

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

## Summary

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### Activity information

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

### Funding information

<b>Start and end dates</b>	9 February 2015 – 31 December 2017 <sup>1</sup>
<b>Total cost</b>	NZD33.22 million* Note that all reported costs will be in NZD millions
<b>Reporting period</b>	1 April - 30 June 2017

\* conversion rate (19/6/2015)

### Progress report preparation

<b>Prepared by</b>	Entura Team
<b>Others involved or consulted during this reporting period</b>	REDD staff, MFEM, DCD staff, ADB, Project Steering Group, TAU staff CIIC Staff, Woo Lee, ADB Energy Specialist MPower Site Visit, Eric Nemme, Project Manager Operations Ed Smith and Erdal Sen (electrical engineers)
<b>Date of report</b>	June 2017

## Key Conclusions and Necessary Actions

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This ninth 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 April (commencement of reporting period) and 30 June 2017 (end of reporting period).

Activities undertaken in this reporting period focused on concluding the contract for the battery energy storage system (BESS) on Rarotonga which closed on 3<sup>rd</sup> November 2016 and contract signed on the 1 June 2017 for NZ\$4,268,243.00. The Cook Islands Government negotiated with NETCON Limited for a variation to the original turnkey contract to include the Phase 1 Southern Group Civil Works package. An ADB No Objection letter dated the 18 May 2017 confirmed the variation with NETCON Limited for NZ3,718,672. In the meantime the REDD office, Project Manager and Project

Monitoring Specialist for Entura, continued to monitor site clearance that has been completed on Mitiaro and commenced on Mauke, Atiu and Mangaia during this reporting period.

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<sup>1</sup> 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

# Review of Progress to Date

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## 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) Chris Blanksby, used the office briefly during the site visit of MPower the BESS contractor. Other international staff were working from their home offices.

The PMU is staffed by the Project Manager, Finance Specialist (3 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 Turnkey contract, awarded to NETCON, was signed on the 17<sup>th</sup> August 2016 and the contract became effective on the 7<sup>th</sup> October 2016. The negotiated contract price was the sum of NZ\$ 7,708,494.88 and €1,023,208.74<sup>2</sup>.

The power distribution network package (grid package) for Mitiaro and Mauke was also awarded to NETCON Limited on the 27 March 2017 for the contract price of NZ\$3,926,941.00 which included the HV variation (11 February) of \$395,554.41.

During this reporting period a variation to the NETCON Phase 1 Turnkey contract was concluded to include the Civil Works. An ADB No Objection letter dated the 18 May 2017 confirmed the variation for Civil works with NETCON Limited for NZ3,718,672.

After extensive negotiations and submission of the BER in January 2017, the contract negotiations for the BESS on Rarotonga was concluded and signed on the 1 June 2017. Based on the Tender Committees detailed evaluation and findings and submission to the Tender Committee, it was agreed that MPower Limited had submitted the lowest evaluated substantially responsive bid and the Contract was awarded at the evaluated fixed price of US\$3,092,768.

The Phase 2 Aitutaki ITB documents have been submitted to ADB for comment. The 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. REDD office have requested additional funding through the Capital budget for 2017/18 and this together with savings from current contracts should see sufficient funds available for Aitutaki. ADB estimates that there may be US\$500,000 savings with uncommitted amount of US\$1.5m in the budget noting however that there are a number of variations still to be confirmed.

ADB is working with TAU to get technical assistance to start developing the tender for the Green Climate Fund Battery Energy Storage System for Rarotonga.

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<sup>2</sup> Contract variation to remove HV system from main contract and transferred to power distribution package to the value of \$395,554.41

### 3. Financial disbursements.

The financial disbursements recorded below provides an update to the ADB and all relevant stakeholders for the CIRESF from February 2015 to 30 June 2017 amount paid to date in NZD.

Items as per Project Administration Manual Updated August 2016	Amount paid to date 09 February 2015 to 30 April 2017*	Total cost of Project as per PAM*
	NZD'000,000	
A. Investment Costs	\$11.59	\$32.42
B. Contingencies	\$0.00	\$1.22
C. Financing Charges during implementation	\$0.04	\$0.74
D. Administration Charges	\$0.00	\$0.28
<b>Total Project Cost</b>	<b>\$11.63</b>	<b>\$34.66</b>

\*All these amounts are exclusive of VAT

In addition to the above the following Table is the project spend by Funding Partner for the quarter in NZD:

