



Report and Recommendation of the President to the Board of Directors

Project Number: 46268
October 2014

Proposed Multitranche Financing Facility India: Clean Energy Finance Investment Program

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Asian Development Bank

CURRENCY EQUIVALENTS

(as of 12 September 2014)

Currency unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	\$0.01640
\$1.00	=	Rs60.966

ABBREVIATIONS

ADB	–	Asian Development Bank
AFD	–	Agence Française de Développement (French Development Agency)
CPS	–	country partnership strategy
ESMS	–	environmental and social management system
ESSU	–	environment and social safeguard unit
FAM	–	facility administration manual
GW	–	gigawatt
IREDA	–	Indian Renewable Energy Development Agency Limited
JICA	–	Japan International Cooperation Agency
MFF	–	multitranches financing facility
MW	–	megawatt
TA	–	technical assistance

NOTES

- (i) The fiscal year (FY) of the Government of India begins on 1 April. FY before a calendar year denotes the year in which the fiscal year begins, e.g., FY2012 begins on 1 April 2012 and ends on 31 March 2013.
- (ii) In this report, “\$” refers to US dollars.

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CONTENTS

	Page
INVESTMENT PROGRAM AT A GLANCE	
I. THE PROPOSAL	1
II. THE INVESTMENT PROGRAM	1
A. Rationale	1
B. Impact and Outcome	4
C. Outputs	4
D. Investment and Financing Plans	4
E. Implementation Arrangements	5
III. DUE DILIGENCE	7
A. Technical	8
B. Economic and Financial	8
C. Governance	8
D. Poverty and Social	9
E. Safeguards	9
F. Risks and Mitigating Measures	10
IV. ASSURANCES AND CONDITIONS	10
V. RECOMMENDATION	10
APPENDIXES	
1. Design and Monitoring Framework for the Investment Program	11
2. List of Linked Documents	14

INVESTMENT PROGRAM^a AT A GLANCE

1. Basic Data		Project Number: 46268-001		
Project Name	Clean Energy Finance Investment Program	Department /Division	SARD/SAPF	
Country	India	Executing Agency	Indian Renewable Energy Dev't Agency Ltd. (IREDA)	
Borrower	Indian Renewable Energy Development Agency Limited			
2. Sector	Subsector(s)	ADB Financing (\$ million)		
✓ Finance	Infrastructure finance and investment funds		500.00	
		Total	500.00	
3. Strategic Agenda	Subcomponents	Climate Change Information		
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Mitigation (\$ million)	500.00	
Environmentally sustainable growth (ESG)	Eco-efficiency	CO ₂ reduction (tons per annum)	3,200,000	
	Global and regional transboundary environmental concerns	Climate Change impact on the Project	Medium	
4. Drivers of Change	Components	Gender Equity and Mainstreaming		
Governance and capacity development (GCD)	Institutional development	No gender elements (NGE)	✓	
Knowledge solutions (KNS)	Organizational development			
	Application and use of new knowledge solutions in key operational areas			
	Knowledge sharing activities			
	Pilot-testing innovation and learning			
Partnerships (PAR)	Bilateral institutions (not client government) Implementation			
Private sector development (PSD)	Conducive policy and institutional environment			
	Promotion of private sector investment			
	Public sector goods and services essential for private sector development			
5. Poverty Targeting		Location Impact		
Project directly targets poverty	No	Nation-wide	High	
6. Risk Categorization:	Complex			
7. Safeguard Categorization	Environment: FI Involuntary Resettlement: FI Indigenous Peoples: FI			
8. Financing				
Modality and Sources	Indicative Tranches (\$million)			Amount (\$million)
	I	II	III	
ADB				500.00
Sovereign	200.00	150.00	150.00	500.00
MFF-Tranche (Loan): Ordinary capital resources				
Cofinancing				0.00
None				
Counterpart				500.00
Beneficiaries	80.00	60.00	60.00	200.00
Project Sponsor	120.00	90.00	90.00	300.00
Total	400.00	300.00	300.00	1,000.00
9. Effective Development Cooperation				
Use of country procurement systems		No		
Use of country public financial management systems		No		

INVESTMENT PROGRAM^a AT A GLANCE

10. Country Operations Business Plan

CPS

<http://www.adb.org/sites/default/files/cps-ind-2013-2017.pdf>

COBP

<http://www.adb.org/sites/default/files/cobp-ind-2013-2015.pdf>

11. Investment Program Summary

The proposed multitranche financing facility (MFF) totaling \$500 million consists of financial intermediation loans to IREDA. The Asian Development Bank (ADB) funds will support lending by IREDA to eligible renewable energy subprojects in India, including wind, biomass, hydropower, solar, and cogeneration technologies. This MFF will leverage private capital to expand sector lending in order to add renewable energy capacity in India.

Impact and Outcome: The impact (of the facility) is increased renewable energy infrastructure. The outcome (of the facility) is facilitated investment in renewable energy.

Outputs: (i) Enhanced availability of long-term financing to support renewable energy projects, and (ii) Improved institutional capacity of IREDA

Implementation Arrangements: Indian Renewable Energy Dev't Agency Ltd. (IREDA) will be the executing agency.

