



Report and Recommendation of the President to the Board of Directors

Project Number: 49241-001
February 2016

Proposed Loans Special Purpose Vehicles owned by Mytrah Energy (India) Limited Mytrah Wind and Solar Power Development Project (India)

This is an abbreviated version of the document approved by ADB's Board of Directors that excludes information that is subject to exceptions to disclosure set forth in ADB's Public Communication Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 23 February 2016)

Currency unit – Indian rupee/s (Re/Rs)

Re1.00 = \$0.01458

\$1.00 = Rs68.60

ABBREVIATIONS

ADB	–	Asian Development Bank
discom	–	(state) distribution company
EBITDA	–	earnings before interest, taxes, depreciation, and amortization
EPC	–	engineering, procurement, and construction
IPP	–	independent power producer
MEL	–	Mytrah Energy Limited
MEIL	–	Mytrah Energy (India) Limited
SPV	–	special purpose vehicle
WRA	–	wind resource assessment

WEIGHTS AND MEASURES

km	–	kilometer
kV	–	kilovolt
GW	–	gigawatt
MW	–	megawatt

NOTES

- (i) The fiscal year (FY) of the special purpose vehicles owned by Mytrah Energy (India) Limited ends on 31 March. “FY” before a calendar year denotes the year in which the fiscal year ends, e.g., FY2015 ends on 31 March 2015.
- (ii) In this report, “\$” refers to US dollars.

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PROJECT AT A GLANCE

1. Basic Data		Project Number: 49241-001	
Project Name	Mytrah Wind and Solar Power Development Project	Department /Division	PSOD/PSIF1
Country	India		
2. Sector		Subsector(s)	
✓ Energy	Renewable energy generation - solar		28.00
	Renewable energy generation - wind		147.00
		Total	175.00
3. Strategic Agenda		Subcomponents	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Climate Change Information	
Environmentally sustainable growth (ESG)	Eco-efficiency Global and regional transboundary environmental concerns	Mitigation (\$ million)	175.00
		CO ₂ reduction (tons per annum)	1,185,165
		Climate Change impact on the Project	Low
4. Drivers of Change		Components	
Private sector development (PSD)	Promotion of private sector investment	Gender Equity and Mainstreaming	
		No gender elements (NGE)	✓
5. Poverty Targeting		Location Impact	
Project directly targets poverty	No	Nation-wide	High
6. Nonsovereign Operation Risk Rating			
Obligor Name		Implied Project Rating	Final Project Rating
Mytrah Vayu (Ravalpalli) Pvt. Limited		NSO7	NSO7
Mytrah Vayu (Savalsang II) Pvt. Limited		NSO7	NSO7
Mytrah Aadhya Power Private Limited		NSO7	NSO7
Mytrah Aakash Power Private Limited		NSO9	NSO9
Mytrah Vayu (Som) Pvt. Limited		NSO7	NSO7
Mytrah Vayu (Tungabhadra) Pvt. Limited		NSO9	NSO9
7. Safeguard Categorization		Environment: B	Involuntary Resettlement: B
			Indigenous Peoples: B
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		175.00	
Nonsovereign LIBOR Based Loan: Ordinary capital resources		42.00	
Nonsovereign LIBOR Based Loan: Ordinary capital resources		23.00	
Nonsovereign LIBOR Based Loan: Ordinary capital resources		14.00	
Nonsovereign LIBOR Based Loan: Ordinary capital resources		18.00	
Nonsovereign LIBOR Based Loan: Ordinary capital resources		64.00	
Nonsovereign LIBOR Based Loan: Ordinary capital resources		14.00	
B-Loans		0.00	
None		0.00	
Official Cofinancing^a		0.00	
None		0.00	
Others^b		494.50	
Total		669.50	
9. Effective Development Cooperation			
Use of country procurement systems		Yes	
Use of country public financial management systems		Yes	

^a Concessional financing from external sources.^b Derived by deducting ADB financing, B Loans and Official Cofinancing from Project Total Cost.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on proposed loans of up to \$175 million (or Indian rupee equivalent) to six special purpose vehicles owned and controlled by Mytrah Energy (India) Limited (MEIL) for the Mytrah Wind and Solar Power Development Project in India.

