FRAMEWORK FINANCING AGREEMENT
(INDIA: ASSAM POWER SECTOR INVESTMENT PROGRAM)

Parties

This Framework Financing Agreement ("FFA") dated 13 May 2014 is between India acting by its President ("India") and Asian Development Bank ("ADB").

MFF Investment Program

India is committed to, and will cause the State of Assam (the "State") to implement, the Assam Power Sector Investment Program (the "Investment Program"), which is an integral part of the State's power sector road map (the "Road Map"). Both the Road Map and the Investment Program are described in Schedule 1 hereto.

The total cost of the Investment Program over the period 2014 to 2024 is expected to be $430 million equivalent. The total cost of the State's program under the Road Map is expected to be $3.5 billion equivalent.

Multitranche Financing Facility

The Multitranche Financing Facility (the "Facility") is intended to finance projects under the Investment Program, provided that such projects comply with the criteria set out in Schedule 4 hereto and that understandings set out in this FFA are complied with.

These may include:

(i) Replacement of an old and less efficient gas power plant with a new plant with capacity of 70 mega-watt (MW);

(ii) Construction of a 120 MW hydropower plant, including associated transmission line;

(iii) Construction and/or upgrading of distribution infrastructure; and

(iv) Support for project implementation and preparation of subsequent tranches of the Investment Program, introduction of enterprise resource planning (ERP) system, training, and capacity building.

This FFA does not constitute a legal obligation on the part of ADB to commit any financing. ADB has the right to deny any financing request made by INDIA, cancel the uncommitted portion of the Facility, and withdraw INDIA'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.

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

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 Investment Program is summarized below.

Financing Source	**Total** ($ million)	**Share (%) of Total**
Asian Development Bank	300.00	70
India	130.00	30
Total (Investment Program)	**430.00**	**100**

Financing Terms

ADB will provide loans to finance projects under the Investment Program, as and when the latter are ready for financing, provided, INDIA is in compliance with the understandings hereunder, and the projects 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, 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.

Commitment charges are not payable on the Facility. They are payable only on financing actually committed by ADB as a loan. ADB rules on commitment charges, 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 three hundred million US dollars ($300,000,000). It will be provided in individual tranches from ADB's ordinary capital resources.[1]

Availability Period

The last date on which any disbursement under any tranche may be made will be 30 June 2024. The last financing tranche is expected to be signed no later than 31 December 2018.

Terms and Conditions

INDIA will cause the proceeds of each tranche to be applied to the financing of expenditures of the Investment Program, in accordance with conditions set forth in this FFA and the legal agreements for each tranche.

Execution

The Executing Agencies will be the State, Assam Power Generation Corporation (APGC) for generation components, and Assam Power Distribution Company (APDC) for distribution components. The Executing Agencies will implement the 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 Requests

INDIA may request, and ADB may agree, to provide loans under the Facility to finance the Investment Program and its related projects upon the submission of a Periodic Financing Request (PFR). Each PFR should be submitted by INDIA. INDIA will make available to the State and through the State to APGC and APDC, 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 thirty million US dollar ($30,000,000), or its equivalent. ADB will review the PFRs and, if found satisfactory, prepare the related legal agreements.

The projects 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 INDIA and ADB.

Until notice is otherwise given by INDIA, the Secretary,

[1] Provisions of the Ordinary Operations Loan Regulations applicable to LIBOR-Based Loans Made from ADB's Ordinary Capital Resources, dated 1 July 2001, would apply to each Loan, subject, to modifications, if any, that may be included under any Loan Agreement (said Ordinary Operations Loan Regulations as so modified, if any, being hereinafter called the Loan Regulations).

Additional Secretary, Joint Secretary, any Director or any Deputy Secretary in the Department of Economic Affairs, Ministry of Finance, will be INDIA'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 the following procedures and undertakings:

(i) INDIA will have notified ADB of a forthcoming PFR in advance of the submission of the PFR.
(ii) INDIA will have submitted a PFR in the format agreed with ADB.
(iii) ADB may, in its sole discretion, for reasons provided, decline to authorize the negotiation and execution of any legal agreement for a tranche.
(iv) 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 amount;
(ii) Description of the projects to be financed;
(iii) Cost estimates and financing plan;
(iv) Implementation arrangements specific to the projects;
(v) Confirmation of the continuing validity of and adherence to the understanding in this Agreement;
(vi) Confirmation of compliance with the provisions under previous Loan Agreement(s) and Project 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 Safeguard Frameworks that will be complied with during the implementation of the Facility.

ADB's Safeguard Policies in effect as of the date of signing of legal agreements for a tranche will be applied with respect to the projects financed under such financing tranche.

Procurement

All goods and services to be financed under the Facility will be procured in accordance with ADB's *Procurement Guidelines* (2013, 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 *Guidelines on the Use of Consultants* (2013, as amended from time to time).

Advance contracting; Retroactive financing	Under each tranche, ADB may, subject to its policies and procedures, allow on request (i) advance contracting of civil works, equipment and consulting services and (ii) retroactive financing of eligible expenditures for civil works, equipment and consulting services up to 20% of proposed individual loan, incurred prior to loan effectiveness but not earlier than 12 months before the date of signing of the related legal agreement. India acknowledges that any approval of advance contracting and/or retroactive financing will not constitute a commitment by ADB to finance the related project.
Disbursements	Disbursements will be made in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time) and detailed arrangements agreed between India and ADB.
Monitoring, Evaluation, and Reporting Arrangements	The State, APGC and APDC, the Executing Agencies of the Investment Program, will be responsible for overall implementation of the Investment Program. The Project Director of the Project Management Unit, established under the Chairman of APGC and APDC, will be responsible for coordinating with INDIA and the State, and coordinating with and reporting to ADB. Schedule 2 hereto sets out the Design and Monitoring Framework for the Investment Program, against which the implementation effectiveness will be evaluated.
Undertakings	Attached as Schedule 6 are the undertakings provided by INDIA, the State, APGC and APDC.
Representations And Warranties	INDIA will cause the State to ensure that each of the following representations is accurate at the time a PFR is submitted: (i) APGC and APDC are limited liability companies, duly established and validly existing under the laws of India. (ii) The execution, delivery and performance by APGC and APDC of the transactions contemplated by the Facility do not and will not violate or conflict with: (a) any law, regulation, governmental approval or judicial or official order applicable to or binding on it; (b) its constitutional documents; and (c) any document which is binding upon it or any of its assets. (iii) APGC and APDC have obtained, or will have obtained, all approvals, licenses, consents and exemptions required to conduct their business and to construct and operate the projects, to the extent they are required at the relevant

