



Report and Recommendation of the President to the Board of Directors

Project Number: 54013-001
May 2021

Proposed Loan and Administration of Loan Dau Tieng Tay Ninh Energy Joint Stock Company B.Grimm Viet Nam Solar Power Project (Dau Tieng Project) (Viet Nam)

This is a redacted 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 30 April 2021)

Currency unit	–	dong (D)
D1.00	=	\$0.000043
\$1.00	=	D23,053

ABBREVIATIONS

ADB	–	Asian Development Bank
B.Grimm	–	B.Grimm Power Public Company Limited
COVID-19	–	coronavirus disease
DTE	–	Dau Tieng Tay Ninh Energy Joint Stock Company
EVN	–	Vietnam Electricity
FIT	–	feed-in tariff
LEAP	–	Leading Asia's Private Infrastructure Fund
PPA	–	power purchase agreement
US	–	United States

WEIGHTS AND MEASURES

GW	–	gigawatt
ha	–	hectare
MW	–	megawatt

NOTE

In this report, "\$" refers to United States dollars.

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CONTENTS

	Page
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	1
A. Project Identification and Description	1
B. Development Impact, Outcomes, and Outputs	3
C. Alignment with ADB Strategy and Operations	3
D. Project Cost and Financing Plan	4
E. Implementation Arrangements	4
F. Projected Financial and Economic Performance	5
III. THE PROPOSED ADB ASSISTANCE	5
A. The Assistance	5
B. Value Added by ADB Assistance	5
C. Risks	6
IV. POLICY COMPLIANCE	6
A. Safeguards and Social Dimensions	6
B. Anticorruption Policy	8
C. Investment Limitations	8
D. Assurances	8
V. RECOMMENDATION	8
APPENDIXES	
1. Design and Monitoring Framework	10
2. List of Linked Documents	12

PROJECT AT A GLANCE

1. Basic Data		Project Number: 54013-001	
Project Name	B.Grimm Viet Nam Solar Power Project (Dau Tieng Project)	Department/Division	PSOD/PSIF2
Country Borrower	Viet Nam, Socialist Republic of Dau Tieng Tay Ninh Energy Joint Stock Company		
Portfolio at a Glance	https://www.adb.org/Documents/LinkedDocs/?id=54013-001-PortAtaGlance		
2. Sector		Subsector(s)	
✓ Energy	Renewable energy generation - solar		ADB Financing (\$ million)
			24.50
		Total	24.50
3. Operational Priorities		Climate Change Information	
✓ Addressing remaining poverty and reducing inequalities		GHG reductions (tons per annum)	129,700
✓ Accelerating progress in gender equality		Climate Change impact on the Project	High
✓ Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability			
		ADB Financing	
		Adaptation (\$ million)	0.00
		Mitigation (\$ million)	24.50
		Cofinancing	
		Adaptation (\$ million)	0.00
		Mitigation (\$ million)	8.00
Sustainable Development Goals		Gender Equity and Mainstreaming	
SDG 5.5		Effective gender mainstreaming (EGM)	✓
SDG 7.2			
SDG 13.a		Poverty Targeting	
		General Intervention on Poverty	✓
4. Nonsovereign Operation Risk Rating			
Obligor Name	Final Project Rating	Facility Risk Rating	
Dau Tieng Tay Ninh Energy Joint Stock Company	Confidential Information Deleted	Confidential Information Deleted	
5. Safeguard Categorization		Environment: B	Involuntary Resettlement: B
		Indigenous Peoples: C	
6. Financing			
Modality and Sources		Amount (\$ million)	
ADB		24.50	
Nonsovereign LIBOR Based Loan (Regular Loan): Ordinary capital resources		24.50	
Cofinancing		136.00	
Complementary Financing Scheme (Full ADB Administration)		128.00	
Leading Asia's Private Infrastructure Fund (LEAP) (Full ADB Administration)		8.00	
Others^a		Confidential Information Deleted	
Total		Confidential Information Deleted	
Currency of ADB Financing: US Dollar			

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

Note: The cofinancing amount for climate change mitigation in the Project at a Glance does not reflect the cofinancing amount from Complementary Financing Scheme of \$128 million.

