

Te Tarai Vaka Activity Progress Report: ADB Loan 3193/Grant 0415-COO Renewable Energy Sector Project

Summary

Activity information

Activity Title	Cook Islands Renewable Energy Sector Project
Goal	Increased energy security in an environmentally sustainable manner
Intended outcomes	The outcome will be increased access to a higher share of electricity generated from renewable energy sources

Funding information

Start and end dates	9 February 2015 – 31 December 2017 ¹
Total cost	NZD33.22 million* Note that all reported costs will be in NZD millions
Reporting period	1 January – 31 March 2017

* conversion rate (19/6/2015)

Progress report preparation

Prepared by	Entura Team
Others involved or consulted during this reporting period	REDD staff, MFEM, DCD staff, ADB, Project Steering Group, TAU staff CIIC Staff, Woo Lee, ADB Energy Specialist NETcon Group & Infratec (Infratec), Phase 1 Contractors ² , Micah Sherman
Date of report	April 2017

Key Conclusions and Necessary Actions

This eighth Progress Report has been prepared by Entura, Project Owners Engineers, (POE) in cooperation with the Cook Islands Government (CIG), Project Management Unit (PMU), Project Steering Group (PSG) for the ADB funded Loan 3193/Grant 0415-COO Renewable Energy Sector Project. The Progress Report provides an update to the ADB and all relevant stakeholders on project progress between 1 January (commencement of reporting period) and 31 March 2017 (end of reporting period).

Activities undertaken in this reporting period focused on completing the Bid Evaluation Report (BER) for battery energy storage system (BESS) on Rarotonga which closed on 3rd November 2016 with contract negotiations and signing due to be completed early in the next quarter. The grid-rehabilitation package for Mitiaro and Mauke which closed on 4th November 2016 received an ADB no objection letter to confirm BER recommendations and contract was signed on 27 March 2017. The ITB for the Phase 1 Southern Group Civil Works package closed on 27th January 2017 with only one bidder. On the 16 February ADB confirmed that the Cook Islands Government annul the bidding process and reject all Bids for the tender, in accordance with ITB 37 and further issued a no objection for Cook Islands Government to negotiate a variation to the NETcon contract to include

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¹ ADB Fact-finding Mission in April reached an in principle agreement with the Government to extend the original loan and grant closing date from 31 December 2017 to 31 December 2019

² Southern Group site visits and consultations held 12 – 21 November 2016

Civil Works. In the meantime the REDD office and Project Manager continued to monitor Mitiaro and Atiu site clearance.

Review of Progress to Date

A. Project Implementation

1. Administration

The POE works directly with the Implementing Agency, REDD, and during this reporting period the POE local team used the REDD office intermittently. For a short period Project Owners Engineer (POE) team members, Dusan Nikolic and Satya Gillkum used the office briefly and visited Mangaia, 27 – 31 March, to find the cause of the Mangaia distribution network overproduction of reactive energy which could result in the new renewable system not working well until this issue is rectified. Other international staff were working from their home offices.

The PMU is staffed by the Project Manager, Finance Specialist (2 days per week) and PEC fund Coordinator who are taking on the major responsibility for the project with oversight by the REDD Director in close consultation with the POE.

2. Procurement

The Phase 1 solar turnkey contractor, Infratec, was signed on the 17th August 2016 and the contract became effective on the 7th October 2016.

The power distribution network package (grid package) for Mitiaro and Mauke was awarded on the 27 March 2017 to NETcon Limited for the contract price of NZ\$3,926,941.00 exclusive of CI VAT, customs and imports duties. Effective date will be within two months of contract signing. During the grid package tender process it was confirmed that the HV portion of the electrical reticulation which was included in the Phase 1 Contract would require a contract variation for the HV to be transferred into the power distribution grid package. The variation of \$395,554.41 reduced the Phase 1 contract and was signed by Infratec on the 11 February 2017.

The Phase 1 Civil Works ITB for Mauke, Mitiaro, Atiu and Mangaia was advertised on the 9 December 2016 and the deadline for submissions will be 27 January 2017. On the opening of the tenders it was recorded that only one bid was received. The bid was not considered to be substantively responsive because it offered a substantially longer Time to Completion than required by the Employer (approximately double). The Bidder was deemed not to have the capacity to complete the required works within (or close to) the required schedule, as it did not have capacity to work on all islands in parallel. The bid was rejected on the basis of the Time to Completion. The Engineer's estimate for the project was \$2.7M. The corrected bid price of Bidder No. 1 was approximately \$8M, approximately 300% higher. An analysis of the pricing breakdown showed that the major difference is in the unit rate used for building construction. The unit rate assumed by the Engineer was \$2,780/m². The unit rate used by Bidder No. 1 was approximately \$6,000/m².

The ADB agreed that the Cook Islands Government annul the bidding process and reject all bids for the tender, in accordance with ITB 37. An ADB no-objection letter was received to commence negotiations for a variation to the Infratec/NETcon Phase 1 turnkey contract to undertake the Civil Works in late February. The proposed variation to the Phase 1 Turnkey Contract has been sent to ADB for approval and confirmation prior to signing of the contract variation early in the next quarter.

The Bid opening for the BESS package was held on 3 November 2016 with 4 out of the 8 bids were below the estimated budget in the procurement plan. The BER was submitted to ADB and Cook Islands Government tender committee and a preferred contractor has been recommended. A draft contract has been provided to the preferred contractor for review and contract negotiations were in progress during the writing of this report. A request has been sent to the first and second place bidders to extend their Bid validity from April 2 for further month.