II. THE PROJECT

A. Project Identification and Description

1. Project Identification

2. MEIL is one of India's fastest-growing independent power producers (IPPs) from renewable sources, with 580 megawatts (MW) of wind power capacity under operations across six states and an additional 476 MW of wind power capacity under advanced stages of development. In 2015, MEIL ventured into solar power development, and has won bids to collectively install 377 MW of solar photovoltaic capacity. MEIL aims to achieve sustainable competitiveness and de-risking through (i) grid parity tariffs, (ii) non-reliance on subsidies, (iii) scalability to achieve utility-scale operations, and (iv) diversification by geography, equipment supplier, and technology.

3. The Asian Development Bank (ADB) has been supporting the development of renewable energy in India since 2007, when it financed the first set of wind projects under the IPP model by Tata Power and China Light and Power. ADB has financed solar IPPs by assisting projects under the National Solar Mission¹ and various state policies. In addition, ADB has invested equity in renewable energy companies (e.g., ReNew Power Limited, Welspun Renewables Energy Limited, and NSL Renewable Power Private Limited). As part of its commitment announced by ADB in September 2015² to scale up clean energy financing, ADB will seek to sustain its private sector activities, particularly in major renewable energy markets such as India. ADB's initiative will actively support the Government of India's intended nationally determined contributions submitted to the United Nations Framework Convention on Climate Change. A key factor of the intended nationally determined contributions is renewable energy capacity addition of 175 gigawatts (GW) by 2022.

2. Project Design

4. ADB is proposing a direct loan facility of up to \$175 million to a portfolio of special purpose vehicles (SPVs or "Borrowers" or "borrowers") owned by MEIL. ADB's facility will be structured as a separate loan to each SPV on a project finance (limited recourse) basis. ADB's facility is being proposed for a tenor of up to 17 years for four SPVs, and 18 years for two SPVs.

Confidential information deleted.

¹ Government of India. Ministry of New and Renewable Energy. Jawaharlal Nehru National solar Mission. <http://www.mnre.gov.in/solar-mission/jnnsmission/introduction-2/>. India.

² ADB. 2015. *ADB to Double Annual Climate Financing to \$6 Billion for Asia-Pacific by 2020*, News Release. 25 September. Manila.

Table 2: Details of Project-Related Special Purpose Vehicles

SPV/Borrower	Location	Capacity (MW)	ADB Loan^a (\$ million)	Tenor (years)
1. Mytrah Vayu (Som) Pvt. Limited	Nidhi, Rajasthan Nipaniya, MP	90.1 50.0	42.0	17
2. Mytrah Vayu (Tungabhadra) Pvt. Limited	Aspiri, AP–Phase I Aspiri, AP–Phase II	101.4 99.3	64.0	17
3. Mytrah Vayu (Ravalpalli) Pvt. Limited ^b	Ravalpalli, Karnataka	59.8	18.0	18
4. Mytrah Vayu (Savalsang II) Pvt. Limited ^b	Savalsang, Karnataka	75.6	23.0	18
5. Mytrah Aadhya Power Pvt. Limited	Mansa, Punjab	50.0	14.0	17
6. Mytrah Aakash Power Pvt. Limited	KM Pally, Telangana	50.0	14.0	17
Total		576.2	175.0	

ADB = Asian Development Bank, AP = Andhra Pradesh, MP = Madhya Pradesh, MW = megawatt, Pvt. = Private, SPV = special purpose vehicle.

^a ADB Loan share for each SPV works out higher than 25% of the project cost to take care of changes due to exchange rate fluctuation. However, ADB share for each SPV would be in-line with OMD13 guidelines.

^b These SPVs are yet to be formed and titled.

Source: Mytrah Energy (India) Limited.