time.

(iv) No litigation, arbitration or administrative or other proceedings are current, or pending, to the best of its knowledge, which could reasonably be expected, if adversely determined, to have a material adverse effect on APGC and/or APDC in relation to the Investment Program.

INDIA	ASIAN DEVELOPMENT BANK
By________________________	By______________________
Sheyphali B. Sharan	M.Teresa Kho
Director, DEA	Country Director

SCHEDULE 1

MFF CONSTITUENTS

A. Road Map

1. **Country Context.** India's power sector has a history of increasing demand for, and chronic shortages of, electricity. India's high economic growth rates since 2003 have added to the growing energy needs. India has accelerated the development of conventional and non-conventional generating capacity in the last decade (2004-2013). Despite this significant capital investment in generation capacity, energy deficits persist at the national level. Despite having installed power generation capacity of about 225 gigawatt (GW), India faced a peak power deficit of 9% (12 GW) as of May 2013. Power shortages have adversely affected the country's economy: in FY2012, the cost of power shortages in Indian economy was about $68 billion (0.4% of the gross domestic product). Improvement of the power sector is essential for the economic well-being of the country and enhancement of the quality of life of its citizens.

2. During the 2008-2012 period, power generation capacity has grown by approximately 50%, and transmission capacity has increased by about 30%. As per the 12th Five Year Plan, the future expansion in power generation capacity in India is planned for about 88 GW. In order to meet this capacity expansion, investment in the transmission sector needs to be increased. Overall, an addition of 90,000 circuit kilometer (km) of 765-220 kilovolt (kV) lines, 154,000 megavolt ampere (MVA) of substation capacity and 27,350 megawatt (MW) of national grid capacity is required in order to meet the 12th Five Year Plan targets. For this purpose, an investment of $35 billion is planned in the power transmission sector. Distribution segment remain the weakest component in the power sector of India. Lack of adequate investments, high distribution losses, and financially unsustainable distribution companies are common problems in most of states.

3. About 75% of the population has access to electricity in India.[2] However, the rate of electrification varies considerably across the country. In the states of Assam, in particular, only about 37% of the households have access to electricity. Per capita electricity consumption is about 210 kilowatt hour (kwh) per annum against a national average of 849 kwh per annum. Under the National Rural Electrification Policy (2004), the Rajiv Gandhi Grameen Vidyutikaran Yojana and Re-structured Accelerated Power Development and Reform Programme are being implemented in many states of India for increasing access to electricity in rural areas. However, connectivity is only part of the problem, since supply shortages coupled with unreliable and underinvested distribution systems mean that even the connected rural end-users face unreliable service.

4. **State Context.** Assam's power sector is characterized by poor performance: only about 37% of the households have access to electricity and these households face about 5 to 6 hours power cuts per day. The state's peak demand for power was 1,250 MW in FY2012 against the availability of 960 MW, indicating a shortfall of 23%. Only about 30% of the state's 700 tea gardens – one of the mainstays of the Assam economy - are supplied with grid electricity. On the supply side, Assam is heavily dependent on power imports from outside of the state, with only about 25% of demand currently met by in-state generation. During peak periods, Assam is forced to purchase as much as 15% of its power requirement from independent power producers at very high costs. The poor financial performance of the state's generation company,

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[2] www.worldenergyoutlook.org/resources/.../accesstoelectricity/

Assam Power Generation Corporation (APGC), imposes a burden on state's economy. Demand for power in Assam is projected to increase to 2,200 MW by FY 2020. Generation sector requires major investments for increasing capacity to meet the growing demand.

5. The state's power distribution company, Assam Power Distribution Company (APDC), has historically had some success in reducing losses: distribution losses came down to 24% in FY2012 from 42% in FY2001. The loss reduction has stagnated in the past three years due to inadequate investments and poor management practices. APDC's inability to meet the loss reduction targets approved by Assam Electricity Regulatory Commission (AERC) has resulted in revenue shortfalls. APDC has petitioned for distribution loss allowance of 23% for FY2014, and 22% for FY2016. Achieving these targets requires capital investments and improvements in distribution system management.

6. Power companies (APGC and APDC) do not have sufficient cash flow to meet debt service obligations, invest in their capital assets and build capacity of their staff. The broader economic implications of the poorly performing power sector include curtailed competitiveness and productivity, fewer job opportunities, reduced private sector investment and inefficient use of resources. Supply deficits also force consumers to use more expensive, less efficient and polluting energy sources, such as smaller diesel generators.

