

Project Administration Manual

Project Numbers: 48224-002
September 2016

India: Demand-Side Energy Efficiency Sector Project

Abbreviations

ADB	–	Asian Development Bank
APFS	-	Audited project financial statements
EESL	–	Energy Efficiency Services Limited
ESCO	–	energy service company
EMP	–	environmental management plan
ICB	–	international competitive bidding
IEE	–	initial environmental examination
LED	–	light emitting diode
LIBOR	–	London Interbank Offered Rate
MSME	–	micro, small, medium enterprise
MW	–	megawatt
NCB	–	national competitive bidding
PAM		project administration manual
PMU		project management unit
RRP	–	report and recommendation of the President to the Board
SOE	–	statement of expenditure
SPS	–	Safeguard Policy Statement

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ABBREVIATIONS

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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 Energy Efficiency Services Limited (EESL) 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 EESL of its 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 (RRP), 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. The Project will finance high-priority areas under Energy Efficiency Services Limited's (EESL) demand-side energy efficiency operations under its energy service company (ESCO) business model. This includes the: (i) use of more efficient light-emitting diodes (LEDs) by municipalities for streetlights that could be operated remotely; (ii) use of more efficient LED bulbs, tube lights, and electric fans by households and institutions; and (iii) promotion of more energy-efficient agricultural water pumps.

2. The impact will be an expanded market for energy-efficient technologies and reduced emissions intensity of economy, aligned with the National Mission on Enhanced Energy Efficiency (NMEEE)¹ and India's intended nationally determined contributions to the UN Framework Convention on Climate Change. The project's outcome will be increased end-use electricity efficiency in the subproject areas.

3. The main outputs of this project² will be: (i) efficiency of street lighting in one or more municipalities in eligible states (including Goa, Maharashtra, Rajasthan, and Telangana) enhanced by replacing the existing lights with LED lamps with a remote monitoring and control system; (ii) efficiency of bulbs, tube lights, and electric fans in households and institutions in utility service areas in eligible states (including Andhra Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh) enhanced by installing LED-based household lighting and more efficient fans; and (iii) efficiency of agricultural water pumps in utility service areas in eligible states (including Andhra Pradesh, Maharashtra, Karnataka, and Rajasthan) improved by replacing old pumps with more efficient models that have a remote monitoring and control system.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Indicative Activities	2016												Responsibility
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Advance contracting actions					X	X	X	X	X	X			EESL
Retroactive financing actions											X	X	ADB
Establish project implementation arrangements					X								EESL
ADB Board approval									X				ADB
Loan signing												X	GOI, EESL & ADB
Government legal opinion provided												X	GOI
EESL budget inclusion							X						EESL

¹ Bureau of Energy Efficiency, Ministry of Power, Government of India: <https://beeindia.gov.in/content/nmeee-1>
Ministry of Environment and Forests, Government of India. 2015. India Intended Nationally Determined Contribution to the United Nations Framework Convention on Climate Change. Available: <http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf>

² Subprojects implementation can take place in other states as well subject to further due diligence and acceptance by ADB in accordance with its eligibility requirements.

Indicative Activities	2016												Responsibility
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Loan effectiveness												X	ADB

ADB = Asian Development Bank, GOI = Government of India, EESL = Energy Efficiency Services Limited.
Source: Asian Development Bank and Energy Efficiency Services Limited.

B. Overall Project Implementation Plan

Table 2: Implementation Schedule

Description	2016				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	Q1	Q2	Q3	Q4
Project Formulation																								
Loan Preparation and Signing				●																				
Loan Effectiveness				●																				
Implementation																								
Output 1: Street lighting efficiency in one or more municipalities in Karnataka and West Bengal enhanced																								
EESL signs MOUs with municipalities																								
EESL develops and validates DPRs, conducts pilots																								
EESL enters into contractual agreements with municipalities																								
EESL procures equipment and implements the projects																								
EESL undertakes monitoring and verification activities																								
Output 2: Household appliance efficiency in utility service areas in Andhra Pradesh, Karnataka, and Kerala enhanced																								
EESL signs MOUs with distribution utilities																								
EESL develops and validates DPRs, conducts pilots																								
EESL enters into contractual agreements with distribution utilities																								
EESL procures equipment and implements the projects																								
EESL undertakes monitoring and verification activities																								
Output 3: Agricultural demand side management in one utility service area in Andhra Pradesh and Karnataka improved																								
EESL signs MOUs with distribution utilities																								
EESL develops and validates DPRs, conducts pilots																								
EESL enters into contractual agreements with distribution utilities																								
EESL procures equipment and implements the projects																								
EESL undertakes monitoring and verification activities																								
Management Activities																								
Procurement Plan Activities																								
Reviews																								
Project Completion Report																								

● Signing and Effectiveness

■ Effectivity for the Entire Component

■ Effectivity for the Specific Activity

Source: Asian Development Bank.

C. Subprojects selection criteria and approval process

4. EESL will ensure that all subprojects are appraised, selected and approved in compliance with the requirements given below, to the satisfaction of the Asian Development Bank (ADB). As applicable, EESL, without limiting to these requirements, will ensure that each subproject:

- (i) will not involve overlapping of funding from other agencies, though other agencies such as bilateral development agencies and nongovernment organizations (NGOs) may be involved in co-financing, as well as in delivering specific additional support such as monitoring, capacity building and poverty alleviation, in which case these will clearly be defined beforehand;
- (ii) seeks participation of stakeholders and affected people, NGOs, and community, including in particular women and vulnerable groups of the society, in the selection, design, implementation and monitoring of the rehabilitation and reconstruction of project facilities;
- (iii) that the equipment, materials and other resources required can be acquired in or carried to the subproject location without undue delays and as feasible provide access to services and opportunities to local labor, both men and women;
- (iv) will be required to yield a financial internal rate of return (FIRR) exceeding their weighted average cost of capital (WACC) (with FIRR and WACC calculated in accordance with the ADB's guidelines). This selection criterion was achieved for sample subprojects, to assess that they are financially viable. EESL will also need to demonstrate that it has undertaken reasonable checks of the credit worthiness of subproject (counterparties);
- (v) will be selected on an economic least cost basis and yields an economic internal rate of return (EIRR) of at least 12%. This selection criterion was achieved for the sample subprojects analyzed, reflecting the robust economic returns expected of energy efficiency investments;
- (vi) meets Category "C" of ADB's Safeguards Policy Statement (SPS) 2009 for environment, indigenous people, and involuntary resettlement; any subproject with category other than "C" as stated herein will not be eligible for financing under the project;
- (vii) has Detailed Project Report completed in format and level of details acceptable to ADB; and
- (viii) has all necessary arrangements for implementation and payback arrangement with the counterparties agreed upon and is scheduled to be completed no later than December 2020.

5. The project management unit (PMU) set up within EESL will reconfirm that the subprojects meet above criteria, among others, and submit to ADB for prior approval of each subproject unless otherwise agreed upon by EESL and ADB. EESL should develop a system for retention for any documentation that formed the basis for selection and approval of subprojects for the entire project implementation period for any further review by ADB.

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations – Roles and Responsibilities

Table 3: Project Implementation Organizations: Roles and Responsibilities

Project Implementation Organizations	Management Roles and Responsibilities
Energy Efficiency Services Limited	Overall responsibility for implementation of the project.
Coordination Committee Meeting	To report progress of the project, in consultation with the Ministry of Power.
Project Management Unit	Responsible for coordination, implementation, and administration of the project. Headed by Deputy General Manager (Finance) at its headquarters.
Asian Development Bank	Will undertake regular project review and facilitate in project implementation.

