

Environmental and Social Monitoring Report

Semi-Annual Report
August 2020

49450-012 TON: Renewable Energy Project

Prepared for the Ministry of Finance and National Planning, Government of Tonga for the Asian Development Bank.

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TREP SEMI ANNUAL SAFEGUARDS REPORT

5 August 2020

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1. Introduction

1. This is the first Semi Annual Safeguards Report as at 31 July 2020 for the Tonga Renewable Energy Project (TREP). The report covers the period 1 January – 30 June 2020. The purpose of the report is to document social and environmental safeguard monitoring activities and their results. Compliance with ADB social and environment safeguard requirements including land acquisition, the 2019 Gender Action Plan and the respective Initial Environmental Examination reports is also assessed. At this time construction is only in its preliminary stage for the Tongatapu sites with outer islands work yet to commence, largely due to unforeseen delays as a result of the evolving COVID-19 situation, hence this report is provided to detail the current monitoring plans, design and preconstruction monitoring, contractor activities and project status. This report also serves as an Interim Land Acquisition Report, while tasks remain ongoing.

1.1 Project background

2. The Tonga Renewable Energy Project (TREP) was formed under the ADB's Regional Transaction Technical Assistance (R-TRTA) 9242-REG program. This program includes project preparation, detailed design, and procurement support for renewable energy projects in the 11 smaller Pacific island countries including Tonga under the proposed Pacific Renewable Energy Investment Facility, with a significant portion of Green Climate Fund (GCF) funding. TREP will implement a range of renewable energy subprojects to significantly increase Tonga's share of renewable energy, shifting away from traditional fossil fuel use.
3. The following subprojects are being implemented under TREP, with the numbering and Lots each representing different work packages and contracts;
 - TREP 01 - grid stability BESS at Popua Power station, Tongatapu (7.2 MW/3.8 MWh)
 - TREP 02 - Load shifting BESS at the Villa, Tongatapu (6 MW/ 20.88MWh)
 - TREP 03 – Lot 1
 - 350 kW solar PV facility and 1003 kW/ 1,856 kWh BESS at 'Eua
 - 300 kW solar PV facility and 1003 kW/ 2,007 kWh BESS at Vava'u
 - TREP 03 – Lot 2
 - Solar PV /BESS micro-grid, including low voltage distribution system, for the following islands in the Ha'apai group:
 - 'O'ua
 - Tungua
 - Kotu
 - Mo'unga'one
 - Solar PV – BESS micro-grid, including medium / low voltage distribution system, at Niuafu'ou.

In 2008, the Government of Tonga issued the Renewable Energy Act and then formulated the Tonga Energy Road Map, 2010 – 2020 (TERM). Under TERM, Tonga established its nationally determined contributions, which include the following generation (supply side) targets:

- By 2020, 50% of all electricity to be generated from renewable energy; and
- By 2030, 70% of all electricity to be generated from renewable energy.

The TREP is a suite of renewable energy projects targeting the energy needs of eight separate islands within the Kingdom of Tonga. Together with other initiatives underway by the Government of Tonga, it will contribute substantially towards the TERM targets. TREP is estimated to enable, through IPP's, contribution of around 28% toward the 2020 TERM target.

1.2 Project categorisation

4. The project has been assigned an ADB Safeguard Category B for Environment and Involuntary Resettlement and Category C for Indigenous Peoples.
5. The Project has been assigned an ADB Safeguard Category B for Involuntary Resettlement and Indigenous Peoples due to the need to lease private-owned lands and potential impacts to non-land assets including crops and trees. The project does not involve physical displacement of people and/or destruction of physical structures. It will however, need to access approximately a total of 60.3 acres (24.4Ha) of private lands allotments for Tongatapu and Outer Islands ranging in size from 1,500 m² to about 2.5 acres per allotment. The government approach to secure the land is through lease agreement, similar to government approach in recent ADB projects.
6. Lease agreements are not always consistent and require oversight to ensure there are no unintended safeguards or stakeholder issues. Where gaps are identified, action plans will need to be developed to manage any associated risks.

1.3 Institutional arrangements

7. The Government of Tonga is the grant beneficiary, represented by the Ministry of Finance and National Planning (MFNP) who are the project executing agency (EA) and are responsible for compliance with ADB environmental and social safeguards. Tonga Power Limited (TPL) and the Ministry of Meteorology, Energy, Information, Disaster Management, Climate Change, Environment and Communications (MEIDECC) are the implementing agencies (IA) for TREP 1, 2, 3 Lot 1 and TREP 3 Lot 2 respectively. A Project Steering Committee (PSC) and Project Management Unit (PMU) have also been established. The projects organisational structure is shown in Figure 1.1.
8. A contract for Construction Support Consultant, (CSC) was signed by the Tonga Power Limited (TPL) and Entura and became effective as at November 2019, funded by the Government of Australia Grant 0642-TON: Renewable Energy Project.
9. The principal national agency charged with environmental protection is the MEIDECC. The role of MEIDECC is to protect the environment and promote sustainable development. MEIDECC also approves the environmental assessment for development projects. It is also the agency required to respond to any complaints from the public about environmental issues.

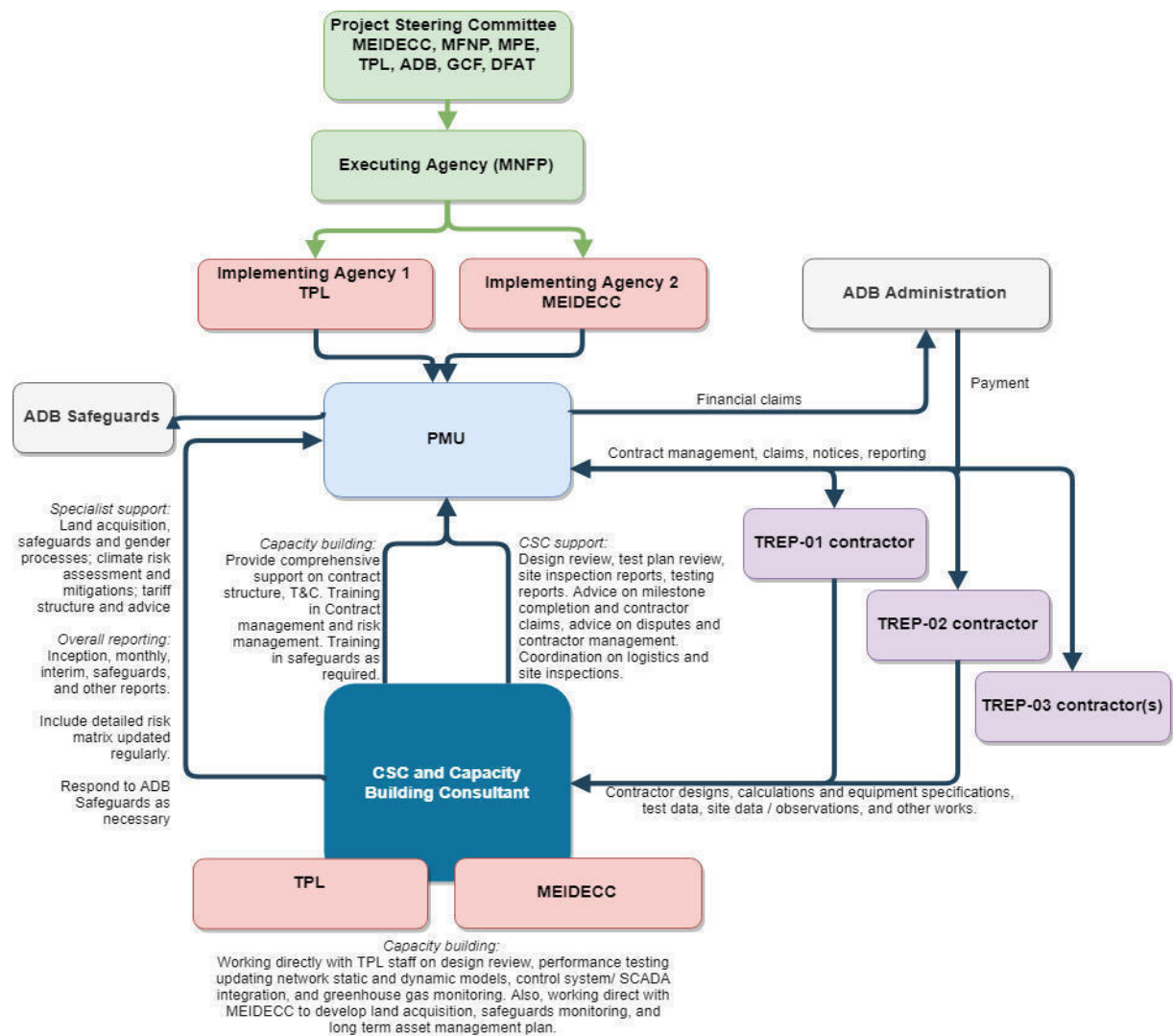
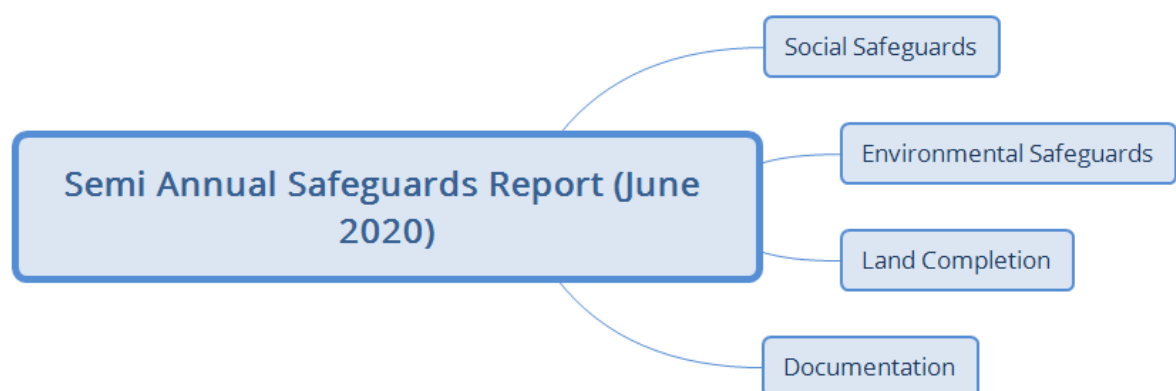


Figure 1.1: TREP Organisational Chart

1.4 Report Structure

10.