B. Strategic Context

7. The Asian Development Bank (ADB) has been a long standing partner in the power sector in Assam since 2003. It supported the sector with five loans totaling $450 million[3] for power sector reforms and transmission and distribution improvements. The power sector master plan and associated sector road map are consistent with the Government of India's (the government), as well as with ADB's, development goals and strategies. The government's 12th Five Year Plan continues the 11th Plan's infrastructure investment imperative and also includes expanded use of renewable energy resources to increase energy availability in the country. The investment program is also consistent with ADB's country partnership strategy (CPS) (2013-2017) which envisages expansion, improvement and better management of energy systems through renewable energy development, transmission and distribution systems improvement and institutional strengthening. The proposed investment program contributes to achieving the ADB's *Energy Policy*[4] objectives of promoting energy efficiency and renewable energy, access to energy for all and capacity building and governance.

C. Policy Framework

8. The Electricity Act of India (2003) (the Act) enabled unbundling of the state power utilities separating generation, transmission and distribution functions. The Act also established and empowered the regulatory agencies at state and national levels, enabled open access to transmission networks and promoted competition in the electricity industry. The National Electricity Policy (NEP) of 2005 established targets to increase availability and eliminate power shortages, establish the lifeline consumption levels, and ensure profitability of sector entities.

[3] $250 million for the Assam Power Development Program, ADB. 2003. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grants Assam Power Sector Development Program*. Manila. (Loan 2036-IND and Loan 2037-IND); and $200 million for the Assam Power Sector Enhancement Investment Program, ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranche Financing Facility and Technical Assistance Grant Assam Power Sector Enhancement Investment Program*. Manila. (Loan 2592-IND, Loan 2677-IND, and Loan 2800-IND).

[4] http://www.adb.org/documents/energy-policy

The Rural Electrification Policy of 2006 includes provisions for accelerated rural electrification in India through both grid and off-grid electrification and innovative financing and operating mechanisms to enable a rapid expansion of the services to rural areas. The 12th Five Year Plan (2012-2017) brings out the need to invest in renewable energy and frontier technologies.

9. In 2003, the Government of Assam (GOA) introduced a Power Policy Statement highlighting the need to: (i) ensure commercial orientation, efficiency and financial viability of the power sector; (ii) carry out technical, managerial and administrative restructuring of power utilities; (iii) increase the number of state operational utilities; and (iv) promote private sector participation in the sector. To implement this policy framework, GOA unbundled the Assam State Electricity Board (ASEB) into five companies: APGC; Assam Electricity Grid Corporation (AEGC); and three distribution companies: Central Assam Electricity Distribution Company (CAEDC), Lower Assam Electricity Distribution Company (LAEDC), and Upper Assam Electricity Distribution Company (UAEDC). The latter three were subsequently (in 2009) merged into one company, the APDC. The ASEB was formally dissolved in 2013. AERC oversees the regulatory aspects of the sector.

D. Investment Program

10. The total investment requirement for Assam's power sector over the FY2012-FY2022 period is about $3.5 billion. The proposed investment program selected a portion of total requirement considering the priority needs. At $430 million, the investment program represents approximately 12.6% of the overall investment requirement for the state. It finance investments to: augment and improve in-state generation capacity through the replacement of an inefficient gas-fired generating plant and construction of new hydropower plant; continue to address distribution loss reduction and efficiency improvement through renovation and modernization; support project preparation and implementation supervision, introduce enterprise resource planning system; and provide training and capacity building on financial management, procurement, project management, monitoring and evaluation, demand side management, and human resource management .

11. The GOA prepared a power sector master plan with ADB assistance[5] covering the 12th (2012-2017) and 13th (2017-2022) planning periods. Objectives of the master plan are to: (i) achieve universal access to electricity by 2022; (ii) improve quality and reliability of power supply; and (iii) remove energy sector constraints to improve the economy of the state. This plan includes a sector road map including a generation plan, a transmission plan and a distribution plan with a total cost of about $3.5 billion. According to the plan the state generation capacity will be increasing from 365 MW (as of May 2013) to 1,410 MW by March 2022. The total cost of this capacity addition is estimated to be $1.2 billion. In addition, the North Eastern Region of India is expected to increase generation capacity by 3,636 MW[6] during the 12th five year plan period. Assam expects to get its share of about 990 MW from these central generating stations to cater to the state's growing demand.

12. Transmission plan of the road map envisages construction of 88 transmission substations, and about 4,800 circuit kilometers of transmission lines. The estimates cost of the transmission plan is about $1.1 billion. Similarly the distribution plan envisages building of 265 distribution substations and 63,500 circuit km of distribution lines to provide about 7.1 million new power connections at a cost of about $1.1 billion. Loss reduction remains a key focus of

[5] Updating Load Forecast and Power System Master Plan for Assam technical assistance (TA 8129).
[6] 2,810 MW hydro and 826 MW gas.

GOA's Road Map for the distribution subsector; it aims to reduce the total losses to 19% (comprising 15% distribution loss and 4% transmission loss) by FY2017. The Road Map also includes institutional strengthening initiatives including improved construction supervision capabilities, enhanced management of ongoing projects, improved financial management systems, and a computerized management system by implementing the enterprise resource planning (ERP) system. Summary of the sector roadmap is given in Figure 1. Table 1 provides estimated investment costs.

Figure 1: Summary Sector Road Map for Power System Master Plan for Assam

State's Objective

Achieving universal access to electricity, improving quality and reliability of power supply and hence improve the economy of the State on par with rest of the Nation.

Strategic Objective

1. Bridging the supply-demand gap in power generation through power purchases and building new power plants.
2. Improving the reliability and efficiency in the transmission network.
3. Distribution system efficiency improvement and delivery of quality power supply to end-use customers.

