

**FRAMEWORK FINANCING AGREEMENT
(IND: SOLAR ROOFTOP INVESTMENT PROGRAM)**

Parties This Framework Financing Agreement (“FFA”) dated 12 August 2016 is between Punjab National Bank (PNB), and India acting by its President (“Guarantor”) on the one part, and Asian Development Bank (“ADB”) on the other part.

MFF Investment Program PNB is committed to and will implement the Solar Rooftop Investment Program, which is an integral part of the Government of India (GOI)’s investment program to meet the 40 GW solar rooftop capacity expansion target. Both the ADB investment program and the GOI investment program are described in Schedule 1 hereto.

The total cost of the ADB investment program over the period 2016 to 2022 is expected to be \$1 billion equivalent, inclusive of \$500 million ADB program funding, \$300 million subproject equity, and \$200 million leveraged commercial financing. The total cost of the GOI investment program, over the period 2015 to 2022 is expected to be \$40 billion equivalent.

Multitranchise Financing Facility The Multitranche Financing Facility (the Facility) is intended to finance subprojects, under both the ADB and the GOI investment program, provided that such subprojects comply with the criteria set out in Schedule 4 hereto and that understandings set out in this FFA are complied with.

These may include:

Subprojects of solar rooftop installation on commercial, industrial, governments, public institutions (e.g., schools and hospitals), residential, and any other type of buildings on an aggregated or standalone basis. It is expected that PNB will use the ADB funds for primarily solar rooftop systems on industrial and commercial properties.

This FFA does not constitute a legal obligation on the part of ADB to commit any financing. At its sole discretion, exercised reasonably, ADB has the right to deny any financing request made by PNB, cancel the uncommitted portion of the Facility, and withdraw PNB’s right to request any financing tranche under the Facility. Financing tranches may be made available by ADB provided matters continue to be in accordance with the general understandings and expectations on which the Facility is based and which are laid out in this FFA. ADB may cancel the facility or reject a financing request when there is a material non-compliance with ADB policies or FFA Undertakings, or there are undue delays in the submission of the financing requests or the implementation of the investment program.

This FFA does not constitute a legal obligation on the part of PNB to request any financing. PNB has the right not to request any financing under the Facility. PNB also has the right at any time to cancel any

uncommitted portion of the Facility.

PNB, India, and ADB may exercise their respective rights to cancel the Facility or any uncommitted portion thereof, and ADB may exercise its right to refuse a financing request, by giving written notice to such effect to the other parties. The written notice will provide an explanation for the cancellation or refusal and, in the case of a cancellation, specify the date on which the cancellation takes effect.

Financing Plan

The financing plan for the Solar Rooftop Investment Program is summarized below.

Government Financing Plan (2015–2022)^a

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank	500	1.25
Commercial banks and/or financiers (debt) ^b	200	0.50
Other foreign borrowing from bilateral and multilateral sources ^c	875	2.19
Government contribution (30% capital subsidy) ^d	750	1.88
Borrowers' equity (assuming 30% for all borrowers)	12,000	30.00
Remaining debt financing	25,675	64.18
Total	40,000	100.00

^a The projections made in the table above, with respect to the borrowers' equity and remaining debt financing, are estimates based on the government's 40 gigawatts solar rooftop investment needs.

^b Assuming ADB finances up to 50% of subproject costs and subproject equity contribution is 30% (or a debt-to-equity ratio of 70:30), then commercial banks (including Punjab National Bank) and/or financiers will therefore contribute 20% of subproject costs, or \$200 million.

^c Including \$625 million from the World Bank to State Bank of India and proposed \$250 million from New Development Bank to Canara Bank.

^d Government allocated Rs50 billion (roughly \$750 million) for the 30% capital subsidy. Source: Asian Development Bank estimates.

Financing Terms

ADB will provide loans to finance subprojects under the ADB investment program, as and when the latter are ready for financing, provided, PNB is in compliance with the understandings hereunder, and the subprojects are in line with those same understandings. Each loan will constitute a tranche.

Each tranche may be financed under terms different from the financing terms of previous or subsequent tranches. The choice of financing terms will depend on the project, capital market conditions, and ADB's financing policies, all prevailing on the date of signing the legal agreement for such tranche.

Tranches may be provided in sequence or simultaneously, and some may overlap in time with each other.

Each individual tranche will be for an amount of no less than \$100 million, or its equivalent.

Commitment charges or guarantee fees are not payable on the Facility. They are payable only on financing actually committed by ADB as a loan or guarantee. ADB rules on commitment charges and guarantee fees, which are in effect when the legal agreements are signed for a tranche, will apply with respect to such tranche.

Amount

The maximum financing amount available under the Facility is \$500 million. It will be provided in individual tranches from either Clean Technology Fund, and/or ADB's Ordinary Capital Resources, and/or a combination of the above two funding sources in the following manner:

Source (\$ million)	Tranche 1	Tranche 2	Tranche 3
Asian Development Bank ^a	0.0	80.0	250.0
Clean Technology Fund	100.0	70.0	0.0
Total	100.0	150.0	250.0

^a Ordinary capital resources.

Sources: Asian Development Bank.

Availability Period

The last date on which any disbursement under any tranche may be made will be 30 June 2023. The last financing tranche is expected to be executed no later than 31 December 2020.