2. Works in Progress

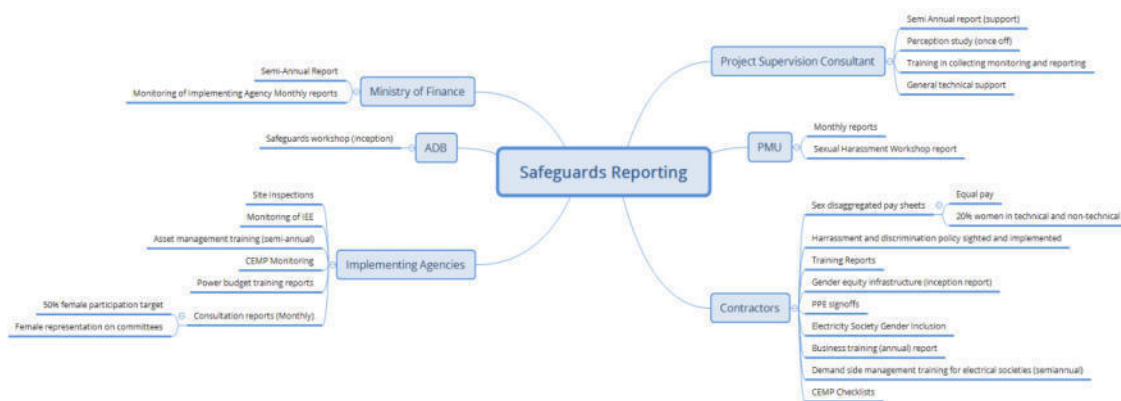
11. The TREP project is currently meeting most project safeguards and schedule targets despite the current global Covid-19 situation. All major contracts have been awarded and project commitments and payments remain ahead of the project schedule.
12. The TREP-01 Grid Stability BESS has progressed to completion of detailed design, and for TREP-02 the design package has been completed, with minor planning items still required for the commissioning stage. Procurement of parts has commenced for both subprojects and Factory Acceptance Testing (FAT) of has been undertaken for all major elements. Transport of equipment required under these contracts has commenced. The Turnkey contractor for both TREP-01 & 02 (Akuo) is engaging a local subcontractor to commence civil works, electrical works are anticipated to be delayed further due to boarder closures.
13. A single Turnkey contractor was selected for both TREP-03 Lots; the Lot 1 contract was signed in April and Lot 2 is now effective, signed in March. Several initial variations for Lot 1 are currently being considered regarding the electrical connection infrastructure and final solar site details.
14. MLSNR is currently processing the land leases for TREP-03 Lot 2.
15. Due to the effects of the COVID-19 pandemic both selected contractors are forecasting significant delays through manufacturing and construction. At this time, the full extent of delays is unpredictable and several mitigations are already occurring; continued remote work where possible to progress planning and design works, and accelerated concurrent work programs planning for after shutdowns are lifted.
16. Covid-19 actions have now been included in the project Health, Safety and Emergency Response plan (including contractors). This is included in section 6 of the TREP Covid-19 Response Plan (Appendix K).
17. Budget savings are being considered for further electrification projects on the outer villages/islands of Vava'u and future land agreements may be required to facilitate this. These will be detailed in the final Land Acquisition Completion Report, along with any updates required to incorporate these items into the IEE and RP.

3. Summary of monitoring activities, results, and follow-up actions

3.1 Social safeguards

18. This report covers social safeguards through reporting on the GAP (Gender Action Plan) and land completion. Social safeguards (compliance, monitoring and reporting) are in place, although restriction on travel and access associated with Covid-19 restriction have affected travel, consultations, and monitoring.
19. Core safeguards concepts were covered with principal stakeholders during the (ADB attended) inception mission. Safeguards reporting and responsibilities are spread across a range of project stakeholders.

20.



3.2 Gender Action Plan

21. The GAP covers safeguards monitoring and compliance not covered under land acquisition issues.
22. Contractors have reported difficulties sourcing trained and available female workers. Women who have appropriate skills are often already working on similar donor based and private sector projects. The sub-contractors are unwilling to be seen to be “poaching” employees in a small context such as the Tonga construction industry.
23. Discussions are ongoing with the contractor regarding the best way of overcoming these issues.
24. There are some ongoing issues with contractors being unclear about GAP compliance. This is particularly around site based gender participation. The argument has been made that the targets do not sufficiently stipulate where women project employees will be based and therefore women based in a contractor’s head office should be able to be included in the Gender participation target.
25. This issue was addressed verbally with the contractor at a project meeting in March 2020 as well as verbally and via email with the SGS National safeguards officer. An email was sent to the contractor representative clarifying the intent of the target and suggesting that any interpretation of the targets should follow discussion and guidance from SGS (see email Appendix B).

26. Several deliverables have not yet become reportable as works were not implemented during the reporting period.
27. The results of monitoring against the Gender Action Plan are contained in the GAP Reporting Matrix in Appendix A.
28. Further contractor training in GAP reporting will be considered as part of the Training Plan (in development to cover GAP training deliverables)
29. Although the intention of the GAP is clear, future iterations of gender participation targets could stipulate either the intention of the target or the national identity of contract employees as a means of avoiding perceived “wiggle room” with respect to targets. Failure to engage with the intention of the target appears to suggest a lack of support for the target.

3.3 Land Completion

30. The following land is required to be acquired under this project:
 - ‘Eua:
 - 350 kW solar PV site
 - Vava’u:
 - 300 kW solar PV site
 - Ha’apai group:
 - ‘O’ua – small solar PV site
 - Tungua – small solar PV site
 - Kotu – small solar PV site
 - Mo’unga’one – small solar PV site
 - Niuafo’ou:
 - substation sites, quantity (if any) to be determined in contractor preliminary designs
 - medium solar PV site
31. For TREP-01 & 02 the Popua power station BESS and the Villa BESS on Tongatapu, there are no ongoing land acquisition issues as outlined in the Resettlement Plan (RP); the two allotments already leased by Tonga Power Limited to build additional battery storage facilities (Popua and Villa). These are attached to the RP.
32. The applicable lease was received subsequent to development, consultation, and signing.
33. There are potential issues inherent in the lease as result of lack of clarity around bases for crop and tree compensation, exclusivity, and grievance resolution.
34. For TREP-03 Lot 1; Land acquisition has been progressed. For ‘Eua there has been a change in the solar array site due to land holder negotiations between TPL and the local stakeholders, voluntary land transfer and land use agreements have been executed. The applicable lease was received subsequent to development, consultation, and signing. There are potential issues inherent in the lease as result of lack of clarity around bases for crop and tree compensation, exclusivity, and grievance resolution.

35. For Vava'u the land leases have progressed towards completion on the title lots outlined in the Resettlement Plan, including signing of the required lease agreements. Copies of the Vava'u lease agreement are yet to be received and reviewed by the CSC.
36. Lease agreements and titles for Lot 1 are attached in Appendix F and G. This work has been undertaken by TPL staff under supervision of the PMU and with monitoring support by the CSC.
37. For TREP-03 Lot 2; Land acquisition is ongoing through local consultations and negotiations. The Land items for TREP-03 Lot 2 are processing by the Ministry of Lands and Natural Resources (MLNR) alongside MEIDECC and assistance from PMU. There are issues for Project sites and are still needed to sort out by the MLNR and MEIDECC. The progress of the process will be updated in the next reporting period.
38. The site at Vava'u for TREP 03 Lot 1 is an estate of His Majesty. Project location in 'Eua is customary land. The Project sites for TREP 03 Lot 2 (Niuafu'ou, Mo'unga'one, and Kotu) are own by the Government. These lands do not require preliminary agreements with the Government but the Land Deeds.
39. The sites for TREP 03 Lot 2 at 'O'ua, and 'Eua require preliminary agreements with the landowners as they are customary land before processing the Land Deeds (Appendix F). The signed land lease agreements for 'O'ua will be reported in the next reporting period.
40. For Mo'unga'one, local consultations revealed that a neighboring property overlayed onto the proposed site by 2m on the southwestern edge. There is a possibility to reduce in size (not yet shown on the available Land title). This has been conveyed to the contractor and a small variation may be required for rework of the solar array layout. A confirmation on the reduction should be received from the Ministry of Lands before a variation is considered.
41. The reduction in the size of the Mo'unga site has no effect on neighbouring land or title.
42. There is some lack of consistency with land lease documents. This is particularly with respect to the identification of compensation and grievance risks associated with crops and trees. While the documentation is complete, a lack of clarity of wording or completeness in some lease documents increases the risk of either safeguards issues or grievances (most likely to take the form of compensation claims. A review of the leases is contained in Appendix E. An action plan to provide closure on these risks is also part of this matrix.
43. There is some lack of clarity regarding confirmation of ownership, agreement, and potential, compensation or lease arrangements for the TREP 3 sites. Current RAP documentation does not appear to provide closure on land ownership or compensation. This is currently being investigated, and a plan of action will be developed.

3.4 Environmental safeguards

44. Environmental monitoring during this reporting period has been limited to desktop monitoring of the design and pre-construction phase commitments contained in the TREP 01/02 IEE and TREP 03 IEE.
45. For TREP 01 and 02 the Popua power station BESS and the Villa BESS no non-conformances were identified during monitoring. As noted a contractor has been appointed (Akua Energy) for TREP 01 / 02 and detailed design is complete. Both the tender documents and detailed design met the

requirements of the IEE. Other design and pre-construction commitments continue to be monitored as relevant activities commence.