3. The Borrowers and Sponsor

5. Mytrah Energy Limited (MEL) is the holding company of the Mytrah Group. It is incorporated in Guernsey and was listed on the AIM, the London Stock Exchange's international market for emerging companies, in 2010. MEL set up MEIL to be its India holding company. MEIL now has 10 operating sites (7 turnkey and 3 self-developed) spread over six states. It started with turnkey projects as it built itself up by investing in its own wind resource assessment (WRA) and project execution teams. It attained the capability of identifying potential wind sites supported by in-house WRA, going through the approval and permitting process, acquiring land, and executing the projects. It now has a self-developed pipeline of over 6,000 MW, backed by wind data collected through 195 wind masts installed across 11 states. MEIL is the sponsor for the six borrowers. The company's medium-term business plan is to achieve a renewable energy capacity of 2 GW (1.7 GW from wind and 300 MW from solar) by the end of FY2017.

6. Mytrah Group was founded by Ravi Kailas, who has 25 years of entrepreneurial experience in telecommunications, software, real estate, and infrastructure. Before MEL's initial public offering, Kailas collaborated with British steel conglomerate Caparo Group, giving chairman and founder Lord Swaraj Paul and his son Angad MEL minority shares in exchange for using the Caparo brand under a licensing agreement. The company was called Caparo Energy Limited. After the initial public offering, the name was changed to Mytrah Energy Limited. At present, the Raksha Trust³ has 57.9% ownership of MEL, followed by Esran Overseas Ltd, an investment trust belonging to Angad Paul's family, (14.7%); Capital Research Global Investments (7.4%); Henderson Global Investors (5.5%); and Moab Capital Partners LLC (3.8%). MEL's market capitalization as of 22 January 2016 is approximately \$105 million. MEIL's annual revenue increased from \$46.7 million in FY2014 to \$66.9 million in FY2015. Similarly, MEIL's earnings before interest, taxes, depreciation, and amortization (EBITDA) was \$59.7 million (EBITDA margin of 89%) in FY2015, up from \$40.6 million (EBITDA margin of 87%) reported in FY2014.

³ Jersey-based discretionary trust settled by Ravi Kailas, the chairman and chief executive officer of MEL.

7. MEL, through its Mauritius-based subsidiary Bindu Vayu (Mauritius) Ltd., holds a majority in MEIL. MEIL has raised external funds in the form of nondilutive mezzanine finance, including convertible preference shares subscribed by the India Infrastructure Fund (managed by IDFC Alternatives, a leading infrastructure-focused financial institution in India) in 2011. Another fundraising round involved a nonconvertible debenture of \$130 million subscribed by AION Capital Partners (an Apollo-managed fund), Goldman Sachs, and Merrill Lynch in 2015.

B. Development Impact, Outcome, and Outputs

1. Impact

8. The project's impact will be the diversification of India's energy mix through the addition of renewable energy capacity, helping the country progress toward its clean energy targets.⁴ To achieve sustainable long-term economic growth, India is promoting alternative sources of energy, such as wind and solar, for power generation. Renewable energy is a secure, reliable, and sustainable source of electricity that helps diversify the country's energy mix, strengthen energy security, and reduce reliance on fossil fuels.

9. The project also contributes to the acceleration and expansion of private sector investment, including foreign direct investment in clean energy infrastructure in India. MEIL sees ADB's potential assistance as a key success factor in expanding the company's renewable energy portfolio. In particular, it is expected that ADB's assistance will help attract further investments in India's renewable energy sector from both within and outside India.

2. Outcome

10. The project's outcome is increased renewable energy capacity operated by the private sector. The project will generate 1,200 gigawatt-hours of clean energy per annum and will contribute to avoiding 1,185,165 tons of carbon dioxide emissions⁵ annually from 2018 onward.

3. Outputs

11. The project outputs are (i) the development and commissioning of 476 MW of wind power and 100 MW of solar power generation capacity by April 2017, and (ii) the creation of 2,500 contractual jobs during construction and 95 full-time jobs during operations.

C. Alignment with ADB Strategy and Operations

1. Consistency with Strategy 2020 and Country Strategy

12. The project is consistent with ADB's Midterm Review of Strategy 2020.⁶ It relates to two of the five core specializations of the bank: infrastructure and environment. The midterm review calls for investing \$2 billion annually in clean energy (including renewable energy). It highlights the key role of the private sector in climate change mitigation and confirms that ADB should continue to prioritize private sector operations in clean and renewable energy to meet growing energy demand in a sustainable manner. The project will also contribute to the bank's

⁴ The Government of India has revised its renewable targets and now plans to achieve 175 GW of renewable capacity by 2022.