Project Spend by Financier for period 01st April 2017 to 30 June 2017							
		ADB	EU	GEF	CIG(PEC)	CIG	Total
		NZD	NZD	NZD	NZD	NZD	
A. Investment costs		\$ 0.18	\$ 1.88	\$ -	\$ 0.03	\$ 0.02	\$ 2.09
	1. Solar PV Module Procurement						\$ -
	2. Turnkey Contract - Solar PV System Development		\$ 1.88				\$ 1.88
	3. Turnkey Contract for Battery Energy Storage System development						\$ -
	4. Consulting Services - Institutional Strengthening and Project Management	\$ 0.18			\$ 0.03	\$ 0.02	\$ 0.21
	5. Land Acquisition						\$ -
	6. Tax and duties						\$ -
B. Contingencies							\$ -
C. Financing Charges during Implementation		\$ 0.03					\$ 0.03
D. Administration Charges							\$ -

Note:

a. Numbers in ADB column may be different from Ministry of Finance and Economic Management Quarterly report

b. Exchange rates used to convert from NZD to USD is on the date that the transaction occurred 1.43. PAM used 1.16.

Source: LFIS/GFIS, DCD and PMU data

### 4. Field work.

Field investigations during this period included:

- Project Owner Engineer, Chris Blanksby 20 – 22 June for the first site visit of Mpower Limited (Eric Nemme, Project Manager Operations Ed Smith and Erdal Sen, electrical engineers) to Rarotonga.
- Project Manager, Romani Katoa 24 – 26 May for initial site visit and finalise land agreement with Mangaia land owners. Team also included Geotech engineer and surveyor.
- Teariki Rongo, POE Safeguards Monitoring Specialist travelled to Mauke in 21 – 24 April and Mangaia in 24 – 26 May

### 5. Safeguards and monitoring

The second Semi-Annual Safeguard Monitoring Report for the CIRESF will be submitted during this reporting period. The report covers the period 1 January – 30 June 2017. The purpose of the report

is to document social and environmental safeguard monitoring activities as well as environmental safeguards.

The Land Acquisition and Compensation Report was submitted on 10 June to ADB. Voluntary land transfer and land use agreements were executed for the respective solar sites on each of the four Phase 1 islands. The process of distributing compensation payments has been completed for three islands and land receipts and agreements confirmed except for Mauke. The Trust Account and details of the Trust Deed established on behalf of the landowners has not been provided to CIIC therefore transfer of the land compensation payment has not been completed. The Land Acquisition and Compensation Report was acknowledged by ADB on 12 June and confirmed that as indicated in paragraph 15, of the report will be reissued when all outstanding agreements and payments have been completed for Mauke and Mangaia. Civil Works on Mauke and Mangaia will not proceed until the subsequent Land Acquisition and Compensation Report has been submitted and approved by ADB. However, the subprojects on Mitiaro and Atiu, where full compensation has been completed and all documentation received and approved by ADB, the civil works may proceed.

Outstanding is the land lease agreement for the power station on Mangaia (Taengakoro Sec 36 Keia Tapere, Oneroa District) which has now been completed and awaits confirmation by Cook Islands Investment Corporation. Landowner consultations and discussions have been held and the landowners confirm their willingness to sign the land lease agreement immediately.

As well during the land acquisition discussions on Mauke it was identified that there were 1 substation and 5 transformer sites, each on different properties occupying 9sq meters on each property. The substations were established more than 40 years ago and there has been no requirement or request by the landowners for compensation payment for the 9sq meters of land occupied by the transformers. Irrespective of this informal agreement, the Government is committed to formalising the acquisition of the substations/transformer land sites and letters of agreement have been completed with the landowners for each of the sites. The land site maps have been requested from the chief surveyor and these will be taken to Mauke early in the next quarter, when formal consultations will be held with the landowners and agreement in principal will be sort. It is expected that the landowners will sign the site maps and their agreement to confirm the transfer will be completed early in the next quarter.

Environmental monitoring during this period has included onsite monitoring of initial site preparation works on Mitiaro, Mangaia, Mauke and Atiu by the POE Safeguards Monitoring Specialist. Initial site visits previously in 2016 were completed by the PMU Project Manager, geotech engineer and surveyor to Mitiaro, Atiu, Mauke and Mangaia. Work carried out this quarter included:

**Mauke:** Monitoring was undertaken 21 – 24 April during the site boundary establishment and initial site clearing for the access track. This was carried out on Friday, Saturday and Monday. Work on Saturday was approved by the Mayor. Monitoring found that a Hazardous Materials Management Plan had yet to be prepared and a spill kit was not available on site at the time of monitoring. No dust control was required during the site boundary establishment and clearing of the access way. A biosecurity breach was reported to the PMU and followed up during the monitoring trip in April. Ants were found in a shipment of batteries and were quickly dealt with. A sample was sent to the Ministry of Agriculture for identification.