Phase 2 Aitutaki feasibility study report was cleared by ADB on 9 November 2016 and confirmed that the subproject selection criteria in Section C of the project administration manual (PAM) and ADB's guidelines are fully complied with. Project Steering Committee (PSG) has confirmed the Government's intention to include Aitutaki subproject in Phase 2 of the Southern Group Project subject to funds being available. Minutes of PSG meeting held on the 15 March confirmed that financing available from Phase 1 for Aitutaki will be confirmed after all pending contracts (Civil Works and BESS) have been signed. This will determine how much additional funding is required for Aitutaki. REDD office have requested additional funding through the Capital budget for 2017/18. ADB is also working with GCF for additional grant funding and will discuss with Cook Islands Government during the ADB mission from 24 – 28 April 2017. ADB estimates that there is a USD500,000 savings with uncommitted amount of USD1.5m in the budget.

During this quarter, ADB has officially removed the Rarotonga solar subproject from the CIRES (COO46453-002).

3. Financial disbursements.

The financial disbursements recorded below provides an update to the ADB and all relevant stakeholders for the CIRES from 9th February to 31st March 2017 amount paid to date.

Items as per Project Administration Manual Updated August 2016	Amount paid to date 09 February 2015 to 31 March 2017	Total cost of Project as per PAM
A. Investment Costs	11.43	32.42
B. Contingencies	0.00	1.22
C. Financing Charges during implementation	0.04	0.74
D. Administration Charges	0.00	0.28
Total Project Cost	11.47	34.66

Appendix A provides further details.

4. Field work.

Field investigations during this period included:

- PMU Project Manager and Entura Monitoring Consultant continued to supervise the clearing of the solar site on Mitiaro during the following times:
 - 24 Jan to 27 Jan 2017
 - 17 Mar to 20 Mar 2017

- PMU Project Manager and Entura Monitoring Consultant commenced supervision of the clearing of the solar site on Atiu from 8 Mar to 11 Mar 2017
- All site clearance work on Mitiaro and Atiu will be completed early April.
- Site clearance work will commence on Mauke and Mangaia in April and expected to be completed by early May.
- ADB Board visit to Mitiaro on Tuesday 21 March which included the REDD Director. The team reviewed the excellent progress of the solar site preparation, which was nearly complete. This provided the ADB Board with the opportunity for understanding of the issues of remoteness, vulnerability, lack of access to 24/7 power, and challenges of transporting equipment and delivery on to the island via the harbor facilities.
- Dusan Nikolic and Satya Gillkum (Entura engineers) visited Mangaia, 27 – 31 March, to examine the Mangaia distribution network.

5. Safeguards and monitoring

The second Semi-Annual Safeguard Monitoring Report for the CIRESPP will be submitted during this reporting period. The report covered the period 30 June – 31 December 2016. The purpose of the report is to document social and environmental safeguard monitoring activities as well as environmental safeguards.

Social safeguards monitoring included attendance at stakeholder meetings and court hearings and review of Cook Islands Investment Corporation (CIIC) and Land Court documentation to determine compliance with the project Resettlement Plan (RP). Voluntary land transfer and land use agreements have been executed for the respective solar sites on each of the four Phase 1 islands. The process of distributing compensation payments to the respective landowners has now been completed. Preparation of land lease agreements is still in process for certain existing assets on Mangaia that would be affected by the project. All Mauke land issues have been resolved. Preparation of the Land Compensation Completion Report is thus expected to be completed for the next Semi-Annual Report.

Environmental monitoring during this monitoring period has included onsite monitoring of initial site preparation works on Mitiaro by the POE Safeguards Monitoring Specialist.

1. NETcon prepared a Construction Environmental Management Plan (CEMP) for all Phase 1 project sites. The CEMP was reviewed against commitments contained in the Environmental Monitoring Plan (IEE) and the Environmental Management Plan (subproject TRs) and found to capture all commitments.
2. It is recognised that the Island Councils do not have the capacity to prepare a CEMP for land preparation. The POE has worked with the Island Councils and Island Environmental Officers to ensure planned works are compliant with the commitments contained in the IEE. Commitments made by the Island Council have been documented and will be monitored on site during land preparation works.

The third Semi-Annual Report will cover the period 1 January – 30 June 2017 and will be presented at the same time as the next Progress Report.

6. ADB Turnkey Tender Packaging

In early November, the Phase 1 solar turnkey contractor, NETcon Group & Infratec (Infratec), submitted a draft civil works design for Phase 1 solar plants to the project management unit (PMU). The civil works design was reviewed by both PMU, Entura and NETcon in Sydney from 3 – 10 March to discuss and develop the scope and plans for NETcon to cost effectively deliver the variations of the civil contract and to enable an overlap between the civil works with the distribution upgrade. ADB confirmation is still required for the Civil Works variation. Since the meeting a technical report has been prepared by NETcon that outlines the costs and implementation plan related to the civil works for the power stations on Atiu, Mangaia, Mitiaro and Mauke as well as providing the specification and pricing details of additional assets related to the civil works and medium and low voltage (MV/LV) project. The document proposed a number of measures that will hasten the civil implementation and ensure that the CIRESP-001 is completed on time or as close to the contracted time frames as possible. As well to deliver on the request from Island councils to maximise available budget to benefit the community and for their workers to be engaged for project work. The civil works variation will also minimise the risk posed by having multiple contractors involved and the impact on the communities that this could have.