46. For TREP-03 Lot 1 and TREP-03 Lot 2 no non-conformances were identified however, monitoring was limited to review of tender documents.
47. TREP 01 has applied for and obtained approval under the EIA Act 2016 and *EIA Regulation 2010* of the Government of Tonga. The application for EIA Approval for TREP 02 has been submitted to MEIDECC – EIA Division and approval is pending. The application for approval for TREP 03 has yet to be submitted.
48. A building permit under the *Building Control and Standards Act 2016* of the Government of Tonga, has been secured for TREP 01. An application for building permit has been submitted to the Ministry of Infrastructure – Building Division and approval is anticipated pending EIA approval. The application for a building permit for TREP 03 has yet to be submitted.
49. Akuo have prepared a CEMP for TREP 01 and 02 which is currently under review.
50. A summary of the results of monitoring of the Project Management Unit and Construction Support Consultant Monitoring Activity Plan are contained in Appendix I. Detailed monitoring checklists covering the design and pre-construction works are contained in Appendix J.

Appendices

A Gender Action Plan Reporting Matrix

| PROJECT OUTPUTS | ACTION | GENDER TARGETS AND ACTIVITIES | STATUS |
|---|--------|---|---|
| Output 1. BESS in Tongatapu | 1.1 | During design and implementation, all community consultations will have a target of at least 50% female participation, including women only consultations in all the sites (baseline: 0) | Consultation records to be compiled and submitted for verification |
| | 1.2 | Requirement for contractors to hire at least 20% women in both technical and non-technical work *(baseline: 0) | Contractors not currently complying with intention of target |
| | 1.3 | Provide toilet and sanitation facilities for men and women, separately if necessary* Ensure women-friendly design by providing reliable water supply, proper lock and lighting (where applicable) (baseline: 0) | Female worker have the toilet in the gym at TPL assigned to them. Portable toilets have been procured for the male workers. |
| | 1.4 | Ensure equal pay for equal work between male and female workers | Detail to become available for review and confirmation from this months contractor project report |
| | 1.5 | Contractor will be required to provide safety gear and protective equipment (PPE) to keep both men and women workers safe on the job | To be verified during site works over the coming month, then monitored during the construction phase |
| | | | |
| Output 2: Solar PV farm with BESS in 'Eua | 2.1 | During design and implementation, all community consultations will have a target of at least 50% female participation, including women only consultations (baseline: 0) | Consultations not yet complete |

| | | | |
|---|-----|--|--|
| Solar PV farm with BESS in Vava'u | 2.2 | Requirement for the contractor to hire 20% women in both technical and non-technical work ** (baseline: 0) | Contractor is aware of requirement. Recruitment not yet complete |
| | 2.3 | Provide toilet and sanitation facilities for men and women, separately if necessary.* Ensure women-friendly design by providing reliable water supply, proper lock and lighting (baseline: 0) | To be monitored during construction once site works commence |
| | 2.4 | Contractor will be required to provide safety gear and protective equipment to keep both men and women workers safe on the job Contractors appointed for construction will be informed of the required facilities before bidding | Contractor is aware of requirement. To be monitored during construction once site works commence |
| | 2.5 | Ensure equal pay for equal work between male and female workers | Contractor is aware of requirement. To be monitored during construction once site works commence |
| | | | |
| Output 3: Solar + BESS mini-grid in outer islands | 3.1 | During design and implementation, all community consultations will have a target of at least 50% female participation, including women only consultations in all the sites (baseline: 0) | Limited Consultations to date. Planning in place to meet this target. |
| | 3.2 | Requirement for the contractor to hire 20% women in both technical and non-technical work** | TREP 3 not yet implemented. |
| | 3.3 | Provide support to women such as toilet and sanitation facilities and separately if required.* Ensure women-friendly design by providing reliable water supply, proper lock and lighting | TREP 3 not yet implemented. |
| | 3.4 | Ensure equal pay for equal work between male and female workers | TREP 3 not yet implemented. |
| | 3.5 | Contractor will be required to provide safety gear and protective equipment to keep both men and women workers safe on the job | TREP 3 not yet implemented. |

| Output 4: Capacity Building and Project Management Support | 4.1 | All staff in MEIDECC, TPL and contractors will receive awareness session on sexual harassment. The contractors will submit to TPL a policy against sexual harassment to be implemented during the entire project duration | Sexual Violence covered in the CEMP. Specific policy not provided but behaviours well covered in the workers code of conduct. |
|---|------|--|--|
| | 4.3 | Enhance community electric societies' management capacities through facilitation of inclusion of at least 30% women in Electric Management Committees (baseline: 0) | TREP 3 not yet implemented. |
| | 4.4 | Provide yearly business skills training on income opportunities from increased electricity supply with 50% women participation in each of the project site** (baseline:0) | TREP 3 not yet implemented. Training plan in preparation |
| | 4.6 | A minimum of 30% women in key decision-making committees for the project | TREP 3 not yet implemented. |
| | 4.7 | Include training on intra-household decision-making and sharing household labour, financial access and control with indicators to be built into the monitoring and evaluation framework to track women's and men's perceptions and behaviour on economic and personal empowerment measures before, and after business skills trainings | TREP 3 not yet implemented. Training plan in preparation |
| | 4.9 | Conduct at least 2 consumers' training on power budget management with a minimum of 50% female participation for each of the project community** (baseline: 0) | TREP 3 not yet implemented Training plan in preparation |
| | 4.11 | Conduct annual workshop with a minimum of 30% female participation on demand side management for community electric societies' customers (Ha'apai and Niuafu'ou)** | TREP 3 not yet implemented. Training plan in preparation |

| | | | |
|--|------|--|--|
| | 4.12 | Conduct at least 2 trainings per year on project planning and asset management maintenance for MEIDECC, TPL staff and the community electric societies (Ha'apai and Niuafu'ou) with a minimum of 30% female participants | TREP 3 not yet implemented. Training plan in preparation |
| | 4.13 | Conduct workshop in the beginning of the project with a minimum of 30% female participants from MEIDECC and TPL staff on procurement, anticorruption and safeguards | TREP 3 not yet implemented. |
| | 4.14 | Train the Implementing Agency in collecting sex disaggregated data and include in the progress, monitoring and evaluation reports | Some training occurred during project inception mission. Further training/ workshop planned for September 2020 |

B GAP compliance email remarks with contractor

John Cook

From: John Cook
Sent: Friday, 24 July 2020 8:22 AM
To: Benjamin Hornung
Cc: David Skinner; David Procter
Subject: Gender Action Plan targets

Hi Ben,

We are currently writing the Semi Annual Report. I have been going over the GAP monitoring and I had a few questions about your data. As you know, there is a target of 20% female workers in both technical and non-technical areas.

I understand from Ese that there has been some confusion about this target and whether the target can include, for example, a female engineer working somewhere other than Tonga. I understand that the target itself does not make it clear whether this is the case or not. I believe, however, that the intention of the target is quite clear. It is to facilitate the involvement and capacity of women in the energy sector in Tonga.

I understand that there may be obstacles to the achievement of this target. I would very much appreciate if we could have a discussion around your experience and understanding of the implementation of this target.

Would you be available to have a discussion about this so that we can see what our best options are?

Perhaps as a start you could supply a list of all positions you have on TREP 1 and 2 and what the obstacles are to any of these position being filled by (Tongan) women?

Please let me know when you would be available to discuss this.

Thanks in advance

John Cook
Project Social Safeguards and Gender

Hi John,

Following up on the plans considered by Akuo for the GAP 20% needs for the TREP battery projects. Initial project kick off dates were TREP 1 November 2019 and TREP 2 January 2020. There was a formal handover within the Akuo team in February 2020, the original project manager had to move back to France due to visa and family needs. The requirement to combine the two TREP projects into 1 overarching project was actioned in April, this streamlined the commercial discussions and project timelines.

Commercial discussions and contract signature with the selected civil contractor were enacted in July with mobilisation occurring directly after. Its anticipated the electrical contractor will be mobilised in August.

Akuo had requested clarification of GAP targets in March via verbal communication in the biweekly technical meetings. This request was left open until the social safe guards specialist joined TPL in April 2020 . Akuo was of the understanding the GAP needs within the head contract applied to the entire project team, and this unclear contract term was communicated with TPL and the disconnect was identified.

Akuo fully supports this GAP need and has, outside of the direct construction project, been able to demonstrate a nearly 50% split gender balance leading into the construction phase. Both accumulated internal resourcing and contractors engaged can demonstrate the gender break down required, please see matrices below.

Akuo is now working with the selected sub-contractors to understand how best to implement the required ADB contractual needs. Akuo is working with TPL and the local technical college to secure trainees for both civil and electrical disciplines and requesting the selected sub-contractor engage the women in the appropriate steams . Akuo has supplied a list for both civil and electrical sub-contractors to use. Akuo's direct site representation will be site management, quality control and social safeguard, the project staff are in Tonga, Akuo is willing to work with trainees in these disciplines as well.

Currently, from the list provided the civil subcontract has reported difficulties in securing local talent for the construction phase of the project due to the available female trainees already being operational on different projects.

Akuo is working with the civil sub-contractor to launch a local radio campaign and approaching LDS church employment to encourage women to apply for the opportunities in civil construction phase.

Parts of this planning is as follows:

- Akuo has received a list of women electrical/civil construction workers from TPL, from the local technical training academy TILT
- Civil sub-contractors assessed the list and found the civil workers were already in placements or operational
- Local contractor not wanting to remove female staff from existing business or projects
- Civil sub-contractor has female team members already included in the business and working in the Tonga branch office, directly on the project
- Civil subcontractor is willing and able to accommodate any further civil site female trainee workers Akuo can source.
- Akuo has requested electrical contractor to assess the existing list and see if female electrical workers are available

Akuo has engaged a local social safe guards specialist and will approach the training college directly to assess the technical streams offered, if training streams other than civil or electrical can be identified, Akuo will assess how best to give the trainees an opportunity to work within the project as trainees. Technical streams such as health and safety, metal fabrication, concreting, carpentry, electrical installation, site management, quality assurance will all be considered.

Akuo acknowledges the ADB requirements but also requests the entire project team be considered when looking at the gender balance, without the talented women in the businesses engaged, the construction of the batteries would not occur.

Regards,



Ben Hornung
| Sr. Project Manager – Akua Energy
Pacific
| Cell : +61 452 201 169
| Address : 3 Albert Coats Lane
Melbourne Vic 3000 Australia
|    

From: John Cook <John.Cook@entura.com.au>
Sent: 29 July 2020 09:15
To: Benjamin Hornung <hornung@akuoenergy.com>
Cc: Estrellita Fulivai <estrellitafulivai@outlook.com>
Subject: Gender action plan matrixs_JC comments

Hi Ben,

Many thanks for your document.