I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan of up to \$152,500,000, comprising (i) an A loan of up to \$24,500,000 and (ii) a B loan of up to \$128,000,000, to Dau Tieng Tay Ninh Energy Joint Stock Company (DTE) for the B.Grimm Viet Nam Solar Power Project (Dau Tieng Project) in Viet Nam. The report also describes the proposed administration of a loan of up to \$8,000,000 to be provided by the Leading Asia's Private Infrastructure Fund (LEAP)¹ for the B.Grimm Viet Nam Solar Power Project (Dau Tieng Project) and if the Board approves the proposed loan, I, acting under the authority delegated to me by the Board, approve the administration of the LEAP loan.

2. The loan will support DTE to operate a 240-megawatt (MW) solar photovoltaic power plant and its associated facilities in Tay Ninh Province, Viet Nam, which is one of the largest solar power projects in Southeast Asia to date. The Asian Development Bank (ADB) financing will meet the borrower's requirements for longer-tenor United States (US) dollar-denominated project financing, which local financial institutions are unable to provide, and will also catalyze commercial cofinancing with a high cofinancing ratio. Further, the project will help Viet Nam achieve its long-term targets for solar power capacity and greenhouse gas emissions, and will accelerate progress in gender equality. In addition, the loan will be an internationally verified green loan.

II. THE PROJECT

A. Project Identification and Description

3. **Project identification.** High rates of economic growth, industrialization, and urbanization are leading to growing electricity demand in Viet Nam, which has become the second largest power market in Southeast Asia (after Indonesia). Electricity demand has grown rapidly, averaging 11.5% per year from 2005 to 2019, and is projected to grow at more than 8.0% per year through 2030. However, meeting fast-growing electricity demand and sustaining high rates of economic growth will be a significant challenge for Viet Nam. According to the Revised National Power Development Master Plan, 2011–2020, Viet Nam needs to invest about \$148 billion in power transmission and generation infrastructure from 2016 to 2030.² Because of financial constraints on the state utility Vietnam Electricity (EVN) and limits on sovereign borrowing, private sector investment will be essential to avoid future power shortages.

4. In 2019, large hydropower, coal, gas, and other fossil fuel projects comprised nearly 90% of Viet Nam's 55.9 gigawatts (GW) of installed power capacity. With (i) limited room to develop large-scale hydropower plants, (ii) depleting domestic coal reserves, and (iii) growing public concern over environmental issues, renewable energy development is receiving significantly greater focus.

5. In April 2017, the Government of Viet Nam issued a decision to accelerate the development of private sector solar projects. This decision included a provision for a 20-year feed-in tariff (FIT) of \$0.0935 per kilowatt-hour for utility-scale solar power projects, the provision under which the power purchase agreement (PPA) for this project was agreed. Although the new FIT policy sparked significant private sector interest, project developers and financiers faced two major challenges. First, developers wishing to receive the FIT were required to be commissioned

¹ Financing partner: Japan International Cooperation Agency.

² Government of Viet Nam, Ministry of Industry and Trade. 2016. *Prime Minister Decision 428/QĐ-TTg: Approval of the Revised National Power Development Master Plan for the 2011–2020 Period with the Vision to 2030*. Ha Noi.

by the end of June 2019—a compressed development and construction time frame. Second, they were required to use the standard (PPA) issued by the Ministry of Industry and Trade, which is not considered bankable for international lenders on a nonrecourse project finance basis because of its lack of sufficient protection for curtailment, changes in law, and various termination scenarios. Since developers were unable to obtain long-term project financing under these conditions, they proceeded with project construction using a combination of sponsor equity, short-term supplier credit, or corporate loans with short tenors and in local currency (dong). This was considered an interim arrangement for many developers, and experienced international developers such as B.Grimm Power Public Company Limited (B.Grimm) continued their efforts to structure more sustainable long-term financing solutions.

6. By June 2019, 82 solar power plants, with a total capacity of nearly 4.5 GW, had been commissioned and connected to the national grid. In latest forecasts, installed solar power capacity is projected to increase to 18.6 GW, a target nearly achieved in 2020, when installed solar power capacity reached 16.6 GW.³ However, while the rapid development of solar power capacity is considered a great success, the need for sustainable financing solutions remains of paramount importance to support the renewable energy sector’s long-term viability and stability. Further, rapid development has resulted in network congestion in some areas, and certain projects have experienced curtailment issues because of grid capacity constraints.