Terms and Conditions

PNB will cause the proceeds of each tranche to be applied to the financing of expenditures of the ADB investment program, in accordance with conditions set forth in this FFA and the legal agreements for each tranche.

Execution

The Executing Agency will be PNB. The Executing Agency will implement the ADB investment program in accordance with the principles set forth in Schedule 1 to this Agreement, and as supplemented in the legal agreements for each tranche.

Periodic Financing Request

PNB may request, and ADB may agree, to provide loans under the Facility to finance the ADB investment program and its related subprojects upon the submission of a Periodic Financing Request (PFR). Each PFR should be submitted by PNB and confirmed by India. PNB will make available to the subborrowers, the proceeds of the tranche in accordance with the related PFR, and the legal agreements for the tranche.

Each individual tranche will be for an amount of no less than \$100 million, or its equivalent. ADB will review the PFRs and, if found satisfactory, prepare the related legal agreements.

The subprojects for which financing is requested under the PFR will be subject to the selection criteria set out in Schedule 4 hereto, satisfactory due diligence, and preparation of relevant safeguard and fiduciary frameworks and other documents. The Facility will be implemented in accordance with the general framework set out in Schedule 3 to this FFA, and the Facility Administration Manual agreed between PNB and ADB.

Until notice is otherwise given by PNB, the H. K. Parikh, General Manager, will be PNB's authorized representative for purposes of executing PFRs. Likewise, until notice is otherwise given by the Guarantor, the Secretary, Additional Secretary, Joint Secretary, Director or Deputy Director in the Department of Economic Affairs, Ministry of Finance, will be Guarantor's authorized representative for purposes of executing PFRs.

**General
Implementation
Framework**

The Facility will be implemented in accordance with the general framework set out in Schedule 3 hereto.

Procedures

Tranches to be provided under the Facility will be subject to following procedures and undertakings:

- (a) PNB will have notified ADB of a forthcoming PFR in advance of the submission of the PFR.
- (b) PNB will have submitted a PFR in the format agreed with ADB.
- (c) ADB may, in its sole discretion, decline to authorize the negotiation and execution of any legal agreement for a tranche.
- (d) If ADB confirms acceptance of the PFR, the legal agreements will be negotiated and executed by the parties.

**PFR
information**

The PFR will substantially be in the form attached hereto, and will contain the following details:

- (i) Loan, grant, guarantee, or cofinancing amount;
- (ii) Description of subproject pipeline to be financed, if available;
- (iii) Cost estimates in light of the market outlook, and financing plan;
- (iv) Implementation arrangements specific to the tranche;
- (v) Confirmation of the continuing validity of and adherence to the understanding in this Agreement;
- (vi) Confirmation of compliance with the provisions under previous Guarantee Agreement(s) and Loan Agreement(s), as appropriate; and
- (vii) Other information as may be required under the Facility Administration Manual, or reasonably requested by ADB.

Safeguards

Attached as Schedule 5 are references to the treatment of subproject safeguard reviews.

Procurement	All goods and services to be financed under the Facility will be procured in accordance with ADB's <i>Procurement Guidelines</i> (2015, as amended from time to time).
Consulting Services	All consulting services to be financed under the Facility will be procured in accordance with ADB's <i>Guidelines on the Use of Consultants</i> (2013, as amended from time to time).
Eligibility Criteria	ADB funds shall be used to finance all types of solar rooftop subprojects that are financially sound and comply with the subproject eligibility criteria and approval procedures as outlined in the FAM.
Retroactive Financing	Retroactive financing would be allowed for eligible expenditures described in the FAM, not exceeding 20% under each tranche, incurred before loan effectiveness, but not earlier than 12 months before the signing of the loan agreement. Any retroactive financing would comply with the same ADB requirements as for any other subprojects funded under the SRIP.
Takeout Financing	PNB may also use up to 20% of the ADB funds to buy out qualified solar rooftop loans from other financial institutions under each tranche in order to better consolidate sector assets. Takeout finance may include subprojects that are financially closed or under construction. Any takeout financing would follow prevailing national norms, and comply with the same ADB requirements as for any other subprojects funded under the SRIP.
Maximum ADB Financing	ADB funds can be used to finance up to 50% of the total subproject cost. There is no maximum subproject size.
Statement of Expenditure (SOE)/Free Limit.	Under tranche 1, ADB would review at least the first 3 subprojects each approved by PNB under imprest arrangement and reimbursement arrangement, regardless of the subproject size, until ADB is satisfied with PNB's ability to manage the subproject review and disbursement process. Following ADB's satisfactory review of a representative sample of subprojects, ADB may permit a \$1 million SOE limit/free limit per subloan, under which amount no supporting documentations are 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 SRIP implementation requirements. See the FAM for more details.
Disbursements	Disbursements will be made in accordance with ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time).
Monitoring, Evaluation, and Reporting Arrangements	A set of indicators for monitoring and evaluating the performance of the ADB investment program and each subproject in relation to the goals, purposes, and outputs of each tranche, will be agreed upon with ADB within no more than 3 months from the signing of each loan agreement (in the case of an individual tranche). Results of the analyses, comments, and conclusions on the performance of the ADB investment program, and

its subprojects will be incorporated in every semi-annual report to ADB.

Schedule 2 hereto sets as the design and monitoring framework for the Facility against which the implementation effectiveness will be evaluated.