Power System Master Plan (2012 – 2022)

Activities

1. Building new, efficient power plants.

2. Upgrading transmission system.

3. Upgrading of distribution system.

4. Reducing the distribution losses and achieving financial sustainability of power companies.

5. Building capacity of agency staff for efficient delivery of services.

Targets

1. **Generation**: Generation capacity increased to 1,410 MW

2. **Transmission**:
Transmission lines: 4,800 km
New substations: 88

3. **Distribution**: Distribution lines: 63,500 km
New substations: 265
New household customers: 7,152,244

4. **Loss reduction**: Reduce distribution losses to 15% by 2017

5. **Capacity Building**: Fully functioning enterprise resource planning system by 2018

Table 1: Power Sector Investment Plan (2012-2022)

Year	GOA Investment Fund Requirements (in $ million) APGC (Generation)	AEGC (Transmission)	APDC (Distribution)	Total (Generation+ Transmission+ Distribution)
2012 (Actual)	20.17	21.45	13.47	55.09
2013	62.15	181.92	30.81	274.88
2014	157.53	70.83	158.41	386.77
2015	221.29	33.60	139.46	394.35
2016	410.76	332.92	143.06	886.74
2017 to 2022	346.79	492.39	637.27	1476.45
Total	**1,218.69**	**1,133.11**	**1,122.482**	**3,474.29**

Source: Assam Power Sector Master Plan

13. **Physical Investment.** The outputs of the Investment Program will be (i) upgraded and expanded generation system; (ii) upgraded and expanded distribution system; and (iii) strengthened institutional capacity of APGC and APDC. Outputs under generation capacity upgrading and expansion includes: (i) replacing of inefficient and old open gas cycle turbines with the more efficient reciprocating internal combustion gas engines with 70 MW capacity and (ii) construction of a new hydropower plant with 120 MW capacity. Output under upgrading and expansion of distribution system include construction of about 30 33/11 kV substations and 50 km of 11 kV distribution lines.

14. **Non-Physical Investment** The weak capacity of power sector institutions in Assam requires long term engagement in the sector to help achieving its long term objective, universal access to power. The MFF modality allows blending of physical investments with institutional capacity building with a long term focus. The physical investment in generation and distribution would be supported by nonphysical outputs, including institutional capacity development. Capacity development has three major subcomponents: (i) project preparation and implementation support; (ii) enterprise resource planning (ERP) support; and (iii) capacity building and training. Project preparatory support will be provided for development of tranche 3 of the MFF and implementation support is for the Lakwa gas power plant in tranche 1. ERP support includes both hardware and software for introducing computerized management system for APGC. Capacity building and training will cover financial management and auditing, project management, procurement, monitoring and evaluation, human resource management, demand side management, and social and environment safeguards.

15. The Investment program is estimated to cost $430 million (Table 2). First two tranches are relatively small because of the nature of the investments and low absorptive capacity of the executing agencies.

Table 2: Investment Program ($ million)

Item	Investment Program	Tranche 1 (2014)	Tranche 2 (2014)	Tranche 3 (2015)
A. Base Cost[a]				
1. Lakwa Power Plant	46.0	46.0	0.0	0.0
2. Capacity strengthening	5.0	5.0	0.0	0.0
3. Upgrading and expansion of distribution system	50.0	0.0	50.0	0.0
4. Lower Kopili Hydropower Station	239.7	0.0	0.0	239.7
Subtotal (A)	**340.7**	**51.0**	**50.0**	**239.7**
B. Contingencies[b]	58.0	10.2	10.0	37.7
C. Financing Charges During Implementation[c]	31.3	0.8	2.0	28.6
Total (A+B+C)	**430.0**	**62.0**	**62.0**	**306.0**

[a] In mid-2013 prices. Includes taxes and duties of about $14 million to be financed from government resources.
[b] Physical contingencies computed at 8.8% of base costs for tranche 1, 5% for tranche 2 and 3% for tranche 3. Price contingency computed using ADB's forecasts of international (1.5.%) and domestic inflation (8.3%).
[c] Includes interest and commitment charges. Interest during construction for ADB loan(s) has been computed at the 5-year forward London interbank offered rate plus a spread of 0.2%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount.
Source: Asian Development Bank estimates.

16. The financing plan is in Table 3.

Table 3: Financing Plan

	Investment Program Funding ($ million)							
	Tranche 1 (2014)	**% Share**	**Tranche 2 (2015)**	**% Share**	**Tranche 3 (2016)**	**% Share**	**Total**	**% Share**
Asian Development Bank [ordinary capital resources (loan)]	50.0	80.6	50.0	80.6	200.0	65.4	**300.0**	**69.8**
Government of Assam	12.0	19.4	12.0	19.4	106.0	34.6	**130.0**	**30.2**
Total	**62.0**	**100.0**	**62.0**	**100.0**	**306.0**	**100.0**	**430.0**	**100.0**

Source: Asian Development Bank estimates.

SCHEDULE 2
DESIGN AND MONITORING FRAMEWORK FOR THE INVESTMENT PROGRAM

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
Impact Increased availability of electricity in Assam	By 2027: load shedding in the state reduced to zero (Baseline 2013: up to 5–6 hours/day)	CEA and MOP publications	**Assumptions** Proposed central generating station (northeast and eastern region) and independent power producer projects are commissioned as planned. **Risk** Increase in fuel prices due to international market conditions and inability of APDC to purchase sufficient power to meet the demand.
Outcome Increased capacity and efficiency of energy generation and distribution systems in Assam	By 2024: Energy generation increased by 962 GWh/year Distribution losses reduced to 15% (Baseline 2012: 25%)	For all indicators: APGC and APDC annual reports, and CEA and MOP statistics	**Assumption** Other power sector distribution projects in the state funded by other agencies are completed as planned. **Risk** A long-term gas supply is not available for the new gas power plant.
Outputs 1. Generation system upgraded and expanded 2. Distribution system upgraded and expanded 3. Institutional capacity of APGC and APDC strengthened	By 2018: Lakwa 4x15 MW gas power generation units replaced with new gas engines with (7x10) MW of total capacity By 2024: Lower Kopili Hydro Project 120 MW (peaking run-of-river) constructed By 2022: About 30 33/11 kV substations upgraded or built About 100 km of 11 kV lines installed By 2018: ERP system fully operating By 2017: About 30 staff trained on procurement, project implementation, demand management, safeguards, and monitoring and evaluation By 2017: about 70 staff trained on financial and	For all indicators: APGC and GOA, annual reports For all indicators: APDC and GOA annual reports For all indicators: project review reports of executing agencies	**Assumption** All statutory and nonstatutory approvals for Lower Kopili hydropower plant are received on time. **Risk** Geological uncertainties in Lower Kopili hydro project may lead to cost and time overrun.