B. Key Persons Involved in Implementation

Executing Agency

Energy Efficiency Services Limited

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Email address: mkhatri@eesl.co.in
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Energy Division
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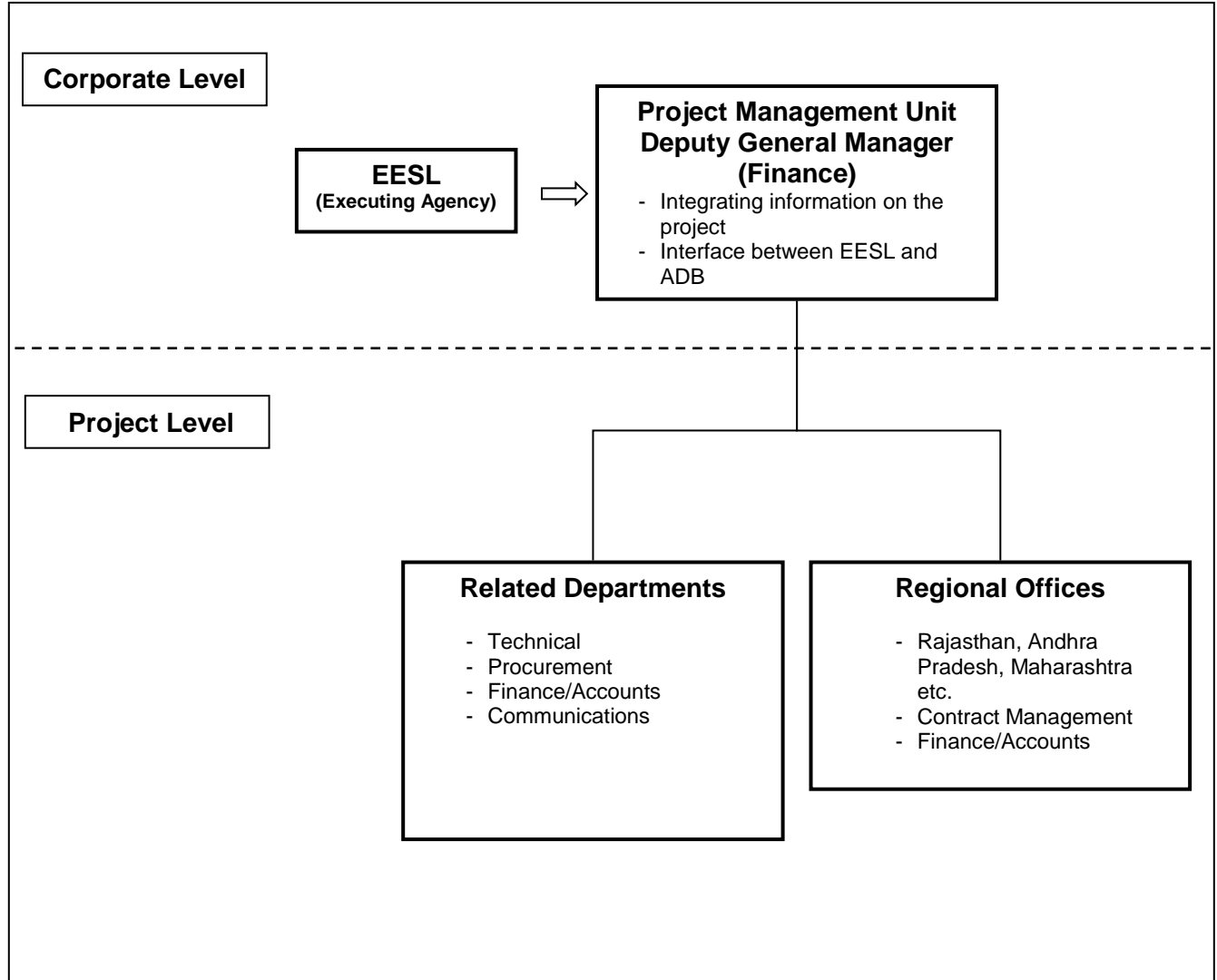
Mission Leader

Jiwan Acharya
Senior Energy Specialist
Telephone: +63 632 4444
Email address: jacharya@adb.org

C. Project Organization Structure

6. EESL will be the executing and implementing agency for the project.

Figure 1: Program Implementation Structure



ADB = Asian Development Bank, EESL = Energy Efficiency Services Limited.

IV. COSTS AND FINANCING

7. EESL has requested for a sovereign guaranteed loan of \$200 million from ADB's Ordinary Capital Resources to help finance its energy efficiency projects. EESL will contribute \$200 million to finance part of the municipal lighting, LED bulbs, tube lights, fans, and agricultural pumps costs, taxes and duties entire cost of domestic fans and tube lights,; financing charges during implementation; and part of contingencies. The loan will have a 20-year term, including a grace period of 5 years, a 15-year straight line repayment method, an annual interest rate determined in accordance with ADB's London Interbank Offered Rate-based (LIBOR) lending facility, a commitment charge of 0.15% per year, and such other terms and conditions set forth in the draft loan and project agreements. The investment plan is in Table 4 and financing plan is in Table 5.

Table 4: Investment Plan
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Efficient municipal streetlights	134.8
2. Efficient appliances for households and institutions	78.5
3. Efficient agricultural pumps	144.8
Subtotal (A)	358.1
B. Contingencies^c	
1. Physical	6.7
2. Price	17.5
Subtotal (B)	24.2
C. Financing Charges During Implementation^d	
1. Interest during implementation	11.1
2. Commitment and other charges	6.5
Subtotal (C)	17.6
Total Cost (A+B+C)	400.0

^a In Q2 2016 prices.

^b Includes taxes and duties of \$57.2 million to be financed by EESL

^c Physical contingencies computed at 2.0% for all equipment costs. Price contingencies computed at an average of 5.5% on local currency costs and 1.5% on foreign currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

^d Includes interest, commitment charges and guarantee commission. Interest during construction (assumed to be one year) for ADB loan(s) has been computed at the 5-year fixed London interbank offered rate plus a spread of 0.5%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount. Interest on Domestic borrowing is computed at 8% pa. Guarantee commission to Government of India on ADB loan has been computed at 1.2% pa on outstanding ADB loan.

Note: Numbers may not sum precisely due to rounding.

Source: Asian Development Bank estimates.

Table 5: Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (loan)	200.0	50.0
Energy Efficiency Services Limited ^a	200.0	50.0
Total	400.0	100.0

^a EESL's contribution includes domestic appliances' customer contribution of \$ 11 million, domestic borrowing by EESL of \$109 million and own contribution of \$ 80 million.

Source: Asian Development Bank estimates.

A. Cost Estimates Preparation and Revisions

8. The cost estimates have been prepared based on EESL's sample detailed project reports and other information provided by EESL. Contingencies and financial charges during implementation were estimated by ADB. EESL will update cost estimates during implementation.

B. Key Assumptions

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

- (i) Exchange rate: INR 66 = \$1 (as of June 2016).
- (ii) Price contingencies based on expected cumulative inflation over the implementation period are in Table 6.

Table 6: Escalation Rates for Price Contingency Calculation

Rate	2016	2017	2018	2019	2020	2021	Average
Domestic rate price inflation (%)	5.4	11.5	17.6	24.1	30.9	38.1	25.5
Foreign rate price inflation (%)	1.5	2.9	4.5	6.0	7.6	9.2	6.36

Source: Asian Development Bank estimates.

- (iii) In-kind contributions cannot be reasonably quantified and have therefore been excluded from the cost estimates.