Project Readiness: ADB conducted macroeconomic, industry/sector, and institution-specific due diligences on the market demand, industry/sector performance, and IREDA's provision of a specific pipeline subproject list. ADB has also worked with IREDA to establish a designated environment and social safeguard management unit (ESSU) with two full-time staff (one environment specialist and one social safeguard specialist) and one designated compliance officer. ADB will ensure that the ESSU is functional prior to IREDA's first drawdown of the ADB funds, whether through the consultant capacity or internal capacity.

12. Milestones

Modality	Estimated Approval	Estimated Completion ^b
Multitranche financing facility	30 October 2014	30 October 2024
Tranche I	30 October 2014	29 October 2018
Tranche II	30 October 2018	29 October 2021
Tranche III	30 October 2021	29 October 2024

13. Project Data Sheet (PDS)

PDS^c

<http://www.adb.org/projects/46268-001/main>

^a Multitranche Financing Facility (MFF).

^b For MFF, this refers to the end of the availability period; for tranches, this refers to the tranche closing date.

^c Safeguard documents can be viewed by clicking the Document's hyperlink in the Project Data Sheet (PDS) page.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed multitranche financing facility (MFF) to Indian Renewable Energy Development Agency Limited (IREDA), to be guaranteed by India, for the Clean Energy Finance Investment Program.¹

2. The proposed MFF totaling \$500 million consists of financial intermediation loans to IREDA. The Asian Development Bank (ADB) funds will support lending by IREDA to eligible renewable energy subprojects in India, including wind, biomass, hydropower, solar, and cogeneration technologies.² This MFF will leverage private capital to expand sector lending in order to add renewable energy capacity in India.

II. THE INVESTMENT PROGRAM

A. Rationale

3. **Background.** India has undergone a rapid economic transformation, with an average annual gross domestic product growth rate of 6.8% during 2008–2013. However, more rapid economic growth is inhibited by chronic electricity shortages, which constrain commercial activity. Around 300 million citizens (around 25% of India's population) have no access to electricity,³ while many with access have an intermittent supply. Meanwhile, the government's push to narrow the electricity supply gap has increased India's dependence on fossil fuels, particularly imported oil (for diesel-based captive generation) and coal. To balance the conflicting objectives among growth, climate change, and energy security, India is scaling up renewable energy investment.

4. **Demand analysis.** The Government of India has ambitious programs to target renewable energy development as a key element in the overall expansion of power generation capacity. As of 31 December 2013, India's total installed electricity-generating capacity was around 234 gigawatts (GW), which included around 30 GW of renewable energy.⁴ Based on strong policy incentives, India's Twelfth Five-Year Plan targets an increase of 30 GW of renewable energy generation capacity by FY2017, and a further increase of 45 GW by FY2022 (footnote 3). Demand for renewable energy investment is thus expected to be robust during the 10-year life of this MFF.

5. **Financing challenges.** A major challenge to sustaining high levels of renewable energy deployment in India is the lack of sufficient long-term debt financing for project lending. Due to the relatively high upfront (per megawatt) cost of renewable energy projects, loan tenors of 12 or more years are usually required to make projects financially viable. However, such long-term funds are scarce in the Indian market, where project lending is predominantly bank-based, and commercial banks have difficulty lending long-term funds from short-term deposits, given the implied asset–liability mismatch. Similarly, the implementation of Basel III capital regulations in India will lead to banks having to raise additional capital given the stricter requirements on capital adequacy and asset liability management, and to raise additional long-term funds. Both

¹ The design and monitoring framework is in Appendix 1.

² IREDA also lends, on a limited basis, to energy-efficiency subprojects, which are permitted under the MFF.

³ Government of India, Planning Commission. 2013. *Twelfth Five-Year Plan, 2012–2017*. New Delhi.

⁴ Central Electricity Authority. 2013. *Installed Capacity (In MW) of Power Stations (as on 31.12.2013)*. New Delhi. (http://www.cea.nic.in/installed_capacity.html). This includes wind power (over 19.5 GW), small hydropower (3.5 GW), solar power (2.4 GW), cogeneration (2.4 GW), biomass (1.2 GW), and “other” (0.4 GW).

of these factors are expected to lead to rising long-term funding costs and constrained project lending capacity.⁵

6. Indian Renewable Energy Development Agency Limited. Under the administrative oversight of the Ministry of New and Renewable Energy, IREDA is a wholly government-owned nonbank financial institution established in 1987 to promote renewable energy investment. IREDA is well capitalized with increasing profitability. Taxable bonds issued by IREDA from 2008 are all rated AAA by local rating agencies, including Credit Analysis and Research Limited (known as CARE Ratings) and Brickwork. IREDA's lending constitutes about 11% of total renewable energy lending in India.⁶ What differentiates IREDA from other commercial lenders is its deep sector knowledge; experience to understand the technical and commercial risks; and its advantageous long-term capital base. This enables IREDA to provide limited recourse, cash flow-based financing for up to 15 years, which most commercial banks in India cannot.⁷ In addition, commercial banks typically favor lending based on the balance sheets of their existing, large corporate customers irrespective of the quality of the underlying project, rather than project, cash flow-based lending. IREDA's ability to fund renewable energy projects on the merits of their cash flows and risk profiles enables it to fund good projects from smaller, less-capitalized sponsors. This widens the pool of project developers and investable projects, leverages additional private capital, and facilitates renewable project development.