7. Since 2018, ADB has engaged in discussions with project developers to explore options for financing solutions. Establishing a viable long-term financing structure is critical to support the sustainable development of Viet Nam’s renewable energy sector. The ADB approach has been to (i) selectively support high-quality landmark projects developed by reputable sponsors, and (ii) take the lead in developing a bankable structure to help catalyze commercial bank cofinancing to Viet Nam’s renewable energy sector by reducing the market perception that long-term financing is not feasible. In late 2018, B.Grimm approached ADB to discuss its development pipeline in Viet Nam and potential financing structures.⁴ The projects were considered suitable because of their size and strategic location, and B.Grimm’s strong technical capacity and record as a developer.

8. In response to market conditions and sponsor demand, ADB has taken the lead to develop an innovative project finance solution with tailor-made sponsor support to address the key risks in Viet Nam’s standard PPA. ADB’s involvement in this project will showcase one of the first international limited-recourse financings for one of the biggest solar power projects in the country (and in Southeast Asia). Through its B loan, ADB will also mobilize one of the largest commercial cofinancing packages for a renewable energy project to date in Viet Nam. The entire ADB loan will be externally verified as a green loan based on the Green Loan Principles.⁵

9. **Project design.** The project consists of the development and operation of a 240 MW solar photovoltaic power plant and its associated facilities in Tay Ninh Province, Viet Nam. The project is connected to the national grid and has entered into a 20-year PPA with EVN. It will directly

³ Government of Viet Nam, Ministry of Industry and Trade. 2021. Draft *National Power Development Plan 2021–2030, with a Vision to 2045*. Ha Noi.

⁴ The proposed Dau Tieng Project is one of two solar projects led by B.Grimm in Viet Nam. The other project, the B.Grimm Viet Nam Solar Power Project (Phu Yen Project), was approved by the ADB Board of Directors on 7 April 2020 and signed on 5 June 2020. The two projects have been processed separately because they are located in different provinces, have different project structures, and had different timelines for financing. ADB. [Viet Nam: B.Grimm Viet Nam Solar Power Project \(Phu Yen Project\)](#).

⁵ Loan Market Association, Asia Pacific Loan Market Association, and Loan Syndications and Trading Association. 2018. [Green Loan Principles: Supporting Environmentally Sustainable Economic Activity](#). London; and International Capital Market Association. 2018. [Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds](#). Paris.

serve the electricity demand of Ho Chi Minh City, the commercial center and one of the fastest-growing regions in Viet Nam. The project achieved commercial operation in June 2019. **CONFIDENTIAL INFORMATION DELETED.**

10. **Gender context.** While Viet Nam has made considerable progress in addressing gender disparities, women's economic opportunities remain constrained because of significant segregation of men and women in terms of occupation and industry of employment, an unequal burden of unpaid care work, and general resistance to women taking up leadership positions.⁶ In the renewable energy sector, only a small proportion of women are in management, technical, and field-based roles, with the highest concentrations of women in administration, finance, and human resources. This project incorporates gender measures that seek to support the closing of some of the identified gender gaps.

11. **Borrower and sponsor.** The borrower, DTE, was established in 2018 to develop, build, and operate the project. DTE will be fully owned by B.Grimm. B.Grimm, established in 1993, is one of the largest private power generation companies among Thailand's small power producer operators. As of October 2020, B.Grimm had total generating capacity of 3.0 GW from a diversified portfolio including 17 gas-fired cogeneration plants, 24 solar power plants, and 3 hydropower plants. B.Grimm has also established climate targets to increase the share of renewable energy as a percentage of installed capacity in its portfolio from 8% in 2017 to 30% in 2022. B.Grimm is ADB's existing private sector client. It issued Thailand's first certified climate bond in 2019 with ADB assistance.⁷ **CONFIDENTIAL INFORMATION DELETED.**

12. ADB conducted integrity and enhanced tax integrity due diligence on DTE's shareholders, managers, and significant contracting entities.⁸ **CONFIDENTIAL INFORMATION DELETED.**

B. Development Impact, Outcomes, and Outputs

13. **Impact.** The project is aligned with the following impact: the proportion of power produced from renewable energy sources in the power generation mix in Viet Nam increased and the solar power capacity increased.