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks
	human resource management		
4. Project management system in place	Investment program implemented on time within allocated budget		

Activities with Milestones	Inputs
1. Generation system upgraded and expanded 1.1. Replacement of Lakwa gas power plant 1.1.1. Complete procurement by Q1 2015 1.1.2. Complete construction of Lakwa gas power plant by Q4 2018 1.2. Construction of 120 MW Lower Kopili hydroelectric power plant 1.2.1. Complete procurement by Q2 2016 1.2.2. Complete construction by Q4 2023 2. **Distribution system upgraded and expanded** 2.1 Complete procurement by Q2 2015 2.2 Complete construction by Q4 2020 3. **Institutional capacity of APGC and APDC strengthened** 3.1 Complete detailed needs assessment by Q1 2015 3.2 Develop ERP systems by Q4 2015 3.3 Develop training modules by Q2 2015 3.4 Conduct training through 2015–2017 3.5 Initiate construction supervision for Lakwa gas power plant by Q1 2015 3.6 Prepare Lower Kopili hydroelectric power project documents by Q3 2015 4. **Project management system in place** 4.1 Advertise bid for project 1 by Q1 2014 4.2 Recruit consultants for capacity strengthening by Q4 2014 4.3 Submit PFR 2 by Q4 2014 4.4 Advertise bids for tranche 2 by Q4 2014 4.5 Submit PFR 3 by Q4 2015 4.6 Advertise bids for tranche 3 by Q2 2016	**ADB (loan):** OCR $300 million (in three tranches) **Government:** $130 million (in three tranches)

ADB= Asian Development Bank; APDC = Assam Power Distribution Company; APGC = Assam Power Generation Corporation; CEA = Central Electricity Authority; CGS= Central Generating Station; ER = Eastern Region; ERP = enterprise resource system, GOA = Government of Assam; GWh = gigawatt hour; HEP = hydroelectric power; kV = kilovolt; km= kilometer; MOP = Ministry of Power; MW = megawatt, NER = North Eastern Region; OCR = ordinary capital resources; PFR = periodic financing request.

SCHEDULE 3

IMPLEMENTATION FRAMEWORK

1. Unless otherwise stipulated in any of loan or project agreements under the Facility, the Facility shall be implemented as follows:

Implementation Arrangements

2. India will cause the State and through the State, the Assam Power Generation Corporation (APGC) and Assam Power Distribution Company (APDC) to implement the projects under the Facility in conformity with the requirements of this Framework Financing Agreement (FFA) and the Facility Administration Manual/Project Administration Manual, as the case may be, as stipulated in the loan and project agreements for each project under the Facility.

3. APGC and APDC will be the executing agencies (EAs) responsible for implementing the overall Investment Program. APGC will the EA for generation projects; and APDC will be the EA for distribution project. The Project Management Unit (PMU) established under the erstwhile Assam State Electricity Board (ASEB) will continue to function as the PMU under the Chairmanship of APGC, Assam Electric Grid Corporation (AEGC) and APDC. The PMU is headed by a Project Director with staffing from AGPC, AEGC, and APDC. For project implementation, APDC and APGC already have established and functioning Project Implementation Units (PIU).

4. The PMU and PIUs will employ sufficient staff for the duration of the Investment Program with adequate and relevant expertise in the field of project management, financial management, engineering, construction supervision, procurement, equipment inspection and testing, and environmental and social safeguards implementation. The PMU and PIUs will be equipped with the necessary office space, facilities, equipment, support staff and management information systems for the entire duration of the Investment Program. To the extent reasonably possible, the same persons must be assigned to key positions in the PMU and PIUs for the entire duration of the implementation of Investment Program.

5. The State, APGC and APDC will arrange for adequate counterpart funding for the timely implementation of the projects, including, without limitation, any funds required to meet additional costs arising from design changes, price escalation in construction costs and/or unforeseen circumstances. APGC and APDC and the State will provide, as necessary, respective counterpart staff, land, facilities, the cost of making land available, and assistance, and implementation and monitoring of the initial environmental examination/environmental (IEE)/environmental impact assessment (EIA), (including cost of environmental management plan (EMP) and mitigating unforeseen environmental impacts, beyond the estimates), grievance redress mechanism, resettlement plan (RP) and indigenous people plan (IPP), utility relocation, general management expenses, in a timely manner.

6. Subject to the provisions of this FFA, the State will make the proceeds of individual loans available to APGC and APDC promptly, on terms and conditions mutually acceptable to India and ADB. India shall cause the State to submit the Onlending Arrangements to India and ADB within one month from the Effective Date.

Performance Monitoring, Review and Progress Reports

7. ADB will field an inception mission within 3 months of the approval of the Facility. ADB will review the implementation and operation of the Facility based on the quarterly progress

reports and meet with State, APGC and APDC on semi-annual basis to discuss the progress of the individual projects and any changes to implementation arrangements or remedial measures required to be undertaken towards achieving the objectives of the projects, and the Facility under the Investment Program.

8. The PMU will establish, for the Facility as well as for each project under the Facility, a project performance monitoring system as required by ADB. The performance reports for each project will be compiled with preparing Facility level performance reporting.

