Report and Recommendation of the President to the Board of Directors

Project Number: 47920
November 2013

Proposed Equity Investment
Welspun Renewables Energy Limited
Solar and Wind 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 Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 2 October 2013)

Currency unit	–	Indian rupee/s (Re/Rs)
Re1.00	=	$0.016
$1.00	=	Rs62.50

ABBREVIATIONS

ADB	–	Asian Development Bank
ESMS	–	environmental and social management system
GW	–	gigawatt
IPO	–	initial public offering
MW	–	megawatt
WEL	–	Welspun Energy Limited
WREL	–	Welspun Renewables Energy Limited

NOTES

(i) The fiscal year (FY) of Welspun Renewables Energy Limited and Welspun Energy Limited ends on 31 March. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2012 ends on 31 March 2012.

(ii) In this report, "$" refers to US dollars.

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CONTENTS

PROJECT AT A GLANCE

1. Project Name: Solar and Wind Power Development Project
2. Project Number: 47920
3. Country: India
4. Department/Division: Private Sector Operations Department
Infrastructure Finance Division 1

5. Sector Classification:

Sectors	Primary	Subsectors
Energy	√	Renewable energy generation

6.Thematic Classification:

Themes	Primary	Subthemes
Economic growth	√	Physical infrastructure development
Environmental sustainability		Eco-efficiency
Private sector development		Private sector investment

6a. Climate Change Impact:

Adaptation	
Mitigation	√
Not applicable	

6b. Gender Mainstreaming:

Gender equity theme	
Effective gender mainstreaming	
Some gender benefits	√
No gender benefits	

7. Targeting Classification:

	Targeted Intervention		
General Intervention	Geographic dimensions of inclusive growth	Millennium Development Goals	Income poverty at household level
√			

8. Location Impact:

Rural	Medium
Urban	Low
National	High
Regional	Low

9. Nonsovereign Operation Risk Rating: Not applicable

10. Safeguard Categorization:

Environment	**B**
Involuntary resettlement	**C**
Indigenous peoples	**C**

11. ADB Financing:

Sovereign/Nonsovereign	**Modality**	**Source**	**Amount** ($ million)
Nonsovereign	Equity	OCR	$50.0 (in Indian rupees)

12. Cofinancing: Not Applicable

13. Counterpart Financing: Not Applicable

14. Aid Effectiveness: Not Applicable

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed equity investment of up to $50,000,000 (in Indian rupee equivalent) in Welspun Renewables Energy Limited (WREL) for the Solar and Wind Power Development Project in India.

II. THE PROJECT

A. Project Identification and Description

1. Project Identification

2. India remains in chronic need of additional power generation capacity. Although the electrification rate of households in India has increased from 43% in 2000[1] to 75% in 2010,[2] the quality and reliability of service remain suboptimal and rural areas in particular remain underserved. The Eleventh Five-Year Plan, 2007–2012 targeted additional capacity of 79 gigawatts (GW); however, actual realization was only 55 GW. The Twelfth Five-Year Plan, 2012–2017 targets an addition of 88 GW, including 30 GW of renewable energy capacity. Although the 12th plan sets ambitious targets to connect all villages to the electricity network, reliability will likely remain an issue. Because of continued demand growth, power supply is expected to continue to fall 10%–12% short of demand every year during the 12th plan.[3]

3. India also needs to preserve its energy mix, not only to combat climate change but also to ensure the country's energy security. Indigenous conventional fuels are diminishing and India has to import increasing quantities of coal and liquefied natural gas. Increasing scarcity of water is putting pressure on coal-based power plants. Investing in renewable power mitigates import dependency and the impact of potential imported fuel price increases. The share of renewable power, including hydro power, in total installed capacity has declined from 44% in 1970 to 31% in 2011. The government intends to stop this decline and has set a goal of maintaining the proportion of renewable power at its current level (31%) until 2023.[4]

4. The Indian energy sector has recently seen some favorable developments that are targeted to increase further investments in the sector, and particularly in renewable power generation. The Jawaharlal Nehru National Solar Mission was launched in 2010, setting the target for 20 GW of grid-connected solar power capacity by 2020. In addition to capacity that will be developed under this mission with central government offtake (4 GW by 2017), the different states have announced targets for capacity that will benefit from state utilities' offtake (6 GW by 2017).[5] Under these programs, solar developers benefit from attractive tariffs, although most tariffs are determined as a result of bids and solar tariffs are expected to decrease and reach "grid parity" over the medium term.[6] In the wind subsector, the seven states with the highest wind potential increased their wind feed-in tariffs in 2012–2013 and the central government announced the reinstatement of the generation-based incentive for wind projects in 2013.[7] In September 2012, the central government approved a large financial restructuring plan for state

