



Report and Recommendation of the President to the Board of Directors

Project Number: 51233-001
September 2017

Proposed Loan B.Grimm Power Public Company Limited ASEAN Distributed Power Project (Phase 2) (Regional)

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 in accordance with paragraph 97 (v) and (viii) of ADB's Public Communications Policy 2011.

Asian Development Bank

CURRENCY EQUIVALENTS

(as of 30 August 2017)

Currency unit	–	baht (B)
B1.00	=	\$0.029
\$1.00	=	B33.21

ABBREVIATIONS

ADB	–	Asian Development Bank
ASEAN	–	Association of Southeast Asian Nations
DMC	–	developing member country
EGAT	–	Electricity Generating Authority of Thailand
ESMS	–	environmental and social management system
IPO	–	initial public offering
MW	–	megawatt
PPA	–	power purchase agreement
SPP	–	small power producer
VSPP	–	very small power producer

NOTES

- (i) The fiscal year of B.Grimm Power Public Company Limited ends on 31 December.
- (ii) In this report, “\$” refers to United States dollars

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PROJECT AT A GLANCE

1. Basic Data		Project Number: 51233-001	
Project Name	ASEAN Distributed Power Project (Phase 2)	Department /Division	PSOD/PSIF2
Country	REG		
Borrower	B.Grimm Power Public Company Limited		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Energy	Conventional energy generation		117.50
	Renewable energy generation - solar		117.50
		Total	235.00
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 1: Economic opportunities, including jobs, created and expanded	Mitigation (\$ million)	117.50
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	CO ₂ reduction (tons per annum)	61,056
		Climate Change impact on the Project	High
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Private sector development (PSD)	Promotion of private sector investment	No gender elements (NGE)	✓
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Regional	High
Household Targeting	No		
SDG Targeting	Yes		
SDG Goals	SDG7		
6. Nonsovereign Operation Risk Rating			
Obligor Name		Obligor Risk Rating	Facility Risk Rating
B.Grimm Power Public Company Limited			
7. Safeguard Categorization Environment: B Involuntary Resettlement: B Indigenous Peoples: B			
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		235.00	
Nonsovereign Local Currency Loan (Regular Loan): Ordinary capital resources		235.00	
B-Loans		0.00	
None		0.00	
Official Cofinancing^a		0.00	
None		0.00	
Others^b		0.00	
Total		235.00	

^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 a proposed loan¹ of up to \$235,000,000 (or its equivalent in baht) to B.Grimm Power Public Company Limited (B.Grimm) for the ASEAN Distributed Power Project (Phase 2).²

II. THE PROJECT

A. Project Identification and Description

2. **Project identification.** Demand for electricity in Thailand increased by an average of 3.6% per year during 2005–2016. Total electricity consumption was 182,846 gigawatt-hours in 2016, up 4.6% from 174,834 gigawatt-hours in 2015. As of April 2017, Thailand's installed power generation capacity was 41,393 megawatts (MW). Production of electricity depends heavily on fossil fuels: 60% is generated from natural gas, 10% from lignite, and 8% from coal. Although renewable energy sources currently contribute only 8%, the Government of Thailand's promotion of alternative energy under the Alternative Energy Development Plan, 2015–2036 is expected to increase renewable energy capacity to 19,684 MW (30% of total capacity) by 2036, with 6,000 MW coming from solar power and 3,002 MW from wind power.³ The plan, prepared as part of the government's strategy to diversify the energy mix and promote renewable energy, notes the significant potential of renewable energy in Thailand and indicates that energy imports can be avoided by developing domestic renewable energy projects with private investment.

3. Countries of the Association of Southeast Asian Nations (ASEAN) face a rapid increase in energy demand, driven by socioeconomic factors such as rapid population growth, sustained economic growth, growing urbanization, an expanding middle class population, and increased access to electricity. According to the Organisation for Economic Co-operation and Development, electricity consumption by countries in the ASEAN region will grow 8.04% per year during 2009–2030. This poses major challenges to achieving and balancing energy policy objectives in the region, including energy security, sustainable development, energy access, and affordability.

4. The Asian Development Bank (ADB) identified the opportunity of providing financial assistance to B.Grimm through close cooperation and strong relationships built over the last ten years with key players in Thailand's energy sector, with the goal of (i) implementing the Midterm Review of Strategy 2020 and its country operations business plan, 2017–2019 for Thailand, which emphasize support for clean energy and environmentally sustainable growth;⁴ and (ii) helping achieve the Sustainable Development Goals, which seek to substantially increase the share of renewable energy in the global energy mix.⁵

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5. **Project design.** CONFIDENTIAL INFORMATION DELETED

¹ Considered as general corporate finance.