9. The PMU will prepare progress reports for respective projects under the Facility and submit these to ADB on a quarterly basis within 30 days from the end of each quarter. Each report will provide a narrative description of progress made during the period with respect to the project, changes in the implementation schedule, problems or difficulties encountered, and the work to be carried out in the next period. The progress report will also include project expenditures for the year to date and total expenditure to date. APGC and APDC shall undertake periodic project performance review under each project, as also for the Facility to evaluate the scope, implementation arrangements, progress and achievements of objectives of the related project and the overall Facility. Performance shall be evaluated based on indicators and targets stipulated in the Design and Monitoring Framework for the Investment Program and individual projects under the Facility.

10. A midterm review shall be carried out 2 years after the loan effectiveness for each project as also for the Facility focusing on all aspects, including but not limited to, the technical, engineering, financial, resettlement, environmental and social aspects, and reviewing the financial status of APGC and APDC. The review will allow for any necessary midcourse corrections to ensure successful project implementation and achievement of objectives of the overall Facility and the Investment Program.

11. APGC and APDC will furnish to ADB a project completion report within 3 months of physical completion of each related tranche, and Facility completion report within 3 months of physical completion of the Facility. These reports will cover a detailed evaluation of projects and the Facility, respectively, covering the design, costs, contractors' and consultants' performance, social, environmental and economic impacts, economic rate of return, and other details for each project and the Facility as may be requested by ADB.

Audit and Accounting

12. For each project under the Facility:

(i) APGC and APDC, as applicable, will (a) maintain separate accounts and records; (b) prepare annual financial statements in accordance with accounting principles acceptable to ADB; (c) have such financial statements for the project audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with international standards for auditing or the national equivalent acceptable to ADB; (d) as part of each such audit, have the auditors prepare a report (which includes the auditors' opinion on the use of the Loan proceeds and compliance with the financial covenants of relevant Loan Agreement) and a management letter (which sets out the deficiencies in the internal control of the Project that were identified in the course of the audit, if any); and (e) furnish to ADB, no later than 6 months after the close of the fiscal year to which they relate, copies of such audited financial statements, audit report and management letter, all in the English language, and such other information concerning these documents and the audit thereof as ADB shall from time to time reasonably request; and

(ii) ADB will disclose the annual audited financial statements for the projects under the MFF and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website.

(iii) In addition to annual audited financial statements referred to in subsection (i) hereinabove, APGC and APDC will (a) provide its annual financial statements prepared in accordance with national accrual-based financing reporting standards acceptable to ADB; (b) have its financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with international standards for auditing or the national equivalent acceptable to ADB; and (c) furnish to ADB, no later than 1 month after approval by the relevant authority, copies of such audited financial statements in the English language and such other information concerning these documents and the audit thereof as ADB shall from time to time reasonably request;

(iv) APGC and APDC will enable ADB, upon ADB's request, to discuss the financial statements for the Project and APGC/APDC and their financial affairs where they relate to the Project with the auditors appointed by APGC and APDC pursuant to subsections (i)(c) and (iii) hereinabove, and shall authorize and require any representative of such auditors to participate in any such discussions requested by ADB. This is provided that such discussions will be conducted only in the presence of an authorized officer of APGC and APDC, unless APGC and APDC will otherwise agree.

Disbursement

13. India will provide the ADB loan proceeds under each project to the State, and through the State to APGC and APDC, as appropriate, and will cause the proceeds to be applied to the financing of expenditures on the subprojects and the capacity development component, in accordance with the conditions set forth in this FFA and the legal agreements for each tranche. The State will onlend funds to APGC and APDC under terms mutually acceptable to the India and ADB.

14. The Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time), and detailed arrangements agreed upon between the India, the State, and ADB.

Projects Implementation

15. The State, through APGC and APDC, will ensure that the subprojects are evaluated and selected in accordance with the criteria set out in the Schedule 4 to this FFA and implemented in accordance with the procedures set out under this FFA and the Facility Administration Manual or Project Administration Manual as the case may be. All documents forming the basis for screening, selection and processing of subprojects will be made available to ADB upon request and will be kept available for such purposes for a minimum period of five years from the date of the relevant project completion report for each project under the Facility.

16. The State, through APGC and APDC, will ensure that civil works contracts under the projects follow all applicable labor laws of India and the State and that these further include provisions to the effect that contractors; (i) carry out HIV/AIDS awareness programs for labor and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; and (ii) follow and implement all statutory provisions on labor (including not employing or using children

as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts will also include clauses for termination in case of any breach of the stated provisions by the contractors.

17. The State, through APGC and APDC, will ensure that all bidding documents and contracts include the anticorruption provisions mutually agreeable to ADB, APGC and APDC, including provisions specifying the right of ADB to review and examine the records and accounts of the executingagencies and all contractors, suppliers, consultants, and other service providers as they relate to the projects under the Facility.

18. The State will ensure that each project under the Facility is undertaken in conformity with the Environmental Management Plan, Resettlement Plan, Indigenous Peoples Plan, and Gender Action Plan, as appropriate and as agreed between ADB, India, and the State as listed in the Facility Administration Manual/Project Administration Manual.

SCHEDULE 4

SELECTION CRITERIA AND APPROVAL PROCESS FOR SUBPROJECTS

A. Selection Criteria

1. The initial selection and preparation of subprojects will be the responsibility of Assam Power Generation Corporation (APGC**APGCAPDC**and Assam Power Distribution Company (APDC). This will be further subject to the Asian Development Bank's (ADB) approval of each subproject as provided in section B below. The selection criteria will be as follows.