7. Road map. In 2008, India launched the National Action Plan for Climate Change to promote sustainable development by using clean technologies to limit greenhouse gas emissions, and to increase the share of power generation by renewables to 15% by FY2022. To help meet this target, the government is leveraging IREDA's position as a uniquely specialized renewable energy financier. IREDA's medium- to long-term business plan (FY2014–FY2024) includes a total disbursement of about \$6.6 billion, leading to an estimated additional 13.4 GW of energy capacity. To accomplish this expansion, IREDA is building its capacity, streamlining its operations, and seeking additional capital from ADB and other sources to enable increased support for renewable energy investments.

8. Strategic context. ADB support to IREDA is consistent with ADB's Energy Policy, which includes promoting renewable energy to increase energy security and facilitate the transition to a low carbon economy.⁸ It is also consistent with ADB's country partnership strategy (CPS) for India, 2013–2017,⁹ which emphasizes clean and renewable energy expansion. ADB support aligns with the CPS in terms of its energy sector road map and financial sector development (catalyzing infrastructure investments, including through investment funds and credit lines). The investment program thus directly aligns with multiple facets of the CPS.

9. Policy framework. ADB's support is consistent with India's policies and initiatives. Taking into account India's energy security concerns and the environment, the Integrated Energy Policy 2006 identified the need to expand the use of renewable energy technologies as

⁵ Reserve Bank of India required that all Indian banks adopt the Basel III standards from April 2013 in a phased manner, with full adoption by 31 March 2019.

⁶ Other major lenders include the Power Finance Corporation, the State Bank of India, and the ICICI Bank. Note that IREDA's subprojects are not strategically different from the subprojects funded by other commercial banks.

⁷ Commercial banks or private nonbank financial institutions in India can usually provide similar loans of up to 8 or 9 years of tenor, and generally have a higher level of recourse to project sponsors.

⁸ ADB. 2009. *Energy Policy*. Manila.

⁹ ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

a key pillar for energy sector development.¹⁰ The New Hydro Policy 2008 streamlines hydropower investment and tendering procedures. The Jawaharlal Nehru National Solar Mission, launched in 2010, intends to deploy 20,000 megawatts (MW) of solar power by 2022. Renewable energy policy incentives include tax incentives, feed-in (e.g., preferential) tariffs, generation-based incentives,¹¹ and regulations establishing minimum renewable purchase obligations for power distribution utilities. By bringing critically needed longer-term debt financing to the renewable energy sector in India, ADB's support will complement these government incentives, catalyze private sector investment, and facilitate sector development.

10. **Investment program.** The government has requested ADB to provide a \$500 million MFF to fund a portion of the long-term credit IREDA needs to meet its renewable energy development target (para. 7). The MFF leverages public sector resources (from IREDA) to catalyze private sector investments in renewable energy. Increasing the power supply through renewable energy sources sustains economic activities, alleviates poverty, and supports inclusive and environmentally sustainable growth, while minimizing India's carbon footprint. The MFF will incorporate a comprehensive institutional capacity development program, supported by IREDA, development partners, and ADB technical assistance (TA).¹² The preconditions for using the MFF modality are in place, including the road map and strategy, policy framework, and investment and financing plans. The MFF is the most suitable modality, and allows ADB to make a long-term commitment to supporting the institution.¹³ The MFF modality enables ADB to work with IREDA to better match ADB's energy strategy in India with the country's renewable energy goals over the medium-term. More specifically, the MFF approach gives IREDA the phased funding it needs to match its subproject pipeline growth, and provides flexibility to adjust subloan terms and future tranche conditions as needed to match IREDA's onlending requirements, while preserving the possibility of offering innovative financial products (e.g., local currency financing, partial risk guarantees, and other credit enhancement products).

11. **Lessons.** Lessons from a 1996 ADB loan to IREDA¹⁴—in which IREDA financed 318 MW of cogeneration and wind generation capacity against a target of 125 MW—were incorporated in this investment program. That loan leveraged additional investments up to 2.1 times. The project was rated *successful*,¹⁵ with implementation benefitting from a fostering

¹⁰ Government of India, Planning Commission. 2006. *Integrated Energy Policy: Report of the Expert Committee*. New Delhi.

¹¹ A specified per kilowatt-hour payment, paid out of funds allocated for such a program, to supplement the effective electricity sale price earned by renewable energy generators.

¹² Ongoing ADB assistance to operationalize IREDA's environment and social safeguard unit (ESSU) is supported by ADB's Technical Assistance to India for Preparing the Clean Energy Finance Investment Program (TA 8365-IND). In addition, a more comprehensive institutional capacity development program will be supported by an ADB capacity development technical assistance, expected to be approved in 2014 or 2015.

¹³ This is further demonstrated by ADB's successful implementation of three MFF financial intermediation loans to the 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); ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranches Financing Facility to India for the Second Infrastructure Investment Program*. Manila. (MFF 0037 for \$700 million approved on 17 November); and ADB. 2007. *Report and Recommendation of the President to the Board of Directors: Proposed Multitranches Financing Facility to India for the Infrastructure Investment Program*. Manila. (MFF 0017 for \$500 million approved on 14 December).