⁵ ADB. 2011. *Manual for Calculating Energy Output Indicators*. Manila. The emission factor used is 988 tons of carbon dioxide per gigawatt-hour.

⁶ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila.

operational goal of scaling up private sector development and private sector operations. The project is aligned with ADB's country partnership strategy, 2013–2017 for India, which calls for "investments in renewable energy development."⁷

2. Consistency with Sector Strategy and Relevant ADB Operations

13. The project is fully aligned with ADB's Energy Policy.⁸ The policy states that support for renewable energy projects will be prioritized and broadened. In 2013, ADB doubled its clean energy investment target to \$2 billion a year. As part of its stronger commitment to financing renewable energy projects, ADB will increase its assistance to such projects to \$6 billion a year by 2020. As part of the policy implementation, ADB emphasizes private sector participation as a tool to boost energy sector efficiency by introducing competition and more investable resources.

3. Lessons from Previous Operations

14. The extended annual reviews of wind and solar projects previously financed by ADB's Private Sector Operations Department in India highlighted three key lessons: (i) the importance of resource assessment, (ii) the risks associated with land acquisition, and (iii) the need for adequate power evacuation facilities. These lessons will be taken into account in the implementation and are part of MEIL's project-selection process.

D. Project Cost and Financing Plan

15. The project is estimated to cost \$669.5 million.

Confidential information deleted.

E. Implementation Arrangements

22. Table 5 summarizes the implementation arrangements.⁹

Table 5: Summary of Implementation Arrangements

Aspects	Arrangements
Regulatory framework	The energy sector in India is regulated. CERC is the central regulator. Individual states have a state ministry of power as well as SERCs. Renewable energy policies are embedded in the framework of the Electricity Act, 2003; the National Electricity Policy, 2005 (and as amended thereafter); and the National Tariff Policy, 2006 (and as amended in December 2010 and thereafter).
Management	Management has demonstrated the ability to execute and efficiently operate wind power projects totaling 580 MW. The team is led by chairman Ravi Kailas, who is supported by an experienced team. The company has 223 full-time employees.
Implementation period	January 2016–April 2017
Construction arrangements	
Type of arrangement	The company executes self-development, turnkey, and hybrid projects. Nipaniya will be implemented on a turnkey basis, while the rest of the projects will be implemented under a self-development model. MEIL will enter into a turbine-supply-and-erection contract with WTG suppliers and into other subcontracts for BOP. For the solar projects, MEIL will be the EPC contractor and will execute solar panel contracts and enter into various subcontracts for BOP.
Power generation	Selection of turbines for wind projects depends on the WRA and site characteristics

⁷ ADB. 2013. *Country Partnership Strategy: India, 2013–2017*. Manila.

⁸ ADB. 2009. *Energy Policy*. Manila.

⁹ Details of Implementation Arrangements

Aspects	Arrangements
equipment	to maximize IRR. For solar, the technology will be polycrystalline photovoltaic cells. Wind turbines will be procured competitively from quality suppliers, with models suitable to local wind and weather conditions. These suppliers include Gamesa, GE, INOX and Suzlon, all with successful track records in India. Solar panels will be acquired from leading suppliers, such as Canadian Solar, Trina, and Yingli.
Civil works	Civil works for BOP (e.g., construction of turbine foundations, panel foundations, and supporting structures; common facilities; substation; and access roads) are normally subcontracted to local firms with sufficient experience.
Transmission lines	Power evacuation facilities are made available by the respective state transmission companies. The project is responsible for building the transmission line to the grid substation. This last-mile connectivity is part of the scope of the EPC contract.
Contractor	MEIL, with various WTG suppliers and solar panel providers as subcontractors.
Operational arrangements	
Revenue structure	The projects will enter into PPAs of 20–25 years with respective state utilities.
Operation and maintenance	Operation and maintenance of the wind power projects is outsourced to external contractors (typically WTG suppliers) under a term contract.
Performance monitoring	Key performance indicators will be reported by MEIL and monitored by ADB.