Please find attached some comments on your document with some comments.

- A timeline would be helpful.
- A statement about how you have been affected by covid
- Background on what obstacles you have encountered.
- Background on what you have tried to do to overcome these obstacles.

Please note that for the GAP targets only individuals who actually have hours on the project can count towards the targets. Individuals within contributing organisations who do not have time on the project are not relevant.

Thanks

John

C Community Consultation Compliance

TREP Consultation Compliance sheet

| Date | TRE P | Location | IA | Descriptio n | Attendanc e | Male | Femal e | Ratio | Commen t |
|------|----------|----------|----|-----------------|----------------|------|------------|-------|-------------|
| | | | | | | | 1 | | |
| | | | | | | | | | |
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| | | | | | | | | | |

Consultation is a meeting of two or more people to inform, consult, or to involve stakeholders in the project process and outputs

Note: Consultations are not yet complete, records to be provided in next Safeguards report issue.

D Training Log

Training Log (MEIDDEC and TPL)

| Date | TREP | Location | IA | Description | Attendees | Male | Female | Ratio (M: F) | Hyperlinks/ Doc. Ref. |
|-------------|-------------|----------|-----|--------------------------------|-----------|------|--------|--------------|-------------------------------|
| 12 Dec 2019 | All Outputs | Nuk | ADB | Safeguards and Gender Training | 17 | 13 | 4 | 77: 23 | MOU Dec 2019 |
| 19 Mar 2020 | All Outputs | Nuk | CSC | TREP Safeguards Workshop | 8 | 7 | 1 | 88:12 | Training List of Participants |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

E Land Completion Matrix

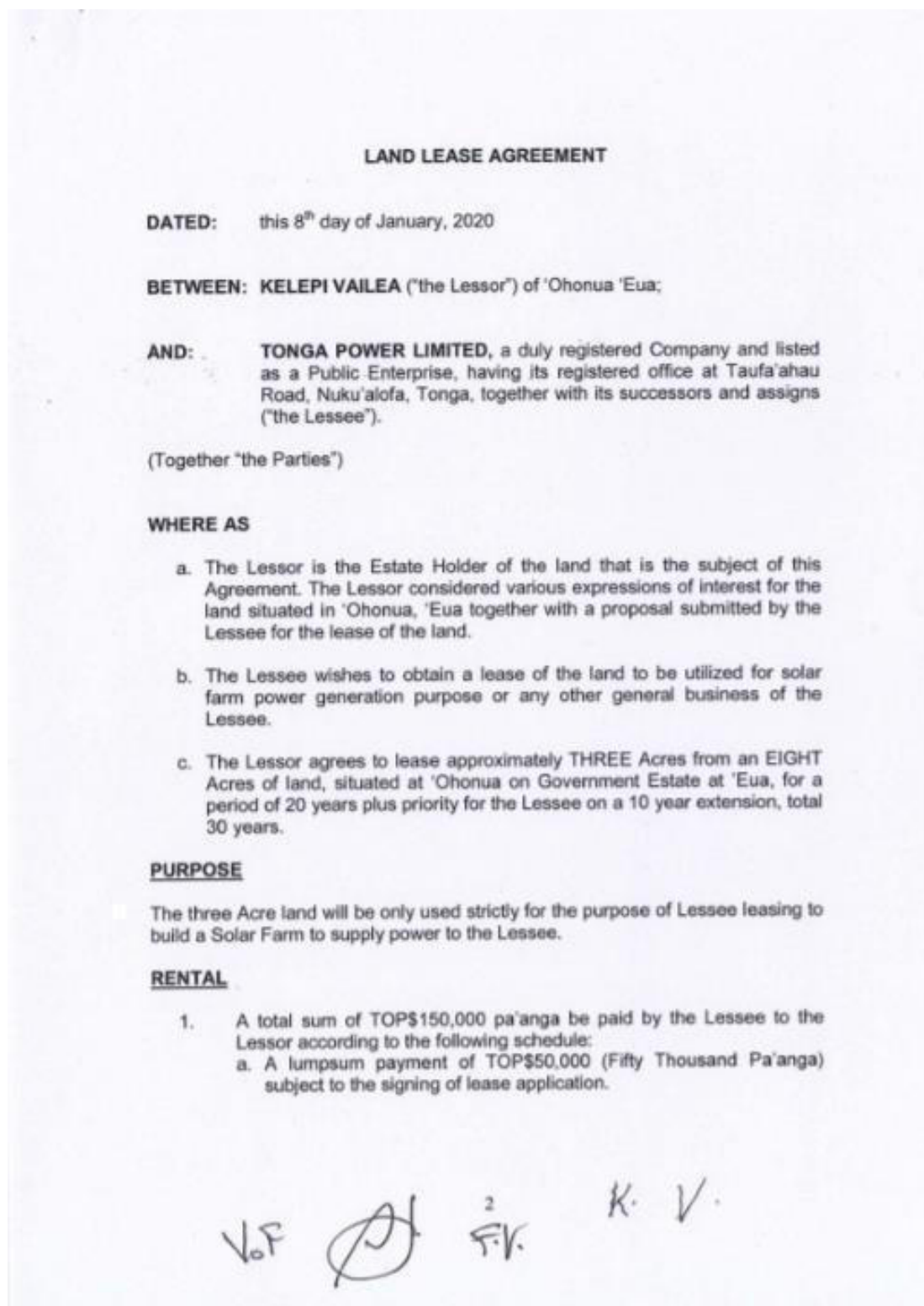
| Step | | Current Status | Further Actions and Expected Completion Date |
|----------|---|---|--|
| 1 | Confirmation of land requirements and identification of land owners. Contact land owner (through the Town Officer) | | |
| | ‘Eua: | Completed. | None. |
| | Vava’u: | Completed. | None. |
| | ‘O’ua | Required Confirmation | MLNR to confirm the name of the Landowner and to approach landowners who are overseas. MLNR/MEIDECC to update PMU in two weeks. |
| | Tungua | Required Confirmation | MLNR to confirm the name of the Landowner and to approach landowners who are overseas. MLNR/MEIDECC to update PMU in two weeks. |
| | Kotu | Required Confirmation | MLNR to confirm the name of the Landowner and to approach landowners who are overseas. MLNR/MEIDECC to update PMU in two weeks. |
| | Mo’unga’one | Required Confirmation | MLNR to confirm the name of the Landowner and to approach landowners who are overseas. MLNR/MEIDECC to update PMU in two weeks. |
| | Niuafo’ou | Required Confirmation | MLNR to confirm the name of the Landowner and to approach landowners who are overseas. MLNR/MEIDECC to update PMU in two weeks. |
| 2 | Meet with the Landowner to confirm the initial agreement to lease the land. Verify land ownership status, government land valuation and market valuation | | |
| | ‘Eua: | Completed. | None. |
| | Vava’u: | Completed. | None. |
| | ‘O’ua | In Progress | MLNR/MEIDECC to update PMU in two weeks. |
| | Tungua | In Progress | MLNR/MEIDECC to update PMU in two weeks. |
| | Kotu | In Progress | MLNR/MEIDECC to update PMU in two weeks. |
| | Mo’unga’one | In Progress | MLNR/MEIDECC to update PMU in two weeks. |
| | Niuafo’ou | In Progress | MLNR/MEIDECC to update PMU in two weeks. |
| 3 | Agree proposed compensation amount within TPL and MEIDECC before negotiation with land owner. Organize follow-up meeting with land owner, or representative, to negotiate price. Allow time for land owner to consult with family and own land valuer. | | |
| | ‘Eua: | Completed. | None. |
| | Vava’u: | Completed. | None. |
| | ‘O’ua | Preliminary agreement is that unused land lots are to be gifted to the project. | None |
| | Tungua | Preliminary agreement is that unused land lots are to be gifted to the project. | MLNR to communicate with the Noble. |

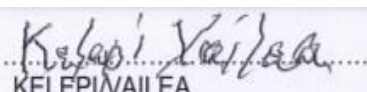
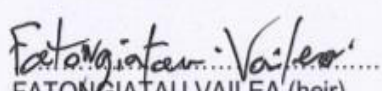


| Step | | Current Status | Further Actions and Expected Completion Date |
|----------|--|--|---|
| | Kotu | Land is a Government own and it does not require compensation. | None. |
| | Mo'unga'one | Consultations revealed that a neighbouring property overlaid onto the proposed site by 2m on the south western edge. Subsequently the site has been reduced in size (not yet shown on the available Land title). | None. |
| | Niuafo'ou | Land is own by the Government and it does not requires compensation. | None. |
| 4 | Prepare government lease form and compensation agreement form. Facilitate signing and payment of lease form and compensation agreement (50% payment or as per agreement) with land owner(s) with Third Party Validation. Compile forms and return to MLSNR for Minister's endorsement to get to Cabinet approval. Submit for Cabinet approval | | |
| | 'Eua: | Completed. Endorsed for approval occurred prior to third party validation; CSC is following up on compensation requirements (if any) | None. |
| | Vava'u: | Completed. Endorsed for approval occurred prior to third party validation; CSC is following up on compensation requirements (if any) | Lease agreement to be provided to CSC for third party validation. |
| | 'O'ua | Ongoing, land identified. Time is taken to confirm land ownership history and lineage. Leases in preparation. | Land lease agreements being complied with MLSNR. MEIDEEC to confirm there are no potential land use or titling conflicts. Copy to be provided to CSC for review prior to submission of endorsement. |
| | Tungua | Ongoing, land identified. Time being taken to confirm land ownership history and lineage. Leases in preparation. | Land lease agreements being complied with MLSNR. MEIDEEC to confirm there are no potential land use or titling conflicts. Copy to be provided to CSC for review prior to submission of endorsement. |
| | Kotu | Ongoing, land identified. Time is taken to confirm land ownership history and lineage. Leases in preparation. | Land lease agreements being complied with MLSNR. MEIDEEC to confirm there are no potential land use or titling conflicts. Copy to be provided to CSC for review prior to submission of endorsement. |
| | Mo'unga'one | Ongoing. Encroachment identified and site adjustments agreed. Ongoing, land identified. Time is taken to confirm land ownership history and lineage—leases in preparation. | Land lease agreements being complied with MLSNR. MEIDEEC to confirm there are no potential land use or titling conflicts. Copy to be provided to CSC for review prior to submission of endorsement. |
| | Niuafo'ou | Ongoing, land identified. Time is taken to confirm land ownership history and lineage—leases in preparation. | Land lease agreements being complied with MLSNR. MEIDEEC to confirm there are no potential land use or titling conflicts. Copy to be provided to CSC for review prior to submission of endorsement. |
| 5 | Payment (final 50% or as per agreement with land owners). Collect Deed of Lease from MLSNR. Final land survey and submission to MLNSR for filing. | | |