14. **Outcomes.** The project has the following outcomes: renewable power delivered to the domestic grid increased, green loan status maintained during the life of the loan, and additional jobs and revenues generated.

15. **Outputs.** The outputs of the project are as follows: (i) a 240 MW solar photovoltaic power project and its associated facilities are operational, (ii) green loan status is achieved, (iii) gender equality in staffing is enhanced, (iv) gender inclusiveness of the work environment is enhanced, and (v) capacity of women in renewable technologies is enhanced.

C. Alignment with ADB Strategy and Operations

⁶ World Bank. 2011. [Vietnam Country Gender Assessment](#). Ha Noi.

⁷ As of March 2021, ADB had the following outstanding transactions with B.Grimm: (i) corporate green bonds of \$157 million equivalent, signed in December 2018 (ADB. [Thailand: Thailand Green Bond Project](#)); and (ii) a project finance loan of \$176.7 million signed in June 2020 (footnote 4).

⁸ ADB. 2003. [Enhancing the Asian Development Bank's Role in Combating Money Laundering and the Financing of Terrorism](#). Manila; and ADB. 2016. [Anticorruption Policy: Enhancing the Role of the Asian Development Bank in Relation to Tax Integrity](#). Manila. More information is in Client Information (accessible from the list of linked documents in Appendix 2).

16. **Consistency with ADB strategy and country strategy.** The project is consistent with ADB's Strategy 2030, which outlines seven operational priorities to address development challenges in Asia and the Pacific.⁹ The project supports three of those priorities: (i) tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability; (ii) addressing remaining poverty and reducing inequalities; and (iii) accelerating progress in gender equality. It also supports Strategy 2030's objectives to expand the role of private sector operations and mobilize additional resources in addition to ADB's own financing.

17. The project is aligned with two of the three pillars of ADB's country partnership strategy for Viet Nam, 2016–2020: (i) increasing the inclusiveness of infrastructure and service delivery, and (ii) improving environmental sustainability and climate change response.¹⁰ The project is also aligned with Viet Nam's climate commitments as highlighted in its updated Nationally Determined Contribution to the United Nations Framework Convention on Climate Change, targeting an unconditional reduction in greenhouse gas emissions of 9% and a conditional reduction of 27% below business as usual by 2030.¹¹

18. **Consistency with sector strategy and relevant ADB operations.** The project aligns with ADB's Energy Policy, which supports wider access to energy through investments in energy efficiency and renewable energy projects.¹² It will contribute to ADB's 2030 targets for climate change mitigation and adaptation financing, cofinancing for private sector operations, and the promotion of gender equality. Consistent with a One ADB approach, the project benefited from close cross-departmental coordination with ADB's Southeast Asia Department in assessing and analyzing Viet Nam's energy sector.

19. **Lessons from previous operations.** The project builds on results and lessons from the close cooperation between ADB sovereign operations and the government for energy sector reform.¹³ It also adds to ADB's growing portfolio of solar projects in Viet Nam, such as the Floating Solar Energy Project, the Gulf Solar Power Project, and the B.Grimm Viet Nam Solar Power Project (Phu Yen Project).¹⁴ Building on these other projects, the project improves the tailor-made sponsor support and will scale up ADB's assistance and cofinancing to make it one of the largest solar power projects in Southeast Asia.

20. The total ADB A loan and cofinancing amount of up to \$160,500,000 will be counted as climate change financing (mitigation) because it matches the criteria according to the joint multilateral development banks methodology.¹⁵

D. Project Cost and Financing Plan

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E. Implementation Arrangements

⁹ ADB. 2018. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

¹⁰ ADB. 2016. *Country Partnership Strategy: Viet Nam, 2016–2020—Fostering More Inclusive and Environmentally Sustainable Growth*. Manila.