² The design and monitoring framework is in Appendix 1.

³ Government of Thailand, Ministry of Energy. 2015. *Alternative Energy Development Plan, 2015–2036*. Bangkok.

⁴ ADB. 2014. *Midterm Review of Strategy 2020: Meeting the Challenges of a Transforming Asia and Pacific*. Manila; and ADB. 2016. *Country Operations Business Plan: Thailand, 2017–2019*. Manila.

⁵ United Nations. Sustainable Development Goals. <http://www.un.org/sustainabledevelopment/energy/>.

6. **Borrower.** B.Grimm, established in 1993 in Thailand, is an energy company that focuses on the development, financing, construction, and operation of greenfield power plants. B.Grimm is a part of B.Grimm Group, Thailand's oldest infrastructure and industrial group in operation, founded in 1878.

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B. Development Impacts, Outcome, and Output

7. **Impacts.** The project will contribute to: (i) regional progress ensured in increasing the share of renewable energy in the global energy mix by 2030;⁶ and (ii) the energy mix diversified through the addition of alternative energy capacity and more electricity consumption from renewable sources.⁷

8. **Outcome.** The outcome will be: sustained operation of private sector power projects in the ASEAN region and other DMCs.

9. **Output.** The output will be the rollout and operation of power projects in the ASEAN region and other DMCs.

C. Alignment with ADB Strategy and Operations

10. **Consistency with ADB strategy and country strategy.** The project is consistent with ADB's Midterm Review of Strategy 2020 (footnote 4) in promoting environmentally sustainable development, assisting the private sector in meeting growing energy demand in the region, and capitalizing on ADB's operating strengths in infrastructure development, finance, and other areas. The midterm review also supported the expansion of environment-friendly technologies for clean and efficient energy generation and use, as well as a larger role for private sector financing of infrastructure. ADB's country partnership strategies for various ADB DMCs echo the themes of the energy policy, including the promotion of environmentally sustainable economic development and energy security.

11. **Consistency with sector strategy and relevant ADB operations.** The project is consistent with ADB's Energy Policy, which supports wider access to energy through investments in energy efficiency and renewable energy projects.⁸ The project will contribute to ADB's target of \$6 billion in annual financing for climate mitigation and adaptation by 2020, and catalyze further private sector resources in the clean energy segment.

D. Project Cost and Financing Plan

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E. Implementation Arrangements

12. Table 4 summarizes the implementation arrangements.⁹

⁶ In support of Goal 7 of the Sustainable Development Goals (footnote 5).

⁷ In support of the Alternative Energy Development Plan (para. 2).

⁸ ADB. 2009. *Energy Policy*. Manila.

⁹ Details of Implementation Arrangements (accessible from the list of linked documents in Appendix 2).

Table 4: Summary of Implementation Arrangements

Aspects	Arrangements
Regulatory framework	B.Grimm's existing distributed gas-fired cogeneration plants were developed under Thailand's Small Power Producer Program, which allows private developers to build, own, and operate power projects in the 10 MW–90 MW capacity range and to enter into PPAs with EGAT in close proximity to power and steam demand to ensure high efficiency and eliminate transmission losses. B.Grimm's existing solar power projects were developed under Thailand's Very Small Power Producer Program, which allows private developers to build, own, and operate power projects with a capacity of up to 10 MW and enter into PPAs with PEA.
Management	CONFIDENTIAL INFORMATION DELETED
Implementation period	CONFIDENTIAL INFORMATION DELETED
Revenue structure	CONFIDENTIAL INFORMATION DELETED
Major cost structure	CONFIDENTIAL INFORMATION DELETED
Contractor selection	CONFIDENTIAL INFORMATION DELETED
Operation and maintenance	CONFIDENTIAL INFORMATION DELETED
Performance monitoring	The company will submit quarterly unaudited financial statements and annual audited financial statements on a consolidated basis.

EGAT = Electricity Generating Authority of Thailand, MW = megawatt, PEA = Provincial Electricity Authority, PTT = PTT Public Company Limited, PPA = power purchase agreement.

Source: B.Grimm Power Public Company Limited.