[1] International Energy Agency (IEA). 2002. *World Energy Outlook 2002*. Paris.
[2] IEA. 2011. *World Energy Outlook 2011*. Paris.
[3] Planning Commission. 2013. *Twelfth Five-Year Plan*. New Delhi: Government of India.
[4] Central Electricity Authority. 2012. *National Electricity Plan*. Delhi: Government of India.
[5] See details under Sector Overview (accessible from the list of linked documents in Appendix 2).
[6] HSBC Global Research. 2013. *India Renewables*. Bangalore. HSBC forecasts grid parity for solar over 2016–2018.
[7] The generation-based incentive provides an incentive of Rs0.5 per kilowatt-hour paid by the central government, in addition to the feed-in-tariff paid by state utilities (in the range of Rs3.5–Rs5.9 per kilowatt-hour in the seven states with the highest wind potential). See Sector Overview (accessible from the list of linked documents in Appendix 2).

electricity boards. Several state electricity boards are in bad financial health and the plan aims to strengthen their balance sheet to encourage investments across the energy sector.

2. Project Design

5. The project enables the funding of WREL's equity injection in a portfolio of solar photovoltaic and wind power projects with a total capacity of approximately 300 megawatts (MW) to be commissioned from December 2013 to March 2016. Although the exact composition of the portfolio might change as a result of public bid awards and other business considerations, WREL expects its portfolio to grow by at least 200 MW of solar power projects and 100 MW of wind power projects from December 2013 to March 2016.

3. The Company and Sponsors

6. WREL is one of the leading renewable power developers in India. As of November 2013, WREL had 309 MW of operational projects (289 MW of solar projects in Andhra Pradesh, Gujarat, Madhya Pradesh, Maharashtra, and Rajasthan; and 20 MW of wind projects in Rajasthan), 211 MW of projects under construction (119 MW solar and 92 MW wind), and a pipeline of 1.2 GW of projects at various stages of development. The project will help the company reach at least 600 MW of operational projects by March 2016.

7. WREL is 100% owned by Welspun Energy Limited (WEL), which is in turn owned by Welspun Corp Limited and indirectly by two individual sponsors: B. K. Goenka and Vineet Mittal. The Welspun Group is a large Indian conglomerate engaged in textiles, steel pipes, oil and gas, and infrastructure with an annual turnover of approximately $2.6 billion. Welspun Textile is the third-largest home textile producer in the world, while Welspun Corp is the second-largest large-diameter pipe company in the world. WEL is the power arm of the Welspun Group and is engaged in engineering, procurement, and construction for power projects (mainly for WREL's projects) and ownership of power generation projects, both renewable (through WREL) and thermal. B. K. Goenka is the chairman of the Welspun Group. V. Mittal started and ran one of the biggest outsourcing companies in India, and is a member of the advisory panel of the Solar Energy Advisory Council of the Government of India. [8]

B. Development Impact, Outcome, and Outputs

1. Impact

8. The project will contribute to the continued development of renewable energy generation in India. In doing so, it will help preserve India's energy mix by increasing the country's reliance on indigenous energy sources as opposed to imported fuels. The project will contribute to the national goal of at least maintaining the proportion of renewable power (including hydro power) in total installed capacity at its current level (31%) until 2023.

9. ADB's assistance will also support private sector development. It will help demonstrate that profitable investments are achievable in the renewable power subsector and, as such, will catalyze more private investments in renewable energy. Supported by favorable government policies for renewable power, the private sector share in the total installed capacity of renewable energy in India is expected to increase from 33% in 2011 to 50% in 2023.

[8] V. Mittal received several distinctions, including Solar Man of the Year from *EQ International* magazine in 2012.

2. Outcome

10. The project's outcome is the demonstrated viability and sustainability of renewable energy projects in the private sector. The project is expected to generate 540 gigawatt-hours of electricity annually and avoid 400,000 tons of carbon dioxide emissions annually from FY2017 onwards. The project will further contribute to local employment and tax revenues.