The Batteries for the CIRESP-01 project have arrived on Rarotonga. The Mauke batteries have been shipped to Mauke for storage while the container of batteries of Mitiaro battery will be stored at the OPM until they are required on the site. Containers with batteries for Mangaia and Atiu are expected to arrive in April 2017.

The overall design plans for the project are approximately 90% complete.

7. Cook Islands Renewable Energy Chart Implementation Plan (CIRECIP)

The CIRECIP is a document that continues to guide the work of the REDD office.

Progress against Results Measurement Table

The Results Measurement Table Appendix B shows progress of the activity against the intended outcomes and outputs and has been updated to mirror the changes in the Project Administration Manual (PAM) April 2016 carried out during the ADB Fact-Finding mission in April 2016. Finalisation of a Results Measurement Table is identified as an action for further discussion at PSG meetings.

Project Specific Covenants

Project specific covenants Appendix D are those covenants that have been included in specific legal agreements, the Loan Agreement between the Government of the Cook Islands and ADB. The ADB Mission 21 – 25 November undertook a compliance review and all covenants are either being complied with or not yet due. No further updates have been provided during this reporting period.

Changes to Activity Context in the Reporting Period

ADB has officially removed the Rarotonga solar subproject during this quarter.

Relationship between Implementing Agencies, Beneficiaries and Other Stakeholders

Pacific Environmental Community (PEC) Procurement

No additional activity with regard to PEC occurred during this reporting period however the PEC fund solar panel allocation has remained the same as per the previous report.

Island	Final	Spare
Aitutaki	3774 (1MW)	100
Mangaia	1800	20
Atiu	1560	20+40
Mauke	864	20
Mitiaro	600	20
Rarotonga	1.3 MW	

The REDD office are awaiting the PEC Panel Installation Plan from Te Aponga Uira (TAU) prior to the 1.3 MW panels being installed on Rarotonga.

Co-financing from GEF

The co-financing from GEF has supported the government's effort to increase power generation from renewable sources and enhance the government's institutional capacity for implementing the Cook Islands Renewable Energy Chart Implementation Plan (CIRECIP), 2012–2020, which sets a target of supplying electricity from renewable energy sources on all inhabited islands by 2020. The proposed additional financing is included as a firm 2016 project in ADB's country operations business plan, 2016–2018 for the Cook Islands.³ The financing has enabled the ITB for a battery energy storage system (BESS) to be installed at the Te Mana Ra Solar PV facility on the island of Rarotonga for integration into the existing power system infrastructure. The BER has been submitted to the Cook Islands Government and ADB and the preferred bidder confirmed. Contract negotiations are currently underway and contract signing is expected in early April.

Co-financing from the Green Climate Fund (GCF)

No further updates have been received with regard to the GCF funding during this quarter but the ADB mission proposed for 24 – 28 will discuss the \$4m additional grant funding from GCF.

Updates to Key TTV Activity Management Documents

The Activity Results Framework is replaced with the Indicative Implementation Plan for this section. The updated Indicative Implementation Plan for the next 18 months is provided in the Table below.

The Table 1 includes key deliverables due during the next reporting period (highlighted) with the activities above having been completed during this reporting period.

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³ ADB. 2015. *Country Operations Business Plan: Cook Islands, 2016–2018*. Manila.

Table 1: Indicative Project Implementation Action Plan for the Next 18 Months

Activity	Responsibility	Target Date/Completed
Completed Q1 2017		
Submission of BER Power distribution upgrade	PMU/Entura	Feb-17
Semi-annual Safeguard Monitoring Report	PMU/Entura	Jan-17
Submission of BER Rarotonga BESS	PMU/Entura	Feb-17
Approval of BER Rarotonga BESS	ADB/MFEM	Mar-17
Contract Negotiations Rarotonga BESS	PMU/Entura	Mar-17
Approval of BER Power distribution upgrade	ADB/MFEM	Feb-17
Contract Negotiations Power distribution upgrade	PMU/Entura	Feb-17
Contract Award Power distribution upgrade	PMU/ADB	Mar-17
Closing of ITB Civil Works Phase 1	PMU/Entura	Jan-17
Submission of BER Civil Works Phase 1	PMU/Entura	Jan-17
Civil Works ITB annul process and reject all bids	ADB/MFEM	Feb-17
Commence Contract Variation Civil Works with Phase 1 Contractor NETcon	PMU/ADB	Mar-17
Site clearance commenced on Mitiaro and Atiu	PMU/Entura	Feb 17
Q 2 2017 Next Reporting Period		
Quarterly Progress Report 8	PMU/Entura	Apr- 17
Supply of Final detailed designs and documents	NetCon/Entura	Apr-17
Site clearance commences on Mangaia	PMU/Island Government	Apr-17
Site clearance commences on Mauke	PMU/Island Governments	Apr-17
Contract Award Rarotonga BESS	PMU/ADB	Apr-17
Commencement of Civil Works Phase 1	PMU/Contractor/Entura/Infratec	May-17
Land Completion Report	PMU/Entura	May-17
Power distribution upgrade commence work	PMU/Infratec/Entura	May-17
Civil Works Upgrade commence work	PMU/Infratec/Entura	Apr-17
Site clearance work completed	PMU/Entura	May 17
Commencement of Phase 1 solar installation	PMU/Infratec/Entura	Jun-17
Subsequent Activities		
Review/Fact-finding mission for GCF	ADB	Pri-17
BESS contract completion	PMU/Entura/PMU	Jun-17
BESS commissioning	TAU/PMU/Contractor	July-17
Phase 1 Project commissioning	PMU/Intratec	Dec-17
Power distribution upgrade Commissioning	PMU/Contractor	Dec-17
Aitutaki Phase 2	PMU/APS/Contractor	TBD

Costed work-plan

A preliminary detailed costed work-plan that was provided in previous quarterly reports is considered now not to be very useful. There seemed to be major discrepancies between what was implemented and estimated costs and the alternative might be that a costed plan of Table 1 above might be more useful. Options will be considered during the next quarter.