- Undertakings** Attached as Schedule 6 are the undertakings provided by PNB.
- Representations and Warranties** India and PNB represent and warrant that
- (i) PNB is a banking corporation duly incorporated and validly existing under the Indian Companies Act 1956 and the Banking Regulation Act, 1949;
 - (ii) PNB is authorized and empowered to implement its business plan and mandate as a schedule commercial bank.
 - (iii) the entry into and performance by PNB of the transactions contemplated herein is in accordance with its memorandum and articles of association and does not conflict with any applicable law or regulation or any agreement or instrument binding upon it or any of its assets; and
 - (iv) necessary approvals of the Reserve Bank of India or any other regulatory authority for the entry into and performance by PNB of the transactions contemplated herein shall have been obtained.
- Guarantee** India will provide a guarantee, in form and substance acceptable to ADB, as a condition precedent to the effectiveness of any tranche requested by PNB, and provided by ADB pursuant to the terms of this Agreement.

PUNJAB NATIONAL BANK

ASIAN DEVELOPMENT BANK

By _____

By _____

By: H. K. Parikh
General Manager
Date: 12 August 2016

By: M. Teresa Kho
Country Director
Date: 12 August 2016

INDIA

By _____

By: Rishikesh Singh
Director (MI)
Department of Economic Affairs
Date: 12 August 2016

SCHEDULE 1

MFF CONSTITUENTS

A. Road Map

1. The Government of India (government) plans to expand the country's solar rooftop capacity by 40 gigawatts (GW) by 2022. To fuel India's economic growth, its power system will have to expand rapidly over the next decade. This is also to maintain national energy security and expand energy access to all people in India.¹ To ensure environmental sustainability, the government places a high priority on renewable energy development. India's National Action Plan on Climate Change (prepared in 2008) outlines existing and future policies and programs addressing climate mitigation and adaptation. Under the plan, the government launched the Jawaharlal Nehru National Solar Mission (JNNSM) in 2010 to add 20 GW of grid connected solar energy by 2022. On 17 July 2015, the Union Cabinet approved a revised JNNSM proposal to increase the original 20 GW solar energy target to 100 GW by 2022, including 40 GW of rooftop solar energy generation.² This government target and the ongoing government sector development initiative establish the road map that is required by the multitranche financing facility (MFF).

B. Strategic Context

2. The Solar Rooftop Investment Program (SRIP) contributes significantly to the Asian Development Bank (ADB) objective of doubling annual climate financing from the current level of \$3 billion to \$6 billion by 2020, of which \$4 billion would be dedicated to mitigation, including through increased support for renewable energy. The entire \$500 million MFF is considered as climate financing. The investment program is consistent with the ADB Energy Policy (2009) by (i) promoting energy efficiency and renewable energy; (ii) maximizing access to energy for all; and (iii) promoting energy sector reform, capacity building, and governance.³ The investment program is also consistent with (i) the ADB Financial Sector Operational Plan, which recognizes financial intermediation as an important instrument for on-lending including for infrastructure; and (ii) ADB's country partnership strategy for India, 2013–2017, which includes an energy sector road map to expand clean and renewable energy capacity and financial sector development to catalyze infrastructure investments, including through credit lines.⁴ Finally, the SRIP supports India's Intended Nationally Determined Contribution, which includes targets to lower the emissions intensity of India's gross domestic product by 33% below 2005 levels (to 35% by 2030), and to increase the share of nonfossil-based power generation capacity to 40% of installed electric power capacity by 2030.

C. Policy Framework

3. The basic elements to support development of the solar rooftop market are in place, as reflected by the unbundling of state electricity boards and the presence of open access and competition among transmission and distribution companies. However, the solar rooftop market is at an early stage of development, and there is low market awareness of the latest solar

¹ India's current primary energy mix is coal (44%), biomass (24%), oil (23%), natural gas (6%), other renewables (2%), and nuclear (1%). International Energy Agency. 2015. *India Energy Outlook*. Paris.

² Government of India. 2015. *Revision of cumulative targets under National Solar Mission from 20,000 MW by 2021–2022 to 100,000 MW*. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=122566>

³ ADB. 2009. *Energy Policy*. Manila.

⁴ ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

photovoltaic technology and its financial benefits. Local power distribution companies have yet to achieve profitability, due to persistently low electricity tariffs, to become offtakers (purchasers) of rooftop solar power. Commercial banks perceive solar rooftop projects as having a high credit risk due to the sector's limited track record. Banks' capacity to evaluate, price, and monitor solar rooftop projects is also limited. There are primarily two types of solar rooftop models: (i) the standalone and (ii) aggregated (from multiple properties to achieve greater economies of scale). The two prevailing business models for large industrial or commercial properties are (i) capex, and (ii) opex.⁵

4. The government requested large financing packages from ADB, New Development Bank, and the World Bank⁶ to catalyze greater commercial finance and support solar rooftop sector development. However, the solar rooftop market is still evolving and would require a series of support measures from 2016–2022 to achieve the stated 40 GW target. A financial intermediation MFF represents a commitment to the government on an appropriate funding and TA support, while ensuring flexibility to accommodate the varying funding needs for (i) more generally, the solar rooftop sector development process (e.g., from initial early market development stage to subsequent rapid deployment stage) and (ii) more specifically, the support to Punjab National Bank (PNB)'s dedicated onlending requirements. There will be no differences in the nature of solar rooftop projects financed across tranches. Compared to a standalone project, an MFF is a more suitable funding modality to support integrated market development in the solar rooftop sector in India. The benefits of an MFF modality are demonstrated by ADB's successful implementation of a number of recent MFF financial intermediation loans in India including in the renewable energy space.⁷