**Mangaia:** Monitoring was undertaken 24 – 26 May. At the commencement of site clearing, monitoring found that neither Health and Safety nor Hazardous Materials Management Plans had been completed and the spill kit was not available on site. It was observed that personnel

protective equipments (PPE) was provided to all on-site workers. No complaints were received of excessive noise during the commencement of site clearance.

## **6. Phase 1 Turnkey Tender Packaging**

POE noted the Monitoring and Safeguard Management Plan and Civil Works Design is incomplete and expected to be received early in the next quarter.

### **Mitiaro – Civil Works**

Infratec will commence work on Mitiaro first and is expecting to have a working system by the start of the Manea Games in October 2017. During this reporting period the solar and powerstation site has been levelled and is ready for civil works to commence. Three Infratec representatives visited Mitiaro on Friday 12 May. These were: Chris Broadhead: Steel building supplier, Teata Tangaroa: Builder and Johnny Tangaroa: Community Liaison

Infratec has employed Johnny Tangaroa as the community liaison. Johnny is a Cook Islander with a multitude of experience with the NZ SAS and army including the engineering corp. It was noted that Infratec would employ a number of Mitiaro based workers to assist in various aspects of the build. Infratec will also hire some of the machinery on Mitiaro for the build.

POE Safeguard and Monitoring Specialist met with Chris Broadhead on the 30 June for a brief update on the Netcon Health and Safety and Hazardous Materials Management Plans. Highlighted compliant measures; all local workers were issued PPE and high visibility vests. Any visitors to the site were given high visibility vests, and no unauthorised personnel were allowed onto the site. A make do spill kit was made on site with black plastic polythene topped with sand and laid below all fuel drums to catch any leaks during fuel use. A report will be forthcoming from the Netcon team. A monitoring visit to Mitiaro is planned for next quarter.

Infratec expressed concerns to the Mayor and EO of the importance of making sure that when the project begins formally and as local workers have been nominated with signed agreements, most being locals who are employed by various Government sectors, these personnel are not to be drawn away at any time from the worksite for any other employment as they see fit or outside the scope of the Solar Project. If the island has other on-going unfinished projects, they must have those projects finished before the solar project kicks-off. All parties agreed with this understanding. Subcontractors that will be employed by Infratec include:

- Anderson electrical (Electrical Subcontractor)
- Concrete Systems Ltd (supply of pre-cast footings)
- Pacific Generators Ltd (Generator supply and fitting)
- QSM (Is supplying Johnnie and probably Teata (who will be a building foreman)
- Chris Broadhead Construction – Supply of building components and likely a foreman/manager

## **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**

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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

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 are 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 been confirmed as follows:

Solar Panel Recipient	Total Solar Panel Capacity Allocated (kWp)	Total No. of Solar Panels Allocated	Construction Start Date	Construction Completion Date
Mitiaro Island	164.3	620	Jul 2017	Oct 2017
Mauke Island	234.26	884	Aug 2017	Nov 2017
Atiu Island	424	1,600	Oct 2017	Jan 2018
Mangaia Island	482.3	1,820	Dec 2017	Mar 2018
Aitutaki Island	1,026.61	3,874	TBA	TBA
<b>TOTAL</b>		<b>8,798</b>		

The panels allocated to the islands of Mitiaro, Mauke, Atiu and Mangaia will be installed by NETCON Limited which is included in the Phase 1 Turnkey contract. The remainder of the panels will be installed on Rarotonga at the various locations identified below. Installation for Rarotonga by Te Aponga Uira (TAU) will be carried out after the commissioning of the BESS at the Rarotonga Airport.

Rarotonga	Total Solar Panel Capacity Allocated (kWp)	Total No. of Solar Panels Allocated
- BCI Stadium	67.045	253
- TSA Stadium	195.04	736
- Avatiu Port	139.92	528
- Rarotonga Airport Runway	919.285	3,469
<b>TOTAL</b>	<b>1,321.29</b>	<b>4,986</b>

### 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 additional financing is included as a firm project in ADB's country operations business plan, 2016–2018 for the Cook Islands.<sup>3</sup> GEF has funded the contract for the 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.