3. Outputs

11. The project output is the development and commissioning of a portfolio of 200 MW of solar photovoltaic power projects and 100 MW of wind power projects by March 2016.

C. Alignment with ADB Strategy and Operations

1. Consistency with Strategy 2020 and Country Strategy

12. The project is consistent with ADB's Strategy 2020.[9] It relates to two of the strategy's five core pillars: infrastructure and environment. The strategy calls for ADB support to clean energy development to meet growing energy demands in a sustainable manner. The project will also contribute to ADB's operational goal of scaling up private sector development. The project is aligned with the India country partnership strategy, 2013–2017, which calls for "investments in renewable energy development, particularly solar."[10]

2. Consistency with Sector Strategy and Relevant ADB Operations

13. The project is fully aligned with ADB's Energy Policy.[11] The policy states that support for renewable energy projects will be prioritized and broadened. Starting in 2013, ADB will increase its target of clean energy investments to $2 billion a year from the previous target of $1 billion a year. As part of the policy implementation, ADB is emphasizing private sector participation as a tool to increase energy sector efficiency by introducing increased competition and increased investable resources. The proposed investment also contributes to ADB's Asia Solar Energy Initiative and complements previous interventions in the solar industry in India.

3. Lessons from Previous Operations

14. No independent evaluation has been undertaken yet on prior nonsovereign investments by ADB in the solar industry. Lessons based on staff experience point to (i) the importance of feed-in tariffs for renewable energy; (ii) the importance of the quality of panel suppliers, as well as their level of warranties and creditworthiness; and (iii) the need for verification of generation losses due to dust and other soiling factors, especially in desert areas of India. To date, India and Thailand are the only two countries in Asia that have appropriate feed-in tariffs in place in combination with credible supporting government policies. The project is mitigating risks associated with panel supply by the fact that the quality of the solar panels, the adequacy of the warranties, as well as the reputation of the supplier selected by WREL have been confirmed by ADB's independent engineer. The independent engineer confirmed that WREL has adequate operations and maintenance capacity in place to minimize generation loss, and that soiling losses have been taken into account when calculating net generation.

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[9] ADB. 2008. *Strategy 2020. The Long-Term Strategic Framework of the Asian Development Bank, 2008–2020.* Manila.
[10] ADB. 2013. *Country Partnership Strategy: India, 2013–2017.* Manila.
[11] ADB. 2009. *Energy Policy.* Manila.

15. The extended annual reviews of private sector wind projects previously financed by ADB in India highlighted three key lessons: (i) the importance of wind resource assessment, (ii) the risks associated with land acquisition if forest land is included in the scope of the project, and (iii) the need for more power evacuation facilities. WREL's project selection aims to mitigate these risks by (i) relying on multiple wind data sources, such as external databases as well as data from wind masts placed by WREL at various project sites; (ii) a land acquisition approach that avoids forest land; and (iii) working closely with local offtakers to ensure advance grid planning is completed where required.

D. Implementation Arrangements

16. Table 3 summarizes the implementation arrangements.

Table 3: Summary of Implementation Arrangements

Aspects	Arrangements
Regulatory framework	The energy sector in India is regulated and administered through a multi-ministerial structure. The 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 the National Tariff Policy, 2006 (and as amended in December 2010). The regulatory environment in India for the renewable subsector is under continuous development and aims to encourage further significant private sector investments.
Management	The management team of WREL is headed by one of the sponsors, Vineet Mittal. He is supported by a team of professionals with ample experience in the renewable energy sector.
Implementation period	December 2013–March 2016
Construction arrangements	
Type of arrangement	EPC contracts will be awarded in a transparent manner based on an assessment of the proposed cost, quality, time lines, and terms and conditions.
Equipment Suppliers	EPC contractors will source thin film and crystalline solar modules, inverters, wind turbines, transformers, and other necessary equipment from leading international suppliers.
Civil works	Civil works for the balance of the plant (including construction of common facilities, control rooms, and access roads) will be subcontracted to local trade contractors.
Transmission lines	Power evacuation facilities will be made by the respective state transmission companies, while short connection lines are included as part of the EPC contract.
Operation arrangements	
Revenue structure	For all projects offtake will be fixed under long-term PPA (majority 25 years) with varying tariffs with the respective state offtakers.
Operation and maintenance	Operation and maintenance of the solar plants will be done in-house at the project level. Training and support is offered by WREL. Operation and maintenance of the wind projects will be done by the wind turbine supplier, generally for a 20-year period.
Performance monitoring	Key performance indicators will be reported by WREL and monitored by ADB.

