



Report and Recommendation of the President to the Board of Directors

Project Number: 52126-001
January 2019

Proposed Equity Investment and Administration of Equity Investment Avaada Energy Private Limited Avaada Solar Project (India)

This is an abbreviated version of the document approved by ADB's Board of Directors, which excludes information that is subject to exceptions to disclosure set forth in ADB's Access to Information Policy.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 4 January 2019)

Currency unit	–	Indian rupee/s (₹)
₹1.00	=	\$ 0.01426
\$1.00	=	₹ 70.1175

ABBREVIATIONS

ADB	–	Asian Development Bank
AEPL	–	Avaada Energy Private Limited
APPL	–	Avaada Power Private Limited
BCA	–	business continuity agreement
CCD	–	compulsory convertible debenture
CERC	–	Central Electricity Regulatory Commission
EPC	–	engineering, procurement, and construction
ESMS	–	environmental and social management system
GIPL	–	Grenoble Infrastructure Private Limited
IPP	–	independent power producer
LEAP	–	Leading Asia's Private Infrastructure Fund
PPA	–	power purchase agreement
RPS	–	redeemable preference share
SECI	–	Solar Energy Corporation of India
SPS	–	Safeguard Policy Statement
SPV	–	Special purpose vehicle
WEL	–	Welspun Energy Limited
WREPL	–	Welspun Renewables Energy Private Limited

NOTES

- (i) The fiscal year (FY) of Avaada Energy Private Limited ends on 31 March. "FY" before a calendar year denotes the year in which the fiscal year ends, e.g., FY2018 ends on 31 March 2018.
- (ii) In this report, "\$" refers to United States dollars unless otherwise stated.

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PROJECT AT A GLANCE

1. Basic Data		Project Number: 52126-001	
Project Name	Avaada Solar Project	Department /Division	PSOD/PSIF1
Country	India		
Investee	Avaada Energy Private Limited		
2. Sector		ADB Financing (\$ million)	
✓ Energy	Renewable energy generation - solar		25.00
		Total	25.00
3. Strategic Agenda		Climate Change Information	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	CO ₂ reduction (tons per annum)	3,860,000
Environmentally sustainable growth (ESG)	Eco-efficiency Global and regional transboundary environmental concerns	Climate Change impact on the Project	Low
		ADB Financing	
		Mitigation (\$ million)	25.00
		Cofinancing	
		Mitigation (\$ million)	25.00
4. Drivers of Change		Gender Equity and Mainstreaming	
Partnerships (PAR)	Implementation Private Sector	Some gender elements (SGE)	✓
Private sector development (PSD)	Promotion of private sector investment		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Nation-wide	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG5, SDG7, SDG13		
6. Nonsovereign Operation Risk Rating - NA			
7. Safeguard Categorization			
Environment: B	Involuntary Resettlement: B	Indigenous Peoples: B	
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		25.00	
Nonsovereign Direct Investment: Ordinary capital resources		25.00	
Cofinancing		75.00	
Leading Asia's Private Infrastructure Fund (LEAP) (Full ADB Administration)		25.00	
Others		50.00	
Others ^a		1,208.84	
Total		1,308.84	
Currency of ADB Financing: INR			

^a Derived by deducting ADB financing and Cofinancing from Total Project Cost.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed equity investment of up to \$25,000,000 in Indian rupee equivalent in Avaada Energy Private Limited (AEPL) for the Avaada Solar Project in India. The report also describes the proposed administration of an equity investment of up to \$25,000,000 in Indian rupee equivalent to be provided by Leading Asia's Private Infrastructure Fund (LEAP)¹, and if the Board approves the proposed equity investment, I, acting under the authority delegated to me by the Board, approve the administration of the equity investment by LEAP.

2. The Asian Development Bank (ADB) will invest in AEPL along with two European development finance institutions, which will invest up to \$25 million each, on the same terms and conditions. The proposed investment will enable AEPL to expand its solar photovoltaic (PV) operating and under construction generation capacity from 593 megawatts (MW) as of December 2018 to 1,991 MW operating capacity by March 2023. The project will help the Government of India to meet the targets for non-fossil-fuel-based electric power generation and reduce India's emission intensity.