¹⁴ ADB. 1996. *Report and Recommendation of the President to the Board of Directors: Proposed Loan and Technical Assistance Grant to the Indian Renewable Energy Development Agency Limited for the Renewable Energy Development Project*. Manila. (Loan 1465-IND for \$100 million approved on 26 September 1996 and closed on 25 October 2002).

¹⁵ ADB. 2004. *Completion Report: Renewable Energy Development Project in India*. Manila.

policy, regulatory, and business environment that promoted renewable energy. In addition, the MFF has benefited from the following lessons drawn from a similar financial intermediation MFF to the India Infrastructure Finance Company,¹⁶ which was rated *highly successful*: (i) deal flows should be sufficient to ensure a pipeline of subprojects is in place for financing over the medium term; (ii) the establishment of a functioning environment and social safeguard system is a long-term process that requires sustained institutional capacity building; (iii) a well-designed monitoring and reporting mechanism is a prerequisite to ensure compliance with ADB implementation requirements; and (iv) ADB should proactively monitor changes in IREDA's business appetite, and adjust to its demand for new financial products and services to build a long-lasting and effective partnership that promotes sector growth.

B. Impact and Outcome

12. The impact of the investment program will be increased renewable energy infrastructure. The outcome will be facilitated investment in renewable energy.

C. Outputs

13. Outputs are (i) enhanced availability of long-term financing to support renewable energy projects, and (ii) improved institutional capacity of IREDA. Key activities to achieve these outputs are using MFF funds to finance the renewable energy subprojects and an IREDA institutional capacity development program (footnote 12). Tranche 1 outputs include at least 10 subprojects debt financed by IREDA, and funded institutional capacity initiatives.¹⁷

D. Investment and Financing Plans

14. To finance the projected \$6.6 billion of loan disbursements by FY2024, IREDA raises domestic funds via term loans and domestic bonds, and borrows in foreign currencies from development partners, including the \$500 million from ADB.¹⁸ The financing plan is in Table 1.

**Table 1: Indian Renewable Energy Development Agency Limited
Indicative Financing Plan (FY2014–FY2024)**

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank	500	7.6
Other foreign borrowing from bilateral and multilateral sources	1,581	24.1
Local borrowing (domestic bonds and term loans)	1,600	24.4
IREDA net repayments	1,855	28.3
IREDA internal accruals and government equity contributions ^a	1,021	15.6
Total	6,557	100.0

FY = fiscal year, IREDA = Indian Renewable Energy Development Agency Limited.

^a This includes an estimated \$411 million in government equity contributions if required.

Sources: Asian Development Bank and Indian Renewable Energy Development Agency Limited estimates.

15. ADB's \$500 million MFF is expected to leverage an estimated \$300 million of equity and other investments from subproject sponsors, and at least \$200 million of additional debt funds

¹⁶ ADB. 2012. *Completion Report: Infrastructure Project Financing Facility in India*. Manila.

¹⁷ The actual number of projects funded may vary based on actual, realized costs of IREDA's immediate pipeline of renewable energy projects. Projects will include wind, solar, hydropower, biomass, and cogeneration.

¹⁸ Further details on IREDA's borrowings are in Demand Analysis. Details on foreign development partner lenders are in Development Coordination (both documents are accessible from the list of linked documents in Appendix 2).

from unrestricted sources,¹⁹ for a total investment program of around \$1 billion. At current prices, this \$1 billion of total subproject investment financing translates into approximately 990 MW of renewable energy capacity additions. The investment program financing plan is in Table 2. ADB's \$500 million MFF contributes only a part of IREDA's total financing plan from FY2014 to FY2024 (Table 1).

Table 2: Facility Investment Program
(\$ million)

Items	Total MFF	Shares of Total (%)	Tranche 1 (actual)	Tranche 2 (expected)	Tranche 3 (expected)
ADB loan funds	500	50	200	150	150
Unrestricted sources	200	20	80	60	60
Subborrowers' equity and others	300	30	120	90	90
Total	1,000	100	400	300	300

ADB = Asian Development Bank, MFF = multitranche financing facility.

Sources: Asian Development Bank and Indian Renewable Energy Development Agency Limited estimates.

16. The MFF will consist of three tranches, subject to the government's submission of related periodic financing requests, execution of the related guarantee and loan agreements 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 for \$200 million, with a 20-year term including a grace period of 5 years, an annual interest rate determined in accordance with ADB's London interbank offered rate-based lending facility, a commitment charge of 0.15% per year, and such other terms and conditions set forth in the guarantee and loan agreements. The second and third tranches are expected to be for \$150 million each and estimated to occur in 2018 and 2021, respectively (Table 2).

E. Implementation Arrangements

17. IREDA will be the borrower for the MFF, and will also function as the executing agency. In order to guarantee IREDA's repayment of the ADB loan under tranche 1, Government of India will enter into a guarantee agreement with ADB. IREDA shall use ADB's funds in accordance with the specified eligibility criteria set out in the facility administration manual (FAM). Subprojects will be selected and approved following the procedures set out in the FAM. IREDA's loans to subborrowers will be priced taking into account IREDA's cost of funds and based on subproject-specific risk (inclusive of subproject cash flows), and guided by technology-specific risks. IREDA will establish a functioning environmental and social management system (ESMS) to screen the subprojects in accordance with ADB's Safeguard Policy Statement (2009). The ESMS document to govern safeguard activities has been endorsed by IREDA.²⁰ The MFF will follow ADB's Procurement Guidelines (2013, as amended from time to time) applicable to financial intermediation loans.