Risk management

Key risks identified for the project, including current actions, are identified in Appendix C. During this reporting period Infratec confirmed that the proposed variation for Civil Works to be included in the Phase 1 turnkey contract will ensure that CIRESP-001 is completed on time or as close to the contracted time frames as possible. A number of measures have been proposed that will hasten the civil implementation and these will be confirmed once the civil works contract variation has been signed.

Governance and management arrangements

The PSG oversees the implementation arrangements of the Southern Group Renewable Energy Project. The members of the PSG were confirmed as Chair, Elizabeth Wright-Koteka (OPM), Tangi Tereapii (REDD), Steve Barrett (NZHC), Garth Henderson (MFEM), Apii Timoti (TAU), Andreas Demmke (DCD), Tamarii Tutangata (CIIC) and Romani Katoa (PMU), Chris Blanksby (Entura), Woo Lee (ADB), Vanessa Jenner (ADB Cook Islands Office)

The Project Manager of the PMU is responsible for the fortnightly PSG meetings. Three PSG meetings were held in the last quarter. The PMU and Entura provides secretariat services for the PSG.

Authorisation

I declare that the information contained in this report is true and correct and confirm:

- Funds were received and used only for the agreed purpose(s); and
- All conditions attached to Funding have been met; and
- Funds have been fully utilised for the intended purpose

Full Name (in block capitals)

Title / Position

Signature

Date

Appendices

This report includes the following appendices:

- Appendix A: Progress Against Agreed Work-plan and Actuals (table)
- Appendix B: Progress against Results Framework (table)
- Appendix C: Risk matrix (table)
- Appendix D: Project specific covenants - as displayed in legal agreements (table)

Appendix A: Progress Against the Amount paid and Cost and Financing

Item	Feb 2015 to Mar 2017	Total Cost	
	Amount paid to date	Cost and Financing	% of cost and financing
A. Investment Costs ^a			
1 Solar photovoltaic module procurement	4.91	4.06	121.04%
2 Turn Key Contract-Solar photovoltaic system development	3.71	17.20	21.57%
3 Turn Key Contract for Battery Energy Storage System (BESS) system development (GEF)	0.00	4.79	0.00%
4 Consulting Services- Institutional Strengthening and Project Management Supprt	1.37	2.14	64.18%
5 Land Acquisition	1.43	1.65	4.76%
6 Tax and Duties	0.00	2.58	7.44%
Subtotal (A)	11.43	32.42	93.54%
B. Contingencies ^b			
1 Physical	0.00	0.96	2.77%
2 Price	0.00	0.26	0.75%
Subtotal (B)	0.00	1.22	3.52%
C. Financing Charges During Implementation ^c			
1 Interest During Implementation	0.04	0.64	1.85%
2 Commitment Charges	0.00	0.10	0.29%
Subtotal (C)	0.04	0.74	2.14%
D. Administration Charges ^d	0.00	0.28	0.81%
Total Project Cost (A+B+C+D)	11.47	34.66	100.00%

Note: Numbers may not sum precisely because of rounding.

^a Exchange rate used to convert to USD is 1.16

^b Physical contingencies computed at 5.0% of base cost. Price contingencies are based on estimated international inflation rates during construction.

^c Includes interest and commitment charges. Interest during construction for ADB loan has been computed at the 3-year NZ\$ swap rate plus a spread of 0.5%. Commitment charges for an ADB loan are 0.15% per year to be charged on the undisbursed loan amount.

^d It comprises ADB's administration fee, audit costs, and bank charges, to the extent that these items are not covered by the interest and investment income earned on this grant, or any additional grant from the European Commission.

Source: Asian Development Bank estimates.

Appendix B: Progress Against Results Framework

This table shows progress of the Activity against the intended outcomes and outputs defined in the (draft) Results Framework and has been updated from the Project Administration Manual (PAM) April 2016. Note that this framework still requires finalisation with the Steering Group Committee.








Note: Planned and actual indicators and targets should be sex-disaggregated where possible.