II. THE PROJECT

A. Project Identification and Description

3. **Project identification.** AEPL, sponsored by Vineet Mittal through his investment vehicle Avaada Power Private Limited (APPL, or the Sponsor), is one of India's fastest-growing independent power producers (IPPs) in solar power generation. ADB has prior experience of working with Vineet Mittal. It invested \$39 million in June 2014 and \$11 million in March 2016 in Welspun Renewables Energy Private Limited (WREPL), a company controlled by Welspun Energy Limited (WEL), which was co-sponsored by Vineet Mittal and B. K. Goenka. WREPL grew to be India's largest solar power company, with 1,140 MW of capacity, within 2 years of ADB investment. In 2016, the two partners decided to part ways and sold WREPL to Tata Power. ADB successfully exited the investment with satisfactory returns. The proceeds realized by WEL were divided between the two partners by demerging WEL. The demerger resulted in the formation of AEPL, with Vineet Mittal getting its full ownership. Mittal's vision for AEPL is to make it one of the leading solar companies in India by leveraging his strong industry experience.

4. AEPL has secured power purchase agreements (PPAs) for 1,199 MW of solar PV projects: 335 MW operating, 258 MW under construction, and 606 MW under development, as of December 2018. It has approached ADB for an aggregate equity investment of \$50.0 million to meet the equity requirements as per its business plan.

5. The project provides ADB with an opportunity to further its commitment to scale up clean energy financing.² ADB's initiative will actively support the Government of India's target to achieve 175 gigawatts (GW) of renewable energy generation capacity by 2022, of which 100 GW shall be from solar power. As of December 2018, operational solar generation capacity in India was about 27.6 GW. The government expects the private sector to lead the capacity addition. The unique reverse auction structure, favorable movements in solar panel prices, creation of credible offtake intermediaries such as the Solar Energy Corporation of India (SECI) and enabling of infrastructure in the form of solar parks has resulted in solar power tariffs coming down rapidly to the current

¹ Financing Partner: Japan International Cooperation Agency.

² ADB. 2009. [Energy Policy](#). Manila.

low of ₹2.44 per kilowatt-hour (\$0.03), leading to improved affordability of solar power in India. In addition to PPAs with government agencies, there is approximately 5 GW of near-term potential for direct power sales to industrial customers under the open access policy of state governments, which is more profitable. AEPL is looking to build a portfolio of open-access and auction-based projects to balance risks and returns.

6. **Project design.** AEPL has secured 1,199 MW of solar PV generation PPAs. Of the 593 MW operational or under construction projects, PPAs for 443 MW are for terms of 25 years. Balance 150 MW PPAs are with industrial customers with strong credit ratings in the state of Karnataka and are of varying tenors (5–25 years), with options to renew on mutually agreeable terms. All projects with long-term PPAs have been acquired based on a competitive bidding process with the lowest power tariff being the key winning criteria. For new project bids after ADB investment, rigorous project selection criteria have been agreed upon between investors and AEPL.

7. Through Vineet Mittal's earlier leadership of WEL, which was the sole in-house engineering, procurement, and construction (EPC) provider to WREPL, he has built strong execution capabilities. This provides AEPL with a unique edge in bidding, as it undertakes all EPC work related to its underlying projects, allowing it to control project costs and timelines and retain the EPC margin. AEPL is the sole entity through which the Sponsor will own and operate all renewable energy projects undertaken by it.

8. **Investee and sponsor.** AEPL (project details as provided in Table 1) is owned entirely by APPL, which in turn, is owned by Vineet Mittal and his spouse, Sindoor Mittal. Vineet Mittal has an established track record of implementing 1,140 MW of renewable energy projects capacity in four years at WREPL. Prior to establishing WREPL, Vineet Mittal established an outsourcing company in India, Infowavz (now called Stream, a business process outsourcing firm). He is the chairman of the Solar Energy Task Force and a Co-Chair of the Renewable Energy Committee at The Associated Chambers of Commerce and Industry of India (ASSOCHAM). He was twice recognized as the 'Solar Man of the Year' in 2012 and 2014.

9. (Confidential information redacted).