18. **Takeout finance.** In addition to direct subloans, IREDA may also use up to 20% of the ADB funds to buy out renewable energy loans from other financial institutions. IREDA's exclusive focus on renewable energy lending gives it a unique ability to manage renewable energy assets, such as structuring subprojects with cost overruns or providing additional finance. Takeout finance will also free up the assets of other financial institutions to engage in

¹⁹ Unrestricted sources are defined as any sources other than the ADB facility, e.g., any forms of debt or equity.

²⁰ Financial Intermediary: Environmental and Social Management System Arrangement (accessible from the list of linked documents in Appendix 2).

additional lending. Takeout finance may include subprojects that are financially closed, under construction, or fully commissioned. Further details on the takeout finance arrangement are provided in the FAM. Subprojects under the takeout finance scheme will comply with the same requirements as other ADB-funded subprojects.

19. A summary of the implementation arrangements is in Table 3, with details in the FAM.²¹

Table 3: Implementation Arrangements

Aspects	Arrangements
Implementation period	October 2014–October 2024
Estimated completion date	29 October 2024
Management	
(i) Oversight body	Board of Directors, IREDA
(ii) Executing agency	IREDA
(iii) Implementing agency	IREDA
(iv) Implementation unit	Headed by R.C. Sharma, deputy general manager, finance, IREDA, New Delhi, India
Procurement	In accordance with ADB's Procurement Guidelines (2013, as amended from time to time) as applicable to financial intermediation loans
Retroactive financing	Retroactive financing approved for individual renewable energy subprojects
Disbursement	Loan proceeds will be disbursed in accordance with ADB's <i>Loan Disbursement Handbook</i> (2012, as amended from time to time) and detailed arrangements agreed upon between the government and ADB.

ADB = Asian Development Bank, IREDA = Indian Renewable Energy Development Agency Limited.

Source: Asian Development Bank and IREDA.

20. **Capacity development.** IREDA is implementing a comprehensive institutional capacity development program with the support of its development partners—ADB, the French Development Agency (AFD), the Japan International Cooperation Agency (JICA), and German development cooperation through KfW; the latter has ongoing TA projects totaling over \$2 million that cover risk management, treasury operations, a credit risk-rating system, and international financial reporting standards. AFD has an ongoing TA totaling €300,000 and focuses on the development of new renewable energy technologies. JICA is preparing TA covering new renewable energy technologies, financial mechanisms for commercialization, and a computerized database for project monitoring and performance evaluation.²² ADB currently supports the operationalization of an environment and social safeguard unit (ESSU). ADB will also provide a capacity development TA from 2014 or 2015. During the implementation of tranche 1, ADB intends to help IREDA strengthen its financial management practices, including by assessing IREDA's provision review and implementing liquidity and interest rate gap reporting (footnote 12). All capacity development work will be provided to IREDA in a coordinated, structured, and harmonized manner to ensure tasks designed by various development partners at different times and/or loan tranches can be incorporated into ADB's MFF implementation. This will provide substantial gains to IREDA, because it will be possible to apply the resulting systems to all development partner assistance (i.e., one ESMS will meet government and development partner requirements). Detailed implementation arrangements are provided in the development coordination linked document.²³ In view of evolving capacity

²¹ Facility Administration Manual (accessible from the list of linked documents in Appendix 2).

²² The activities from the development partners are indicative, through ADB's dialogue with IREDA.

²³ Development Coordination (accessible from the list of linked documents in Appendix 2).

development needs and the size of ongoing TA programs, ADB's TA (footnote 12) is estimated to be \$1 million.

21. **Retroactive financing.** Under each tranche, ADB may, subject to its policies and procedures, permit retroactive financing of eligible expenditures incurred not earlier than 12 months before the date of signing of the related loan agreement; the retroactive financing request may not exceed 20% of each tranche's total amount. Use of retroactive financing is subject to the subprojects meeting all eligibility, safeguard compliance, and other requirements. IREDA acknowledges that approval of retroactive financing will not constitute a commitment by ADB to finance the subprojects.

22. **Maximum ADB financing and free limit.** ADB funds can be used to finance up to 50% of the total subproject cost. Under tranche 1, no free limit will be provided. Under tranches 2 and 3, ADB may, subject to its policies and procedures, permit on request a free limit up to a specified threshold, based on ADB's assessment of IREDA's operating performance, appraisal standards, portfolio quality, and average loan size during MFF implementation.

23. **Eligibility criteria.** ADB funds shall be used to finance subprojects within the renewable energy subsectors (that generate electricity and/or energy through new and renewable sources).²⁴ The subproject eligibility criteria and approval procedures are outlined in the FAM.

III. DUE DILIGENCE

24. ADB's due diligence consisted of detailed financial, economic, technical, market, institutional, and related compliance reviews to ensure IREDA's capacity to successfully implement the MFF. At the institutional level, ADB conducted financial risk management, credit, technical, procurement, environment and social safeguard, and climate risk assessments to ensure IREDA's ability to comply with ADB's project implementation requirements. This included a review of IREDA's processes and procedures. ADB has also conducted integrity due diligence, and rated IREDA's capacity to be satisfactory. Safeguards due diligence included subproject sites visits, and interactions with the project promoters, local village leaders, and the communities to understand the nature of environmental and social issues.