| Step | | Current Status | Further Actions and Expected Completion Date |
|----------|--|--|--|
| | ‘Eua: | Initial Lease payments made. compensation payment requirements to be verified (if any) | CSC/MEIDEEC to confirm and validate any compensation requirements. August 2020 |
| | Vava’u: | Initial Lease payments made. compensation payment requirements to be verified (if any) | CSC/MEIDEEC to confirm and validate any compensation requirements. August 2020 |
| | ‘O’ua | TBC | August 2020 |
| | Tungua | TBC | August 2020 |
| | Kotu | TBC | August 2020 |
| | Mo’unga’one | TBC | August 2020 |
| | Niuafo’ou | TBC | August 2020 |
| 6 | Proponent submits the Deed of Lease and compensation completion report to ADB | | |
| | ‘Eua: Vava’u: ‘O’ua Tungua Kotu Mo’unga’one Niuafo’ou | TBC | Report TBC in September 2020 |


F Land Agreement; Eua

F.1 Lessor (Kelepi Vailea) and the Lessee (TPL) for the land situated at 'Ohonua, 'Eua



| | | |
|---|---|--|
| EXECUTED BY the Estate Holder |) |  |
| |) | |
| |) | KELEPI/VAILEA |
| In the Presence of: |) | |
|  | | |
| FATONGIATAU VAILEA (heir) | | |
| Address: | | |
| | | |
| EXECUTED FOR |) |  |
| TONGA POWER LIMITED |) | |
| |) | TPL Board of Directors Member |
| |) | Mr Sione Havea Talone |
| In the Presence of: |) | |
|  | | |
| Name: Vahid L. Fifita | | |
| Address: | | |

F.2 Certificate of Land Title Kelepi Vailea



MINISTRY OF LANDS AND NATURAL RESOURCES
Government of Tonga

Rosamond C. Bing
Chief Executive Officer

P. O. Box 5
Vuna Road, Nukunono
Kingdom of Tonga

Tel: (676) 23611 / 23210
Email: ceo.mlnr@gmail.com

9th December 2019

TO WHOM IT MAY CONCERN

RE: KELEPI VAILEA OF 'OHONUA, 'EUA.

This is to certify that the above mentioned name currently holds a registered tax allotment at 'Ohenua 'Eua, in the Kingdom of Tonga


The allotment was registered under the following details;

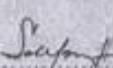
Details of the Tax Allotment


| | |
|----------|----------------------|
| Name | : "MAFILE'O" |
| Area | : 8a 1r 00p |
| Location | : Lot 21, Blk 68/105 |
| Register | : 1.5.1975 |

If you need more clarification on this, please do not hesitate to contact the Ministry.

Checked by,


Land Assessment Officer


Seli Taufu.
For Secretary of Lands & Natural Resources



- A endorsed Project Consultation Letter was provided to the Landuser group which highlighted some key impact timelines i.e. geotechnical testing ~March 2020, Land clearing ~ June/July 2020. It was noted by the Landowner that this is their first official documented notification of the project.
- The landuser group spoke on the following matters;
 - The group mostly comprise of relatives and the group is formed as a Toutu'u.
 - The intensions of their partaking in the group is for financial goals and their objective differed for each individual.
 - The kava crop has a intended maturity of 4-5years. The crop is currently at just over 2 years (Dec 2017 to Dec 2019).
 - The landuser outlined their concerns of harvesting early which would result in a significant reduction in the yield due to the maturity of the crop.
- The valuation of the kava crop was discussed and the following was highlighted;
 - The value of Kava according to the MAF table was ~\$14 per plant. This is significantly less than the current market value.
 - The market value of Kava depends on the intended market. One grower highlighted that his intended market is USA where his son lives. This would be different to his neighbour if his intended market was local or NZ, Aust etc.
 - Landusers discussed a fair process for valuation of each individual section by providing a written valuation from MAF. The individuals would approach the MAF to provide their valuation on their intended market. It was agreed that the way forward on this would be firstly discussed with the safeguards specialists before agreeing a way forward before proceeding.

Ministry of Agriculture (MAF)

We took the opportunity to Visit the MAF Vava'u Branch and was directed to meet with Mr. Eti Moala (did not get his Job Title). The following has been confirmed:

- The compensation table received in Tonga is what they use in Vava'u. This table has been approved by Cabinet but has not been updated since i.e. MAF utilize the table as is.
- The intention of the table is for it to be applied in the assessment of compensation post damage. The table is not to be used for the instance of the current landuser. The landuser is entitled to current market value for their intended harvest/yield. Mr. Moala noted that they have, in the past, provided some guidance on current market costs for Kava through a letter from their Branch Manager (or CEO). He also indicated that current market value for kava is between \$200 and \$300 per plant (unharvested).
- Mr. Moala also spoke about the significant fruit trees and specifically the coconut trees and confirmed that the existing on site would fall under the Optimum 16-44year \$5,720.50 per tree.

Crop Compensation

Reference to Resettlement Plan:

Part VI, Section 2, Paragraph 131 – “The Ministry of Agriculture & Fisheries (MAF) uses a standard compensation table determined by Government. This uses average yields and pre-determined prices. ADB guidelines indicate that prices should be determined in the market and assume that the farmer sells at the peak price.”

| Plant type | Estimate assumptions | Estimated number plants per row | Estimated current market value | Estimated compensation value |
|------------|----------------------|---------------------------------|--------------------------------|------------------------------|
|------------|----------------------|---------------------------------|--------------------------------|------------------------------|

| | | | | |
|----------|--|---|--|-----------------------------|
| Kava | <ul style="list-style-type: none"> • 1.5m spacing • 5 rows per section • 11 crop sections | <ul style="list-style-type: none"> • 67 plants per row • 335 plants per section • 3685 plants in total | Peak Price: \$250 per plant Current Market Calculated Value: 5 plants produced 10kg of pounded Kava. This equates to ~\$150/plant net when sold @\$10/100 grams locally | \$921,250 \$552,750 |
| Hopa | <ul style="list-style-type: none"> • 10m spacing per cluster • 1 cluster row per section • 3 plants per cluster • 7 cropped sections | <ul style="list-style-type: none"> • 10 clusters per row • 30 plants per section • 210 plants in total | \$50 per bunch | \$10,500 |
| Kape | <ul style="list-style-type: none"> • 3.5m spacing • 2 rows per section • 7 cropped sections | <ul style="list-style-type: none"> • 30 plants per row • 60 plants per section • 420 plants in total | \$20 per plant | \$8,400 |
| Coconuts | <ul style="list-style-type: none"> • 10m spacing • 1 rows per section • 18 sections | <ul style="list-style-type: none"> • 10 per row • 10 plants per section • 180 plants in total | MAF Compensation \$5,720.50 per plant Recommend: Offer/Negotiate \$300 per plant | \$1,029,690 \$54,000 |

Recommended way forward

- Determine the exact area of impact - minimize the impact on existing crop by locating the solar farm to the north of the allotment and only clearing the absolute minimum of crop as required.
- Engage MAF to provide market value advice for discussion and agreement with the landusers.
- Engage MAF to provide valuation of affected crop and compensate affected landusers.

Note that as a consequence of the above consultations and report recommendations the project will utilise only the only the northern area of the site.

G.2 Vava'u lease approval notification



MINISTRY OF LANDS AND NATURAL RESOURCES

Government of Tonga

Rosamond C. Bing
Chief Executive Officer

P. O. Box 5
Vuna Road, Nuku'alofa
Kingdom of Tonga

Tel: (676) 23611 / 23210

Email: ceo.mlnr@gmail.com

Date: 26.11.2019

Tonga Power Limited,
Nuku'alofa,
Tongatapu.

Dear Sir/Madam,

Please be advised that Cabinet Ministers in their **Decision Number ...1189-25.10.2019..**, approved your application to lease part of the Royal's estate at 'Ovava, Vava'u on the following terms:

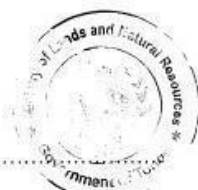
| | | |
|-----------|---|-----------------------------|
| Lessee | - | Tonga Power Limited. |
| Lessor | - | HM the King. |
| Purpose | - | Solar Farms. |
| Rental | - | \$1000.00 pa |
| Term | - | 25 years |
| Area | - | 5A 0R 00P. |
| Location | - | Part of Blk 216/158 Lot 27. |
| Effective | - | Date of Registration |

The ministry is currently executing all relevant actions to facilitate the registration of the lease.

Should you require clarification on the matter, please do not hesitate to contact the Ministry.

Sincerely,

Seli Taufa
Deputy CEO of Lands and Natural Resources



G.3 Vava'u lease agreement and title confirmation

Note that the Vava'u Lease and title notification documents have not yet been made available, and are to be provided to CSC for validation and inclusion in next Safeguards Reporting period.