C. Detailed Cost Estimates by Expenditure Category

Table 7: Cost Estimates by Expenditure Category
(\$ million)

Item	Total Gross Cost	Taxes	Total Net Cost	% of Base Cost
A. Base Costs				
1. Equipment supply				
a. Municipal lighting	134.85	20.69	114.16	37.6%
b. Bulbs	33.71	5.17	28.54	9.4%
c. Fans	16.86	2.59	14.27	4.7%
d. Tube lights	16.86	2.59	14.27	4.7%
e. Agricultural pumps	134.85	20.69	114.16	37.6%
2. Equipment installation	5.94	0.77	5.16	1.7%
3. Distribution costs	7.27	0.00	7.27	2.0%
4. Awareness campaign	7.84	1.02	6.82	2.2%
Total Base Cost	358.16	53.52	304.64	100.0%
B. Contingencies				
1. Physical	6.74	1.03	5.71	1.9%
2. Price	17.47	2.68	14.79	4.9%
Subtotal (B)	24.21	3.72	20.50	6.8%
C.				
1. Interest during implementation	11.14	0.00	11.14	3.1%
2. Commitment and other charges	6.49	0.00	6.49	1.8%
Subtotal (C)	17.63	0.00	17.63	4.9%
Total Cost (A+B+C)	400.00	57.24	342.77	111.7%

Notes: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

D. Allocation and Withdrawal of Loan Proceeds

Table 8: Allocation and Withdrawal of Loan Proceeds

	Item	ADB Financing	% ADB Financing Basis
	Base Cost		
1	Equipment – Municipal lighting	81.94	100% of total expenditure claimed ^a
2	Equipment – bulbs, tube lights and fans	20.49	100% of total expenditure claimed ^a
3	Equipment – Agricultural pumps	81.94	100% of total expenditure claimed ^a
4	Unallocated	15.63	
	Total	200.00	

ADB = Asian Development Bank.

^a Exclusive of taxes and duties in the country of the Borrower.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

E. Detailed Cost Estimates by Financier

**Table 9: Cost Estimates by Financier
(\$ million)**

Item	ADB		EESL		Total Cost	
	Amount	% of Cost Category	Amount	% of Cost Category		
A. Base Cost						
1.	Equipment supply					
	Municipal lighting	81.94	60.8%	52.91	39.2%	134.85
	Bulbs	20.49	60.8%	13.23	39.2%	33.71
	Fans	0.00	0.0%	16.86	100.0%	16.86
	Tube lights	0.00	0.0%	16.86	100.0%	16.86
	Agricultural pumps	81.94	60.8%	52.91	39.2%	134.85
2.	Equipment installation	0.00	0.0%	5.94	100.0%	5.94
3.	Distribution costs	0.00	0.0%	7.27	100.0%	7.27
4.	Awareness campaign	0.00	0.0%	7.84	100.0%	7.84
	Total Base Cost	184.37	51.5%	173.80	48.5%	358.16
B. Contingencies						
1.	Physical	4.36	64.6%	2.39	35.4%	6.74
2.	Price	11.29	64.6%	6.18	35.4%	17.47
	Subtotal (B)	15.64	64.6%	8.57	35.4%	24.21
C. Financing Charges During Implementation						
1.	Interest during implementation	0.00	0.0%	11.14	100.0%	11.14
2.	Commitment and other charges	0.00	0.0%	6.49	100.0%	6.49
	Subtotal (C)	0.00	0.0%	17.63	100.0%	17.63
Total Cost (A+B+C)		200.00	50.0%	200.00	50.0%	400.00

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

F. Detailed Cost Estimates by Components

Table 10: Detailed Cost Estimates by Components
(\$ million)

Item	Total	Municipal Lighting		Household Appliances		Agricultural Pumps	
		Amount	%	Amount	%	Amount	%
A. Base Cost							
1. Equipment supply	337.12	134.85	40.0%	67.42	20.0%	134.85	40.0%
Municipal lighting	134.85	134.85	100.0%	0.00	0.0%	0.00	0.0%
Bulbs	33.71	0.00	0.0%	33.71	100.0%	0.00	0.0%
Fans	16.86	0.00	0.0%	16.86	100.0%	0.00	0.0%
Tube lights	16.86	0.00	0.0%	16.86	100.0%	0.00	0.0%
Agricultural demand side management	134.85	0.00	0.0%	0.00	0.0%	134.85	100.0%
2. Equipment installation	5.94	0.00	0.0%	0.00	0.0%	5.94	100.0%
3. Distribution costs	7.27	0.00	0.0%	7.27	100.0%	0.00	0.0%
4. Awareness campaign	7.84	0.00	0.0%	3.79	48.4%	4.05	51.6%
Total Base Cost	358.16	134.85	37.6%	78.49	21.9%	144.83	40.4%
B. Contingencies							
1. Physical	6.74	2.70	40.0%	1.35	20.0%	2.70	40.0%
2. Price	17.47	6.99	40.0%	3.49	20.0%	6.99	40.0%
Subtotal (B)	24.21	9.68	40.0%	4.84	20.0%	9.68	40.0%
C. Financing Charges During Implementation							
1. Interest during implementation	11.14	4.46	40.0%	2.23	20.0%	4.46	40.0%
2. Commitment and other charges	6.49	2.88	44.4%	0.72	11.1%	2.88	44.4%
Subtotal (C)	17.63	7.34	41.6%	2.95	16.7%	7.34	41.6%
Total Cost (A+B+C)	400.00	151.87	38.0%	86.28	21.6%	161.86	40.5%

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

G. Detailed Cost Estimates by Year

Table 11: Detailed Cost Estimates by Year
(\$ million)

Item	Total	2017	2018	2019	2020
A. Base Cost					
1. Equipment supply	337.12	50.57	134.85	101.14	50.57
2. Equipment installation	5.94	0.89	2.38	1.78	0.89
3. Distribution costs	7.27	1.09	2.91	2.18	1.09
4. Awareness campaign	7.84	1.18	3.14	2.35	1.18
Total Base Cost	358.16	53.72	143.27	107.45	53.72
B. Contingencies					
1. Physical	6.74	1.01	2.70	2.02	1.01
2. Price	17.47	1.40	5.95	6.17	3.95
Subtotal (B)	24.21	2.41	8.65	8.19	4.96
C. Financing Charges During Implementation					
1. Interest during implementation	11.14	0.95	2.90	3.85	3.45
2. Commitment and other charges	6.49	0.64	1.50	2.07	2.28
Subtotal (C)	17.63	1.59	4.40	5.92	5.73
Total Cost (A+B+C)	400.00	57.72	156.31	121.56	64.42
% of Total Cost	100%	14%	39%	30%	16%

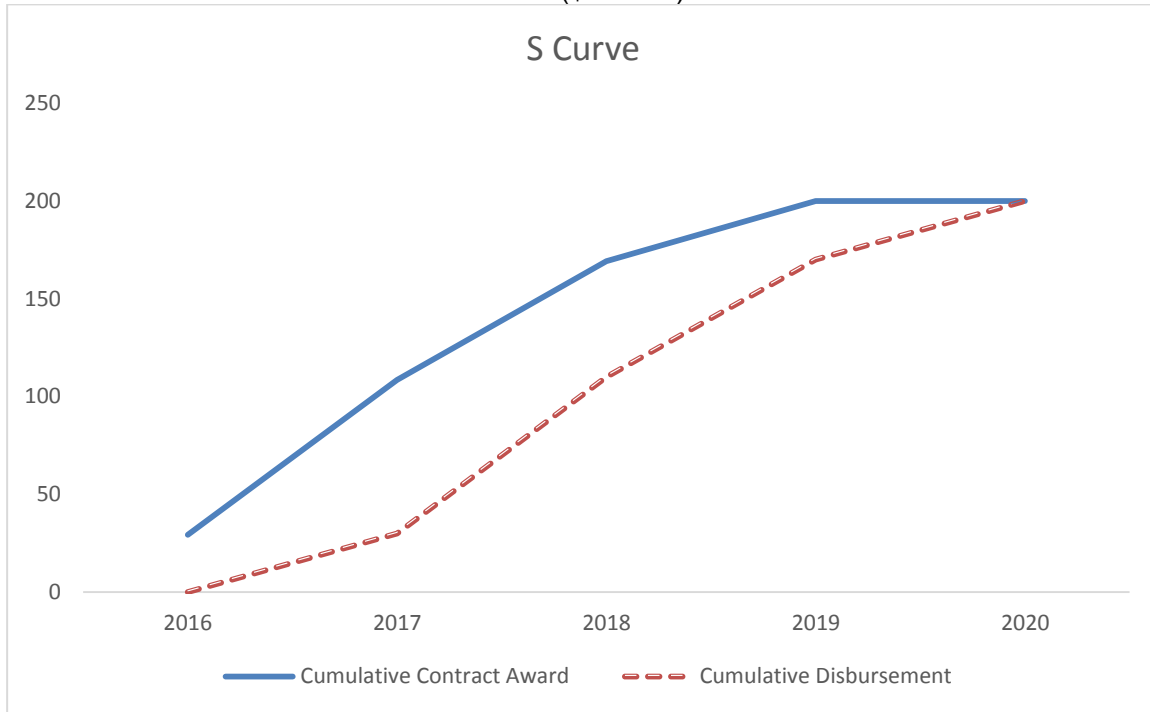
Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank estimates.