25. IREDA has a unique market position in financing renewable energy in India, with access to a variety of funding sources to catalyze private sector investments. The viability of the subproject pipeline, which consists mostly of private sector renewable energy projects, also benefits from government policy support and financial incentives. IREDA's continuous business expansion and improving financial performance since FY2007 have been facilitated by the positive business and policy environment.²⁵

26. The MFF's main beneficiaries are private sector renewable energy investors. The MFF is also expected to increase economic activity and employment, improve livelihoods and quality of life, improve environmental conditions, and strengthen India's public sector institutional capacity to institute international best practices, particularly with respect to safeguard compliance.

²⁴ Includes wind, solar, hydropower, biomass, and cogeneration projects. Energy-efficiency subprojects will also be permitted.

²⁵ Economic and financial Analysis (accessible from the list of linked documents in Appendix 2).

A. Technical

27. ADB assessed IREDA's ability to appraise the technical viability of renewable energy subprojects and found its technical assessment process to be strong. IREDA's subproject appraisal process begins with a "know-your-customer" review, followed by more detailed appraisals to confirm the technical and associated financial viability. IREDA includes an in-depth analysis of the proposed renewable energy technology and its risks and performance. IREDA analyzes external technical risks (e.g., electrical grid access and power evacuation concerns), and conducts a detailed assessment of subproject preparedness in terms of clearances and other statutory requirements. IREDA has 27 years of experience in technical appraisal of renewable energy projects, and its technical capacity is considered satisfactory by ADB.

B. Economic and Financial

28. Because ADB's MFF will finance IREDA operations for a range of eligible subprojects over time, the viability of IREDA (the financial intermediary) is the best available proxy for the economic and financial performance of the overall project. According to ADB guidelines,²⁶ the most important criteria for determining the appropriateness of a financial intermediary's performance are capital adequacy, asset quality, management quality, earnings, liquidity, and sensitivity to market risk. For IREDA, the status of most of these indicators is satisfactory and improved during FY2007—FY2013. IREDA's foreign currency and interest rate risks are mitigated through swap transactions. Economic and financial internal rates of return on sample eligible subprojects are provided in the economic and financial analysis (footnote 25). The case study provides a snapshot of the economic and financial performance of typical eligible subprojects. The incremental economic benefits are the additional power generation and the positive externalities from improved IREDA operational efficiency and improvement of debt market condition. Renewable energy also generates positive but difficult to quantify environmental benefits such as reductions in greenhouse gas emissions and other pollutants typically associated with conventional power generation facilities.

C. Governance

29. **Financial management.** IREDA has the financial management capability to administer the MFF. IREDA's board of directors oversees all operations. IREDA has adequate capacity for budgeting, accounting, finance, assets and liabilities management, internal controls, and reporting functions. There are well-defined operating procedures and guidelines and proper internal and external audit controls. IREDA's accounting system is based on Indian Accounting Standard as adapted by the Institute of Chartered Accountants of India, and they have a capable management information system including financial accounts, loan management, payroll, and a reporting system compatible with the Credit Information Bureau (India). IREDA is subject to the Reserve Bank of India prudential regulations for nonbank financial companies, and is well within its capital adequacy requirements of 15%.²⁷ The overall financial management control risk is moderate.

²⁶ ADB. 2005. *Financial Management and Analysis of Projects*. Manila (Section 6.4. Assessing FI Performance). <http://www.adb.org/sites/default/files/pub/2005/financial-governance-management.pdf>

²⁷ Reserve Bank of India, Master Circulars RBI/2013-14/35, http://www.rbi.org.in/scripts/BS_ViewMasCirculardetails.aspx?id=8154#16. IREDA's capital adequacy ratio was between 25% and 35% from 2010 to 2013 and at 25% as per March 2013 unaudited financial statements.

30. **Procurement and disbursement.** All procurement to be financed under the MFF will be carried out in accordance with ADB's Procurement Guidelines. ADB will encourage IREDA to require its subborrowers to adopt internationally competitive bidding procedures to the extent possible when the amount of the investment is unusually large and economy and efficiency can be gained through such procedures. For procurement of goods and services to be financed by subloans from the ADB loan, IREDA will ensure that prices are reasonable and that relevant factors—e.g., time of delivery, efficiency, reliability, suitability for the subproject, and (for consulting services) quality and competence—are taken into account. ADB loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time).

31. **Anticorruption policy.** ADB's Anticorruption Policy (1998, as amended from time to time) was explained to and discussed with the government and IREDA. The specific policy requirements and supplementary measures are described in the FAM (footnote 21).

D. Poverty and Social

32. The investment program supports renewable energy development in India. The benefits of renewable energy capacity additions include globalized benefits in the form of reduced greenhouse gas emissions, national benefits in terms of enhanced energy security and additional electricity supply contributing to inclusive and environmentally sustainable economic growth, and localized benefits of improvement of livelihoods and job creation at the subproject sites. The poverty reduction impact of renewable energy projects can be both direct and indirect. Directly, additional power generation supports economic activities and improves the livelihoods of individuals through the provision of lighting, heat, refrigeration, and other household amenities. The investment also creates employment and income, including economic benefits for other business sectors, service providers, and related industries. The strong safeguard measures under ADB's MFF ensure the compliance of subprojects with environment, social (resettlement and indigenous people), labor, and other requirements. Indirectly, renewable energy projects minimize the negative environmental impacts and improve general public health conditions. In addition, the investment will improve some basic infrastructure—including roads, sanitation, electric and water supplies, and community infrastructure development—under IREDA's corporate social responsibility program.