¹¹ Government of Viet Nam. 2015. *Intended Nationally Determined Contribution of Viet Nam*. Ha Noi.

¹² ADB. 2009. *Energy Policy*. Manila.

¹³ ADB. 2015. *Technical Assistance to the Socialist Republic of Viet Nam for the Power Sector Reform Program*. Manila.

¹⁴ ADB. *Viet Nam: Gulf Solar Power Project*; and footnote 4.

¹⁵ European Bank for Reconstruction and Development. 2020. *2019 Joint Report on Multilateral Development Banks' Climate Finance*. London.

21. Table 3 summarizes the implementation arrangements.¹⁶

Table 3: Summary of Implementation Arrangements

Aspects	Arrangements
Regulatory framework	The project is being implemented under Prime Minister Decision No. 11/2017/QĐ-TTg, which establishes the framework and the standards for implementing solar power projects.
Management	The project sponsor, B.Grimm Power Public Company Limited, has extensive experience in the development, operation, and maintenance of power projects.
Implementation period	The project achieved commercial operations on 13 June 2019. To meet the June 2019 deadline for the commercial operation date under the PPA, the project was initially financed with sponsor's equity and a deferred payment arrangement with the EPC contractors.
Construction arrangements	The EPC contractors are Power China Huadong Engineering Corporation and Sinohydro Corporation Limited, which are both subsidiaries of Power Construction Corporation of China, Ltd. The EPC contracts are standard fixed-price, date-certain turnkey contracts. The photovoltaic panels were manufactured by Jinko Solar Holding Company Limited.
Revenue structure	DTE sells electricity generated by the project to Vietnam Electricity under a 20-year PPA at a fixed feed-in tariff of \$0.0935 per kilowatt-hour. The tariff is paid in dong but indexed to the United States dollar. ADB will receive sponsor support to mitigate key risks from Viet Nam's standard PPA for renewable energy.
Operation and maintenance	DTE has entered into two separate operation and maintenance contracts: the first is for the power plant and was entered into with Power China Huadong Engineering Corporation; the second is for the substation and was entered into with a consortium consisting of V.T.E.C.H Electrical Technology Co., Ltd. and Technical Service Center 4.
Performance monitoring	DTE will submit to ADB (i) development effectiveness reports on key performance indicators, (ii) semiannual unaudited and annual audited financial statements, and (iii) environmental and social monitoring reports.

ADB = Asian Development Bank; DTE = Dau Tieng Tay Ninh Energy Joint Stock Company; EPC = engineering, procurement, and construction; PPA = power purchase agreement.

Source: Asian Development Bank.

F. Projected Financial and Economic Performance

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III. THE PROPOSED ADB ASSISTANCE

A. The Assistance

22. ADB's assistance will have three components: (i) a direct senior secured loan (A loan) of up to \$24,500,000, (ii) a B loan of up to \$128,000,000 to be funded by participating financial institutions, and (iii) administration of a parallel senior secured loan of up to \$8,000,000 to be provided by LEAP. The A loan will be provided from ADB's ordinary capital resources.

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B. Value Added by ADB Assistance

23. ADB adds value by mobilizing a long-term financing package that would not have been available without ADB. International lenders are not comfortable offering long-term US dollar-denominated debt on a nonrecourse basis in the Vietnamese renewables market because of concerns regarding the PPA and the nascency of the sector. Local banks are unable to offer US dollar-denominated longer-tenor debt. As one of the first and biggest international limited-recourse project finance transactions in Viet Nam's renewable energy sector, together with the Phu Yen project (footnote 4), the project will demonstrate the potential for private sector

¹⁶ Details of Implementation Arrangements (accessible from the list of linked documents in Appendix 2).

investment in the sector, send a strong signal to the market, and attract other investors for similar investments. ADB has led the structuring of the transaction and is crowding in commercial banks under the B loan structure, at a cofinancing ratio of \$5.2 for every \$1 of ADB assistance.¹⁷ ADB will offer a longer tenor than participating commercial banks, help to improve debt service coverage ratios for lenders, and thereby improve the project's financial viability.