H. Contract and Disbursement S-Curve

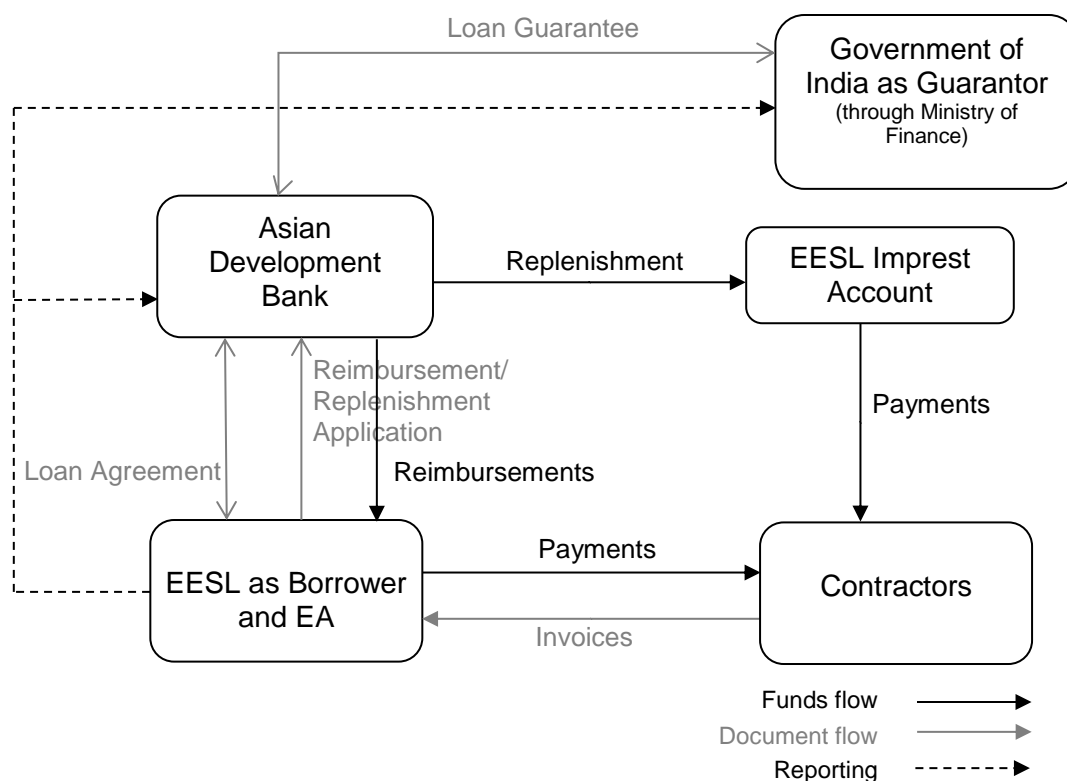
10. Figure 2 below shows contract award and loan disbursement over the life of the project, and annually based on the contract awards and disbursement projections.

Figure 2: Contract and Disbursement S-Curve
(\$ million)



I. Fund Flow Diagram

Figure 3: Fund Flow Diagram



EA = executing agency, EESL = Energy Efficiency Services Limited.
Source: Asian Development Bank.

V. FINANCIAL MANAGEMENT

A. Financial Management Assessment

11. The financial management assessment (FMA) was conducted in April to June 2016 in accordance with ADB's Guidelines - Financial Management Technical Guidance Note – Financial Management Assessment.³ The FMA considered the capacity of EESL, including funds-flow arrangements, staffing, accounting policies and procedures, budgeting system, payments, policies and procedures, cash and bank, contract management and accounting, internal controls, financial reporting and monitoring, and internal and external audit, reporting and monitoring, and information systems in relation to administering the proposed loan. Based on the assessment, the key financial management risks identified are: cash flow issues arising from delayed receipts from counterparties; inadequate insurance cover for project assets; the absence of a risk management strategy for foreign exchange and interest rate risk management and lack of experience in ADB's processes and procedures. It is concluded that the overall premitigation financial management risk of EESL is moderate. EESL has agreed to implement an action plan as key measures to address the

³ Detailed Financial Management Assessment is available as a supplementary linked document.

deficiencies. The financial management action plan is provided in Table 11.

Table 11: Financial Management Action Plan

Action	Responsibility	Resources	Timing
Establish a foreign exchange risk management framework with specific policies relating to hedging of both foreign currency and interest rates.	EESL	EESL	By June 2017
Undertake a legal and commercial audit of its existing and pro forma agreements with urban local bodies (ULBs) and distribution companies in areas relating to liabilities in the event of termination and force majeure events	EESL	EESL	By June 2017
Establish a framework for protection of project assets (insurance) in the event of fire, theft, insurable force majeure events, etc. post project commissioning.	EESL	EESL	By June 2017
Capacity building for adhering to ADB's disbursement, procurement and financial management policies and procedures including managing imprest account.	ADB	ADB	Continuous
Establish a framework for escrow account (and other securities) monitoring including establishment of escrow accounts, deposit of funds, enforcement of payment terms in event of default, etc. The framework would also monitor government guarantees and letters of credit	EESL	EESL	By June 2017
Establish a policy on provision for doubtful debt and writing off of irrecoverable debt in accordance with appropriate industry/regulatory standards and guidelines	EESL	EESL	By June 2017
Obtain clarification regarding applicability of International Accounting Standards (IAS) 17 (Lease accounting) on EESL's financial assets.	EESL	EESL	By June 2017
Implement a comprehensive enterprise resource planning (ERP) system including fixed assets management modules	EESL	EESL	By December 2017

ADB = Asian Development Bank, EESL = Energy Efficiency Services Limited.

11. Risk Assessment. Table 12 summarizes the financial management risk assessment, and proposes risk mitigation and management measures.

Table 12: Financial Management Internal Control and Risk Assessment

Risk Description	Assessment	Mitigation Measures
Country Specific - There is no significant weakness in the budgetary process or in the public sector accounting and reporting system that are expected to directly impact on EESL (to the extent that entity and project financial management are at risk). Public and private sector auditing standards and capacity are generally adequate.	Low	None required.
Entity Specific – Counterparty Risk Most of EESL's project payments come from urban local bodies and distribution companies, which are known to have uncertain cash flows, leading to delayed payments to EESL. Cash flow issues arising from delayed receipts from counterparties could affect the overall portfolio performance.	High	EESL has structured an annuity payment mechanism backed by either escrow account, state government guarantee or letter of credit. EESL will establish a system for monitoring annuity payments and for establishment and funding of escrow accounts by June 2017. EESL will establish a policy on provision for doubtful debts and for writing off of irrecoverable debt in accordance with appropriate industry/regulatory standards and guidelines by June 2017.
Asset Risk EESL has arrangements with the supplier for O&M support for the entire project period. However, project assets are covered for insurance only until delivery and installation.	Moderate	EESL will establish a framework, by June 2017, for protection of project assets (insurance) in the event of fire, theft, insurable force majeure events, etc. post project commissioning.
Overall Inherent Risk	Moderate	
Budget and Planning – Current budgeting and planning arrangement are considered adequate: a detailed budget including a capital expenditure plan is prepared annually and is used for monthly variance analysis. A 5-year business plan has also been prepared and approved.	Low	None required
Staffing – Adequate staff, however no experience in implementation of ADB funded projects	Moderate	Undertake training in ADB disbursement and procurement procedures
Internal Controls – Staff duties and delegated authorities are well documented. Payment processes and authorities are appropriate. The company has instituted fraud prevention policy.	Low	None required
Internal Audit – Internal audit is undertaken by an external chartered accountant appointed by the board of directors. The internal audit program is considered adequate for now.	Low	None required
External Audit – The Comptroller and Auditor General of Government of India appoints EESL's external auditor and also conducts supplementary audits. Audits are annual and must be concluded within six months of the end of the fiscal year. The audits are done in	Low	None required