EPC = engineering, procurement, and construction; PPA = power purchase agreement; WREL = Welspun Renewables Energy Limited.
Source: Welspun Renewables Energy Limited.

E. Unique Features

17. The project will be ADB's largest direct equity investment in renewable energy ($50 million) and it will be ADB's largest nonsovereign solar power project in size (200 MW). It is noteworthy that ADB will become the first external investor in WREL. In most other direct equity investments so far, ADB has followed first-round private equity investors. In this transaction, ADB is taking a leading structuring role. The valuation, corporate governance standards, and minority shareholder protection rights negotiated by ADB as part of its investment will help WREL attract further equity investment to support its growth.

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

18. ADB will subscribe to common equity shares of WREL for an amount up to the lower of (i) the Indian rupee equivalent of $50 million, and (ii) such amount that represents 25% of the net worth of WREL after the ADB investment.

19. The equity investment has been structured to address the capital needs of WREL. It provides growth capital to WREL without imposing the burden of interest payments, while the asset base is being expanded. It will enable ADB to share the investment upside created by an initial public offering (IPO) or a strategic sale.

B. Value Added by ADB Assistance

20. ADB's assistance will support the government's policy to develop renewable energy. It will strengthen a local renewable energy sponsor with a good operational track record and a commitment to comply with ADB's environmental and social safeguard requirements. In addition, ADB's investment is expected to be catalytic as it will enable the company to raise equity funds from other investors. As such, WREL sees ADB's potential assistance as a key success factor for subsequent fund raising and its future IPO.

IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

21. The proposed equity investment is considered as general corporate finance in accordance with ADB's Safeguard Policy Statement (2009); it is classified category B for environment and category C for involuntary resettlement and indigenous peoples. Although solar and wind power projects involve potential environmental impacts during construction and operation (e.g. potential water and land pollution), these impacts are site-specific, reversible and can be mitigated using tested mitigation measures.[12] As required under the Safeguard Policy Statement, a corporate safeguards audit was conducted during due diligence. A corrective action plan which describes gap-filling measures at the corporate and project level was prepared based on the audit findings. WREL will be required to adopt an environmental and social management system (ESMS) satisfactory to ADB prior to ADB's investment. To ensure adequate implementation of its ESMS, WREL has agreed to develop its capacity to oversee the ESMS implementation at the corporate level and at the project level.

22. The project team's due diligence and external expert's corporate audit found that WREL's existing environmental and social policies and systems are not fully aligned with the requirements of ADB safeguards and social requirements. While there are existing procedures to screen, assess, and address environmental and social risks arising out of its portfolio of solar and wind power projects, there are still improvements required to ensure compliance and

[12] On the social aspects, due diligence found that selected WREL solar and wind power projects were located either on state-owned lands that are vacant and have low productivity or on private land procured through negotiated settlements. None of these projects required use, purchase, or acquisition of tribal lands, or require any physical or economic displacement. Future solar and wind power projects are planned in similar locations.

effective implementation. However, WREL is committed to adopting best practices and norms to achieve its commitment to environmental and social sustainability through the ESMS.[13]

23. The project is classified as having some gender elements. WREL has committed to increase the proportion of women staff from 10% in FY2013 to 15% by FY2018. Consistent with WREL's policy objective of empowering women, the ESMS will include arrangements to ensure meaningful consultation with women during the conduct of environmental and social assessments. Further, the company engages in community programs and will ensure that these activities include services and support that meet local women's needs. WREL will comply with ADB's Social Protection Strategy and report regularly to ADB on measures taken to ensure compliance (including that of contractors) with national labor laws and adherence to internationally recognized core labor standards.[14] Information disclosure and consultations with affected people for all WREL projects will be conducted in accordance with ADB requirements.[15]

B. Anticorruption Policy

24. WREL was advised of ADB's policy on 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.

C. Investment Limitations

25. The proposed equity investment is within the medium-term, country, industry, group, and single-project exposure limits for nonsovereign investments.

D. Assurances

26. Consistent with the Agreement Establishing the Asian Development Bank, the Government of India will be requested to confirm that it has no objection to the proposed assistance to WREL. 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

27. I am satisfied that the proposed equity investment would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the equity investment of up to $50,000,000 in Welspun Renewables Energy Limited for the Solar and Wind Power Development Project in India from ADB's ordinary capital resources, 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.