<i>From agreed Results Measurement Table in the Activity Design Document</i>				<i>Data up to and including this reporting period</i>	
Outcomes and outputs	Planned indicators	Planned targets	Planned methodology and data sources	Actual measurement against targets (using indicators)	Actual methodology and data sources
Impact Increased energy security in an environmentally sustainable manner	100% of islands convert energy system from diesel fuel to renewable energy source. (baseline: 0% in 2012)	By 2020	Government Statistics	6 of 15 islands commissioned with renewable energy generation systems	Project completion reports held by REDD
Medium-term outcome Increased access to a higher share of electricity generated by renewable energy sources	Four islands in the Southern group fully convert energy system from diesel fuel to renewable energy. (Baseline: 0% in 2012)	By end of 2018	Government statistics Project Completion Report		
Short-term outcome					
Output 1. Solar PV power system for four (4) subprojects developed on Mangaia, Mauke, Mitiaro and Atiu islands.	Solar PV power system of Phase 1 subprojects (with 1.24 kW installed capacity) connected to the existing power grid on Mangaia, Mauke, Mitiaro and Atiu islands. (Baseline: 0% in 2012)	By the end of 2017	Project Progress Reports Project Completion Report		
Output 2. Solar PV power system for Phase 2 subprojects developed on Aitutaki, and Rarotonga. Installation of a battery energy storage system (BESS) with a preliminary capacity of the 1.0 MW and 4.0 MWh	Solar PV power system of non-core subprojects (2400kW) connected to the existing power grid on Aitutaki, and Rarotonga islands. (Baseline 0% in 2012) About 2.0 MW of additional solar PV without negatively affecting the grid. This will result in fuel savings and carbon dioxide reduction of about 0.575 million liters and of 1,370 tons per annum	By end-2017 By end – 2018	Project Progress Reports Project Completion Report		
Output 3. Institutional and project management capacity strengthened.	Energy efficiency policy implementation plan is developed (2012 baseline 0%) Capacity of OEC and REDD (10 staff in total) for renewable energy technology assessments and tariff setting in private sector-funded developed (2012 baseline: 0%) The updated CIRECIP which incorporates load demand update, viable renewable technology choice, and least-cost investment plan, developed. (2012 baseline: 0%) Project management support for REDD and TAU to implement core and non-core subprojects (6 in total) completed (2012 baseline: 0%)	By end-2019	Project Progress Reports Project Completion Report		

Appendix C: Project Risk Table

ID	Discipline	Category	Risk description	Prior to implementing mitigating actions			Mitigation	After mitigating actions implemented			Risk Status
				Likelihood	Consequence	Risk ranking		Likelihood	Consequence	Risk Ranking	
1	Project management	Human resources management	PMU Recruitment not commenced on time and delays implementation or reduces effectiveness	C. Possible	3. Moderate	M	Early completion of recruitment process by Tender Evaluation Committee and and contract negotiation by OPM REDD and POE agrees to provide further support as necessary.	C. Possible	2. Minor	L	✓
2	Project management	Contract procurement management	Approval of PEC tender documents is delayed or insufficient capacity to finalise contracts.	C. Possible	2. Minor	L	Crown Law and Tender Committee gives priority to confirming PEC documents and evaluation. POE provides necessary capacity during contract negotiation	C. Possible	2. Minor	L	✓
3	Project management	Contract procurement management	Solar Modules insurance and storage delayed and delivery delayed.	C. Possible	3. Moderate	M	Contract negotiations include Government insurers and CIIC confirms storage prior to modules being shipped.	C. Possible	2. Minor	L	✓
4	Project management	Time management	Land payment confirmation report cannot be completed due to delays in land acquisition payments. Impact on preparation of site and civil works and turnkey contract timing (and liquidated damages)	C. Possible	4. Major	H	Emphasis on completing payments	C. Unlikely	4. Major	M	🌀
5	Project management	Time management	Atiu sub-project due diligence not approved in time for bidding documents	C. Possible	3. Moderate	M	Atiu feasibility progressing satisfactorily, hence risk reducing. Enable Atiu to be removed from bidding documents if necessary (tender separately) Accommodate small delays in issue of bidding documents (<1 month); taking into account safeguards may form critical path for construction.	D. Unlikely	2. Minor	L	✓
6	Engineering	Social and cultural	Island Project Site Preparation is delayed due to capacity on island	C. Possible	3. Moderate	M	PMU to oversee site preparation and engineering implementation plans. Include procurement of local civil engineer Island councils are consulted and understand requirements	C. Possible	3. Moderate	M	🌀


7	Project management	Contract procurement management	Selection of ADB Works Procurement Packages for turnkey work - use of two envelope approach increases evaluation time and reduces technical flexibility to evaluate performance or compatibility preferences	C. Possible	3. Moderate	M	Risk acknowledged and incorporated into bidding documents and schedule to the extent possible. One envelop approach now being used	C. Possible	2. Minor	L	✓
8	Project management	Risk management	If selecting turnkey packages for individual islands: High premium paid for relatively low value individual ICT works contracts	C. Possible	4. Major	H	Steering Committee gives priority to managing the smaller ICT packages with POE and PMU/REDD. One turnkey package being used Possible likelihood of fewer funds for Phase 2.	C. Possible	2. Minor	L	✓
9	Project management	Risk management	Key equipment is incompatible if a turnkey tender is offered for each island	C. Possible	4. Major	H	Procurement of critical set of components such as batteries, battery inverters and controllers as a single lot, which would require them to be compatible. One turnkey package is being used	C. Possible	2. Minor	L	✓
10	Science	Political	Local contractors do not have sufficient opportunity to participate in works	C. Possible	3. Moderate	M	REDD undertake early discussions with private sector informing them of the proposed works contracts Chamber of Commerce is involved in supporting local contractors through the business mentor programme CITTI commences training programme prior to procurement packages being advertised. Skills set of local staff on each island to be provided to international bidders	C. Possible	3. Moderate	M	🌀
11	Project management	Contract procurement management	Scoping work for distribution rehabilitation not included in ICT process due to schedule constraints	C. Possible	2. Minor	L	Prepare alternative procurement structure for distribution works.	C. Possible	2. Minor	L	🌀