Risk Description	Assessment	Mitigation Measures
accordance with the current Indian accounting standards.		
Revenue – EESL’s revenue profile is predicated on the premise of sharing of energy savings with its customers along with earning a reasonable return on its debt and equity invested in the projects. EESL is subject to credit risk, and has in place mitigating measures including requirements for escrow accounts and guarantees.	Moderate	A policy for provisioning of accounts receivables to be submitted to the BoD for approval by June 2017
Foreign Currency Risk – EESL has planned about 20% of its proposed funding from development assistance, most of which will be denominated in foreign currency. All of the company’s revenue will be denominated in local currency, exposing the company to significant risk. EESL currently does not have any foreign exchange risk management strategies or mechanisms in place.	Moderate	EESL will prepare and submit to its board for approval a foreign exchange risk management framework by June 2017. This framework should also contemplate interest rate and maturity mismatch risk and, if necessary, propose mitigation strategies.
Transaction Risk – EESL enters into contracts with customers on one side and manufacturers and/or suppliers on the other, and most of the obligations of EESL towards customers are transferred to the manufacturers and/or suppliers on a back-to-back basis, with some of the residual risks remaining with EESL. The allocation of this transaction risk requires further clarification.	Low	By no later than June 2017, EESL will undertake a legal and commercial audit of all agreements with customers to ensure appropriate risk allocation in the areas of force majeure and termination.
Information Systems – Although fully computerized, EESL’s financial reporting system is not fully integrated with project implementation. This introduces a risk of inaccuracies, and incomplete and delayed reporting. In recognition of these potential issues, EESL has engaged a vendor to implement an ERP solution.	Moderate	By no later than 31 December 2017, EESL will implement a comprehensive ERP system (EESL has already engaged a contractor for full ERP implementation).
Governance – EESL maintains solid, transparent financial management and procurement systems. ADB has performed its standard Know-Your-Customer assessment and found no material integrity concerns.	Low	None required.
Overall Control Risk	Moderate	
Overall (Combined) Risk	Moderate	

ADB = Asian Development Bank, BoD = Board of Directors, EESL = Energy Efficiency Services Limited, ERP = enterprise resource planning.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

12. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook*⁴ (2015, as amended from time to time), and detailed arrangements agreed upon between EESL and ADB. The implementing agency will be responsible for: (i) preparing annual contract awards and disbursement projections; (ii) collecting supporting documents; and (iii) preparing and sending withdrawal applications to ADB. Online training for project staff on disbursement policies and procedures is available.⁵ Project staff are encouraged to avail of this training to help ensure efficient disbursement and fiduciary control.

13. **Imprest fund procedure.** Separate imprest accounts should be established and maintained by EESL for each funding source. The currency of the imprest account is the US dollar. The imprest account is to be used exclusively for ADB's share of eligible expenditures. EESL will establish the imprest account in its name, is accountable and responsible for proper use of advances to the imprest account.

14. The total outstanding advance to the imprest accounts should not exceed the estimate of ADB's share of expenditures to be paid through the imprest accounts for the forthcoming 6 months. EESL may request for initial and additional advances to the imprest accounts based on an Estimate of Expenditure Sheet⁶ setting out the estimated expenditures to be financed through the accounts for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by EESL in accordance with ADB's *Loan Disbursement Handbook* (2015, as amended from time to time) when liquidating or replenishing the imprest account.

15. **Statement of expenditure procedure.**⁷ The SOE procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the imprest accounts. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit.

16. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of EESL, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is US\$100,000 equivalent. Individual payments below this amount should be paid (i) by the EESL and subsequently claimed to ADB through reimbursement, or (ii) through the imprest accounts, unless otherwise accepted by ADB.

2. Disbursement Arrangements for Counterpart Funds

17. Counterpart funds from EESL will be used for equipment costs, installation costs, distribution costs awareness campaigns and taxes and duties. Disbursement arrangements will be as per EESL guidelines and practices.

⁴ Loan Disbursement Handbook: <http://www.adb.org/documents/loan-disbursement-handbook>

⁵ Disbursement eLearning. http://wpqr4.adb.org/disbursement_elearning

⁶ ADB. 2015. *Loan Disbursement Handbook*. 10B.

⁷ SOE forms are available in Appendix 9B and 9C of ADB's *Loan Disbursement Handbook* (2015, as amended from time to time).

C. Accounting

18. EESL will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following relevant standards. Project financial statements will follow accounting principles and practices prescribed under the Companies Act, 2013, and any other applicable law or regulation prevailing in India, which are consistent with international accounting principles and practices. Project financial statements should be prepared on an accrual basis of accounting consistent with EESLs own accounting framework. Template financial statements provided in the Standardized Terms of Reference for audit of ADB assisted projects, agreed with the Comptroller and Auditor General of India, the DEA and ADB can be referred to as a guide for preparing financial statements, as relevant.

D. Auditing and Public Disclosure

19. EESL will cause the detailed consolidated project financial statements to be audited in accordance with its audit regulations by an independent auditor acceptable to ADB. The audited project financial statements 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 EESL.

20. The audited entity financial statements of EESL, together with the auditor's report and management letter, will be submitted in English to ADB within 1 month after their approval by relevant authorities.

21. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements 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).

22. 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.

23. The government and EESL have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.⁸ 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

⁸ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements 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 imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements 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 imprest 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 project financial statements are not received within 12 months after the due date, ADB may suspend the loan.

confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

24. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Public Communications Policy 2011.⁹ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements 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.¹⁰

24. Internal audit continues to be undertaken by EESL and internal auditors shall also include project activities within their audit scope, over the project implementation period.

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

25. All advance contracting and retroactive financing will be undertaken in conformity with ADB's Procurement Guidelines (2015, as amended from time to time)¹¹ and ADB's Guidelines on the Use of Consultants (2013, as amended from time to time). The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. EESL has been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the Project.

26. **Advance contracting.** In order to expedite project implementation, EESL has requested approval for advance contracting for the procurement of the equipment, goods and works. The steps to be concluded in advance include preparation of bidding documents, bidding, and bid evaluation for all the eligible contract packages to be agreed between ADB and EESL.

27. **Retroactive financing.** Withdrawals from the loan account may be made for reimbursement of eligible expenditures incurred under the project before the loan effective date, but not earlier than 12 months before the date of signing the loan agreement, subject to a maximum amount equivalent to 20% of the loan amount.

B. Procurement of Goods, Works and Consulting Services

28. All procurement of goods will be undertaken in accordance with ADB's Procurement Guidelines on ADBs Procurement Guidelines (2015, as amended from time to time). Before the start of any procurement, ADB and the government will review the public procurement laws of the central and state governments to ensure consistency with ADB's Procurement Guidelines (2015, as amended from time to time).

29. The procurement scope under the project will be limited to procurement of goods for the Domestic Efficient Lighting, Municipal Street Lighting and Agricultural Demand Side Management Programs. The procurement of services and consultants will be undertaken by EESL using its own funds and following its own procedures. International Competitive Bidding (ICB) procedures would be adopted where the estimated tender value is above the threshold

⁹ Public Communications Policy: <http://www.adb.org/documents/pcp-2011?ref=site/disclosure/publications>

¹⁰ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2011. *Public Communications Policy*. Paragraph 97(iv) and/or 97(v).