(i) the subproject is consistent with and forms part of the State approved generation, transmission and distribution improvement master plan to support State's power sector based on best practice design, construction, operations and maintenance in a cost effective manner;

(ii) the subproject is consistent with, and forms part of, the power sector road map for the State adopted by APGC, Assam Electricity Grid Corporation (AEGC) and APDC;

(iii) the subproject displays performance-based design consistent with international benchmarks for system efficiency and operational risks;

(iv) the subproject will be economically and financially viable;

(v) the location of the subproject will be as agreed between State, APGC, APDC and ADB;

(vi) a poverty and social assessment will be conducted for the subproject and results presented in ADB's Summary Poverty Reduction and Social Strategy (SPRSS) format;

(vii) the subproject is prepared and designed in compliance with this FFA (including ADB's Social Dimensions and Safeguard Requirements set forth in Schedule 5 to this FFA) and detailed herein;

(viii) as required, a resettlement plan (RP) that meets the requirements of ADB's *Safeguard Policy Statement (2009)*, India's and State's applicable laws and regulations, as set out in the resettlement framework (RF) referred to in Schedule 5, has been prepared for the subproject and submitted to ADB for review;

(ix) an environmental impact assessment (EIA) or an initial environmental examination (IEE) (as the case may be) and an environmental management and monitoring plan (EMP) that meet the requirements of *ADB's Safeguard Policy Statement (2009)* and India's and State's applicable laws and regulations, as set out in the Environmental Assessment and Review Framework (EARF) referred to in Schedule 5 to this FFA, have been prepared for the subproject and submitted to ADB for review; provided that in case of environment category A subproject, the EIA will be required to be made available to the public 120 days before the ADB consideration of related subproject for approval;

(x) as required, an indigenous people plan (IPP) that meets the requirements of ADB's *Safeguard Policy Statement (2009)* and India's and State's applicable laws and regulations, as set out in the Indigenous People Development Framework (IPDF) referred to in Schedule 5 to this FFA, has been prepared for the subproject and submitted to ADB for review;

(xi) sufficient counterpart funding has been allocated by the State as required to implement the subproject as scheduled and maintain the project facilities in accordance with the requirements of this FFA; and

(xii) all necessary approvals of India and the State have been obtained.

B. Approval Process

2. The approval procedures will be as follows:

(i) APGC and APDC will prepare the subproject proposals in compliance with the selection criteria.

(ii) APGC, APDC and ADB will maintain contact through periodic review missions and quarterly progress reports, and in doing so may include advanced consultation on Periodic Financing Requests (PFRs) prior to submission to ADB for ADB's formal approval.

(iii) The State, through APGC and APDC, will prepare a PFR based on a format agreed with ADB to finance the subprojects and submit to India for submission to ADB.

(iv) The PFR will be forwarded by India for review and submission to ADB for its consideration.

SCHEDULE 5

SOCIAL DIMENSIONS AND SAFEGUARD REQUIREMENTS

1. India will ensure that all the requirements prescribed in this Schedule, and the following safeguard frameworks and plans that have been prepared with respect to the Facility and the first tranche and of which ADB has been provided full copies, and which are deemed incorporated herein by reference, are complied with during the processing and implementation of the projects under the Facility;

(i) environmental assessment and review framework (EARF), dated 17 February, 2014;
(ii) resettlement framework (RF), dated 17 February, 2014;
(iii) indigenous peoples development framework (IPDF), dated 17 February, 2014; and
(iv) the initial environment examination (including the environmental management plan), dated 17 February, 2014 for Project 1.

2. The frameworks cover the Facility-specific information and requirements in accordance with ADB's safeguard policies: (i) the general anticipated impacts of the components or projects likely to be financed under the MFF on the environment, involuntary resettlement, and indigenous peoples; (ii) the safeguard criteria that are to be used in selecting components and projects; (iii) the requirements and procedures that will be followed for screening and categorization, impact assessments, development of management plans, public consultation and information disclosure (including the 120-day disclosure rule, if required), and monitoring and reporting; and (iv) the institutional arrangements (including budget and capacity requirements) and the GOI's, GOA's, APGC's, APDC's and ADB's responsibilities and authorities for the preparation, review and clearance of safeguard documents.

3. Prior to the preparation of each PFR, the applicability and relevance of each safeguard framework for environmental assessment, involuntary resettlement, and indigenous people will be reviewed by ADB, India, the State, APGC and APDC, and updated to ensure relevance and consistency with applicable country legal frameworks and ADB's safeguard policies, as amended from time to time.

4. In all cases, for each new PFR preparation, India, the State, APGC and APDC will review ongoing projects to check on the status of compliance with the safeguard plans and frameworks, and submit the review reports to ADB, together with other required safeguard documents relevant to the projects included in the tranche being processed. In any case, if major noncompliance is discovered in the course of the review of ongoing projects, a corrective action plan will be prepared by the State, APGC and APDC and submitted to ADB.

SCHEDULE 6

UNDERTAKINGS

Definitions of the terms used in this FFA are those as included in the relevant Loan Agreement.

India shall ensure, and shall cause the State, APGC and APDC to ensure the following:

1. The State and/or APGC and APDC shall remain committed to the implementation of the Investment Program over the period 2014 to 2022 as envisaged in the State's Power Sector Road Map.

2. In the event of any change in the Road Map, policy framework, Investment Program, or financing plan, India, the State and ADB will assess the potential impact on the Investment Program and evaluate any change in scope, amendment, or continuation, as appropriate.

3. The implementation of the Facility and projects under the Investment Program shall conform to ADB's mandatory policies on safeguards, anticorruption, procurement, consulting services, and disbursement, and following undertakings.