D. Investment Program

5. As requested by the government, PNB would be the borrower⁸ and India would provide a sovereign guarantee to the Asian Development Bank (ADB) for the SRIP. The SRIP intends to primarily finance large solar rooftop systems on industrial and commercial buildings on standalone or aggregated basis.⁹ PNB's loans to subborrowers will be priced based on PNB's cost of funds and subproject-specific risks. The proposed accompanying TA for \$5 million is critical to integrate the building blocks of the government's sector development initiative to promote market demand, by strengthening (i) PNB's institutional capacity and (ii) market infrastructure. SRIP's value addition is to facilitate India's transition to a low carbon economy and therefore contribute to the climate change goal of reducing greenhouse gas emissions by 441,700 tons of carbon dioxide equivalent annually, or about 11 million tons of carbon dioxide equivalent over the typical 25-year lifetime of rooftop solar systems.

⁵ Under the capex model, the solar rooftop system is owned by the property owner; under the opex model, the system is owned by the developer. Sector Assessment (Summary): Energy (Renewable Energy Generation—Solar) (accessible from the list of linked documents in Appendix 2).

⁶ The World Bank's Grid-Connected Rooftop Solar Program of \$625 million was approved on 13 May 2016.

⁷ This includes: (i) India Infrastructure Finance Company: ADB. 2013. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranches Financing Facility to India for Accelerating Infrastructure Investment Program*. Manila (MFF 0077-IND for \$700 million approved on 27 September), and (ii) Indian Renewable Energy Development Agency: ADB. 2014. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranches Financing Facility to India for Clean Energy Finance Investment Program*. Manila (MFF 0087-IND for \$500 million approved on 30 October).

⁸ Punjab National Bank was selected by the Ministry of Finance to be the sole direct participating financial institution under the proposed investment program (para. 13).

⁹ SRIP may consider supporting smaller residential solar rooftop financing when that market further matures.

E. Financing Plan

6. The government program to support 40 GW of solar rooftop capacity is estimated to cost \$40 billion (Table 1). The investment plan is estimated at \$1 billion (Table 2). PNB has requested ADB financing through MFF in an amount up to \$500 million, consisting of \$330 million in loan from ADB ordinary capital resources (OCR) and \$170 million in loan from the CTF.¹⁰ The MFF consists of three tranches (tranche 1 loan of \$100 million from 2016–2018, tranche 2 loan of \$150 million from 2018–2020, and tranche 3 loan of \$250 million from 2020–2022), subject to PNB's submission of related periodic financing requests, execution of the related loan agreement and guarantee agreement with India for each tranche, and fulfillment of terms and conditions and undertakings set forth in the framework financing agreement. The first tranche of the MFF will be a loan in the amount of \$100 million to be financed entirely by CTF and administered by ADB. The CTF loan has a maturity of 40 years with a 10-year grace period. Principal repayments would be 2% for years 11–20 and 4% for years 21–40. CTF's multilateral development bank fee is 0.18% and annual service charge is 0.25%.

Table 1: Government Financing Plan (2015–2022)^a

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank	500	1.25
Other multilateral development bank foreign borrowing ^b	875	2.19
Government contribution ^c	750	1.88
Borrowers' equity (assuming 30% for all borrowers)	12,000	30.00
Remaining debt financing	25,875	64.68
Total	40,000	100.00

^a The projections made in the table above, with respect to the borrowers' equity and remaining debt financing, are estimates based on the government's 40 gigawatts solar rooftop investment needs.

^b Including \$625 million from the World Bank to State Bank of India and proposed \$250 million from New Development Bank to Canara Bank.

^c Government allocated Rs50 billion (roughly \$750 million) for 30% capital subsidy.

Source: Asian Development Bank estimates.

Table 2: Solar Rooftop Investment Program

Source	Amount (\$ million)	Share of Total (%)	Tranche 1 (\$ million)	Tranche 2 (\$ million)	Tranche 3 (\$ million)
Asian Development Bank (OCR)	330.0	33.0	0.0	80.0	250.0
Clean Technology Fund (loan)	170.0	17.0	100.0	70.0	0.0
Subproject Equity	300.0	30.0	60.0	90.0	150.0
Commercial banks and/or financiers (debt) ^a	200.0	20.0	40.0	60.0	100.0
Clean Technology Fund (TA grant)	5.0	NA	2.0	2.0	1.0
Total	1,005.0	100.0	202.0	302.0	501.0

NA = not applicable, OCR = ordinary capital resources, TA = technical assistance.

^a Any financial sources other than subproject equity and Asian Development Bank funds. The purpose is to leverage financing from the market.

Source: Asian Development Bank.

¹⁰ The Clean Technology Fund (CTF) is a \$5.2 billion fund providing middle-income countries with resources to scale up demonstration, deployment, and transfer of low-carbon clean technologies. CTF financing approvals for the investment program were received on 17 May 2016.