E. Safeguards

33. The tranche 1 loan is classified as category FI for impacts on the environment, involuntary resettlement, and indigenous peoples under ADB's Safeguard Policy Statement; the same is expected for all future tranches. Renewable energy subprojects generally offer environmental benefits because they serve as an alternative to the fossil fuel extraction, transport, and combustion associated with conventional power generation. Renewable energy subprojects funded under the MFF are generally of a small size. IREDA is committed to working to meeting international best practices in subproject environmental and social safeguard implementation requirements to address subproject impacts, as requested by the international lenders. Under the MFF, IREDA will establish a functioning ESSU satisfactory to ADB (and, over time, to other development partners), including the nomination of two designated full-time staff members for day-to-day implementation of the ESMS, and a responsible institutional compliance officer. The ESMS will be maintained throughout the term of the MFF. A TA, to be provided in 2014 or 2015, will assist IREDA to attain the required capacity to implement the ADB safeguard system. If capacity gaps exist, consultant support will be provided to fill gaps until the required capacity is in place.

F. Risks and Mitigating Measures

34. At a macroeconomic level, a protracted economic slowdown in the international and domestic markets may reduce investor appetite for renewable energy subprojects. Adverse policy conditions, including changes to the regulatory framework that supports green growth, could also affect the forecasted demand for such subprojects. However, the policy risk is unlikely to significantly impact IREDA's operations due to the compelling case for government support to the renewable energy sector. As an institution, IREDA faces business risk from its narrow renewable energy portfolio base. Any adverse impact to the renewable energy sector or the power sector in general could cause the credit quality of IREDA's portfolio to decline.²⁸ However, the integrated benefits and impacts are expected to outweigh the costs.

IV. ASSURANCES AND CONDITIONS

35. The government and IREDA have assured ADB that implementation of the investment program shall conform to all applicable ADB policies including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, and disbursement as described in detail in the FAM and loan documents.

36. IREDA has given ADB certain undertakings for the MFF, which are set forth in the framework financing agreement. Specific covenants agreed by the government and IREDA with respect to individual tranches under the MFF are set forth in the loan agreement and guarantee agreement for the respective tranches.

37. As condition precedent to drawdown of tranche 1, IREDA will have established the ESMS and fully staffed the ESSU or made other arrangements to the satisfaction of ADB.

V. RECOMMENDATION

38. I am satisfied that the proposed multitranche financing facility would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the multitranche financing facility to Indian Renewable Energy Development Agency Limited, to be guaranteed by India, for the Clean Energy Finance Investment Program in an aggregate principal amount not exceeding \$500,000,000, which comprises the provision of loans from ADB's ordinary capital resources, with interest and other terms to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility, and subject to such other terms and conditions as are substantially in accordance with those set forth in the framework financing agreement presented to the Board.

Takehiko Nakao
President

9 October 2014

²⁸ Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 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
<p>Impact Increased renewable energy infrastructure</p>	<p>Installed renewable energy generation capacity is 16.5% of total capacity by 2027 (2013 baseline: 9.25%).</p> <p>At least 70.0 gigawatts of renewable energy capacity is added by 2027 (2013 baseline: 29.5 gigawatts).</p>	<p>For all indicators: Central Electricity Authority annual reports</p> <p>Ministry of New and Renewable Energy and Ministry of Power annual reports</p>	<p>Assumption Continued energy sector reforms such as development of a robust renewable energy certificate market, reduction in fossil fuel subsidies, and fair tariff setting</p> <p>Risk Protracted economic slowdown in the international and domestic markets may reduce investor appetite for renewable energy projects.</p>
<p>Outcome Facilitated investment in renewable energy</p>	<p>By 2024, \$200 million of additional finance and about \$300 million of private sector equity and other funds leveraged by IREDA to achieve \$1 billion of investments in renewable energy^a (2014 baseline: 0)</p> <p>By 2024, at least 990 megawatts of additional renewable energy capacity added through IREDA's provision of long-term financing, generating an estimated 3,900 gigawatt-hours of electricity annually^b (2014 baseline: 0)</p> <p>By 2024, generation of approximately 3.2 million additional tons of carbon dioxide avoided annually^c (2014 baseline: 0)</p>	<p>For all indicators: IREDA annual report and other project-specific reports</p>	<p>Assumptions Conducive government policy on renewable energy will be maintained.</p> <p>Private sector demand for renewable energy will be maintained.</p> <p>Risk Increase in borrowing costs could hinder demand for renewable energy project funding.</p>

