ADB

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Pacific Renewable Energy Program
Interim Review Report

Asian Development Bank

ABBREVIATIONS

ADB	–	Asian Development Bank
BESS	–	battery energy storage system
COVID-19	–	coronavirus disease
DMC	–	developing member country
DMF	–	design and monitoring framework
IPP	–	independent power producer
OPPP	–	Office of Public–Private Partnership
PARD	–	Pacific Department
PPA	–	power purchase agreement
PRG	–	partial risk guarantee
PSOD	–	Private Sector Operations Department
RRP	–	report and recommendation of the President

NOTE

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

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I. INTRODUCTION

1. The Pacific Renewable Energy Program is designed to provide an umbrella facility of up to $100,000,000 of financing support, including loans, guarantees, and letters of credit, to overcome the constraints on private sector investment in renewable energy projects in Pacific island countries.[1] The program was jointly developed by the Asian Development Bank (ADB) Private Sector Operations Department (PSOD) and the Pacific Department (PARD). PSOD and PARD jointly oversee implementation, monitor the progress of the portfolio, and prepare periodic program progress reports to development partners as required.

2. The program's report and recommendation of the President (RRP) require that by 30 September 2021 or when 50% of the approval limit has been utilized, whichever occurs first, ADB will conduct an interim review of the program and report to the Board of Directors on the program's status and performance, including recommendations for design modifications. This paper provides the review and covers 2.5 years of the program's 5-year funding approval period.

II. PROGRAM SUMMARY

A. Overview

3. The Board approved the program on 17 April 2019. PSOD and PARD jointly developed the program using the "One ADB" approach. It leverages PARD's close relationship with the Pacific power utilities. The development of a regional guarantee program is an output indicator of the Pacific Renewable Energy Investment Facility, which was designed to support ADB investment in sovereign renewable energy projects in the smallest 11 Pacific island member countries and to assist in sector reform.[2] The facility identified a donor-backed guarantee program as a key activity to promote private investment in the Pacific energy sector as part of the sector reform agenda. The design of each project under the program includes one or more of the following forms of financing support:

(i) A partial risk guarantee (PRG) for commercial lenders covering standard political risks and breaches of contract under a power purchase agreement (PPA), which includes coverage of failure by the utility to make a termination payment in the event of full default by the power utility, as set out in the PPA.[3] Payment for breach of contract is made under the PRG upon arbitral award.[4]

(ii) A direct loan to support a private sector borrower; or, where ADB cannot fund a loan in a local currency, then an ADB partial credit guarantee, instead of a direct loan benefiting one or more local lenders to the project, may be made available to an independent power producer (IPP).

(iii) A letter of credit (LC) facility to support the power utility and the project sponsor to cover short-term liquidity risk and drawable by the IPP in an amount covering payments due under the PPA for a specific period. ADB may arrange for a maximum of 24 months of PPA payments per project. The LC will cover the risk that a power utility as an offtaker fails to make payments to the project following the terms of the PPA, and the LC will be reinstated once the utility has restored the

[1] ADB. 2019. *Report and Recommendation of the President to the Board of Directors: Pacific Renewable Energy Program.* Manila.

[2] ADB. 2017. *Report and Recommendation of the President to the Board of Directors: Proposed Pacific Renewable Energy Investment Facility*. Manila. The facility was approved on 22 June 2017.

[3] Expropriation, inconvertibility and/or nontransferability, war and civil disturbance, and breach of contract.

[4] The PRG will not cover PSOD lending.

outstanding payments. The LC, if provided, will be fully funded by development partner funds.

(iv) Technical assistance for transaction advisory support and streamlined processes to reduce high transaction costs associated with small transaction sizes in the Pacific, and to assist with capacity building in environmental and social safeguards.

B. Impact, Outcome, and Output

4. **Impact and outcome.** The impact will be increased generation of renewable energy in the Pacific, as stated under the Framework for Action on Energy Security and Resilience in the Pacific.[5] The outcome will be increased private sector investment in renewable energy in the Pacific.[6] The 6 megawatt (MW) anchor project in Tonga will be the largest solar IPP in the Pacific. The project sponsor is planning to expand its activity in the region using the program offered by ADB.

5. **Output.** The program output will be the establishment of the Pacific Renewable Energy Program and support for an estimated five separate renewable energy projects in Pacific developing member countries (DMCs) over five years.[7] The implementation period for the program will take place over 20 years, from April 2019 to April 2039.