H Workforce Gender Composition

H.1 Akuo records of gender disaggregation for TREP-01 & TREP-02

| Associated Company | Role | On-Site Worker (Y/N) | No. of Females | No. of Males | Ratio (%) F: M |
|----------------------|--------------------------|----------------------|----------------|--------------|----------------|
| Akuo Energy | Director | | | 2 | 42:58 |
| | Financial Control | | | 1 | |
| | HSE | | 1 | | |
| | Legal | | 1 | | |
| | Logistics | | | 1 | |
| | Regional CEO | | 1 | | |
| | Construction Manager | | | 1 | |
| | Project Manager | | | 1 | |
| | Storage Manager | | | 1 | |
| | Storage Engineer | | 1 | | |
| | Service Engineer | | 1 | | |
| Sub- Total | | | 5 | 7 | 12 |
| ERM | HSE Consultant | | | 1 | 33:67 |
| | Environmental Consultant | | 1 | | |
| | Social Safeguard | | | 1 | |
| Sub-Total | | | 1 | 2 | 3 |
| ITS Engineering Ltd. | Site Supervisor | | | 1 | 75:25 |
| | Admin & Accounts | | 3 | | |
| Sub-Total | | | 3 | 1 | 4 |
| Fletchers Ltd. | Project Management | | | 3 | 51:49 |
| | HSE Staff | | 2 | | |
| | Office Admin | | 3 | 1 | |
| | Trades | | 20 | 20 | |
| Sub-Total | | | 25 | 24 | 49 |
| Infratec | Professional | | 1 | 3 | 25:75 |
| | Technical | | 2 | 3 | |
| 24 | Administrative | | 3 | 1 | |
| | Trades | | 0 | 11 | |
| Sub-Total | | | 6 | 18 | 24 |
| TOTAL | | | 40 females | 52 males | 43%:57% |

I Environmental Safeguard Monitoring Matrix

The following matrix presents the current status of environmental commitments contained in the IEE.

TREP 01/02

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|---|---|---|--|
| Pre-construction | | | |
| Design and plant/equipment selection – climate change | Proposed siting has addressed climate change risk | Complete Siting addresses risk of increase storm surges associated with climate change. | |
| | Project detailed design and bidding packages to ensure equipment selected is resilient to climate change. | Bidding and contract documents included requirement to design and install the BESS to meet performance requirements in full range of environment conditions including those influenced by climate change. | Continue to monitor during detailed design. |
| | Plant/equipment selected for low emissions; | Complete No equipment associated with TREP 0102 produces emissions during operation. | |
| | Transformers and other electrical system equipment to be free of polychlorinatedbiphenyls (PCB's). | Complete Mineral oil transformers (Celduc) that do not contained PCBs specified in detailed design. | |
| Project environmental management systems | PMU to establish ESU and allocate staff and resources for effective operation | Complete ESU established and staff and resources allocated. | |
| | ESU updated project EMP and includes conditions of GOT approvals in BCD | Final GoT approval not yet obtained. Conditions associated with approval will be included in updated IEE but cannot be included in BCD. | Update IEE/EMP (and monitoring matrix) to include conditions of GoT approval |

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|---|--|--|--|
| | BCD requires contractor to: (i) comply with applicable COEP; (ii) designate full-time EHSO, Deputy EHSO and CLO; (iii) implement monitoring and reporting plan; (iv) provide induction and training for workers (and community) as specified | Complete The BCD included the IEE and referred bidders to the requirements (including listed requirements) in the IEE. | |
| | Contractor to prepare site-specific CEMP; | The contractor, Akuo Energy, has prepared a draft CEMP for TREP 01 / 02. The CEMP is currently being reviewed by the ESU | |
| | CEMP reviewed and cleared by ESU prior to works commencing. | The CEMP is currently being reviewed by the ESU and works will not commence until the CEMP is cleared. | ESU to clear CEMP |
| Complaints/grievances | CCP updated and GRM established; | Complete | |
| | Procedure for accessing GRM disclosed; | Not yet complete | |
| | Grievance focal points (GFP) appointed; | Not yet complete | |
| | Contractor addresses relevant elements of CCP and GRM in CEMP; | The CEMP is currently being reviewed by the ESU | ESU to ensure CCP and GRM addressed in CEMP |
| | GRM registers established at site and PMU | Not yet complete | |
| Alien or invasive species / Local material sourcing | All materials, plant and equipment imported for the project to follow Quarantine Act and Quarantine regulations and requirements of Quarantine and Quality Management Division – MAFF | No materials, plant or equipment imported at time of monitoring. BCD (and draft CEMP) commits contractor to compliance with Quarantine Act and associated regulations. | Monitor compliance of imported material with Quarantine Act. |
| | Phytosanitary certificates obtained as required | No materials, plant or equipment imported at time of monitoring. | Monitor compliance of imported material with Quarantine Act. |
| | Locally sourced materials only obtained from sources agreed by resource/land owner | Material sources yet to be determined at the time of monitoring | Monitor material sources to ensure compliance. |

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|---|---|--|---|
| | Locally sourced materials to comply with GOT laws and obtain permits and consents as required | Material sources yet to be determined at the time of monitoring | Monitor material sources to ensure compliance. |
| | Materials extraction plan to be prepared by contractor and approved by PMU. | Material sources yet to be determined at the time of monitoring | Monitor material sources to ensure compliance. |
| Site selection - Visual and landscape impacts | Site selection, application of COEP 1 and COEP 14 | COEPs unable to be sourced at the time of monitoring (<i>since been obtained monitoring matrix will be updated in next reporting period</i>) | Update monitoring matrix and assess compliance. |
| | Careful selection of site away from inhabited areas. For sites close to residences (minigrids) ensure available land for buffer | Complete Sites located away from residences and adequate buffers allowed. | |
| | Retain boundary vegetation if possible or replant upon works completion. | Complete No clearance of boundary vegetation anticipated | |
| Land use changes | Site selection and application of COEP 1; | COEPs unable to be sourced at the time of monitoring (<i>since been obtained monitoring matrix will be updated in next reporting period</i>) | Update monitoring matrix and assess compliance. |
| | Timely and effective consultation | | |
| | Negotiation with land owners/lease holders | | |
| Clearing beyond marked areas - ecological | Care taken to only clear and remove trees as marked on approved plan; | Site clearing not commenced at the time of monitoring. | Monitor during site clearance |
| | Trees to be protected clearly marked on site | Site clearing not commenced at the time of monitoring. | Monitor during site clearance |
| Land acquisition/lease, asset | Affected people will be compensated as per entitlement matrix in resettlement plan (RP) | | |
| | Application of COEP 3 | COEPs unable to be sourced at the time of monitoring (<i>since been obtained</i> | Update monitoring matrix and assess compliance. |

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|-------------------------|--|--|-----------------|
| removal/acquisition | | <i>monitoring matrix will be updated in next reporting period)</i> | |
| | Consultation will be ongoing and transparent | | |

TREP 03

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|---|--|---|--|
| Pre-construction | | | |
| Design and plant/equipment selection – climate change | Proposed siting has addressed climate change risk | Concept designs addresses risk associated with climate change (eg storm surges) to the extent possible. | Monitor during detailed design and construction. |
| | Project detailed design and bidding packages to ensure equipment selected is resilient to climate change. | Bidding and contract documents for project components (e.g. BESS, solar PV array) included requirement to design and install to meet performance requirements in full range of environment conditions including those influenced by climate change (e.g. storm surges, cyclones). | Continue to monitor during detailed design. |
| | Plant/equipment selected for low emissions; | Complete No equipment associated with TREP 03 produces emissions during operation. | |
| | Transformers and other electrical system equipment to be free of polychlorinated biphenyls (PCB's). | The BCD specifies compliance with AS/NZS 60076.11 (IEC 60076) Power transformers – dry type transformers and that pole mounted stepdown transformers shall use insulating oil to AS 1767.1 with no bio-oils. | Continue to monitor during detailed design. |
| Project environmental management systems | PMU to establish ESU and allocate staff and resources for effective operation | Complete ESU established and staff and resources allocated. | |
| | ESU updated project EMP and includes conditions of GOT approvals in BCD | Final GoT approval not yet obtained. Conditions associated with approval will be included in updated IEE but cannot be included in BCD. | Update IEE/EMP (and monitoring matrix) to include conditions of GoT approval |
| | BCD requires contractor to: (i) comply with applicable COEP; (ii) designate full-time EHSO, Deputy EHSO and CLO; (iii) implement monitoring and reporting plan; | Complete The BCD included the IEE and referred bidders to the requirements (including listed requirements) in the IEE. | |

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|---|---|--|---|
| | (iv) provide induction and training for workers (and community) as specified | | |
| | Contractor to prepare site-specific CEMP; | A contractor had yet to be engaged for TREP03 at the time of monitoring. | Ensure CEMP prepare by contractor prior to commencement of on-site works. |
| | CEMP reviewed and cleared by ESU prior to works commencing. | CEMP yet to be prepared at the time of monitoring | Ensure CEMP cleared by ESU prior to on-site works commencing |
| Complaints/grievances | CCP updated and GRM established; | Not yet complete | |
| | Procedure for accessing GRM disclosed; | Not yet complete | |
| | Grievance focal points (GFP) appointed; | Not yet complete | |
| | Contractor addresses relevant elements of CCP and GRM in CEMP; | CEMP yet to be prepared at the time of monitoring | Ensure CEMP cleared by ESU prior to on-site works commencing |
| | GRM registers established at site and PMU | Not yet complete | |
| | Niuafu'ou site consultation with Tonga Airports Limited and application of COEP 17. | Not yet complete | |
| Alien or invasive species / Local material sourcing | All materials, plant and equipment imported for the project to follow Quarantine Act and Quarantine regulations and requirements of Quarantine and Quality Management Division – MAFF | No materials, plant or equipment imported at time of monitoring. BCD (and draft CEMP) commits contractor to compliance with Quarantine Act and associated regulations. | Monitor compliance of imported material with Quarantine Act. |
| | Phytosanitary certificates obtained as required | No materials, plant or equipment imported at time of monitoring. | Monitor compliance of imported material with Quarantine Act. |
| | Locally sourced materials only obtained from sources agreed by resource/land owner | Material sources yet to be determined at the time of monitoring | Monitor material sources to ensure compliance. |
| | Locally sourced materials to comply with GOT laws and obtain permits and consents as required | Material sources yet to be determined at the time of monitoring | Monitor material sources to ensure compliance. |
| | Materials extraction plan to be prepared by contractor and approved by PMU. | Material sources yet to be determined at the time of monitoring | Monitor material sources to ensure compliance. |