10. As part of the demerger process, the team from WEL, comprising about 167 professionals, has moved to AEPL and at APPL. Vineet Mittal spearheads overall strategy including project selection, procurement, and liaison with government agencies. Sindoor Mittal is responsible for leadership development and capital raising. Kishor Nair, who has more than 30 years of business experience, leads project execution and implementation. Sudhir Sehgal, who has more than 35 years of industry experience, leads project development, design, and engineering. The finance team has strong relationships with large domestic financial institutions, having raised more than \$1 billion of project financing. A separate team for land acquisition, with extensive experience in purchasing and leasing land, has already identified a land bank for significant expansion through future projects.

Table 1: Avaada Energy Private Limited's Existing Projects

Location	State	PPA	Bid Tariff (₹/kWh)	Tenor (Years)	Capacity (MW)	COD
Operational					335	
Chalisingaon	Maharashtra	SECI	4.43	25	80	Jun 2018
Banavikal, Ilkal (OA)	Karnataka	Corporate	4.46	10–25	90	Mar 2018
Hanegal (OA)	Karnataka	Corporate	4.79	5–25	30	Mar 2018
Kanahosahalli (OA)	Karnataka	Corporate	4.30	25	30	Mar 2018
Bhadla	Rajasthan	SECI	2.62	25	100	Oct 2018
Kanpur	Uttar Pradesh	Central	4.18	25	5	Oct 2018
Construction					258	
Pavagada	Karnataka	State	2.92	25	150	Mar 2019
IREL	Orissa	Central	3.90	25	5	Sep 2019
HAL	Telangana	Central	3.12	25	3	Sep 2019
Satara	Maharashtra	SECI	4.43	25	100	Sep 2019
Development					606	
Gujarat	Gujarat	State	2.44	25	300	Sep 2020
Pavagada 2	Karnataka	State	2.92	25	150	Mar 2020
Badaun	Uttar Pradesh	State	3.23	25	50	Sep 2020
TBD	Uttar Pradesh	State	3.07	25	100	Nov 2020
Distributed	Multiple ^a	State	3.23	25	6	May 2019
Total					1,199	

COD = commercial operations date, HAL = Hindustan Aeronautics Limited, IREL = Indian Rare Earths Limited, kWh = kilowatt-hour, MW = megawatt, OA = open access, PPA = power purchase agreement, SECI = Solar Energy Corporation of India, TBD = To be decided.

^a States of Gujarat and Madhya Pradesh.

Sources: Avaada Energy Private Limited and Asian Development Bank.

11. (Confidential information redacted).

12. Integrity due diligence was conducted.³ No significant or potentially significant integrity risks were identified. ADB's review of the entity does not give ADB cause to believe that it is being used for money laundering or terrorism financing. Tax integrity due diligence was not required.

B. Development Impact, Outcome, and Outputs

13. **Impacts.** The project will contribute to the strategy of the Government of India to (i) increase the share of non-fossil-fuel-based electric power generation to 40% by 2030, and (ii) help to reduce India's emission intensity of its gross domestic product by 33%–35% by 2030.⁴

14. **Outcome.** The project outcome is increased clean power delivered to the domestic grid. The project will generate about 4,400 gigawatt-hours of clean energy per annum and will contribute to avoiding 3.86 million tons of carbon dioxide emissions annually from 2023 onwards.⁵ The project will also add to local employment and tax revenues.

15. **Outputs.** The outputs of the project are an increase of installed solar power plants by 1,841 MW, and also generation of local employments, a stimulus to the local economy and raised gender awareness.

³ ADB. 2003. [Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism](#). Manila.

⁴ The Government of India has set a target to achieve 175 GW of renewable capacity by 2022. Government of India, National Institution for Transforming India Aayog. [Draft National Energy Policy Version as on 27 June 2017](#).

⁵ Assuming 1,991 MW of total capacity to be operational by 2023 and India's electricity emission factor to be 0.9.

C. Alignment with ADB Strategy and Operations

16. **Consistency with ADB strategy and country strategy.** The project is fully aligned with ADB's Energy Policy, which prioritizes support for renewable energy development (footnote 2). The project is consistent with ADB's Strategy 2030.⁶ It contributes to ADB's goal to provide climate finance of \$80 billion cumulatively from 2019 to 2030. It relates to two of the five core specializations of ADB: infrastructure, and environment. The project will also contribute to ADB's operational goal of scaling up private sector development and private sector operations. The project is aligned with the country partnership strategy, 2018–2022 for India, which calls for higher efficiency and carbon mitigation through power generation from renewable sources.⁷

17. **Lessons from previous operations.** 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 have been incorporated as part of implementation arrangement of the project and will be closely monitored by ADB as a key shareholder.