III. IMPLEMENTATION PROGRESS

A. Approved Projects and Financial Products

6. The program is well received by the utilities and the private sector, and project financing transactions are underway with some delays in the project development process because of the impact of COVID-19. On 21 June 2021, the ADB President approved (i) a loan of $3,000,000 from ordinary capital resources and (ii) administration of up to $2,000,000 from the program for the LC facility for the Hihifo 6MW solar project in Tonga, which is an anchor project of the program.[8] The project's financing agreements are expected to be signed by the end of 2021. The financing will be drawn post-completion. PRG and partial credit guarantee have not yet been utilized under the program.

7. **Output**: **Pacific Renewable Energy Program established.** Table 1 summarizes the output of the first project against the design and monitoring framework (DMF) targets. The program output is well below the target of $50 million in loan and guarantee obligations.

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[5] Secretariat of the Pacific Community. 2021. *Framework for Action on Energy Security and Resilience in the Pacific, 2021–2030*. Suva.

[6] The design and monitoring framework is in the Appendix. Five investments in renewable energy generation are supported by the program, and at least two projects of which will be categorized as having some gender elements.

[7] By comparison, PSOD has only ever invested in one energy sector project in the Pacific.

[8] Financing for the Hihifo project was anticipated to close in 2019. However, the investor sold the majority of its shares to a new investor, which delayed financing by 7 months. The coronavirus disease (COVID-19) restrictions caused another 8 months' delay, and the adjusted project commercial operation date is scheduled for the end of 2021. The project is categorized as effective gender mainstreaming.

Table 1: Output Performance Against Target

Outputs	**DMF Target** ($ million)	**Outputs as of Sep 2021** ($ million)	**Outputs as of Sep 2021 as a share of DMF Targets**
Loan and guarantee obligations of the program reached by 2022	50	3	6%

DMF = design and monitoring framework.
Source: Asian Development Bank estimates.

8. The slow progress in utilizing the program loans and guarantees is mainly the result of the impact of coronavirus disease (COVID-19). COVID-19 quarantine and travel restrictions continue to delay project construction and new renewable energy project development across the Pacific. Besides travel restrictions, projects face higher logistics costs, delayed delivery of construction materials to project sites, and slower rolling out of renewable energy plans by Pacific governments.

9. The Hihifo project is under construction, with two of three sites completed. However, the commercial operation date of the whole project is dependent on a total capacity of 10.1MW/19.9 megawatt-hours of battery energy storage system (BESS), which was scheduled to be installed by Akuo Energy by the end of 2020. PARD was the accredited agency for the $29.9 million grant from the Green Climate Fund to install BESS.[9] It will ensure that the intermittent electricity generated from solar photovoltaic and wind power can be stored and used overnight without negatively affecting the grid. COVID-19 has delayed the completion of BESS, and it has not yet been tested and commissioned as of July 2021. The commissioning of BESS is being arranged remotely because of continuing travel and quarantine restrictions.

10. The change in the region's investment environment incurs delays in every aspect of private sector renewable energy projects in the pipeline. Its corresponding projected outputs are reflected in the proposed DMF revision in para. 21, which recommends a 2-year extension of the program period.

B. Additional Funding

11. The Government of New Zealand, represented by the Ministry of Foreign Affairs and Trade, provided a grant of $3 million in donor funds to support the issuance of letters of credit under the program. This grant is administered by ADB. Of this amount, $2 million has been committed for the Hihifo project, and $1 million remains available for other projects. Further donor support of $4.5 million for letters of credit has been approved from the Asia-Pacific Climate Finance Fund on 10 November 2020.

C. Technical Assistance

12. A grant of $15,000 was provided under technical assistance to help the borrower conduct environmental and social due diligence and prepare the initial environmental assessment and relevant social assessment and social plans for the Hihifo 6MW solar project in Tonga.[10]

[9] ADB. 2017. *Technical Assistance Pacific Renewable Investment Facility.* Manila. Two BESS units are expected to be commissioned by the end of October 2021.
[10] ADB. 2016. *Project Preparatory Technical Assistance Report: Pacific Renewable Energy Investment Facility.* Manila.

D. Alignment with ADB Strategy and Operations

13. The development objective is to provide credit enhancement mechanisms to hedge against the key risks inherent in power projects in the Pacific DMCs, which will increase private investment in energy. The program will (i) lower the cost of financing and encourage financing with longer tenors, which will feed through to lower power tariffs; (ii) attract new investors and lenders to the Pacific DMCs, where they might not otherwise invest; (iii) generate financing opportunities for PSOD; and (iv) increase PSOD's focus on frontier markets in accordance with ADB's Strategy 2030.[11] The program is aligned with the operational priorities of Strategy 2030 to tackle climate change, build climate and disaster resilience, and increase environmental sustainability. ADB is the largest investor in the Pacific at present, and the program will leverage this extensive network with Pacific power utilities to identify planned transactions in the early stages under the "One ADB" approach. Identifying new renewable energy projects suitable for private sector participation originated from close collaboration with project officers in PARD and OPPP.