12	Project management	Contract/procurement management	Equipment performance testing is not possible as required if separate works and goods contracts are let	B. Likely	4. Major	E	Preference for Turnkey contract. If not turnkey, detailed contractual backing and conventional system specification is required. Detailed quality and workmanship auditing -for Works also required to ensure best practice is followed. Include time based warranties where possible. One turnkey package being used	C. Possible	2. Minor	L	
13	Project management	Contract/procurement management	System performance and equipment integration is unlikely to be able to have a full market test of the least cost system configuration if separate goods and works contracts are let.	B. Likely	4. Major	E	Preference for Turnkey contract. POE will base equipment specifications on the latest understanding of the market and market test will occur within each equipment specification. Novate civil works contract under turnkey contract.	C. Possible	3. Moderate	M	
14	Project management	Contract/procurement management	Compatibility of equipment may not be achievable if separate goods and works contracts are let	B. Likely	4. Major	E	Preference for Turnkey contract. POE will make every effort to provide full and complete specification. Consider plant contract to integrate diesel in powerhouse. One turnkey contract is now being used	C. Possible	2. Minor	L	
15	Engineering	Electrical - Primary	Connection of solar PV hybrid systems to remote grids has unforeseen technical difficulties	C. Possible	4. Major	H	Ensure grid assessment reviews the issues and risks and ensure contractual clauses in place for these eventualities in Turnkey contract.	C. Possible	3. Moderate	M	
16	Engineering	Renewable energy	Turnkey contractors designs, construction and commissioning have unforeseen difficulties on site	C. Possible	4. Major	H	Ensure sites assessment reviews the issues and risks and ensure contractual clauses in place for these eventualities in contract for Turnkey suppliers	C. Possible	3. Moderate	M	
17	Project management	Scope management	Environmental & Social Safeguards scope or site visits highlights significant issues arising or mitigation required.	C. Possible	3. Moderate	M	Ensure sites assessment reviews the issues and risks early, and mitigations are put in place through EMP.	C. Possible	3. Moderate	M	
18	Technical	Environment	Environmental issues are not identified resulting in environmental impacts	D. Unlikely	4. Major	M	Use local expert support through the POE; follow NES and ADB requirements	D. Unlikely	2. Minor	M	

19	Project management	Contract procurement management	REDD and TAU has sufficient capacity to implement and maintain the project.	C. Possible	3. Moderate	M	The government adopts policy actions recommended under the institutional strengthening and project management that will support the performance and service delivery of TAU and REDD.	D. Unlikely	3. Moderate	L	
20	Project management	Human resources management	To deliver project may require assistance from others outside of the project team that is not currently costed .	C. Possible	3. Moderate	M	PMU recruitment underway. Consideration and requests in-place for capacity support between government departments	D. Unlikely	2. Minor	L	
21	Financial Management	Currency risk	Phase 1 bid in NZD exposes forex risk for payments over implementation period from grant in EURO.	C. Possible	3. Moderate	M	Request bidder to increase EURO component. Consider allowing increased contingency when planning for other subprojects	C. Possible	3. Moderate	M	

KEY

Risk status (column L)

Symbol	Definition
✓	Satisfactory - everything necessary and possible is being done
	Some concerns - actions are in place but are not fully implemented or effective - close monitoring required
✗	Unsatisfactory - current actions are not sufficient, or actions still to be commenced - immediate attention required

KEY

Risk trend (column M)

Symbol	Definition
↓	Risk is likely to reduce
→	Risk is likely to remain the same
↑	Risk is likely to become moderately worse
↑	Risk is likely to become significantly worse

Appendix D: Project specific covenants - as displayed in legal agreements

Product	Schedule	Para No.	Description	Remarks/Issues	Type
Loan 3193	Article IV	1	(a) The Borrower shall cause the Project to be carried out with due diligence and efficiency and in conformity with sound applicable technical, financial, business, and development practices.	Being complied with.	Others
Loan 3193	Article IV	2	The Borrower shall make available, or cause to be made available, promptly as needed, and on terms and conditions acceptable to ADB, the funds, facilities, services, land and other resources, as required, in addition to the proceeds of the Loan, for the carrying out of the Project.	Being complied with.	Others
Loan 3193	5	2	The Borrower shall ensure, and shall cause the Implementing Agencies and other involved agencies to ensure, that the preparation, design, construction, implementation, operation and decommissioning of the Project, and that all Project facilities comply with (a) all applicable laws and regulations of the Borrower relating to environment; (b) the Environmental Safeguards as set out in the SPS; and (c) all measures and requirements set forth in the IEE, the EMP, the EARF, and any corrective or preventative actions (i) set forth in a Safeguards Monitoring Report, or (ii) as subsequently agreed among ADB, the Borrower, and the Implementing Agencies.	Being complied with.	Safeguards
Loan 3193	Article IV	3	The Borrower shall ensure that the activities of its departments and agencies with respect to the carrying out of the Project and operation of the Project facilities are conducted and coordinated in accordance with sound administrative policies and procedures.	Being complied with.	Others
Loan 3193	5	3	The Borrower shall ensure and cause the Implementing Agencies to ensure that all land and all rights-of-way required for the Project are made available to the Works contractors in a manner and within timeframes compliant with the RP, the RF and all land acquisition and resettlement activities are implemented in compliance with (a) all applicable laws and regulations of	Being complied with.	Safeguards