ADB = Asian Development Bank; BOP = balance of plants; CERC = Central Electricity Regulatory Commission; EPC = engineering, procurement, and construction; GE = General Electric; INOX = INOX Wind Limited; IRR = internal rate of return; MEIL = Mytrah Energy (India) Limited; MW = megawatt; PPA = power purchase agreement; SERC = state electricity regulatory commission; WRA = wind resource assessment, WTG = wind turbine generator.

Source: Mytrah Energy (India) Limited due diligence.

F. Projected Financial and Economic Performance

23. Confidential information deleted.

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

24. ADB will provide six separate nonrecourse loans totaling \$175 million (or Indian rupee equivalent) to six SPVs to partly finance about 476 MW of wind and 100 MW of solar projects during 2016–2017. The loan tenor will be up to 17 years for four SPVs, and 18 years for two SPVs, including a principal grace period of up to 1 year. ADB loans will carry an interest rate as well as other fees as approved by ADB's Investment Committee.

B. Value Added by ADB Assistance

25. The proposed project merits ADB assistance for the following reasons:

- (i) **Clean energy development support.** ADB assistance will support the Government of India's efforts to develop renewable energy, where the private sector is expected to play a major role. Supporting a renewable energy developer with a portfolio of projects through a debt package, as opposed to single-project financing, is a way to achieve greater leverage of ADB's funding and hence greater development impact.
- (ii) **Foreign direct investment support.** ADB assistance will support the growth of a professionally managed renewable energy platform. ADB assistance will facilitate \$175 million as foreign direct investments in these six SPVs, incorporated in India.

C. Risks

26. **Off-taker and regulatory risk.** State distribution companies (discoms) are the off-takers. Projects are exposed to payment default risk because of the poor financial health of these discoms. While none of the discoms has defaulted on payments, some payments have been late. The projects will each have sufficient liquidity buffers—a 6-month debt service reserve account and 3-month working capital—to offset the expected sporadic liquidity issues. The tariffs for the projects are competitive compared with the marginal cost of power for the discoms, thereby providing a commercial incentive for timely payment. Renewable purchase obligations and strong political commitment from the government also encourage timely payments.

27. **Engineering, procurement, and construction risk.** Tariffs are fixed by the regulator for a certain time. Any delay in construction could have a negative impact on the projects' commissioning date and potentially on the applicable tariff. The risks of delay and cost overrun are relatively low for wind and solar projects, and are mitigated by the short construction period, modular nature and low complexity of construction. The project's engineering, procurement, and construction (EPC) arrangements are a fixed-price, date-certain contract with MEIL. The project team assessed the construction arrangements and got positive feedback from the lenders' independent engineer (TÜV Rheinland) that the construction schedule is in line with the target commissioning. MEIL also provides a comprehensive project completion guarantee supported by the contingent equity required to fund cost overruns caused by delay or scope changes.

28. **Confidential information deleted.**

29. **Wind resource risk.** Over 2 years of wind data was collected and a WRA for the first three projects was carried out by TÜV Rheinland, which will also assess the other project sites. These will be reviewed by ADB's Private Sector Operations Department and Office of Risk Management before disbursement is approved. Wind speed for these sites is medium-to-low and the risk will be mitigated through the use of higher rotor diameter wind turbines that are designed for lower wind resource locations. The wind resource forecast used for calculating base-case cash flows in the financial model is based on generation exceeding 90% probability each year. MEIL's track record in forecasting is good, with its existing sites generating 75%–90% of probable generation estimates. This risk is also mitigated by the cross default between projects, where cash will be trapped in performing projects if any other project is in default, effectively providing a portfolio diversification effect.

30. **Land acquisition risk.** Land acquisition has the potential to delay implementation. The land for the projects is expected to be either unencumbered public land allocated to the project or private land acquired on a willing-seller–willing-buyer basis. Land acquisition for wind farms is relatively simple because a large, contiguous piece is not required. If challenges on a particular turbine site arise, then micrositing can be changed and the land parcel excluded. The project team has evaluated the status of land acquisition, including along transmission lines, and has found it satisfactory. The company has set internal guidelines for land acquisition that clearly define environment-sensitive zones (e.g., bird sanctuary, forest) and socially sensitive zones (e.g., tribal habitation) as no-go areas. In addition, the company will be required to implement an ADB-approved environmental and social management system at the corporate level. This risk is also mitigated by MEIL's project completion guarantee.