F. Projected Financial and Economic Performance

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III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

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B. Value Added by ADB Assistance

13. ADB's assistance will support B.Grimm in the diversification and expansion of its energy portfolio in the ASEAN region and other DMCs. By working with a well-established energy company with a strong track record of successful execution, ADB will be able to extend its reach to multiple energy and renewable power projects that would be difficult to assist directly. ADB's assistance will play an important role not only in providing direct financing but also in attracting third-party investors and establishing more confidence in B.Grimm's future access to capital markets. ADB's assistance will also ensure that B.Grimm fully adopts and implements ADB's environmental and social safeguards standards.

14. ADB's assistance will help the company establish renewable energy solutions in DMCs with more challenging legal and regulatory contexts. Countries such as Cambodia, Myanmar, the Lao People's Democratic Republic, Indonesia, and Viet Nam have only recently begun to develop distributed renewable power options such as solar and wind, and new developers face multiple technical, legal, regulatory, and financing challenges. Through ADB's loan facility and concessional finance, ADB will help demonstrate a track record of successful financing to encourage private sector developers to take on the higher risk associated with these projects.

C. Risks

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IV. POLICY COMPLIANCE**A. Safeguards and Social Dimensions**

15. In compliance with ADB's Safeguard Policy Statement (2009), the project (phase 2) is classified as category B for environment, involuntary resettlement, and indigenous peoples.

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B. Anticorruption Policy

16. B.Grimm 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

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D. Assurances

17. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),¹⁰ ADB will proceed with the proposed assistance upon establishing that the Government of Thailand has no objection to the proposed assistance to B.Grimm Power Public Company Limited. ADB will enter into suitable finance documentation, in form and substance satisfactory to ADB, following approval of the proposed assistance by the ADB Board of Directors.

V. RECOMMENDATION

18. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan of up to \$235,000,000 (or its equivalent in baht) from ADB's ordinary capital resources to B.Grimm Power Public Company Limited for the ASEAN Distributed Power Project (Phase 2), 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

4 September 2017

¹⁰ ADB. 1966. *Agreement Establishing the Asian Development Bank*. Manila.

DESIGN AND MONITORING FRAMEWORK

Impacts the Project is Aligned With			
<p>Regional progress ensured in achieving one of the Sustainable Development Goal 7 targets: Increasing substantially the share of renewable energy in the global energy mix by 2030^a</p> <p>Energy mix diversified through the addition of alternative energy capacity and more electricity consumption from renewable sources (Alternative Energy Development Plan, 2015–2036)^b</p>			
Results Chain	Performance Indicators with Targets and Baselines	Data Sources and Reporting Mechanisms	Risks
<p>Outcome</p> <p>Private sector power project operations in the ASEAN region and other DMCs sustained</p>	<p>CONFIDENTIAL INFORMATION DELETED</p>	<p>a–c ADB's annual development effectiveness monitoring reports</p>	<p>Weak power demand caused by adverse macroeconomic shock</p>
<p>Output</p> <p>Power projects in the ASEAN region and other DMCs rolled out and operational</p>	<p>CONFIDENTIAL INFORMATION DELETED</p>	<p>ADB's annual monitoring reports</p>	<p>Delayed commissioning resulting from force majeure events</p>
<p>Key Activities with Milestones</p> <p>Power projects in the ASEAN region and other DMCs rolled out and operational</p> <p>CONFIDENTIAL INFORMATION DELETED</p>			
<p>Inputs</p> <p>ADB loan of up to \$235.0 million (or its equivalent in baht)</p>			
<p>Assumptions for Partner Financing</p> <p>Not applicable</p>			

ADB = Asian Development Bank, ASEAN = Association of Southeast Asian Nations, DMC = developing member country, GWh = gigawatt hours, MW = megawatt.

^a United Nations. Sustainable Development Goals. <http://www.un.org/sustainabledevelopment/energy/>.

^b Government of Thailand, Ministry of Energy. 2015. *Alternative Energy Development Plan, 2015–2036*. Bangkok.

^c Emission factor of 0.5088 tons of carbon dioxide per MW-hour for Thailand.

^d Baseline refers to the without project scenario and includes the results the client is expected to achieve under the Phase 1 of ADB's investment.

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=51233-001-4>

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. Safeguards and Social Dimensions Summary
10. Findings of the Corporate Safeguards Audit: Environmental and Social Management System Arrangement

Supplementary Documents

11. Integrity Disclosure