4. The State, APGC and APDC will ensure that the implementation of the Subprojects under the Investment Program and Facility is in compliance with the undertakings and assurances concerning, Environmental Safeguards, Indigenous Peoples Safeguards, Involuntary Resettlement Safeguards, gender policy, labor standards, and prohibited investments as set out in Schedule 5 of this FFA and the loan agreement for each tranche under the Investment Program.

5. The State shall ensure, and cause APGC and APDC to ensure, that APGC and APDC submit to AERC tariff petitions in a timely manner, prior to commercial operation of the projects under the Facility.

6. The State, through APGC and APDC, shall employ sufficient staff for the duration of the Investment Program with adequate and relevant expertise in the field of project management, financial management, engineering, construction supervision, procurement, equipment inspection and testing, and environmental and social safeguards implementation; the State, APGC and APDC shall ensure that all projects are implemented in accordance with the detailed arrangements set forth in the FAM, and if applicable, any PAM that may be prepared for any portion of the Investment Program and Facility. Any subsequent change to the FAM (or PAM) shall become effective only after approval of such change by India and ADB.

7. The State shall set up a Steering Committee to ensure coordinated development of the generation capacity additions and distribution system strengthening, that supports the State's power sector road map and the Power System Master Plan developed under Updating Load Forecast and Power System Master Plan for Assam technical assistance (ADB TA-8129).

8. India and the State shall remain committed to, and monitor and enforce, the implementation of the Electricity Act of India (2003, as amended from time to time) and the State's Power Policy Statement (2003, as amended from time to time).

9. Towards smooth implementation of the projects under the Facility, the State, through APGC and APDC, shall ensure that grievance(s) if any from stakeholders relating to Project implementation or use of funds are addressed effectively and efficiently.

10. Works contracts (i) follow all applicable labor laws of India and the State and that these further include provisions to the effect that contractors (a) carry out HIV/AIDS awareness programs and disseminate information at worksites on risks of sexually transmitted diseases and HIV/AIDS as part of health and safety measures for those employed during construction; (b) follow and implement all statutory provisions on labor (including not employing or using children as labor, equal pay for equal work), health, safety, welfare, sanitation, and working conditions. Such contracts shall include clauses for termination in case of any breach of the stated provisions by the contractors.

11. The State, APGC and APDC as required shall announce the Investment Program and business opportunities associated with the Investment Program on its website. In addition, the website shall at least disclose the following information in relation to goods and services procured for the Investment Program: (i) the list of participating bidders; (ii) the name of the winning bidder; (iii) the amount of the contracts awarded; and (iv) the goods and services procured.

12. India, the State, APGC and APDC will (i) comply with ADB's Anticorruption Policy (1998, as amended to date) and acknowledge that ADB reserves the right to investigate directly, or through its agents, any alleged corrupt, fraudulent, collusive or coercive practice relating to Investment Program; and (ii) cooperate with any such investigation and extend all necessary assistance for satisfactory completion of such investigation, and as included in detail in the FAM.

13. India, the State, APGC and APDC shall (i) ensure that the anticorruption provisions acceptable to ADB, India, and the State are included in all bidding documents and contracts financed by ADB in connection with projects under the Facility, including provisions specifying the right of ADB to review and examine the records and accounts of the State, APGC and APDC, and all contractors, suppliers, consultants, and other service providers as they relate to the projects under the Facility and as included in detail in the FAM, and (ii) India, the State, APGC and APDC shall allow and assist ADB's representatives to carry out random spot-checks on the work in progress and utilization of funds for the projects under the Facility.

14. The State shall provide all counterpart funds, land and facilities required for timely and effective implementation of projects under the Investment Program, including, without limitation, any funds required (i) to meet any shortfall between cost and revenues for the operation and maintenance of the facilities created or rehabilitated under the projects; (ii) to mitigate unforeseen environmental and social impacts; and (iii) to meet additional costs arising from design changes, price escalation in construction costs and/or unforeseen circumstances.
APGCAPDC

15. India and the State shall ensure, and cause APGC and APDC to ensure, that all projects and project facilities under the Facility are assessed, designed, implemented, constructed, operated, maintained, and monitored in accordance with all applicable environmental laws, rules, and regulations of India, the State, ADB's SPS, the IEE, the EIA, and the EARF, as applicable.

16. All subprojects are selected and approved in accordance with the selection criteria and approval process set out in Schedule 4 to this FFA and all documents forming the basis for screening, selection and processing of subprojects are made available to ADB upon request and are kept available for such purposes for a minimum period of five years from the date of the relevant project completion report.

17. The State shall establish a project monitoring system in line with the targets and indicators set out in the DMF for the Investment Program.

18. The State shall pass on to APGC and APDC the proceeds of the loans from ADB on the terms and conditions acceptable to India, the State, and ADB.

19. APGC and APDC shall address, by 31 December 2014, the issues identified by the statutory external auditor in its audit reports on APGC and APDC, respectively, including**,** but not be limited to: (a) comprehensive revision of their accounting manual and chart of accounts; (b) training of relevant staff; and (c) revision and strengthening of the internal control procedures with respect to accounting and audit.

20. By 2018, the State shall cause APGC and APDC to fully implement the ERP to ensure efficiency in their overall operations and service delivery.

21. APGC and APDC shall continue to endeavor to reduce losses to achieve the loss reduction targets prescribed by the AERC towards long-term financial sustainability, so that a minimum debt service coverage ratio of 1:2 and debt equity ratio of 4:1 are achieved by 2018.

22. By 2018, the State shall cause APGC and APDC to implement the institutional reforms and capacity development measures recommended under Capacity Development of the Assam Power Sector Utilities technical assistance (ADB TA-7378).

23. APGC and APDC shall conduct a one-time valuation of assets and reconciliation of fixed assets and mandatory spares, and operationalize the Assets Module in the ERP by 2018. Thereafter, assessment of the assets shall be conducted every three to five years.