| Project activity/ stage | Environmental Commitment | Current Status | Further Actions |
|---|---|--|---|
| Site selection - Visual and landscape impacts | Site selection, application of COEP 1 and COEP 14 | COEPs unable to be sourced at the time of monitoring (<i>since been obtained monitoring matrix will be updated in next reporting period</i>) | Update monitoring matrix and assess compliance. |
| | Careful selection of site away from inhabited areas. For sites close to residences (minigrids) ensure available land for buffer | Concept designs have located sites away from inhabited areas to the extent possible. | Monitor to ensure that, where possible, the maximum buffer is between the new installation and residences is maintained |
| | Retain boundary vegetation if possible or replant upon works completion. | Neither detailed design or on-site vegetation clearing commenced at the time of monitoring. | Monitor during detailed design and construction. |
| Land use changes | Site selection and application of COEP 1 | COEPs unable to be sourced at the time of monitoring (<i>since been obtained monitoring matrix will be updated in next reporting period</i>) | Update monitoring matrix and assess compliance. |
| | Timely and effective consultation | | |
| | Negotiation with land owners/lease holders | | |
| Clearing beyond marked areas - ecological | Care taken to only clear and remove trees as marked on approved plan; | Site clearing not commenced at the time of monitoring. | Monitor during site clearance |
| | Trees to be protected clearly marked on site | Site clearing not commenced at the time of monitoring. | Monitor during site clearance |
| Land acquisition/lease, asset removal/acquisition | Affected people will be compensated as per entitlement matrix in resettlement plan (RP) | | |
| | Application of COEP 3 | COEPs unable to be sourced at the time of monitoring (<i>since been obtained monitoring matrix will be updated in next reporting period</i>) | Update monitoring matrix and assess compliance. |
| | Consultation will be ongoing and transparent | | |

J Subproject environmental monitoring checklists

| TREP 01/02 –design and pre-construction | | | | Inspection Date: May - June 2020 | |
|--|--|--|--|----------------------------------|-----------------|
| Monitor(s) | | | | Inspection Time: | |
| Name: David Procter / Estrellita Fulivai | | Position: International Safeguards Expert / National Safeguards Expert | | Start time: NA | Finish time: NA |

| Item No | Environmental Commitment <i>(all commitments contained in the IEE)</i> | Source | Findings (OK, NC or N/A) | Comments | Evidence |
|---|---|--------|-----------------------------|---|---|
| Design and plant/equipment selection – climate change | | | | | |
| 1.1 | Proposed siting has addressed climate change risk | IEE | OK | Increased flooding as a result of storm surges is expected to the primary climate change risk associated with sub-project siting. TREP 1 is located at the Popua Power Station which is adjacent to the lagoon on Tongatapu and may be exposed to flooding from storm surges. The site was selected as it allows co-location of the BESS with the Popua Power Station and provides significant technical advantages. To mitigate against the risk of flooding the BCD require that <i>the footings for the BESS must be at least 1.5 m above the local ground level</i> . The intent of this requirement was to maintain the BESS at the same height as the power station. However, the location of the BESS has since been moved and the design of the TREP 01 BESS foundations specifies that the foundations be raised 1000mm from natural grade level which is sufficient to maintain the same height as the power station. TREP 2 is located behind the TPL operations office and close to the Villa IPP 2 MW solar power plant. It is approx. 500m from the lagoon and is not exposed to storm surges. | Section 6 Appendix B Tender documents General_TREP-01_1106_Construction and foundation details _v3_20200518 |
| 1.2 | Project detailed design and bidding packages to ensure equipment selected is resilient to climate change. | IEE | OK | The BCD state that the <i>BESS shall be designed and installed such that the specified performance (including internal environmental requirements) is achieved for full range of environmental conditions at site for the full design life</i> . The BCD lists environmental conditions that must be considered and include those that are predicted to be influenced by climate change (e.g. temperature, rainfall, wind, storms and cyclones, inundation from flood, storm surges and overtopping wave events) | Section 6 Appendix B Tender documents |
| 1.3 | Plant/equipment selected for low emissions; | IEE | OK | No equipment associated with TREP 01/02 produces emissions during operation. Consideration has not be given to lifecycle emissions of plant and equipment. | |
| 1.4 | Transformers and other electrical system equipment to be free of polychlorinatedbiphenyls (PCB’s). | IEE | OK | Section 6 (Employer Requirements) Appendix B (Power Station BESS for Grid Stability Support) specifies compliance with AS/NZS 60076.11 (IEC 60076) Power transformers – dry type transformers. Detailed design proposes to use oil cooled Celduc transformers. However, the transformers use mineral oil and do not contain PCB’s. The proposed transformers are sealed and banded and pose a very low contamination risk. | Section 6 Appendix B Tender documents |
| Project environmental management systems | | | | | |
| 2.1 | PMU to establish ESU and allocate staff and resources for effective operation | IEE | OK | PMU has established an ESU. Members of PMU-ESU are the TPL Project Managers, TREP Project Manager, MEIDECC Project Manager, PMU Social Safeguard, and CSC Environmental and Social Specialists. Estrellita Fulivai has been appointed as the National social and environmental safeguards specialist to support the PMU | |
| 2.2 | ESU updated project EMP and includes conditions of GOT approvals in BCD | IEE | NA | Final GoT approval not yet obtained (ESU in contact with Tongan Dept of Environment). Conditions associated with approval will be included in updated IEE but cannot be included in BCD. | |
| 2.3 | BCD requires contractor to: (v) comply with applicable COEP; | IEE | OK | The BCD included the IEE and referred bidders to the requirements of the IEE. Akuo have designated an HSE manager and Site HSE manager for TREP 01 / 02. | Section 6 Appendix C Tender documents TREP 01-Akuo-Organization Chart |

| | | | | | |
|---|---|-----|----|--|--|
| | (vi) designate full-time EHSO, Deputy EHSO and CLO; (vii) implement monitoring and reporting plan; (viii) provide induction and training for workers (and community) as specified | | | The draft CEMP provides a monitoring and reporting plan for environmental aspects and the Health and Safety Management System Plan provides a monitoring and reporting plan for health and safety aspects. The draft CEMP commits Akuo to the provision of induction and training for workers. | Draft Akuo CEMP HBK-ENV-MSP-042 Akuo Health and Safety Management System Plan HBK-H&S-MSP-000 |
| 2.4 | Contractor to prepare site-specific CEMP; | IEE | NA | The contractor, Akuo Energy, has prepared a draft CEMP for TREP 01 / 02. The CEMP is currently being reviewed by the ESU. | Draft Akuo CEMP HBK-ENV-MSP-042 |
| 2.5 | CEMP reviewed and cleared by ESU prior to works commencing. | IEE | NA | The CEMP is currently being reviewed by the ESU and works will not commence until the CEMP is cleared. | |
| Complaints/grievances | | | | | |
| 3.1 | CCP updated and GRM established; | | - | Not yet complete | |
| 3.2 | Procedure for accessing GRM disclosed; | | - | Not yet complete | |
| 3.3 | Grievance focal points (GFP) appointed; | | - | Not yet complete | |
| 3.4 | Contractor addresses relevant elements of CCP and GRM in CEMP; | | | Draft CEMP under review | Draft Akuo CEMP HBK-ENV-MSP-042 |
| 3.5 | GRM registers established at site and PMU | | - | Not yet complete | |
| 3.6 | Niuafo'o site consultation with Tonga Airports Limited and application of COEP 17. | | | NA – for TREP 03 – IEE error | |
| Alien or invasive species / Local material sourcing | | | | | |
| 4.1 | All materials, plant and equipment imported for the project to follow Quarantine Act and Quarantine regulations and requirements of Quarantine and Quality Management Division – MAFF | IEE | NA | Draft CEMP commits Akuo to compliance with Quarantine Management Act. Further monitoring required to ensure compliance. | Draft Akuo CEMP HBK-ENV-MSP-042 |
| 4.2 | Phytosanitary certificates obtained as required | IEE | NA | No materials, plant or equipment imported at time of monitoring. | |
| 4.3 | Locally sourced materials only obtained from sources agreed by resource/land owner | IEE | NA | Material sources yet to be determined at time of monitoring. | |
| 4.4 | Locally sourced materials to comply with GOT laws and obtain permits and consents as required | IEE | NA | Material sources yet to be determined at time of monitoring. | |
| 4.5 | Materials extraction plan to be prepared by contractor and approved by PMU. | IEE | NA | Material sources yet to be determined at time of monitoring. Monitoring required to ensure preparation of plan and approval by PMU prior to extraction. | |
| Site selection - Visual and landscape impacts | | | | | |
| 5.1 | Site selection, application of COEP 1 and COEP 14 | IEE | NA | COEP's unable to be sourced at time of monitoring. | |
| 5.2 | Careful selection of site away from inhabited areas. For sites close to residences (minigrids) ensure available land for buffer | IEE | OK | TREP 01 located at Popua Power Station and although close to inhabited areas, is not expected to result in additional impact to residences (ie no additional noise generation or visual impacts). TREP 02 located adjacent to The Villa solar installation and existing TPL office and store. The closest residence is more than 150m away. | General_TREP-01_1112_Site Location_v0_20191209 General_TREP-02_1103_Site layout_v0_20200327 |
| 5.3 | Retain boundary vegetation if possible or replant upon works completion. | IEE | OK | Neither TREP 01 nor 02 is anticipated to require the clearance of boundary vegetation. | General_TREP-01_1112_Site Location_v0_20191209 General_TREP-02_1103_Site layout_v0_20200327 |
| Land use changes | | | | | |
| 6.1 | Site selection and application of COEP 1; | IEE | NA | COEP's unable to be sourced at time of monitoring. | |
| 6.2 | Timely and effective consultation | | NA | | |
| 6.3 | Negotiation with land owners/lease holders | | NA | | |
| Clearing beyond marked areas - ecological | | | | | |
| 7.1 | Care taken to only clear and remove trees as marked on approved plan; | IEE | NA | Site clearing not commenced at the time of monitoring. | |
| 7.2 | Trees to be protected clearly marked on site | IEE | NA | Site clearing not commenced at the time of monitoring. | |
| Land acquisition/lease, asset removal/acquisition | | | | | |
| 8.1 | Affected people will be compensated as per entitlement matrix in resettlement plan (RP) | | NA | | |
| 8.2 | Application of COEP 3 | IEE | NA | COEP's unable to be sourced at time of monitoring. | |
| 8.3 | Consultation will be ongoing and transparent | | NA | | |