Product	Schedule	Para No.	Description	Remarks/Issues	Type
			the Borrower relating to land acquisition and involuntary resettlement; (b) the Involuntary Resettlement Safeguards; and (c) all measures and requirements set forth in the RP and the RF, and any corrective or preventative actions (i) set forth in the Safeguards Monitoring Report, or (ii) as subsequently agreed among ADB, the Borrower, and the Implementing Agencies.		
Loan 3193	5	4	Without limiting the application of the Involuntary Resettlement Safeguards or the RP, the Borrower shall ensure, or cause the Implementing Agencies to ensure, that no physical or economic displacement takes place until: (a) compensation and other entitlements have been provided to the displaced persons under Involuntary Resettlement Safeguards as described in and in accordance with the RP and the RF, and (b) a comprehensive income and livelihood restoration program has been established in accordance with the RP and the RF.	Being complied with.	Safeguards
Loan 3193	Article IV	4	The Borrower shall enable ADB's representatives to inspect the Project, the Goods and Works, and any relevant records and documents.	Being complied with.	Others
Loan 3193	Article IV	5	(b) ADB shall disclose the annual audited financial statements for Parts B and C the Project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website.	waiver on requirement approved as no financial disbursements in financial year ending 30 June 2015. 2016 audit report underway.	Financials
Loan 3193	5	5	The Borrower shall ensure and cause the Implementing Agencies to ensure that the provisions of the IEE, EMP and RP as well as any requirements under the SPS also apply to the portion of the Project to be financed by the Borrower.	Being complied with.	Safeguards
Loan 3193	Article IV	5	(c) The Borrower shall enable ADB, upon ADB's request, to discuss the financial statements for Parts B and C of the Project and the Borrower's financial affairs where they relate to Parts B and C of the Project with the auditors appointed pursuant to subsection (a)(iii) hereinabove, and shall		Financials

Product	Schedule	Para No.	Description	Remarks/Issues	Type
			authorize and require any representative of such auditors to participate in any such discussions requested by ADB. This is provided that such discussions shall be conducted only in the presence of an authorized officer of the Borrower, unless the Borrower shall otherwise agree.		
Loan 3193	Article IV	5	(a) The Borrower shall (i) maintain accounts and records for Parts B and C of the Project (separate from those for Part A, which will be maintained by TAU); (ii) prepare annual financial statements for Parts B and C of the Project in accordance with accounting principles acceptable to ADB; (iii) have such financial statements audited annually by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB, in accordance with international standards for auditing or the national equivalent acceptable to ADB; (iv) as part of each such audit, have the auditors prepare a report (which includes the auditors' opinion on the financial statements and use of the Loan proceeds) and a management letter (which sets out the deficiencies in the internal control of Parts B and C of the Project that were identified in the course of the audit, if any); and (v) furnish to ADB, no later than 6 months after the end of each related fiscal year, copies of such audited financial statements, audit report and management letter, all in the English language, and such other information concerning these documents and the audit thereof as ADB shall from time to time reasonably request.	Being complied with	Financials
Loan 3193	4	6	The Borrower shall ensure that the Implementing Agencies shall not award any Works contracts until all land and related rights for the construction of the Project facilities, to be handed over to the contractor before construction commences, have been acquired or rights to access and use the land for the purposes of constructing and operating the Project facilities on an ongoing basis have been secured by the Borrower. (d) reinstate pathways and other local infrastructure to at least their pre-project condition as soon as possible and no later than the completion of construction.	Being complied with.	Safeguards
Loan	Article IV	7	(a) The Borrower shall exercise its rights under the Subsidiary Loan	Subsidiary Loan Agreement not yet	Others

Product	Schedule	Para No.	Description	Remarks/Issues	Type
3193			Agreement in such a manner as to protect the interests of the Borrower and ADB and to accomplish the purposes of the Loan. (b) No rights or obligations under the Subsidiary Loan Agreement shall be assigned, amended, abrogated or waived without the prior concurrence of ADB.	finalized/effective.	
Loan 3193	4	8	(a) The Borrower shall cause the Implementing Agencies to ensure that all Goods and Works procured (including without limitation all computer hardware, software and systems, whether separately procured or incorporated within other goods and services procured) do not violate or infringe any industrial property or intellectual property right or claim of any third party. (b) The Borrower shall cause the Implementing Agencies to ensure that all contracts for the procurement of Goods and Works contain appropriate representations, warranties and, if appropriate, indemnities from the contractor or supplier with respect to the matters referred to in subparagraph (a) of this paragraph.	Being complied with.	Others
Loan 3193	5	8	The Borrower shall do, or cause the Implementing Agencies to do, the following: (a) submit Safeguards Monitoring Reports to ADB: (i) in respect of implementation of and compliance with Environmental Safeguards and the EMP, annually during construction and the implementation of the Project and the EMP until the issuance of ADB's project completion report unless a longer period is agreed in the EMP; and (ii) in respect of implementation of and compliance with Involuntary Resettlement Safeguards and of the RP, semi-annually during the implementation of the Project, and the RP until the issuance of ADB's project completion report unless a longer period is agreed in the RP; and disclose relevant information from such reports to respective affected people under Environmental Safeguards, Involuntary Resettlement Safeguards, and Indigenous Peoples Safeguards promptly upon submission; (b) if any unanticipated environmental and/or social risks and impacts arise during construction, implementation, or operation of the Project that were not considered in the IEE, the EMP and the RP, promptly inform ADB of	Being complied with.	Safeguards