¹¹ Available at: <http://www.adb.org/Documents/Guidelines/Procurement/Guidelines-Procurement.pdf>.

limit as defined in the procurement Plan, and National Competitive Bidding (NCB) procedures may be adopted for bids with an estimated value up to the threshold limit. EESL has sufficient capacity to design and implement Energy Efficiency interventions in Domestic Lighting, Municipal Street Lighting and Agricultural Demand Side Management Programs. EESL has also demonstrated good performance and track record with procurement of goods and works for DSM program and has sufficient knowledge of NCB procedures.

30. National competitive bidding (NCB) is normally used for public procurement by EESL, and may be the most appropriate way of procuring goods or works which, by their nature or scope, are unlikely to attract foreign competition. NCB in India follows the procedures in the General Financial Rules 2005. In order to be acceptable for use in ADB-financed procurement, these procedures shall be reviewed and modified as follows to ensure economy, efficiency, transparency, and broad consistency with the provisions included in ADB's Procurement Guidelines.

- (i) Price Matching: No matching of prices shall be done by EESL and the entire tendered quantity shall be awarded to the L1 bidder.
- (ii) Reservation for micro, small, medium enterprise (MSME) sector: No reservations shall be made for the MSME sector for ADB-financed procurement of goods.
- (iii) Domestic Content Preference: The Department of Electronics and Information Technology, Government of India has stipulated that procurement of 30% of the total electronic procurement of goods shall be from domestically manufactured companies. This stipulation shall not be applicable to ADB funded procurements and EESL shall comply with this requirement by suitably augmenting the quantity of electronic goods to be procured using its own funds so as to achieve the mandated 30% level on an annual basis.

31. In view of the fact that the Contracts Department has not done any substantive procurement with bilateral/multilateral funds, capacity development support shall be provided to EESL to facilitate (i) adoption of ICB Procedures for procurement of goods using ADB Guidelines, (ii) developing SBDs for NCB/ICB, and (iii) adoption of e-procurement for ICBs. The first two ICB transactions as well as first two NCB transactions using ADB SBDs will be subject to prior review while subsequent transactions will be subject to post review.

32. An 18-month procurement plan indicating threshold and review procedures for goods, indicative contract packages and national competitive bidding guidelines is in Section C.

C. Procurement Plan

PROCUREMENT PLAN

Basic Data

Project Name: Demand Side Energy Efficiency Investment Project	
Project Number: 48224-002	Approval Number: TBD
Country: INDIA	Executing Agency: Energy Efficiency Services Limited
Project Procurement Classification: A	Implementing Agency: Energy Efficiency Services Limited
Procurement Risk: High	
Project Financing Amount: \$400 million	Project Closing Date: 31 December 2020
ADB Financing: \$200 million	
Non-ADB Financing: \$200 million	
Date of First Procurement Plan: 25 May 2016	Date of this Procurement Plan: 25 May 2016

A. Methods, Thresholds, Review and 18-Month Procurement Plan

1. Procurement and Consulting Methods and Thresholds

33. Except as ADB may otherwise agree, the following process thresholds shall apply to procurement of goods.

Procurement of Goods and Works		
Method	Threshold	Comments
International Competitive Bidding (ICB) for Works	\$40,000,000	Not Applicable.
International Competitive Bidding for Goods	\$1,000,000 and above	The first two ICBs are subject to prior review; subsequent ICBs will be post reviewed.
National Competitive Bidding (NCB) for Works	Beneath that stated for ICB, Works	
National Competitive Bidding for Goods	Below \$1,000,000	The first two NCBs are subject to prior review; subsequent NCBs will be post reviewed.
Shopping for Works	Below \$100,000	Not Applicable.
Shopping for Goods	Below \$100,000	Not Applicable.

ICB = international competitive bidding; NCB = national competitive bidding.

Consulting Services	
Method	Comments
Quality and Cost Based Selection (QCBS)	Not Applicable.
Quality Based Selection	Not Applicable.
Consultants' Qualifications Selection ⁴	Not Applicable.
Least-Cost Selection ⁵	Not Applicable.
Fixed Budget Selection	Not Applicable.

2. Goods and Works Contracts Estimated to Cost \$1 Million or More

34. The following table lists goods contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months financed by ADB.

Package Number	General Description	Estimated Value	Procurement Method	Review [Prior/Post/Post (Sampling)]	Bidding Procedures	Advertisement Date (quarter/year)	Comments
1	LED Bulbs	\$15 million	ICB	First two packages will be subject to	1S2E	First package in Q3/2016	

Package Number	General Description	Estimated Value	Procurement Method	Review [Prior/Post/Post (Sampling)]	Bidding Procedures	Advertisement Date (quarter/year)	Comments
				prior review. Thereafter annual post review			
2	LED Street Lights	\$27 million	ICB	First two packages will be subject to prior review. Thereafter annual post review	1S2E	First package in Q3/2016	
3	Agricultural Pump sets	\$27 million	ICB	First two packages will be subject to prior review. Thereafter annual post review	1S2E	First package in Q1/2017	

1S2E = one stage two envelope, ICB = international competitive bidding, LED = light emitting diode, Q = quarter.

3. Consulting Services Contracts Estimated to Cost \$100,000 or More

35. The project does not envisage any consulting package under ADB financing.

4. Goods and Works Contracts Estimated to Cost Less than \$1 Million

36. Package size is not yet identified for the goods contracts as this will be a sector program. However, no goods contract is envisaged to cost less than \$1 million. No works contracts are envisaged.

B. Indicative List of Packages Required Under the Project

37. The following table provides an indicative list of goods and services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

Goods							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Review [Prior/Post/Post (Sampling)]	Bidding Procedure	Comments
1	Electronic Goods / Pump Sets	\$400 million	TBD	ICB Limited NCB	First 2 ICBs and first 2 NCBs subject to prior review. Thereafter post review	1S2E	No domestic preference

1S2E = one stage two envelope, ADB = Asian Development Bank, ICB = international competitive bidding, MSME = micro, small, medium enterprise, NCB = national competitive bidding, TBD = to be determined.

Consulting Services							
Package Number	General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Recruitment Method	Review (Prior / Post)	Type of Proposal	Comments
None							

C. List of Awarded and On-going, and Completed Contracts

38. None

D. Non-ADB Financing

39. The following table lists goods, works and consulting services contracts over the life of the project, financed by Non-ADB sources.

Goods and Works				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments
Goods	\$200 million	Numerous	National Procedures	Executing agency financing
Distribution / Monitoring Agencies	TBD	Numerous	National Procedures	Executing agency financing

TBD = to be determined.

E. National Competitive Bidding

A. Regulation and Reference Documents

40. The procedures to be followed for national competitive bidding shall be those set forth in the General Financial Rules 2005 and its amendments issued by the Government of India with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of the Procurement Guidelines of ADB.

B. Procurement Procedures

1. Eligibility

41. The eligibility of bidders shall be as defined under Section I of the Procurement Guidelines; accordingly, no bidder or potential bidder should be declared ineligible for reasons other than those provided in Section I of the Guidelines, as amended from time to time.

2. Advertising

42. The posting of NCB specific notices for contracts valued at less than \$1 million on ADB's website is not required but is highly recommended. The executing agency will ensure that other NCB notices are posted on EESL website as well as the Government of India procurement portal and also advertised in at least one widely circulated national newspaper.

3. Reservation for Micro, Small and Medium Enterprise (MSME)

43. No reservations shall be made for the MSME Sector for ADB financed procurement of

goods.

4. Domestic Content Preference for Electronic Goods

44. The Department of Information & Technology, Government of India has stipulated that procurement of 30% of the total electronic procurement of goods shall be from domestically manufactured companies. This stipulation shall not be applicable to ADB funded procurements and EESL shall comply with this requirement by suitably augmenting the quantity of electronic goods to be procured using its own funds so as to achieve the mandated 30% level on an annual basis.