Takehiko Nakao
President

21 November 2013

[13] Safeguards and Social Dimensions Summary, and Findings of the Corporate Safeguards Audit: Environmental and Social System Arrangements (accessible from the list of linked documents in Appendix 2).
[14] ADB. 2003. *Social Protection.* Manila (adopted in 2001).
[15] Summary Poverty Reduction and Social Strategy, and Safeguards and Social Dimensions Summary (accessible from the list of linked documents in Appendix 2).

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets and/or Indicators with Baselines	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
Impacts Continued development of renewable energy in India Greater private sector participation in the Indian renewable energy sector	Share of renewable energy (including hydro power) in total installed capacity maintained at 31% from 2011 to 2023 (end of 13th 5-year plan) Private sector share of total installed capacity of renewable energy (including hydro power) increased from 33% in 2011 to 50% in 2023 (end of 13th 5-year plan)[a]	ADB staff estimates based on capacity addition for the 12th and 13th 5-year plans, cited in Central Electricity Authority National Electricity Plan (2102) ADB staff estimates based on capacity addition for the 12th and 13th 5-year plans, cited in Central Electricity Authority National Electricity Plan (2012)	**Assumptions** Continued macroeconomic and political stability at the central and state levels Regulatory incentives for renewable energy projects remain
Outcome Demonstrated viability and sustainability of renewable energy projects in the private sector	330 GWh generated annually by the additional solar plants from 2017[b] 210 GWh generated annually by the additional wind farms from 2017[c] 245,000 tons of CO_2 avoided annually through the solar plants from 2017[d] 155,000 tons of CO_2 avoided annually through the wind farms from 2017[d] 200 FTE positions created during operation by 2017 Annual contribution of corporate taxes of at least Rs12 million by 2017	Company financial statements Company progress reports ADB's annual reviews Development effectiveness monitoring reports	**Assumptions** PPAs are honored Continuity of qualified company management **Risks** Resource risk Operational risks cause disruption in power production
Outputs A portfolio of solar and wind power projects in India constructed and commissioned	200 MW of solar photovoltaic power capacity commissioned by 2016 100 MW of wind power capacity commissioned by 2016	Company financial statements Company progress reports ADB's annual reviews Development effectiveness monitoring report	**Assumptions** Business plans are executed in a timely fashion and within budget WREL is able to raise project debt

Design Summary	Performance Targets and/or Indicators with Baselines	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
	Satisfactory ESMS established prior to ADB's equity injection Locally purchased goods and services amount to $150 million in 2014–2016 100 FTE positions created during construction in 2014–2106 Number of women staff increased from 10% in 2013 to 15% by 2018		**Risk** Project delays
Activities with Milestones 1.1 Audit and appropriate revision of the company's ESMS by March 2014 1.2 Financial close by March 2014			**Inputs** ADB: $50 million equity investment Other investor(s): $35 million Internal accruals: $5 million Project debt: $250 million

ADB = Asian Development Bank, CO_2 = carbon dioxide, ESMS = environmental and social management system, FTE = full-time equivalent, GWh = gigawatt-hour, MW = megawatt, PPA = power purchase agreement, WREL = Welspun Renewables Energy Limited.

[a] Target assumes 10% of hydro power capacity addition by the private sector and 90% of other renewable energy capacity addition by the private sector in the 12th and 13th 5-year plan periods.

[b] 200 MW capacity x 19.2% plant load factor x 8,760 hours = ~330 GWh.

[c] 100 MW capacity x 24.4% plant load factor x 8,760 hours = ~210 GWh.

[d] 330 GWh x 739.73 (ADB's conversion factor) = ~245,000 tons of CO_2 avoided.

[e] 210 GWh x 739.73 (ADB's conversion factor) = ~155,000 tons of CO_2 avoided.

Sources: Welspun Renewables Energy Limited, ADB estimates.

LIST OF LINKED DOCUMENTS

http://www.adb.org/Documents/RRPs/?id=47920-01-4

1. Sector Overview
2. Contribution to the ADB Results Framework
3. Country Economic Indicators
4. Summary Poverty Reduction and Social Strategy
5. Safeguards and Social Dimensions Summary
6. Findings of the Corporate Safeguards Audit: Environmental and Social Management System Framework