Design Summary	Performance Targets and Indicators with Baselines	Data Sources and Reporting Mechanisms	Assumptions and Risks								
<p>Outputs</p> <p>1. Enhanced availability of long-term financing to support renewable energy projects</p> <p>2. Improved institutional capacity of IREDA</p>	<p>At least 30 private sector subprojects approved and funded by IREDA under this multitranche financing facility by 2024^b (2014 baseline: 0)</p> <p>An integrated environmental and social management system approved and operational by December 2014</p> <p>ADB's environment and social safeguard system and other ADB facility agreements independently and successfully implemented by IREDA (by December 2016)</p> <p>ADB facility approval, disbursement, and liquidation successfully carried out by IREDA on a timely basis; IREDA maintains nonperforming loans at below 3.9% of disbursed subprojects (by March 2016) (2013 baseline: gross nonperforming loan 3.9%)</p> <p>Comprehensive capacity-building plan for financing and credit risk management developed by IREDA by the end of 2018</p>	<p>For all indicators: Project-specific reports from IREDA</p> <p>ADB project review missions and staff reports</p> <p>IREDA annual reports</p> <p>IREDA facility progress reports</p> <p>Semiannual performance reports, including risk management reports</p>	<p>Assumptions IREDA and the project developers make available sufficient counterpart funds in a timely manner.</p> <p>Capacity development plans of development partners are successfully carried out.</p> <p>IREDA's developed staff capacity is maintained throughout the implementation period of the multitranche financing facility.</p> <p>Risks IREDA's portfolio quality deteriorates.</p> <p>Adverse economic and/or policy conditions affect the forecasted demand for pipeline subprojects.</p>								
<p>Activities with Milestones</p> <p>1. Enhanced availability of long-term financing to support renewable energy projects (tranche 1 by December 2014, tranche 2 by December 2018, and tranche 3 by December 2021)</p> <p>1.1 ADB provides \$500 million credit line to IREDA to provide required long-term funds to onlend to eligible renewable energy subprojects (three tranches in accordance with the disbursement rate).</p> <p>1.2 IREDA sources, appraises, and funds renewable energy projects using the ADB facility in a satisfactory manner to promote private sector renewable energy (continuous).</p> <p>1.3 IREDA leverages the ADB facility to catalyze private sector</p>		<p>Inputs</p> <table border="0"> <tr> <td>ADB (loan)</td> <td>\$500 million</td> </tr> <tr> <td>Unrestricted funds</td> <td>\$200 million</td> </tr> <tr> <td>Project developers/ others^d</td> <td>\$300 million</td> </tr> <tr> <td>IREDA</td> <td>Counterpart staff</td> </tr> </table>		ADB (loan)	\$500 million	Unrestricted funds	\$200 million	Project developers/ others ^d	\$300 million	IREDA	Counterpart staff
ADB (loan)	\$500 million										
Unrestricted funds	\$200 million										
Project developers/ others ^d	\$300 million										
IREDA	Counterpart staff										

<p>equity and debt financing (continuous).</p> <p>2. Improved institutional capacity of IREDA (by December 2018)</p> <p>2.1 IREDA establishes an environment and social safeguard unit by May 2014 to implement ADB's environment and social safeguard system, and ensures it is operational prior to the first drawdown of ADB funds.</p> <p>2.2 ADB and development partners conduct training for IREDA staff on subproject implementation and administration by December 2017.</p> <p>2.3 IREDA improves its financial and credit risk management and other areas detailed in the multitranche financing facility's capacity development plan.</p> <p>2.4 IREDA improves its subproject monitoring, review, and reporting process in accordance with the FAM by December 2017.</p> <p>2.5 Based on its business plan and the memorandum of understanding signed with the Ministry of New and Renewable Energy, IREDA develops its human resources, information technology, and financial and risk management (continuous).</p>	
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ADB = Asian Development Bank, GW = gigawatt, IREDA = Indian Renewable Energy Development Agency Limited.

^a Based on a 70%/30% debt–equity ratio and \$1 billion total subproject costs funded under the facility (including subborrower equity and additional financing).

^b The 990 megawatts (MW) figure is based on a near-term historical and pipeline average cost per subproject and MW capacity per subproject, such that the \$500 million ADB facility plus subborrower equity and additional financing is estimated to fund at least 50 subprojects totaling about 990 MW. This figure includes bagasse cogeneration facilities. Electricity generation calculations assume the 990 MW consists of 20% wind, 13% solar, 33% hydropower, and 25% cogeneration (actual percentages may vary.) The capacity factors are wind: 0.3; solar: 0.1; hydropower: 0.45; and cogeneration: 0.7.

^c Greenhouse gas emission reduction is calculated using estimated annual gigawatt-hour production, using the weighted average emission factor for the Indian power grid of 0.82, published by the Central Electricity Authority. http://www.cea.nic.in/reports/planning/cdm_co2/user_guide_ver9.pdf

^d This includes government schemes such as viability gap funding that promotes renewable energy development.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://adb.org/Documents/RRPs/?id=46268-001-3>

1. Framework Financing Agreement
2. Periodic Financing Request for Project 1
3. Sector Assessment (Summary): Energy (Renewable Energy) Financing
4. Facility Administration Manual
5. Contribution to the ADB Results Framework
6. Development Coordination
7. Economic and Financial Analysis
8. Country Economic Indicators
9. Summary Poverty Reduction and Social Strategy
10. Financial Intermediary: Environmental and Social Management System Arrangement
11. Risk Assessment and Risk Management Plan

Supplementary Documents

12. Demand Analysis
13. Indicative Subprojects
14. Comparison of Financing Modalities
15. Financial Management Assessment
16. Project Climate Risk Assessment and Management Report
17. Capacity Development Arrangement