SCHEDULE 2

DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

Impact the Program is Aligned with			
Energy security provided to all in an environmentally sustainable manner, and renewable energy developed (Integrated Energy Policy) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
<p>Outcome Solar rooftop capacity in India increased.</p>	<p>By 2023</p> <p>a. 400 MW of solar rooftop power-generating capacity is funded by PNB (2016 baseline: 0).^b</p> <p>b. An average of additional 441,700 tons of carbon dioxide emission reduced annually from this program (2016 baseline: 0).</p> <p>c. ADB program to catalyze \$300 million project equity and \$200 million debt financing leveraged by PNB (2016 baseline: \$0 project equity and \$0 debt).</p>	<p>a–c. MNRE and relevant Government reports.</p>	<p>Protracted economic slowdown in the international and domestic markets to reduce government fiscal capacity to support the sector development.</p> <p>Change of government and solar rooftop policy.</p>
<p>Outputs</p> <p>1. Debt funding to the solar rooftop sector increased.</p> <p>2. PNB institutional capacity improved.</p>	<p>At least 500 solar rooftop subprojects approved for financing by 2022 (2016 baseline: 0).</p> <p>2a. A designated solar rooftop unit at PNB headquarters and selected branches to screen, review, price, and monitor subprojects established by September 2016 (2016 baseline: not applicable).</p> <p>2b. Annual ADB program disbursement targets (to be determined during implementation) met from 2016 to 2022 (2016 baseline: not applicable).</p> <p>2c. ADB program compliance</p>	<p>PNB's own program review reports.</p> <p>2a–2c. PNB annual reports and ADB review reports.</p>	<p>Untested solar rooftop market demand.</p> <p>Slow market reaction to government market development efforts and incentives, e.g., feed-in-tariff, renewable energy purchase obligation, and/or direct subsidies.</p> <p>PNB's declining financial position to implement the ADB program.</p>

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting	Risks
	requirements met from 2016 to 2022 (2016 baseline: not applicable).		
3. Solar rooftop market infrastructure and bankable subproject pipeline developed.	<p>3a. Subproject pipeline of 50 MW developed by MNRE channel partners (developers) for PNB financing by 2017 (2016 baseline: 0 MW of subprojects).</p> <p>3b. Capacity development program at power distribution companies, SNA, CERC, and CEA levels completed by 2021 (2016 baseline: 0).</p> <p>3c. Extensive marketing and awareness campaign program targeting industrial and commercial sectors, including businesses and properties owned and managed by women, if any, implemented by 2022 (2016 baseline: 0)</p> <p>3d. Solar rooftop web portal to promote the PNB financing facility developed by 2017.</p>	<p>3a–3d. Government of India (e.g., MOP and/or MNRE) notifications, gazettes, and reports.</p> <p>3d. Market and sector research and reports.</p>	<p>Inadequate sector-level (power distribution companies, SNA, CERC, and CEA) ownership and commitment to reform and development.</p> <p>Continued power distribution companies' financial position and associated offtaker risk.</p>
Key Activities and Milestones			
<p>1. Debt funding to the solar rooftop sector increased. (Tranche 1 for \$100 million available by December 2016, tranche 2 for \$150 million available by December 2018, and tranche 3 for \$250 million available by December 2020)</p> <p>1.1 Approve at least 500 solar rooftop subprojects for financing, by 2022.</p> <p>2. PNB institutional capacity improved.</p> <p>2.1 Establish a designated solar rooftop unit at PNB headquarters and selected branches to screen, review, price and monitor subprojects, by September 2016.</p> <p>2.2 Meet annual ADB program disbursement targets (to be determined during implementation) from 2016 to 2022 (2016 baseline: not applicable).</p> <p>2.3 Meet ADB program compliance requirements from 2016 to 2022.</p> <p>3. Solar rooftop market infrastructure and bankable subproject pipeline developed.</p> <p>3.1 MNRE channel partners develop a subproject pipeline of 50 MW for PNB financing by 2017.</p> <p>3.2 Complete capacity development program at power distribution companies, SNA, CERC, and CEA levels by 2021 (2016 baseline: 0).</p> <p>3.3 Implement extensive marketing and awareness campaign program targeting industrial and commercial sectors, including businesses and properties owned and managed by women, if any, by 2022 (2016 baseline: 0).</p> <p>3.4 Develop solar rooftop web portal to promote the PNB financing facility, by 2017.</p>			

Inputs	
Loan	
ADB OCR:	\$330 million
CTF:	\$170 million
Commercial banks and/or financiers:	\$200 million (estimated)
Equity	
Subproject Equity:	\$300 million (estimated)
Grant	
CTF:	\$5 million
Assumptions for Partner Financing	
Outputs not administered by ADB that are necessary to reach the outcome include: USAID train PNB solar rooftop unit staff on solar rooftop-specific financial credit and/or risk model. ^c	

ADB = Asian Development Bank, CEA = Central Electricity Authority, CERC = Central Electricity Regulatory Commission, CTF = Clean Technology Fund, FAM = facility administration manual, GW = gigawatt, MNRE = Ministry of New and Renewable Energy, MOP = Ministry of Power, MW = megawatt, OCR = ordinary capital resources, PNB = Punjab National Bank, SNA = state nodal agency, TA = technical assistance, USAID = United States Agency for International Development.

^a Government of India, Planning Commission. 2006. *Integrated Energy Policy*. Delhi.

^b 400 MW of solar rooftop energy is estimated to be generated solely from \$500 million ADB financing, without the additional \$300 million subproject equity or the \$200 million debt financing from other commercial sources.