D. Project Cost and Financing Plan

18. (Confidential information redacted).

19. (Confidential information redacted).

20. (Confidential information redacted).

E. Implementation Arrangements

21. (Confidential information redacted).

F. Projected Financial and Economic Performance

22. (Confidential information redacted).

III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

23. ADB and LEAP will invest up to \$25 million each in Indian rupee equivalent by subscribing to compulsory convertible debentures (CCDs) issued by AEPL. (Confidential information redacted).

B. Value Added by ADB Assistance

24. ADB's participation has been catalytic in enabling AEPL to attract \$50 million of equity investment from two European development finance institutions. ADB's experience in the Indian renewable energy sector and its signaling function for rigorous due diligence processes should

⁶ ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

⁷ ADB. 2017. [Country Partnership Strategy: India, 2018–2022—Accelerating Inclusive Economic Transformation](#). Manila.

help AEPL attract further private or development finance, thereby helping it scale up faster. Upon ADB's intervention, AEPL will strengthen and update its existing environmental and social management system (ESMS) to achieve its growth in an environmentally and socially responsible manner by adopting higher and internationally recognized environmental and social standards. Similarly, ADB's recommendations and requirements will lead to an improved gender policy within the company.

C. Risks

25. (Confidential information redacted).
26. (Confidential information redacted).
27. (Confidential information redacted).
28. (Confidential information redacted).
29. (Confidential information redacted).
30. (Confidential information redacted).
31. (Confidential information redacted).
32. (Confidential information redacted).

IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

33. The investment is a general corporate finance transaction under ADB's Safeguard Policy Statement (2009) (SPS). ADB has categorized the investment in compliance with its SPS as follows: environment (*category B*), involuntary resettlement (*category B*), and indigenous peoples (*category B*).⁸ This categorization is based on the potential environmental and social impacts of the AEPL's existing and future projects. AEPL will use ADB's equity investment for developing renewable power projects, primarily solar PV plants. ADB has undertaken due diligence and reviewed the potential environmental and social impacts of the project and the measures to avoid, minimize, mitigate, and compensate for the adverse impacts in the safeguard reports and plans. The environmental and social measures and the institutional capacity and commitment of AEPL to manage the project's social and environmental impacts are deemed adequate.

34. An external third party conducted a corporate audit in accordance with ADB's SPS requirements.⁹ The corporate audit assessed that the operations of the company were in compliance with the statutory requirements. The current environmental and social systems, processes, and practices of the company were also commensurate with the risks and impacts associated with its business and operation. The corporate audit findings indicated that AEPL's ESMS is broadly aligned with ADB's safeguard requirements. However, some of the processes and procedures (like early stage screening of risks, construction phase labor, and safety

⁸ ADB. 2009. [Safeguard Categories](#).

⁹ Emergent Ventures India conducted the corporate and subprojects audit.

management) need further strengthening and updating. The audit also indicated that environmental and social resources and capacity at the corporate and project level must be strengthened and regular training on ESMSs and environmental and social issues should be performed to ensure adequate implementation.¹⁰

35. A corrective action plan has been developed incorporating these and other audit findings and recommendations based on which AEPL will strengthen and update its existing ESMS to comply with ADB requirements. AEPL will also strengthen its environmental and social team resources and capacity and provide regular ESMS and environmental and social training at the corporate and project level. AEPL will also report on an annual basis to ADB on ongoing compliance with ESMS and ADB's SPS requirements.

36. AEPL will comply with the national labor laws and, pursuant to ADB's Social Protection Strategy (2001), take measures to comply with the internationally recognized core labor standards. AEPL will report on an annual basis to ADB on (i) its compliance with such laws, and (ii) the measures taken. ADB will seek information and conduct consultation with affected people in accordance with ADB requirements.¹¹

37. AEPL is committed to implement measures to promote gender equality and women's empowerment in its business activities following ADB's Policy on Gender and Development.¹² Therefore, the project is classified as "Some Gender Elements". AEPL has agreed to undertake the following key measures: (i) increase employment of women in the company (from the current baseline of 12% to 24%), (ii) support skills development of women, (iii) support education of girls, and (iv) provide sanitation facilities for women. The project team supported AEPL in development of a gender action plan. AEPL will submit periodic reports on the implementation of gender measures to ADB.