24. ADB's support for the project will demonstrate that innovative financing solutions can address existing challenges in this nascent market. The support also contributes to B.Grimm's target of increasing the share of renewable energy in its portfolio, and will confirm the loan as a green loan, allowing B.Grimm to showcase its commitment to climate-friendly investments. ADB's involvement and due diligence will ensure that the project is developed and operated to international best practice standards and will perform to expectations over the project life. ADB's participation in the project will enable gender design features and targets to be incorporated and will also ensure compliance with ADB's rigorous environmental and social safeguard standards.

C. Risks

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IV. POLICY COMPLIANCE

A. Safeguards and Social Dimensions

25. ADB has categorized the project in compliance with ADB's Safeguard Policy Statement (2009) as follows: environment (category B), involuntary resettlement (category B), and indigenous peoples (category C). Safeguard Requirement 4 for existing facilities is applicable.¹⁸

26. ADB has undertaken due diligence and reviewed the potential environmental and social impacts of the project and the measures implemented by DTE to avoid, minimize, and mitigate the adverse impacts. An environmental and social compliance audit, including on-site assessment, was conducted by the borrower's consultant to identify past or present concerns related to the impacts on environment, involuntary resettlement, and indigenous peoples. The environmental and social measures and the institutional capacity and commitment of DTE to manage the project's social and environmental impacts according to the requirements of ADB's Safeguard Policy Statement are deemed adequate. DTE commits to address and implement the environmental and social corrective action plan for the project.

27. **Environment.** The project's local environmental impact assessment report was approved by the People's Committee of Tay Ninh Province on 12 June 2018 with Decision No. 1483/QD-UBND. The project occupies a total land area of 274.1 hectares (ha) located at the western edge of Dau Tieng Reservoir; about 90% of the project area experiences seasonal inundation from October to March. The Dau Tieng Reservoir Authority confirmed that the reservoir is not classified as a key biodiversity area and does not support globally or nationally threatened species. The project was designed based on a 200-year return period of Dau Tieng Reservoir, which is deemed adequate to address the climate high risk factors (e.g., flood, increased precipitation) identified in the report produced by the Aware for Projects climate risk screening tool.¹⁹ The environmental and social compliance audit report proposed a corrective action plan to comply with ADB's

¹⁷ The overall cofinancing ratio is 5.6 times, including the LEAP parallel loan of \$8 million.

¹⁸ ADB. [Safeguard Categories](#).

¹⁹ Aware for Projects is an online tool used by ADB project teams to screen projects for climate risks.

requirements, which includes the following: (i) strengthen the environmental and social capacity of the project team, (ii) implement an occupational health and safety plan and emergency plan to respond to operational safety risks and incidents, (iii) implement a waste management plan and strengthen housekeeping practices, and (iv) enhance the project's grievance redress mechanism and adopt a stakeholder engagement plan. DTE will implement the corrective action plan to address the gaps before the loan drawdown. It will regularly report to ADB on the project's compliance with ADB's requirements and applicable local environmental, health, and safety laws and regulations.

28. **Social.** The solar farm and other project facilities are located on 274.1 ha of state-owned and managed land. The 270.2 ha solar farm has been leased by the government to DTE for a period of 50 years. Land use rights for project-related facilities such as the transmission line, transmission towers, and access road (comprising about 4 ha) were acquired by DTE directly from land users through negotiated settlement following statutory requirements and procedures. The land for the solar farm is low-lying, situated along the western edge of Dau Tieng Reservoir and seasonally inundated. During other seasons, and depending upon the soil condition, it was mostly used for cassava or sugarcane cultivation by informal land users. These users did not have any legal title to the land, but had been using it for sustenance and livelihood purposes. Although the affected users were not solely dependent on this land for their livelihoods, the land take for the project caused the loss of or disruption to the livelihoods of 88 households (352 persons), of which 7 affected households (28 persons) were assessed to have lost 10% or more of their income sources. The affected households include one temporary household with two informal occupants who were physically displaced from a seasonal dwelling made of temporary materials situated near the boundary of the solar plant within the vicinity of the reservoir. The environmental and social compliance audit confirmed that the project took measures to address the impact on income and livelihood losses to the affected households, despite the informal land use and in the absence of a binding statutory requirement. In lieu of land compensation and in recognition of the partial economic dependence, the affected land users were provided (i) compensation for loss of trees and crops, (ii) additional support to cope with the transition or subsistence loss, and (iii) an additional financial incentive for surrendering informal land use rights to the project. The audit further confirmed that compensation unit prices for crops and other assets were in accordance with the local regulations and broadly equivalent to the market price. The one temporary household that was physically displaced has been relocated, awarded with land use rights for a plot of community land by the commune people's committee, and received financial support from DTE for their newly constructed house.