14. The additionality provided by ADB is in sourcing and using available grant funds for the Pacific DMCs from ADB's development partners as a credit enhancement tool that will mobilize private financing. The financing will spur self-sustaining private sector development, reduce continued reliance of power utilities on grants and subsidies, and increase energy supply. Technical assistance under the program will help strengthen governance and institutional capacity by building skills in financial sustainability, service delivery, capacity, and standards.

IV. ISSUES, LESSONS, AND RECOMMENDATIONS

A. Issues

15. **Program implementation period.** Proposals for loans and guarantees under the program are proposed to be considered until 30 April 2026, and the program implementation period is proposed to be extended to April 2041. Project processing is ongoing, and several projects are still in the pipeline for development. However, most of the pipeline projects have been delayed by the COVID-19 pandemic. With the pandemic-related delays, it is recommended that the availability period be extended by two years, and the DMF output by 2026 has been reduced accordingly.

16. **Program pipeline.** Since the initial market sounding in 2017,[12] the pipeline of candidate projects has been updated (Table 2).

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

[12] ADB. 2017. *Technical Assistance Pacific Renewable Investment Facility.* Manila.

Table 2: Indicative Project Pipeline

Country	Project Type	Capacity (megawatt)	Project Cost ($ million)	Debt ($ million)
Short term (6 months)				
Tonga	Wind	6	8.4	6
Total			**8.4**	**6**
Medium term (1–3 years)				
Fiji	Solar/Storage	10/5	20	14
Fiji	Solar	5	7	5
Palau	Solar/Storage	16/9	23	15
Total			**50**	**34**

Note: Five investments in renewable energy generation are supported by the program and at least two projects of which will be categorized as having some gender elements.
Source: Asian Development Bank.

17. Any reduction in the existing program will be considered and discussed in the program's annual report for 2021, when more clarity may be available on the impact of COVID-19 on future renewable energy targets in the Pacific.

B. Lessons Learned and Proposed Changes

18. **Amount of LC support**. The RRP states that ADB may arrange the LC for a maximum of up to 24 months of PPA payments per project. The amount of the LC should ideally be fixed at the appropriate amount. For the anchor project the total available amount that can be drawn under the LCs[13] will be 24 months of power payments, consisting of 3 months of power payments provided by the power utility as a first-loss component and 21 months' equivalent amount of cash backed by donor funds. The first 3 months of power payments from the power utility will be drawn first in the event of nonpayment to mitigate the risk of moral hazard, whereby the power utility must take the first loss before further amounts can be drawn under the LC. The RRP for the program stated that the extent of the cover of debt service under such LC will differ from project to project based on the credit standing of each offtaker and the extent to which concessional funding sources support the use of funds for such a purpose. The flexibility of offering up to 24 months of power payments in the LC and of allowing varying volumes in the LC support does not work in practice and should be fixed if offered prior to the project award for the following reasons:

(i) The design of the LC in the program contemplates the matter of moral hazard. Therefore, the design assumes that the power utility's first 3 months of power payments would be provided as a first-loss portion. The program envisaged that this period would be determined on a project-specific basis. However, a requirement that fixes the first-loss portion from the power utility to 3 months of power payments was necessary to treat all utilities equally in offering the credit enhancement tool.

(a) First, power utilities have argued for deserving better treatment than other utilities by paying a smaller amount than three months for the first loss portion, and the competition to limit the contribution from any utility is difficult to justify and detrimental to the program's efficient rollout.

(b) Second, a fixed portion of a given amount (equivalent to an estimated number of months of power payments) for the LC backed by donors is

[13] Under Tonga, the LC, will be spilt into two LCs. On LC will be funded by Donor funds and one LC will be funded by Offtaker funds.

necessary to allow early engagement with bidders in IPP tenders. Before bidding for a renewable IPP tender, bidders need to evaluate the risk profile during the operating period and then price that risk accordingly into the internal rate of return they require for the project in their bid. This risk is reflected in the tariff that they bid on the tender documents. The investors are aware that financing of their bid is subject to full due diligence by lenders, and, therefore, their bids are usually subject to successful financing. The current flexibility in the LC as a credit enhancement tool, however, is challenging for the investor because it directly impacts perceived risk at the time of bidding the tariff. If a fixed amount is known pre-tender, the tariff incorporates the expected credit enhancement provided by the program, and so bidders need to be offered the same LC terms during the bid phase to establish their required internal rate of return for their investment.