^c USAID has developed a solar rooftop-specific financial credit and/or risk model to assist lending institutions in India assess, appraise, and price the solar rooftop lending projects. USAID would administer its funds to provide the relevant capacity to PNB to support the ADB program.

Source: Asian Development Bank.

SCHEDULE 3

IMPLEMENTATION FRAMEWORK

1. PNB would be the executing agency. PNB would establish a designated solar rooftop unit during implementation, associated counterpart resources, and dedicated internal capacity to implement the SRIP. The facility administration manual (FAM) would provide the detailed implementation arrangements and compliance requirements.¹¹
2. **Retroactive financing.** Retroactive financing would be allowed for eligible expenditures described in the FAM, not exceeding 20% under each tranche, incurred before loan effectiveness, but not earlier than 12 months before the signing of the loan agreement. Any retroactive financing would comply with the same ADB requirements as applied to any other subprojects funded under the SRIP.
3. **Takeout financing.** PNB may also use up to 20% of the ADB funds to buy out qualified solar rooftop loans from other financial institutions under each tranche in order to better consolidate sector assets. Takeout finance may include subprojects that are financially closed or under construction. Any takeout financing would follow prevailing national norms, and comply with the same ADB requirements as applied to any other subprojects funded under the SRIP.
4. **Maximum ADB financing.** ADB funds can be used to finance up to 50% of the total subproject cost. There is no maximum subproject size.
5. **Procurement from nonmember countries of ADB.** Although the MFF will be jointly financed by ADB and CTF, the individual tranche under the MFF may be financed solely by either CTF or ADB. In view of the multisource financing, a waiver¹² of ADB's member country procurement eligibility for the loans is sought to allow for procurement from nonmember countries of ADB¹³ under the MFF.
6. **Statement of expenditure and/or free limit.** Under tranche 1, ADB would review at least the first three subprojects approved by PNB under both the imprest and reimbursement arrangements, regardless of the subproject size, until ADB is satisfied with PNB's ability to manage the subproject review and disbursement process. Following ADB's satisfactory review of a representative sample of subprojects, ADB may permit a \$1 million statement of expenditure limit per subloan, under which amount no supporting documentation would be required, except basic subproject information for the purpose of ADB disbursement (footnote 20). For any subloan exceeding \$1 million, ADB approval would be required. ADB reserves the right to request any supporting subproject documents and to not reimburse or liquidate any subprojects that do not comply with the SRIP implementation requirements.
7. **Eligibility criteria.** ADB funds shall be used to finance all types of solar rooftop subprojects that are financially sound and comply with the subproject eligibility criteria set forth in the framework financing agreement and approval procedures as outlined in the FAM.

¹¹ Facility Administration Manual (accessible from the list of linked documents in Appendix 2).

¹² This would permit procurement of goods, works, and consultant services from nonmember countries of ADB. The Board of Directors must approve the waiver by a vote representing not less than two-thirds of the total voting power of the members of the Board.

¹³ On 18 March 2013, the Board approved a blanket waiver of member country procurement eligibility restrictions in certain cases of cofinanced ADF operations.

8. The implementation arrangements are summarized in Table 3 and described in detail in the FAM.

Table 3: Implementation Arrangements

Aspects	Arrangements
Implementation period	December 2016–December 2022 (MFF); December 2016–December 2018 (Tranche 1); December 2018–December 2020 (Tranche 2); and December 2020–December 2022 (Tranche 3)
Loan closing date	30 June 2023 (MFF); 30 June 2019 (Tranche 1); 30 June 2021 (Tranche 2); and 30 June 2023 (Tranche 3)
Management	
(i) Oversight body	Board of Directors, PNB
(ii) Executing agency	PNB
(iii) Key implementing agency	PNB
(iv) Implementation unit	New Delhi, number of staff deemed appropriate to PNB and ADB
Procurement	In accordance with ADB's Procurement Guidelines (2015, as amended from time to time) as applicable to financial intermediation loans
Consulting services	In accordance with ADB's Guidelines on the Use of Consultants (2013, as amended from time to time)
Retroactive financing	Permitted up to 20% of each tranche and total SRIP amount.
Disbursement	The loan proceeds would be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2015, as amended from time to time) and detailed arrangements agreed upon between PNB and ADB.

ADB = Asian Development Bank, PNB = Punjab National Bank, SRIP = Solar Rooftop Investment Program.

Source: Asian Development Bank.

SCHEDULE 4

SELECTION CRITERIA AND APPROVAL PROCESS FOR SUBPROJECTS

A. Selection Criteria

1. The following criteria will apply to selecting and approving subprojects under the ADB Facility. ADB has the discretion not to fund any subprojects that PNB has financed or propose to finance:

- (i) subprojects shall be for the preparation, design, installation, operations, and maintenance of electricity generation from solar photovoltaic systems on, clearly defined conventional building structures (e.g., factories, warehouses, shopping malls, and residential buildings) which will have no environmental, involuntary resettlement, or indigenous peoples impacts;¹⁴
- (ii) for subprojects proposed for the preparation, design, installation, operation and maintenance in structures that cannot be clearly defined as “conventional buildings”, PNB shall first consult ADB on each such proposed subproject, for ADB to determine that the subproject is category C for all safeguard categorizations and can be deemed eligible for financing;
- (iii) the subborrower is financially sound;
- (iv) the subprojects shall follow PNB’s Financing Norms as acceptable to ADB, including adequate collaterals, subproject equity contribution, viability gap funding if any, and any other counterpart financing;
- (v) the subprojects are either grid-connected or off-grid;
- (vi) the subprojects shall be based on any technically and commercially viable business model,¹⁵ as generally perceived by the market and deemed appropriate by ADB;
- (vii) the subprojects shall comply with the SRIP implementation requirements as stated in the legal agreement and this FAM;
- (viii) the subprojects shall comply with all national and state requirements;
- (ix) the subprojects shall have a basic level of product quality and service standards as commonly accepted by the market and PNB technical experts.