31. **Confidential information deleted.**

32. **Operation and maintenance risk.** Operation and maintenance is initially outsourced to the equipment supplier since it has the best experience in operating its own equipment. The

company has a good operation and maintenance track record, as demonstrated by plant availability and load factors. This risk is also mitigated by the cross default between projects, where cash will be trapped in performing projects if any other project is in default, effectively providing a portfolio diversification effect.

33. **Foreign currency risk.** As the project portfolio's revenues and loans are in Indian rupees, foreign currency risk is expected to be fully mitigated. However, no assurance exists that a 17- to 18-year cross-currency swap can be obtained, which means that alternative Indian rupee funding mechanisms (rollover of shorter cross-currency swaps) will need to be included in the loan documentation. Although ADB will have the option to disburse in US dollars, this will only be undertaken as a last resort if the foreign currency risk is hedged to ADB's satisfaction.

34. **Confidential information deleted.**

IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

35. In compliance with ADB's Safeguard Policy Statement (2009), the project is classified category B for environment, B for involuntary resettlement, and B for indigenous peoples. The identified sites are not considered to be along a major fly route for migratory birds and no known bat populations exist in their vicinities. Environmental impacts during construction are generally site-specific and reversible. Potential noise and shadow flicker impacts during operations are expected to be within acceptable limits. An environmental and social audit was completed and adequate measures to solve outstanding compliance issues were put in place. The potential environmental and social impacts of the project were identified and effective measures to avoid, minimize, mitigate, and compensate for the adverse impacts are incorporated in the safeguard reports and plans. MEIL's institutional capacity and commitment to manage the project's social and environmental impacts are deemed adequate.

36. MEIL will comply with national labor laws and, pursuant to ADB's Social Protection Strategy (2001), will take measures to comply with the internationally recognized core labor standards.¹⁰ The borrower will report regularly to ADB on (i) its and its contractors' compliance with such laws and (ii) the measures taken. Information disclosure and consultation with affected people will be conducted in accordance with ADB requirements.¹¹

B. Anticorruption Policy

37. MEIL was advised of ADB's policy of implementing best international practice relating to combating corruption, money laundering, and the financing of terrorism. ADB will ensure that the investment documentation includes appropriate provisions prohibiting corruption, money laundering, and the financing of terrorism, and remedies for ADB in the event of noncompliance.

38. During project preparation the integrity due diligence was conducted and significant integrity issues were addressed or disclosed herewith. MEIL is directly and indirectly owned by entities established in intermediate jurisdictions, including Guernsey (MEL) and Mauritius (Bindu Vayu). Both are rated as largely compliant with the tax transparency principles, and neither is on the Financial Action Task Force's list of countries with strategic anti-money laundering

¹⁰ ADB. 2003. *Social Protection*. Manila (adopted in 2001).

¹¹ Summary Poverty Reduction and Social Strategy, and Safeguards and Social Dimensions Summary

deficiencies. The structure was adopted for purposes of tax efficiency and to allow MEL to raise funds from listing in an overseas market and Bindu Vayu to pass-through funds raised by MEL to its Indian subsidiary. ADB does not believe that the structure was established for cross-border tax evasion, money laundering, or the financing of terrorism in the jurisdictions involved in the project. Politically exposed persons were identified in this transaction and adverse media was found on several individuals and corporate structures. These were reviewed by the Office of Anticorruption and Integrity and were assessed as constituting low risks to the Project.

C. Investment Limitations

38. The proposed loans are within the medium-term, country, industry, group, and single-project exposure limits for nonsovereign investments.

D. Assurances

39. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),¹² ADB will proceed with the proposed assistance upon establishing that the Government of India has no objection to the proposed assistance to MEIL and its subsidiaries. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the Board of Directors.

V. RECOMMENDATION

40. I am satisfied that the proposed loans would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loans of up to \$175,000,000, from ADB's ordinary capital resources, to six special purpose vehicles owned and controlled by Mytrah Energy (India) Limited, for the Mytrah Wind and Solar Power Development Project in India, with such terms and conditions as are substantially in accordance with those set forth in this report, and as may be reported to the Board.