Product	Schedule	Para No.	Description	Remarks/Issues	Type
			<p>the occurrence of such risks or impacts, with detailed description of the event and proposed corrective action plan; and</p> <p>(c) report any actual or potential breach of compliance with the measures and requirements set forth in the EMP or the RP promptly after becoming aware of the breach.</p>		
Loan 3193	4	9	The Borrower shall cause the Implementing Agencies to ensure that all ADB-financed contracts with consultants contain appropriate representations, warranties and, if appropriate, indemnities from the consultants to ensure that the Consulting Services provided do not violate or infringe any industrial property or intellectual property right or claim of any third party.	Being complied with.	Others
Loan 3193	5	10	The Borrower shall cause the Implementing Agencies to ensure that Works contracts include provisions to require the contractors (a) not to discriminate against people seeking work on the basis of age, provided they are capable of doing such work; (b) to provide equal pay for equal work, regardless of gender or ethnicity; (c) to comply with core labour standards and the applicable labour laws and regulations, including stipulations related to employment, such as health, safety, welfare, the workers' rights and anti-trafficking laws; (d) not to force the labour to work against their will; and (e) not to employ child labour.	Being complied with.	Social
Loan 3193	5	11	The Borrower shall cause the Implementing Agencies to ensure that the Works contractors (a) implement HIV/AIDS and STIs awareness and prevention training for all employees; (b) provide necessary measures to ensure the safety and health of their employees; and (c) together with the local centers of disease control, disseminate information on the risks, hazards, impacts and prevention know-how on HIV/AIDS and STIs among the staff, workers on the construction sites and the local community by means of information disclosure, education and consultation.	Being complied with.	Social
Loan 3193	5	12	The Borrower shall ensure to provide Counterpart Funds in a timely manner, including any additional Counterpart Funds required for any shortfall of funds or cost overruns. The Borrower shall also ensure to ensure	Being complied with.	Financials

Product	Schedule	Para No.	Description	Remarks/Issues	Type
			that O&M of all Project facilities is fully funded without any delay.		
Loan 3193	5	13	The Borrower shall, and shall cause the Implementing Agencies to, establish and maintain sound financial management systems in accordance with ADB's Financial Management and Analysis of Projects (July 2005), including the establishment of separate Project accounts.	Being complied with.	Financials
Loan 3193	5	14	The Borrower shall, and shall cause the Implementing Agencies to, (a) comply with ADB's Anticorruption Policy (1998, as amended to date); (b) acknowledge ADB's right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive or coercive practices relating to the Project; and (c) agree to cooperate, and shall cause the Implementing Agencies and all other government offices, organizations and entities involved in implementing the Project to cooperate, fully with any such investigation, and to extend all necessary assistance, including providing access to all relevant books and records, as may be necessary for the satisfactory completion of any such investigation. In particular, the Borrower shall ensure, or cause to be ensured, that (i) periodic inspections of the Project contractors' activities related to fund withdrawals and settlements are carried out; (ii) relevant provisions of ADB's Anticorruption Policy (1998, as amended to date) are included in all bidding documents for the Project; and (iii) contracts, financed under the Project, include provisions specifying the right of ADB to audit and examine the records and accounts of the Implementing Agencies, contractors, suppliers, consultants, and other service providers as they relate to the Project.	Being complied with.	Others
Loan 3193	5	15	In the event of (a) any change in ownership of the Project facilities, or (b) any sale, transfer or assignment of shares or interest or other change of control in the Implementing Agencies is anticipated, the Borrower shall consult with ADB at least 6 months prior to the implementation of such change. The Borrower shall ensure that such change be carried out in a lawful and transparent matter. The Borrower shall further ensure that the new controlling management of Implementing Agencies complies with (a) all Project-related agreements executed between ADB or the Borrower and the	Being complied with.	Others

Product	Schedule	Para No.	Description	Remarks/Issues	Type
			Implementing Agencies; and (b) the policies of ADB relevant to the Project.		
Loan 3193	5	16	Within 90 days following effectiveness of the Loan Agreement and Grant Agreement, the Borrower shall establish and maintain a Project website which will be regularly updated to include information on the following general matters: (a) bidding procedures, bidders and contract awards for Works, Goods, and Consulting Services; (b) physical progress of the Works and procurement of Goods; and (c) audited Project financial accounts, Project review reports (e.g. mid-term review), and quarterly progress reports, consolidated annual reports and post-completion report, in each case promptly after submission to ADB (unless, in the case of Project review reports and quarterly progress reports, ADB considers these to be exempt from disclosure under ADB's Public Communications Policy (2011)).	Project website established Government procurement website utilised (www.procurement.gov.ck)	Others
Loan 3193	5	17	The Borrower shall cause the Implementing Agencies to ensure that (a) the Project facilities are installed in accordance with design specifications and construction norms; and (b) construction supervision, quality control and contract management are performed in accordance with best international industry practices. The Borrower shall cause the Implementing Agencies to install, equip, operate, maintain and manage the project facilities in compliance with applicable standards and best international practices. The Borrower shall cause the Implementing Agencies to operate and maintain, and continue to operate and maintain, the Project facilities in accordance with an O&M framework that is satisfactory to ADB.		Sector
Loan 3193	5	18	The Borrower shall cause the Implementing Agencies to do the following: (a) acquire all rights necessary to use the parcels of land constituting the Project site at least 30 days prior to the award of the turnkey contract; and (b) install or otherwise secure road access sufficient for the purposes of the Project at least 30 days prior to the award of the turnkey contract.	Being complied with.	Sector
Loan 3193	5	19	The Borrower shall ensure ongoing operational financial sustainability of the Project, either through adjustment of electricity tariffs, or budgetary allocations.	Being complied with.	Sector

Product	Schedule	Para No.	Description	Remarks/Issues	Type
Loan 3193	5	20	The Borrower shall cause the Implementing Agencies to ensure that adequate staffing will be planned and allocated for the implementation and O&M of the Project facilities, and that relevant staff members will attend training provided under the Project in relation to O&M.	Being complied with.	Sector