A. Subproject Approval Process

2. The subloan approval process is determined based on the disbursement method (see the Disbursement under the Financial Management Section). PNB is able to adopt both imprest (advance) and reimbursement arrangements, based on its preference.

¹⁴ ADB reserve the rights to audit any of the funded subprojects to ensure eligibility and compliance.

¹⁵ Currently, there are two main types of aggregated business models: (i) capex business model and (ii) opex business model. Under the capex model, a property owner procures and owns the solar rooftop system while an engineering, procurement, and construction (EPC) contractor/developer constructs and commissions the system. This type of solar projects could be self-owned or third-party-owned, either grid-connected or off-grid. Under the opex model, the developer (e.g., a third party renewable energy service company) procures, owns and installs the solar rooftop system and usually enters into a long-term power purchase agreement (PPA) with the property owner to provide a lower tariff than would otherwise be purchased from utility companies/local power distribution companies (discoms).

3. **Under the imprest arrangement**, the process usually starts from the branch level, from a prospective subborrower's submission of a (sub)loan application along with any requisite subproject information including feasibility study, company business profile and business plan, financial information, and permits and license, if appropriate, among others. The next step is a Know Your Customer appraisal as required by RBI guidelines to verify the credentials of the subborrower, requisite documentation, and transparency aspects on the subborrower's sources of funds from an anti-money laundering perspective. Upon confirming the basic lending eligibility, PNB technical team would proceed to the approval process in accordance with its normal business processes. At any time prior to disbursing to the subprojects, PNB would screen the subprojects against the ADB eligibility criteria before placing the eligible subprojects in the withdrawal application (see disbursement section below) and request the USD advance from ADB corresponding to the following six months' subprojects lending volume. Upon full disbursement of the subloans, PNB shall follow the liquidation procedure as outlined below. For subprojects below the SOE limit/free limit, PNB shall retain all subproject documents for possible ADB review or audit.
4. **Under the reimbursement arrangement**, the process also starts from the branch level, from a prospective subborrower's submission of a (sub)loan application along with any requisite subproject information including feasibility study, company business profile and business plan, financial information, and permits and license, if appropriate, among others. The next step is a Know Your Customer appraisal as required by RBI guidelines to verify the credentials of the subborrower, requisite documentation, and transparency aspects on the subborrower's sources of funds from an anti-money laundering perspective. Upon confirming the basic lending eligibility, PNB technical team would proceed to the approval process in accordance with its normal business processes until financial closure. Upon fully disbursing to the approved subprojects, PNB would screen the subprojects against the ADB eligibility criteria and place those eligible subprojects in the withdrawal application (see disbursement section below) and request reimbursement. To provide PNB with the flexibility to manage its ADB loans' repayment, ADB permits the reimbursements in either INR or USD. Upon disbursement of the subloans, PNB shall follow the reimbursement procedure as outlined below. For subprojects below the SOE limit/free limit, PNB shall retain all subproject documents for possible ADB review or audit.
5. **Under the retroactive financing**, PNB may finance eligible subprojects not exceeding 20% of each tranche amount, incurred before loan effectiveness, but not earlier than 12 months before the signing of the loan agreement. The detailed procedure shall follow the reimbursement arrangement as described above, and the already financed solar rooftop subprojects shall comply with the SRIP and associated implementation requirements. ADB's SOE limit/free limit shall still apply to the subprojects under the retroactive financing scheme.
6. **Under the takeout financing**, PNB may acquire eligible subprojects and portfolios from other financial institutions not exceeding 20% of each tranche amount, incurred at any time but not fully repaid. The detailed procedure shall follow the reimbursement arrangement as described above, and the already financed solar rooftop subprojects shall comply with the SRIP and associated implementation requirements, including PNB's own internal guidelines on takeout financing, and relevant RBI guidelines. ADB's SOE limit/free limit shall still apply to the subprojects acquired under the takeout financing scheme.

SCHEDULE 5

SOCIAL DIMENSIONS AND SAFEGUARD REQUIREMENTS

1. The Solar Rooftop Investment Program (SRIP) supports solar renewable energy development in India. 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 design of the SRIP incorporates some gender elements. In addition to Punjab National Bank (PNB)'s existing social schemes to support women,¹⁶, ADB would also encourage PNB and the subproject developers to promote ADB's gender inclusiveness by: (i) increasing the recruitment of women in the construction, operations and maintenance of systems and (ii) applying a gender-equal human resources management strategy in their respective operations through the effective application of gender equity laws and regulations. The implementation and progress of these measures will be regularly reported. 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 general public health conditions.