29. The environmental and social compliance audit assessed that (i) the transfer of land rights was done following statutory requirements, (ii) all affected households were compensated for loss of income resulting from loss of access to land and other productive assets and in recognition of their informal user rights, (iii) no legacy or ongoing encumbrances or risks are associated with project lands, and (iv) the compensation process provided enhanced compensation and other benefits that exceed statutory requirements and were generally aligned with ADB's requirements. To address the long-term impact of income and livelihood loss and build on the livelihood support already provided to affected households, DTE has committed to develop a livelihood restoration plan for significantly affected, willing, and vulnerable households before the first loan disbursement. The plan will include a detailed assessment of affected households' socioeconomic conditions and the provision of opportunities for skills building and alternative livelihoods to ensure the restoration of sustenance and livelihood status to at least pre-project levels. The project has no known impacts on indigenous peoples. It is not located in an area which is owned, claimed, or used by any ethnic minorities.

30. **Effective gender mainstreaming.** As of February 2021, 7 of DTE's 17 staff were female, but none of the management or technical roles were held by women. DTE does not have an anti-sexual harassment policy or an internship program. Following ADB's Policy on Gender and Development (1998), DTE has incorporated measures to promote gender equality and/or women's empowerment in its business activities. Key features of the gender action plan are as follows: (i) an increase in the number of women employed by DTE in technical or managerial roles, (ii) 50% of the jobs in grass cutting are held by women, (iii) the development and implementation of an internship program with at least 50% of internships offered to women, (iv) inclusion of anti-sexual harassment provisions in DTE's code of conduct, and (v) training of staff on anti-sexual harassment provisions. DTE will submit periodic reports on the implementation of gender measures to ADB.

31. DTE 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.²⁰ DTE 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 follow ADB requirements.²¹

B. Anticorruption Policy

32. DTE and B.Grimm were 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

33. The proposed loan is within the medium-term, country, industry, group, and single exposure limits for nonsovereign investments.

D. Assurances

34. Consistent with the Agreement Establishing the Asian Development Bank (the Charter),²² ADB will proceed with the proposed assistance upon establishing that the Government of Viet Nam has no objection to the proposed assistance to DTE. 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

35. 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 \$152,500,000, comprising (i) an A loan of up to \$24,500,000 from ADB's ordinary capital resources and (ii) a B loan of up to \$128,000,000, to Dau Tieng Tay Ninh Energy Joint Stock Company for the B.Grimm Viet Nam Solar Power Project (Dau Tieng Project) in Viet Nam, with such terms and conditions as are substantially in accordance with those set forth in this report,

²⁰ ADB. 2003. [Social Protection](#). Manila (adopted in 2001).

²¹ Summary Poverty Reduction and Social Strategy (accessible from the list of linked documents in Appendix 2).

²² ADB. 1966. [Agreement Establishing the Asian Development Bank](#). Manila.

and as may be reported to the Board.