### Co-financing from the Green Climate Fund (GCF)

During this reporting period TAU has requested formal confirmation that they will commence developing a further BESS proposal to the GCF funding.

## Updates to Key TTV Activity Management Documents

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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

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

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

Activity	Responsibility	Target Date/Completed
<b>Completed Q2 2017</b>		
Site clearance completed on Mitiaro	PMU/Entura	Apr- 17
Quarterly Progress Report 8	PMU/Entura	Apr- 17
Contract Award Rarotonga BESS	PMU/ADB	Jun-17
Site Clearance Commenced Mangaia	PMU/Island Government	Jun-17
Site Clearance Commenced on Atiu	PMU/Island Government	Jun-17
Land Acquisition and Compensation Report	PMU/ADB/Entura	Jun-17
<b>Q 3 2017 Next Reporting Period</b>		
Quarterly Progress Report 9	PMU/Entura	Jun-17
Supply of Final detailed designs and documents	NetCon/Entura	Jul-17
Site clearance completed on Mangaia	PMU/Island Government	Oct-17
Site clearance completed on Mauke	PMU/Island Governments	Oct-17
Site clearance completed on Atiu	PMU/Island Governments	Aug-17
Commencement of Civil Works Phase 1 Mitiaro	PMU/Contractor/Entura/Infratec	Jul-17
Final Land Acquisition and Compensation Report	PMU/Entura	Jul-17
Power distribution upgrade commence work Mitiaro	PMU/Infratec/Entura	Jul-17
Rarotonga BESS design	PMU/TAU/Entura/MPower	Oct-17
<b>Subsequent Activities</b>		
Review/Fact-finding mission for GCF	ADB	TBC
ITB Aitutaki confirmed	ADB	Jul-17
BESS commissioning	TAU/PMU/Contractor	Apr-18
Phase 1 Project commissioning	PMU/Intratec	Dec-17
Power distribution upgrade Commissioning	PMU/Contractor	Dec-17
Aitutaki Phase 2 contract award	PMU/APS/Contractor	TBD

### Costed work-plan

	Quarter 3		Quarter 4		Quarter 1		Quarter 2	
	July - September 2017		October - December 2017		January to March 2018		April to June 2018	
	NZD	EURO	NZD	EURO	NZD	EURO	NZD	EURO
<b>NETCON</b>								
1. Solar PV					\$ 0.29	€ 0.05	\$ 0.54	€ 0.10
2. Distribution					\$ 1.43			
3. Civil Contract								
<b>ENTURA</b>								
4. Consulting Services			\$ 0.13		\$ 0.13		\$ 0.07	
<b>Romani's Designs</b>								
5. Project Management	\$ 0.13				\$ 0.13		\$ 0.13	
NB: This is an estimated future spend.								
Source: Payment Schedules provided by Contractors								



A preliminary detailed costed work-plan was provided in previous quarterly reports but is now considered not to be very useful. There seemed to be discrepancies between what was implemented and the projected estimated cost. 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.

### **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 (Energy Commissioner), Tangi Tereapii (REDD), Steve Barrett (NZHC), Garth Henderson (MFEM), Apii Timoti (TAU), Andreas Demmke (DCD), Tamarai Tutangata (CIIC) and Romani Katoa (PMU), Chris Blanksby (Entura), Woo Lee (ADB), Vanessa Jenner (ADB Cook Islands Office), Bredina Drollet (Chief of Staff). NZHC will appoint a new representative in the next quarter and DCD have Michelle Aisake who replaces Andreas who has moved to the NZHC.

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**

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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

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***Full Name (in block capitals)***

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***Title / Position***

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***Signature***

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***Date***

## Appendices

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This report includes the following appendices:

- Appendix A: Progress Against Agreed Work-plan and Actuals ( not required for this Quarterly Report)
- 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

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## 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
<b>Impact</b> 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)	<b>By 2020</b>	Government Statistics	6 of 15 islands commissioned with renewable energy generation systems	Project completion reports held by REDD
<b>Medium-term outcome</b> 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)	<b>By end of 2018</b>	Government statistics Project Completion Report		
<b>Short-term outcome</b>					
<b>Output 1.</b> 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)	<b>By the end of 2017</b>	Project Progress Reports Project Completion Report		
<b>Output 2.</b> 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	<b>By end-2017</b>  <b>By end – 2018</b>	Project Progress Reports Project Completion Report		
<b>Output 3.</b> 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%)	<b>By end-2019</b>	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



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	No subsidiary loan	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.	needed.	
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