B. Anticorruption Policy

38. AEPL 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.

C. Investment Limitations

39. (Confidential information redacted).

D. Assurances

40. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),¹³ ADB will proceed with the proposed assistance upon establishing that the Government of India has no objection to the proposed assistance to AEPL. 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.

¹⁰ Environmental and Social Management System: Audit Findings and Details of Arrangement (accessible from the list of linked documents in Appendix 2).

¹¹ Summary Poverty Reduction and Social Strategy; Safeguards and Social Dimensions Summary (accessible from the list of linked documents in Appendix 2).

¹² ADB. 2012. [Guidelines for Gender Mainstreaming Categories of ADB Projects](#). Manila.

¹³ ADB. 1966. [Agreement Establishing the Asian Development Bank](#). Manila.

V. RECOMMENDATION

41. 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 \$25,000,000 in Indian rupee equivalent from ADB's ordinary capital resources in Avaada Energy Private Limited for the Avaada Solar 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.

Takehiko Nakao
President

31 January 2019

DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned with			
Share of non-fossil-fuel-based electric power generation capacity increased to 40% by 2030 (Nationally Determined Contribution, Draft National Energy Policy) ^a			
India's target to reduce the emission intensity of its GDP by 33%–35% by 2030 from the 2005 level (Nationally Determined Contribution, Draft National Energy Policy) ^a			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
Outcome Clean power delivered to the domestic grid increased	By FY2024 a. Electricity delivered to offtakers increased to 4,400 GWh per year (FY2018 baseline: 0) b. Annual emission of 3,860,000 tons of CO ₂ avoided (FY2018 baseline: 0) c. Number of jobs provided during operation amounted to at least 500 (FY2018 baseline: 167) d. Number of contractual jobs provided for operations and maintenance of operating projects amounted to at least 450 (FY2018 baseline: 25) e. Share of jobs provided to women during operation reached at least 24% (FY2018 baseline: 12%) f. Annual domestic purchase of goods and services amounted to more than \$17.3 million during operation (FY2018 baseline: 6.0)	a–f. Company's annual development effectiveness monitoring reports	Changes in the regulatory environment or power purchasing arrangements Climate and weather risks
Outputs 1. Solar power plant installed 2. Local employment generated	By FY2023 1. Total installed renewable energy electricity generation capacity increased to 1,991 MW (FY2018 baseline: 150 MW) 2. Number of jobs provided during construction phase amounted to at least 9,000 (FY2018 baseline: 3,200)	1–4. Company's annual development effectiveness monitoring reports	Construction delays because of force majeure events Cost overruns

Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
3. Growth of local economy supported	3a. Total payments to the government in relation to project construction amounted to at least \$55.8 million (FY2018 baseline: \$1.2 million)		
	3b. Total domestic purchases related to the construction and operation of this project amounted to at least \$578.6 million (FY2018 baseline: \$88.4 million)		
4. Gender awareness raised	4. Gender focal person nominated to facilitate the implementation of a gender action plan (Baseline: NA).		
Key Activities with Milestones Outputs 1–3: Power plants installed, local employment generated, and growth of local economy supported 1.1 Shareholders agreement and shares subscription agreement with AEPL executed by ADB by 15 March 2019. 1.2 Construction of power plants completed by 31 March 2023. Output 4: Gender awareness raised 1.1 Gender focal person nominated.			
Inputs (Confidential information redacted).			
Assumptions for Partner Financing Not applicable			

CO₂ = carbon dioxide; EPC = engineering, procurement, and construction; FY= fiscal year; GDP = gross domestic product; GWh = gigawatt-hour, MW = megawatt, NA = not applicable.

^a Government of India, National Institution for Transforming India Aayog. 2017. [Draft National Energy Policy Version as on 27 June 2017](#).

^b Capital grant is provided by the government to attract bidders and keep final tariffs low.
Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=52126-001-4>

1. Sector Overview
2. Client Information
3. Details of Implementation Arrangements
4. Contribution to the ADB Results Framework
5. Financial Analysis
6. Economic Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Environmental and Social Management System: Audit Findings and Details of Arrangement
10. Gender Action Plan