29 February 2016

Takehiko Nakao
President

¹² ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.

DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned with			
<p>India's energy mix diversified through the addition of renewable energy capacity (Ministry of New and Renewable Energy)^a</p> <p>Renewable energy in India accelerated and scaled up through greater private sector participation (Ministry of New and Renewable Energy)^a</p>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>Outcome</p> <p>Increased renewable energy capacity sustainably operated by the private sector</p>	<p>By 2018</p> <p>a. 1,200 GWh generated annually (2015 baseline: NA)</p> <p>b. 1,185,165 tons of CO₂ avoided annually (2015 baseline: NA)</p> <p>c. At least 64 full-time equivalent local jobs and 415 contractual jobs are created for operations^b (2015 baseline: NA)</p> <p>d. Direct contribution (corporate tax) to government revenues amounts to an average of Rs890 million (\$13 million equivalent) annually (2015 baseline: NA)</p>	<p>a–d. Company financial statements and annual progress reports, ADB's annual reviews</p>	<p>Capacity utilization rates do not meet forecasts because wind resource falls short of expectations</p> <p>Accidents and late maintenance cause power production to be lower than planned</p> <p>Generated energy is not dispatched due to inadequate transmission capacity at substation delivery point</p>
<p>Outputs</p> <p>1. 476 MW of wind power and 100 MW of solar power commissioned</p> <p>2. Local employment generated</p>	<p>1a. 241 MW wind farm project commissioned by 2016 (2015 baseline: NA)</p> <p>1b. 234 MW of additional wind capacity commissioned by 2017 (2015 baseline: NA)</p> <p>1c. 100 MW of solar capacity commissioned by 2016 (2015 baseline: NA)</p> <p>2a. Local purchase of goods and services amounts to Rs38,812.3 million (\$581 million equivalent) during construction (2015 baseline: NA)</p> <p>2b. 95 full-time equivalent local jobs and 2,500 contractual jobs are created during construction^c (2015 baseline: NA)</p>	<p>1–2. Company financial statements and progress reports, ADB's annual monitoring reports</p>	<p>Land acquisition is delayed</p> <p>Prices of raw materials increase</p> <p>Trained staff is not available</p>

<p>Key Activities with Milestones</p> <p>Output 1: 476 MW of wind power and 100 MW of solar power projects developed and commissioned.</p> <p>1.1 Execution of legal documentation completed by April 2016.</p> <p>1.2 Construction of the projects progressing as per schedule and all projects complete construction by April 2017.</p> <p>1.3 Implementation of environmental and social safeguard policies.</p> <p>Output 2: Local employment generated.</p> <p>1.1 Construction of the projects progressing as per schedule and required personnel are employed</p> <p>1.2 The projects are operating satisfactorily and employing the right staff.</p>
<p>Inputs</p> <p>Debt:</p> <p>Asian Development Bank: \$175.0 million</p> <p>Domestic financial institutions: \$329.6 million</p> <p>Equity:</p> <p>\$164.8</p>
<p>Assumptions for Partner Financing</p> <p>Not applicable.</p>

ADB = Asian Development Bank, CO₂ = carbon dioxide, GWh = gigawatt-hours, MW = megawatt, NA = not applicable, Rs = Indian rupees.

^a Intended nationally determined contributions to Climate Change submitted to United Nations Framework Convention on Climate Change in October 2015. Government of India. 2015. *India's Intended Nationally Determined Contributions: Working Towards Climate Justice*. Delhi. <http://www4.unfccc.int/submissions/INDC/Published%20Documents/India/1/INDIA%20INDC%20TO%20UNFCCC.pdf>

^b Full-time employment generated during operations is 64 (10 per project for wind power projects and 7 per project for solar power projects). Total number of contractual jobs generated during operations is 406 (80 per project for wind power projects and 3 per project for solar power projects).

^c Full-time employment generated during construction is 95 (15 per project for wind power projects and 10 per project for solar power projects). Number of contractual jobs generated during construction is 2,500 (400 per project for wind power projects and 250 per project for solar power projects).

Source: Asian Development Bank