5. Price Matching

45. No matching of prices shall be done by EESL and the entire tendered quantity shall be awarded to the L1 bidder

6. Participation by Government-owned enterprises

46. Government-owned enterprises in India shall be eligible to participate as bidders only if they can establish that they are legally and financially autonomous, operate under commercial law, and are not a dependent agency of the contracting authority. Furthermore, they will be subject to the same bid and performance security requirements as other bidders

7. Bid Opening and Bid Evaluation

47. (i) Bids shall be opened in public. (ii) Evaluation of bids shall be made in strict adherence to the criteria declared in the bidding documents and contracts shall be awarded to the lowest evaluated bidder. (iii) Bidders shall not be eliminated from detailed evaluation on the basis of minor, non-substantial deviations. (iv) No bidder shall be rejected on the basis of a comparison with the employer's estimate and budget ceiling without ADB's prior concurrence. (v) A contract shall be awarded to the technically responsive bid that offers the lowest evaluated price and no negotiations shall be permitted.

VII. SAFEGUARDS

48. **Environment.** The project is classified as category C for environment as the adverse environmental impacts of the project will be minimal. Following ADB's Safeguard Policy Statement (SPS) 2009, an environmental assessment and review framework (EARF) has been prepared which will guide the PMU-EESL in subproject selection, screening and categorization, environmental assessment and institutional arrangements. EESL and their implementing partners will ensure compliance to the EARF, and applicable national and state regulations. EESL and its contractors will comply with SPS 2009, government laws and regulations on occupational health and safety, and in the collection, transport, storage and disposal of the wastes generated from this project. PMU-EESL will designate staff supported by a Consultant through ADB TA9081-IND (as needed) to manage potential environmental concerns and to ensure compliance to the requirements of SPS 2009, MoEFCC, Central Pollution Control Board and State Pollution Control Boards. PMU-EESL will require their implementing partners to establish a grievance redress mechanism to address complaints that may be raised during project implementation. Corrective actions will be taken for any unanticipated impacts. PMU-EESL will keep a record of the wastes disposed of according to the government laws and regulations including the relevant permits and/or waste destruction certificates. PMU-EESL will

submit, as part of project QPR, a waste management monitoring summary which will include the amount of waste collected, stored, transported and disposed of following the requirements of MoEFCC, CPCB, and SPCBs. Method of final waste disposal will be indicated in the waste management monitoring summary including proof of government permits/licenses.

49. **Social.** The project is classified as category C both for involuntary resettlement and indigenous peoples as the project will not have any negative impacts on titled or non-titled holders including indigenous peoples and their livelihood. The project activities are not expected to cause any physical or economic displacement. No private land acquisition and government land transfer is necessary and temporary impacts are unlikely to be envisaged either. For the subproject selection and implementation, resettlement framework has been prepared including involuntary resettlement and indigenous peoples checklists. Stakeholder consultations and due diligence for each project component were undertaken in accordance with ADB's SPS 2009 and the result have been provided. A loan condition of the project will include social safeguard provisions to ensure that the project does not cause negative involuntary resettlement and indigenous peoples impacts and is implemented in accordance with ADB's SPS 2009. The project social safeguard aspects will be followed up through quarterly project progress report and the other relevant project documents. Monitoring reports will be submitted upon ADB's request if necessary.

50. **Prohibited investment activities.** Pursuant to ADB's SPS 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).

VIII. GENDER AND SOCIAL DIMENSIONS

51. **Gender:** The project will contribute to sustainable economic development, poverty reduction, and social well-being through increased access to energy efficient appliances and reduced electricity consumption. The project is classified as having some gender elements, and Stakeholder Communication Strategy (SCS) is prepared and an end-user awareness program is to be conducted. The gender inclusive activities will enhance women's participation by increasing awareness, acceptance and use of energy efficient technologies. A gender specialist and a communication specialist engaged through technical assistance (TA9081-IND) to guide the gender activities, develop and implement communications tools, and train relevant stakeholders and will continue providing technical support during implementation. EESL will take the overall responsibility to implement the gender activities and communication strategy and report progress to ADB through quarterly progress reports.

52. **HIV/AIDS:** Based on the poverty and social assessment, there is no risk that the project will increase HIV/AIDS incidence. However contractors will carry out HIV/AIDS awareness for their laborers at work sites, which will be monitored by the construction supervision consultants.

53. **Health:** EESL will ensure that contractors adequately provide health and safety measures for the construction workers and further ensure that bidding documents include clauses on how contractors will address this, including an information and awareness raising campaign for construction workers on sexually transmitted diseases, including HIV/AIDS and human trafficking.

54. **Labor:** EESL will ensure that civil works contractors comply with all applicable labor laws and regulations do not employ child labor for construction and maintenance activities. Provide appropriate facilities for women and children in construction campsites; and do not differentiate wages between men and women for work of equal value. EESL will ensure that specific clauses ensuring these will be included in bidding documents.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

A. Project Design and Monitoring Framework

Impact(s) the Project is Aligned with			
Market for energy efficient technologies expanded (National Mission for Enhanced Energy Efficiency) ^a Emissions intensity of economy reduced (India's Intended Nationally Determined Contribution to the United Nations Framework Convention on Climate Change) ^b			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Outcome End-use energy efficiency in subproject areas increased	By 2021: a. Electricity consumption in subproject areas reduced by 3,800 GWh/annum in project areas reduced [Baseline: 0] b. Additional aggregate greenhouse gas emission reduced by of 3 million tCO ₂ -eq per year [Baseline: 0]	a. Distribution utility reports b. Project reports	Rebound effect is substantial whereby consumers offset energy savings from efficiency measures with increased usage or other behaviors.
Outputs	By 2020:		
1. Efficiency of street lighting in one or more municipalities in eligible states (including Goa, Maharashtra, Rajasthan, and Telangana) enhanced	1a. 1.5 million street lights with LED lamps replaced (Baseline: 0) 1b. End-user awareness programs with 30% women's participation implemented	1a-b. Monitoring and verification reports	Municipalities, Urban Local Bodies, and distribution companies might delay payments to EESL due to poor financial health.
2. Efficiency of electric bulbs and fans in households in utility service areas in eligible states (including Andhra Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh) enhanced	2a. 42 LED lamps, ceiling fans, and LED tube lights installed (Baseline: 0) 2b. End-user awareness programs with 30% women's participation implemented	2a-b Monitoring and verification reports	
3. Efficiency of agricultural water pumps in utility service areas in eligible states (including Andhra Pradesh, Karnataka)	3a. 225,000 inefficient agricultural water pumps replaced with more efficient models (Baseline: 0) 3b. End-user awareness	3a-b. Monitoring and verification reports	

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
Maharashtra, and Rajasthan) improved	programs with 30% women's participation implemented		
<p>Key Activities with Milestones</p> <p>1 Efficiency of street lighting in one or more municipalities in eligible states (including Goa, Maharashtra, Rajasthan, and Telangana) enhanced</p> <p>1.1 EESL signs MOUs with municipalities (Q2 2016 onwards)</p> <p>1.2 EESL develops and validates DPRs conducts pilots to demonstrate technology and savings (Q3 2016 onward)</p> <p>1.3 EESL enters into contractual agreements with municipalities and ensures a secure payment mechanism (Q4 2016 onward)</p> <p>1.4 EESL procures equipment and implements the subprojects (Q1 2017 onward)</p> <p>1.5 EESL undertakes monitoring and verification activities (Q3 2017 onward)</p> <p>2 Efficiency of electric bulbs and fans in households in utility service areas in eligible states (including Andhra Pradesh, Maharashtra, Rajasthan, and Uttar Pradesh) enhanced</p> <p>2.1 EESL signs MOUs with distribution utilities (Q2 2016 onward)</p> <p>2.2 EESL develops and validates DPRs conducts pilots to demonstrate technology and savings (Q3 2016 onward)</p> <p>2.3 EESL enters into contractual agreements with distribution utilities and ensures a secure payment mechanism (Q4 2016 onward)</p> <p>2.4 EESL procures equipment and implements the projects (Q1 2017 onward)</p> <p>2.5 EESL undertakes monitoring and verification activities (Q3 2017 onward)</p> <p>3 Efficiency of agricultural water pumps in utility service areas in eligible states (including Andhra Pradesh, Karnataka, Maharashtra, and Rajasthan) improved</p> <p>3.1 EESL signs MOUs with distribution utilities (Q3 2016 onward)</p> <p>3.2 EESL develops and validates DPRs conducts pilots to demonstrate technology and savings (Q4 2016 onward)</p> <p>3.3 EESL enters into contractual agreements with distribution utilities and ensures a secure payment mechanism (Q1 2017 onward)</p> <p>3.4 EESL procures equipment and implements the projects (Q2 2017 onward)</p> <p>3.5 EESL undertakes monitoring and verification activities (Q3 2017 onward)</p> <p>Project Management</p> <p>Project monitoring and evaluation, capacity building of EESL staff on ADB policies and procedures (Q2 2016 onward)</p> <p>Inputs</p> <p>ADB: \$200 million loan</p> <p>EESL: \$200 million</p> <p>Assumptions for Partner Financing</p> <p>None.</p>			