(ii) The maximum amount of 24 months power payments is proposed to be the basis of the fixed amount for the Tonga solar power project. During the evaluation of the LC amount for the Tonga solar power project, the capacity of the power utilities and their new engagement with the private sector, the nascent regulatory framework, and the introduction to PPAs that share risk equitably with the private sector apparently required more time to resolve issues. In particular, the international arbitration process, according to the Singapore International Arbitration Centre, was estimated to last an average of 13.8 months. Accordingly, a total amount of 24 months would give an 8-month margin to account for protracted negotiations and a longer than average arbitration process.

(iii) A longer-tenor LC can cover monthly payments on time and up to date and keep the loan current until an arbitration award is received.[14]

19. **DMF output indicator.** The DMF Output 1 target of loans and guarantees obligation are proposed to be reduced from $50 million to $30 million to reflect the recovery period needed following the impact of COVID-19 for Pacific utilities to meet their renewable energy targets in the Pacific.

C. Recommendations for Design and Scope Modifications

20. Below are the proposed program design and scope clarifications and modifications:

(i) **Availability period.** The program's approval period for loans and guarantees is proposed to be extended by 2 years so that the processing window extends to 30 April 2026 and implementation to April 2041.

(ii) **LC.** It is clarified that the LC from the commercial bank may be backstopped by ADB using donor funds through appropriate financial instruments including a partial credit guarantee, a LC, or a cash deposit.

(iii) **Eligibility criteria.** The RRP states that the program will be made available to all bidders, but the bidders must meet eligibility criteria and be subject to due diligence satisfactory to ADB, internal credit approvals, and final documentation covering each IPP and its sponsors. The reference to eligibility criteria is proposed to be deleted and not applied to the program since the bidder's credit standing is not in question. The only criteria that should be applied to the bidders in a bidding round is suitable know-your-customer integrity.

[14] Singapore International Arbitration Centre

(iv) **DMF output indicators revision.** The output 1 target of loan and guarantee obligation of the program is proposed to be reduced from $50 million to $30 million by 2026 to accommodate the delays caused by the COVID-19 pandemic.

(v) **OCR.** It is clarified that the LC product would only be provided in transactions that ADB provides a loan or guarantee.

V. CONCLUSION

21. The implementation of the pioneering program has encountered delays and difficulties during the COVID-19 pandemic. Yet, the program has attracted keen interest from private sector investors and power utilities, and a number of potential projects are under discussion. The program requires an extension of implementation time because of the unprecedented impacts of COVID-19.

22. To improve program performance, procedures, design, and scope must be modified as recommended in para. 20. The changes will accelerate the achievement of targets, better capture the evolving needs and energy landscape of the Pacific DMCs and remain relevant as a means of engaging more private sector activity in renewable energy. The recommended modifications consider feedback from the sponsor on the financing process for the Hihifo project in Tonga, and from other potential sponsors. None of the proposed program modifications will negatively affect the program’s outcome.

VI. NEXT STEPS

23. Upon disclosure of this interim review report, approval will be sought from the Director General of PARD and the Director General of PSOD for a change in the program design and scope as recommended in para. 20.

24. Modification to the mechanism for determining the LC amount will be proposed by the program’s annual reports or after the first project has reached financial close.

DESIGN AND MONITORING FRAMEWORK

Impact the Program is Aligned with Increased generation of renewable energy in the Pacific (Framework for Action on Energy Security and Resilience in the Pacific, 2021–2030)[a]			
Results Chain	**Performance Indicators with Targets and Baselines**	**Data Sources and Reporting Mechanisms**	**Risks**
Outcome Private sector investment in renewable energy in the Pacific increased	**By 2028** Five investments in renewable energy generation are supported by the program, and at least two projects of which will be categorized as having *some gender elements*. (Baseline 2019: 0)	Program progress report	Political support for renewable energy declines Commercial financiers unwilling to finance IPPs in Pacific DMCs, despite the program
Outputs Pacific Renewable Energy Program established	**By 2026** Program loan and guarantee obligations reach $30 million (2019 baseline: 0)	Program progress reports	Insufficient demand for loans and guarantees within target Pacific DMCs
Key Activities with Milestones **Output 1: Pacific Renewable Energy Program established** Guarantee program is operational when financing agreements are signed by 2021.			

DMC = developing member country, IPP = independent power producer.

[a] Secretariat of the Pacific Community. 2021. *Framework for Action on Energy Security in the Pacific, 2021–2030.* Suva.

Source: Asian Development Bank.