Masatsugu Asakawa
President

19 May 2021

DESIGN AND MONITORING FRAMEWORK

Impact the Project is Aligned with			
<p>The share of power produced from renewable energy sources in the power generation mix in Viet Nam increased to more than 10% by 2030 and the solar power capacity increased to 12,000 MW (3.3% of total production) by 2030 (Revised National Power Development Master Plan for the 2011–2020 Period with the Vision to 2030)^a</p>			
Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
<p>Outcomes</p> <p>Renewable power delivered to the domestic grid increased, green loan status maintained, and additional jobs and revenues generated</p>	<p>a. Electricity delivered to offtaker increased to 337 GWh per year by 2022 (2018 baseline: 0)^b (OP 3.1.4)</p> <p>b. Annual emissions of 129,700^c tCO₂ equivalent avoided^d by 2022 (2018 baseline: 0) (OP 3.1)</p> <p>c. Green loan status of the project maintained during the life of the loan (2020 baseline: Not applicable)</p> <p>d. Number of jobs provided during operation of the project amounts to at least 117 full-time equivalent jobs, including casual and part-time workers by 2021 (2018 baseline: 0) (OP 1.2)</p> <p>e. CONFIDENTIAL INFORMATION DELETED.</p> <p>f. CONFIDENTIAL INFORMATION DELETED.</p>	<p>a–f. DTE’s annual development effectiveness monitoring report</p>	<p>Changes in regulatory environment or power purchase agreement, specifically relating to curtailment risk, tariff reduction, or termination of contract</p> <p>Grid constraints or other technical network issues that reduce the amount of electricity delivered from the project to the grid</p> <p>Climate and weather risk</p>
<p>Outputs</p> <p>1. A 240 MW solar photovoltaic power project and its associated facilities are operational</p> <p>2. Green loan status is achieved</p> <p>3. Gender equality in staffing is enhanced</p>	<p>1. Total installed solar photovoltaic electricity generation capacity of the project increased to 240 MW by 2022 (2018 baseline: 0) (OP 3.1.4)</p> <p>2. Assurance report issued for green loan compliance by 2021 (2020 baseline: Not applicable)</p> <p>3a. Number of technical or managerial roles held by women in DTE increased by at least 1 by 2023, and in the case that the total number of such staff positions is increased, by at least 2 by 2025 (2020 baseline: 0) (OP 2.3.1)</p>	<p>1–5. DTE’s annual development effectiveness monitoring report</p>	<p>Construction delays caused by force majeure events</p> <p>Poor quality of construction, which impacts operational performance</p>

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
4. Gender inclusiveness of the work environment is enhanced	3b. At least 50% of jobs in grass cutting are held by women by 2024 (2020 baseline: 0%) 4a. DTE's code of conduct includes anti-sexual harassment provisions by 2022 (2020 baseline: Not applicable) (OP 2.2.3) 4b. At least 80% of staff trained on anti-sexual harassment provisions by 2023 (2020 baseline: 0)		
5. Capacity of women in renewable technologies is enhanced	5. Internship program at DTE is developed and implemented with at least 50% of internships offered to women by Q4 2023 (2020 baseline: 0) (OP 2.1.1)		

Key Activities with Milestones

Outputs 1–5

1. **CONFIDENTIAL INFORMATION DELETED.**
2. Assurance report for green loan issued by Q2 2021
3. DTE's code of conduct includes anti-sexual harassment provisions by 2022
4. Design of internship program completed by 2021

Inputs

Debt:

- Asian Development Bank (A loan): \$24.5 million
- Commercial banks (B loan): \$128.0 million
- Leading Asia's Private Infrastructure Fund (Parallel Debt Subprogram): \$8.0 million

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DTE = Dau Tieng Tay Ninh Energy Joint Stock Company, GWh = gigawatt-hour, MW = megawatt, OP = operational priority, Q = quarter, tCO₂ = ton of carbon dioxide.

^a Government of Viet Nam, Ministry of Industry and Trade. 2016. *Prime Minister Decision 428/QĐ-TTg: Approval of the Revised National Power Development Master Plan for the 2011–2020 Period with the Vision to 2030*. Ha Noi.

^b The solar plant achieved commercial operations in June 2019.

^c 337 GWh x 385 tCO₂/GWh (grid emission factor for Viet Nam) = 129,700 tCO₂ equivalent.

^d United Nations Framework Convention on Climate Change. 2019. *The IFI Dataset of Default Grid Factors (v. 2.0)*. July 2019.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this project will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/RRPs/?id=54013-001-4>

1. Sector Overview
2. Client Information
3. Details of Implementation Arrangements
4. Contribution to Strategy 2030 Operational Priorities
5. Financial Analysis
6. Economic Analysis
7. Country Economic Indicators
8. Summary Poverty Reduction and Social Strategy
9. Gender Action Plan
10. Integrity and Tax Due Diligence Disclosures

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