ADB = Asian Development Bank; CO₂ = carbon dioxide; DISCOM = distribution company, DPR = Detailed Project Reports, EESL = Energy Efficiency Services Limited; GWh = gigawatt hour, LED = light emitting diode; MOU = Memorandum of Understanding; MWh = megawatt hour, Q = quarter.

Note: KfW will support a similar program for €250 million (equivalent to about \$283 million) under collaborative cofinancing arrangement.

^a Bureau of Energy Efficiency. National Mission for Enhanced Energy Efficiency.

<https://beeindia.gov.in/content/nmeee-1>.

^b Government of India, Ministry of Environment, Forest and Climate Change. 2015. *India's Intended Nationally Determined Contribution: Working Towards Climate Justice*.

<http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf>.

Source: Asian Development Bank.

B. Monitoring

55. **Project performance monitoring:** Overall monitoring of the project in terms of progress and performance will be undertaken in a timely manner by EESL. The Project Management Unit (PMU) headed by the Deputy General Manager (Finance) has been set up at EESL's headquarters. The unit, through the related functional departments of EESL, will be responsible for monitoring the implementation of the project, including outcomes, outputs and activities in relation to the targets and milestones set for the project.

56. EESL has 11 regional offices headed by a regional manager to implement the projects under their respective jurisdictions. The additional general manager or deputy general managers in the region responsible for the implementation of the projects will report to their respective heads in the headquarters, who in turn will facilitate submission of the implementation progress reports. The management of EESL will receive monthly progress reports and review each project in quarterly review meetings.

57. EESL will prepare monitoring reports in the format covering all essential aspects of the Project and submits them to ADB at the agreed frequency for each type of report. Staff designated by PMU-EESL to deal with environmental issues will prepare a waste management monitoring summary consistent with the requirements of the EARF. The waste management monitoring summary will be an integral part of the project progress report.

58. **Compliance monitoring:** Compliance with covenants in the loan agreement will be monitored through ADB's project administration missions, including project inception mission, to discuss and confirm the timetable for compliance with the loan covenants; project review missions to review the borrower's compliance with particular loan covenants and, where there is any noncompliance or delay, discuss proposed remedial measures with the government; and midterm review mission if necessary to review covenants to assess whether they are still relevant or need to be changed, or waived due to changing circumstances.

59. **Gender and social dimensions monitoring:** Compliance will be monitored by the PMU.

C. Evaluation

60. ADB will field regular review missions every six months at the minimum to review status of contract awards, disbursements, physical progress and implementation of the environmental management plan. There may be a mid-term review of project implementation in 2018 to determine if any corrective measures need to be taken in consultation with EESL. Within six months of physical completion of the project, EESL will submit a project completion report to ADB.¹² Subsequently, ADB will field a mission to finalize the project completion report.

¹² Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>

Table 13: Evaluation Methodology

Evaluation Activity	Purpose	Methodology	Who responsible and involved
Review Mission	Review the progress of the project and provide guidance to facilitate implementation	Site visits and meetings with EESL officials, contractors, consultants at least twice a year	ADB/EESL
Mid Term Review	Comprehensive review of the project	2 years after the loan effectiveness, focusing on the engineering, resettlement, and environmental aspects of the Investment Program, and reviewing the financial status of EESL.	ADB/EESL
Project completion report	Evaluate the overall output of the project and its relevance and suitability	Evaluation of project relevance, effectiveness, efficiency, sustainability and impact	ADB/EESL

ADB = Asian Development Bank, EESL = Energy Efficiency Services Limited.

D. Reporting

61. EESL will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions; (c) updated procurement plan; and (d) updated implementation plan for next 12 months; and (iii) a project completion report within 6 months of physical completion of the project. To ensure projects continue to be both viable and sustainable, project accounts and EESL's audited financial statements, together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

62. EESL will post all relevant information on its website. The website will include at minimum information regarding the bidding process, bidders, contract awards, use of funds disbursed under the project and physical progress. The Stakeholder Communications Strategy is described in the following table.

Table 14: Stakeholder Communication Strategy

Project information to be communicated	Means of Communication	Responsibility	Audience	Frequency
ADB's RRP with linked documents (including safeguards plans)	ADB website	ADB	All stakeholders including the general public	Once
Project information while planning/ designing	Discussions and stakeholder consultations	EESL	Project beneficiaries	Regular intervals during planning and design
Status of implementation during construction	Information boards at site	EESL/ Contractors	Project beneficiaries	All the time at construction sites
Project Performance Reports and Project Information Documents	ADB website	ADB	All stakeholders including the general public	Quarterly
Waste management monitoring summary	ADB	PMU-EESL	ADB (part of project progress report)	Quarterly
Awareness raising on e-waste management	Workshops, town hall meetings, print media	Communications Consultant of EESL	Project stakeholders including the general public	Semi-annually or as needed
Quarterly progress reports	ADB website	EESL	All stakeholders including the general public	Quarterly
Project completion report	ADB website	ADB	All stakeholders including the general public	Once

ADB = Asian Development Bank, GOI = Government of India, EESL = Energy Efficiency Services Limited, RRP = Report and Recommendation of the President.

X. ANTICORRUPTION POLICY

63. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.¹³ 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.¹⁴

64. To support these efforts, relevant provisions of ADB's Anticorruption Policy are included

¹³ Anticorruption Policy: <http://www.adb.org/Documents/Policies/Anticorruption-Integrity/Policies-Strategies.pdf>

¹⁴ ADB's Integrity Office web site: <http://www.adb.org/integrity/unit.asp>

in the Loan Agreement/Regulations and the bidding documents for the project. In particular, all contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of EESL, and all contractors, suppliers, consultants, and other service providers as they relate to the project. Individuals and entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activities and may not be awarded any contract under the Project.¹⁵

65. ADB's Anticorruption Policy designates the Office of Anticorruption and Integrity as the point of contact to report allegations of fraud or corruption among ADB-financed projects or its staff. Office of Anticorruption and Integrity is responsible for all matters related to allegations of fraud and corruption. For a more detailed explanation refer to the Anticorruption Policy and Procedures. Anyone coming across evidence of corruption associated with the project may contact the Anticorruption Unit by telephone, facsimile, mail, or email at the following numbers/addresses:

- by email integrity@adb.org or anticorruption@adb.org
- by phone +63 2 632 5004
- by fax +6326362152
- by mail at the following address

(Please mark correspondence Strictly Confidential):

Office of Anticorruption and Integrity
Asian Development Bank
6 ADB Avenue
Mandaluyong City 1550
Metro Manila, Philippines

XI. ACCOUNTABILITY MECHANISM

66. 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 a good faith effort 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.¹⁶

XII. RECORD OF PAM CHANGES

67. All revisions/updates during course of implementation should be retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

¹⁵ ADB's Integrity Office web site is available at: <http://www.adb.org/integrity/unit.asp>

¹⁶ Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.