2. The safeguard categories for environment, involuntary resettlement, and indigenous peoples are all "FI" treated as "C." The solar rooftop systems do not require land space, and have no impact on involuntary resettlement and indigenous people. The nature of the solar rooftop systems is to improve the environmental conditions in India and mitigate the negative impact from global climate change. Solar rooftop projects do not require an environmental clearance in India. Recycling of solar panel modules after they reached the end of their economic life would help recover 90% of the module material. The environmental and social impacts associated with the implementation of solar rooftop 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 under each tranche. ADB will monitor program implementation to ensure that subprojects financed by the facility do not have environmental, involuntary resettlement, and indigenous peoples impacts; and that corrective actions are taken if unforeseen issues arise.

¹⁶ PNB already has a number of lending schemes that target women self-help groups: (i) National Rural Livelihood Mission that will promote lending to women self-help groups consisting of 10-15 persons and in difficult/ remote tribal areas/groups with disabled persons; (ii) Swaran Jayanti Shahari Rozgar Yojna that promotes lending as part of an Urban Self Employment Programme for urban poor living below the poverty line in any city/town and residing in the town for at least 3 years; and (iii) Urban Women Self Help Programme for urban poor women living below the poverty line in any city/town and residing in the town for at least 3 years.

SCHEDULE 6

UNDERTAKINGS

1. The Guarantor and PNB shall ensure that:
 - (a) PNB complies, at all times, with the prudential norms as made applicable to it by the Guarantor, including capital adequacy, income recognition, classification, and provisioning of nonperforming assets;
 - (b) The subprojects and subborrowers meet the eligibility criteria agreed with ADB (as set out in schedule 4 and the loan agreement for each tranche), including technical, commercial, and financial/economic viability;
 - (c) The onlending rates to subborrowers are market-based and adequate to cover all costs and risks associated with the onlending;
 - (d) The subborrowers adopt and implement appropriate procurement procedures that are based on competitive bidding and foster economy, efficiency, and transparency; and
 - (e) A subloan to a subborrower is made for only such subprojects that involve procurement of goods, works, and consulting services from ADB's member countries.

2. PNB shall select subprojects for financing under this facility in accordance with the selection and approval criteria set out below. PNB shall ensure that subborrowers will:
 - (a) have sufficient resources and financial capability to raise resources to complete and operate the relevant subproject successfully;
 - (b) not be in default under any prior loan from PNB or any other lenders;
 - (c) be able to provide appropriate security as required by PNB;
 - (d) maintain appropriate financial records of income and expenditure to the satisfaction of PNB and ADB;
 - (e) comply with and cause each subproject to comply with ADB's safeguard requirement and national and state policies, laws, and regulations relating to environment, resettlement, and indigenous peoples applicable at the date of the relevant periodic financing request (PFR) is submitted.

3. PNB shall only finance commercially viable subprojects and provide financing on commercial terms. PNB will undertake extensive due diligence for all aspects of subproject economics and creditworthiness prior to loan approval by PNB.

4. PNB shall ensure that (a) accountability and transparency in PNB are maintained in its operations through stakeholder meetings and publication of progress reports through the duration of the Facility; and (b) internal procedures and controls are instituted, maintained, and complied with to prevent any corrupt, fraudulent, collusive, or coercive practices.

5. PNB shall comply with ADB's Anticorruption Policy (1998, as amended to date) and (a) shall ensure that the anticorruption provisions acceptable to ADB and PNB are included in all bidding documents and contracts financed by ADB in connection with the Project, including provisions specifying the right of ADB to review and examine the records and accounts of PNB, the Qualified Enterprises and all contractors, suppliers, consultants, and other service providers as they relate to the Qualified Subprojects and the Project, and as included in the FAM; (b) shall

allow and assist ADB's representatives to carry out random spot checks on the work in progress and utilization of funds for the Project; (c) acknowledge that ADB reserves the right to investigate directly or through its agents any alleged corrupt, fraudulent, collusive or coercive practice relating to the Project; and (d) cooperate with any such investigation and extend all necessary assistance for satisfactory completion of such investigation, and as included in the FAM.

6. PNB shall ensure that its annual report to its board of directors, and ADB, includes a report and discussion of the implementation of its corporate governance practice. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to review and examine any alleged corrupt, fraudulent, coercive practices relating to subprojects.

7. PNB shall establish an investment program performance monitoring system (IPPMS) acceptable to ADB within 3 months from the signing of this FFA. For the IPPMS, PNB will select a set of clearly measurable performance monitoring indicators relating to implementation, improvements, institutional development, and capacity building milestones, including those in the design and monitoring framework. PNB shall, through the project management unit, review the performance of the Facility against the DMF on a quarterly basis which shall be completed by the tenth day of the month following the quarterly review. PNB management shall review the performance of the Facility semi-annually and shall forward semiannual progress reports to ADB by the tenth day of the month following the semiannual review. ADB will review the quarterly progress reports and semiannual reports and undertake the annual review missions and tripartite reviews chaired by the Guarantor. In addition, a midterm review of the investment program will be conducted in FY2018-19.

9. PNB shall facilitate ADB's annual reviews of management, financial, and operational performance of PNB and subprojects financed under the Facility after the closing of withdrawals.

10. PNB shall develop and maintain the capacity of the solar rooftop unit staff to perform the responsibilities of the SRIP, including developing and maintaining specialist capacity per the design of the accompanied technical assistance grant.

11. PNB shall comply at all times with the prudential norms as made applicable to PNB by relevant authorities in India.

12. PNB shall ensure that it has no arrears in repayment of its current debt obligations.