| | | | |
|--|--|----------------------------------|-----------------|
| TREP 03 –design and pre-construction | | Inspection Date: May - June 2020 | |
| Monitor(s) | | Inspection Time: | |
| Name: David Procter / Estrellita Fulivai | Position: International Safeguards Expert / National Safeguards Expert | Start time: NA | Finish time: NA |

| Item No | Environmental Commitment <i>(all commitments contained in the IEE)</i> | Source | Findings (OK, NC or N/A) | Comments | Evidence |
|---|--|--------|-----------------------------|---|---|
| Design and plant/equipment selection – climate change | | | | | |
| 1.5 | Proposed siting has addressed climate change risk | IEE | OK | The siting of projects for TREP 03 Lots 1 and 2 have considered the risks associated with climate change (primarily flooding caused by storm surges) to the extent possible. The solar PV / BESS for Lot 1 on ‘Eua and Vava’u are located adjacent to the existing power stations and are more than 800 m from the shoreline and not expected to be exposed to storm surges. The solar PV / BESS locations for Lot 2 on Niuafo'ou, O'ua, Tungua, Kotu, Mo'unga'one are also located inland from the coast with the closest site approximately 100 m from the coast on Kotu. None are anticipated to be exposed to storm surges. The distribution components of Lot 2 (LV lines, meter boxes) are located to service existing villages and residences and may be exposed to storm surges. | Tender documents - Section 6 Employers requirements Tender documents - Section 6 Employers requirements Appendix E - (LOT 2) Distribution system |
| 1.6 | Project detailed design and bidding packages to ensure equipment selected is resilient to climate change. | IEE | OK | The BCD state that the <i>BESS shall be designed and installed such that the specified performance (including internal environmental requirements) is achieved for full range of environmental conditions at site for the full design life.</i> The BCD lists environmental conditions that must be considered and include those that are predicted to be influenced by climate change (e.g. temperature, rainfall, wind, storms and cyclones, inundation from flood, storm surges and overtopping wave events). In addition the BCD for the solar PV arrays state that <i>the array frames will be generally installed in areas relatively close to the ocean with high salt spray (and thus potential for corrosion), cyclonic wind conditions, and storm surges. As a result, the array frame must be designed in such a way as to be able to withstand these environmental impacts.</i> | Tender documents - Section 6 Appendix B – BESS Tender documents - Section 6 Appendix C – Renewable Energy Solar PV array requirements Tender documents - Section 6 Appendix D – (LOT2 only) Powerhouse Tender documents - Section 6 Appendix E – (LOT2 only) Distribution system |
| 1.7 | Plant/equipment selected for low emissions; | IEE | OK | No plant/equipment associated with TREP 03 produces emissions during operation. Consideration has not be given to lifecycle emissions of plant and equipment. | |
| 1.8 | Transformers and other electrical system equipment to be free of polychlorinatedbiphenyls (PCB’s). | IEE | OK | The BCD specifies compliance with AS/NZS 60076.11 (IEC 60076) Power transformers – dry type transformers and that pole mounted stepdown transformers shall use <i>insulating oil to AS 1767.1 with no bio-oils.</i> | Tender documents - Section 6 Appendix B – BESS Tender documents - Section 6 Appendix E – (LOT2 only) Distribution system |
| Project environmental management systems | | | | | |
| 2.6 | PMU to establish ESU and allocate staff and resources for effective operation | IEE | OK | PMU has established ESU and appointed Estrellita Fulivai as the national social and environmental safeguards specialist to support the PMU | |
| 2.7 | ESU updated project EMP and includes conditions of GOT approvals in BCD | IEE | NA | Final GoT approval not yet obtained (ESU in contact with Tongan Dept of Environment). Conditions associated with approval will be included in updated IEE/EMP but cannot be included in BCD. | |
| 2.8 | BCD requires contractor to: (ix) comply with applicable COEP; (x) designate full-time EHSO, Deputy EHSO and CLO; (xi) implement monitoring and reporting plan; (xii) provide induction and training for workers (and community) as specified | IEE | OK | The BCD included the IEE and referred bidders to the requirements of the IEE. Further monitoring (eg of Infratec’s CEMP required to ensure compliance. | Tender documents - Section 6 Appendix F Tender documents - IEE |
| 2.9 | Contractor to prepare site-specific CEMP; | IEE | NA | Infratec yet to prepare CEMP | |
| 2.10 | CEMP reviewed and cleared by ESU prior to works commencing. | IEE | NA | Infratec yet to prepare CEMP | |
| Complaints/grievances | | | | | |
| 3.7 | CCP updated and GRM established; | | - | Not yet complete | |
| 3.8 | Procedure for accessing GRM disclosed; | | - | Not yet complete | |
| 3.9 | Grievance focal points (GFP) appointed; | | - | Not yet complete | |

| | | | | | |
|---|---|-----|----|--|--|
| 3.10 | Contractor addresses relevant elements of CCP and GRM in CEMP; | | | Infratec yet to prepare CEMP | |
| 3.11 | GRM registers established at site and PMU | | - | Not yet complete | |
| 3.12 | Niuafo'o site consultation with Tonga Airports Limited and application of COEP 17. | | - | Not yet complete | |
| Alien or invasive species / Local material sourcing | | | | | |
| 4.6 | All materials, plant and equipment imported for the project to follow Quarantine Act and Quarantine regulations and requirements of Quarantine and Quality Management Division – MAFF | IEE | NA | Infratec yet to prepare CEMP | |
| 4.7 | Phytosanitary certificates obtained as required | IEE | NA | No materials, plant or equipment imported at time of monitoring. | |
| 4.8 | Locally sourced materials only obtained from sources agreed by resource/land owner | IEE | NA | Material sources yet to be determined at time of monitoring. | |
| 4.9 | Locally sourced materials to comply with GOT laws and obtain permits and consents as required | IEE | NA | Material sources yet to be determined at time of monitoring. | |
| 4.10 | Materials extraction plan to be prepared by contractor and approved by PMU. | IEE | NA | Material sources yet to be determined at time of monitoring. Monitoring required to ensure preparation of plan and approval by PMU prior to extraction. | |
| Site selection - Visual and landscape impacts | | | | | |
| 5.4 | Site selection, application of COEP 1 and COEP 14 | IEE | NA | COEP's unable to be sourced at time of monitoring. | |
| 5.5 | Careful selection of site away from inhabited areas. For sites close to residences (minigrids) ensure available land for buffer | IEE | OK | Lot 1 on 'Eua and Vava'u are located adjacent to the existing power stations and, although close to residences, neither are anticipated to result in any significant disturbance to amenity. Several Lot 2 sites are located in close proximity to residences (it is noted that none of the equipment proposed to be installed will produce significant noise emissions which limits the potential impacts to nearby residences). The mini-grid systems proposed for Lot 2 will also necessarily be located close to residences however, with the exception of Niuafo'ou the majority of the system will be underground. Further monitoring is required during detailed design to ensure that, where possible, the maximum buffer is between the new installation and residences is maintained. | Tender documents - Section 6 Appendix K – drawings |
| 5.6 | Retain boundary vegetation if possible or replant upon works completion. | IEE | NA | Detailed design yet to commence at time of monitoring. | |
| Land use changes | | | | | |
| 6.4 | Site selection and application of COEP 1; | IEE | NA | COEP's unable to be sourced at time of monitoring. | |
| 6.5 | Timely and effective consultation | | - | Not yet complete | |
| 6.6 | Negotiation with land owners/lease holders | | - | Not yet complete | |
| Clearing beyond marked areas - ecological | | | | | |
| 7.3 | Care taken to only clear and remove trees as marked on approved plan; | IEE | NA | Site clearing not commenced at the time of monitoring. | |
| 7.4 | Trees to be protected clearly marked on site | IEE | NA | Site clearing not commenced at the time of monitoring. | |
| Land acquisition/lease, asset removal/acquisition | | | | | |
| 8.4 | Affected people will be compensated as per entitlement matrix in resettlement plan (RP) | | - | Not yet complete | |
| 8.5 | Application of COEP 3 | IEE | NA | COEP's unable to be sourced at time of monitoring. | |
| 8.6 | Consultation will be ongoing and transparent | | - | Not yet complete | |

K Covid 19 Response Plan

3.5 6. COVID-19 Health and Safety

L 6.1 Health and safety of workers and communities

M For COVID-19 Hygiene and Infection Control all workers and staff on TREP are advised to avoid catching or spreading germs by practising good hygiene and help slow the spread of COVID-19.

N This means:

O • wash your hands often with soap and water. This includes before and after eating and after going to the toilet

P • use alcohol-based hand sanitisers when you can't use soap and water

Q • avoid touching your eyes, nose and mouth

R • clean and disinfect surfaces you use often such as benchtops, desks and doorknobs

S • clean and disinfect objects you use often such as mobile phones, keys, wallets and work passes

T • use tap and go instead of cash where possible

U • increase the amount of fresh air by opening windows or changing air conditioning

V The following physical distancing measures will be used as mitigation strategies to protect workers and the wider community:

W • Reducing numbers of staff on site and limiting physical interactions where possible.

X • stop shaking hands to greet others

Y • avoid non-essential meetings. If needed, hold meetings via video conferencing or phone call

Z • put off large meetings to a later date

AA • hold essential meetings outside in the open air if possible

- BB • promote good hand, sneeze and cough hygiene
- CC • provide alcohol-based hand rub for all staff
- DD • eat lunch at your desk or outside rather than in the lunch room
- EE • regularly clean and disinfect surfaces that many people touch
- FF • open windows or adjust air conditioning for more ventilation
- GG • limit food handling and sharing of food in the workplace
- HH • avoid non-essential travel
- II • promote strict hygiene among food preparation

JEIA Approval and Building Permits

(Place holder for next reporting period, to include TREP-01 and TREP-02 approval records)