**Training Schedule and Content**

**SOLAR PV MINI-GRID TRAINING**

**VAVA’U ISLAND GROUP**

**28th – 30th April 2021**

**OBJECTIVE.**

The objective of this training is to bridge the knowledge gap and develop specific skills for enabling relevant stakeholders, islanders and plant operators/technicians to appreciate challenges, techno-commercial feasibility and financial viability of setting up the Solar Mini-Grid in Tonga, as well as analyze various financial instruments, government schemes/policies/regulations, tools, business models, risk mitigation mechanisms etc., that will be adopted and deployed by the Government in the Proposed TREP Mini-Grid Project at Vava’u. The training program will include an overview of concepts, components and safety with a specific focus on technical standards of solar mini-grids as well as anticipated business models.

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**DAY 1 – 28th April 2021**

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| **Theme: Setting the Scene and Mini-grid Due Diligence Checks + ISA webinar**  |
| TIME | ACTIVITIES | **PRESENTER**  | **FACILITATOR**  |
| 0830-0900 | **REGISTRATION** |
|  **Session 1** | OPENING SESSION |
| **0900-0905** | Opening Prayer | Paea Tauaika | DOE |
| **0905-0910** | Welcome Remarks | Ofa Sefana |
| **0910-0915** | Remarks from SPC | Jesse Benjamin, SPC PCREEE |
| **0915 - 0920** | Opening Remarks | Dr Tevita Tukunga,  |
| **Session 2** | SETTING THE SCENE |
| **0920 - 0940** | Global energy scenario & Sustainable development with RE technologies | Ofa Sefana | DoE |
| **0940 - 10000** | Mini-grid Development in the Pacific | Sione Misi (PCREEE) |
| **1000 - 1030** | Mini-grids and TERM Plus | Dr Tevita Tukunga |
| **1030 -1100** | MORNING TEA |
| **Session 3** | BASICS OF SOLAR PV MINI-GRIDS |  |  |
| **1100 - 1130** | Different Solar PV technologies, components & Metering arrangements | Samuela Matakaiongo |  |
| **1130 - 1200** | Customer Connections, household installations and wiring standards | Ofa Sefana |  |
| **1200 - 1230** | Q&A  |  |  |
| **1230 -1400** | LUNCH |  |  |
| **Session 4** | DESIGNING MINI-GRIDS |  |  |
| **1400-1430** | Site Feasibility assessment and Technical Due Diligence for Solar PV Mini gird implementation | Sione Tausinga |  |
| **1430-1500** | Load assessment & Basic Design exercise for micro/mini grid | Samuela Matakaiongo |  |
| **1500-1530** | AFTERNOON TEA |  |  |
| **Session 5** | OPERATION AND MAINTENANCE OF SOLAR PV |  |  |
| **1530 - 1600** | Energy generation analysis & Performance indicators of solar PV plant/mini grid – | Laulaupea’alu |  |
| **1600 - 1630** | Managing and operating a Solar Mini-grid- Experience from TPL | TPL Manager – Vava’u  |  |
| **1630 - 1700** | RECESS |  |  |
| **Session 6** | INTERNATIONAL SOLAR ALLIANCE (ISA) TRAINING  |  |  |
| **1700- 1720** | Introduction to Micro Grid | Michael Callahan |  |
| **1720 - 1800** | Operation and Maintenance of Microgrid | Bruno Gaiddon |  |
| **1800 - 1830** | Q&A |  |  |
|  **END OF DAY 1** |

**DAY 2 – 29TH April 2021**

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| **Theme: ENABLING ENVIRONMENT FOR SOLAR PV MIGRO-GRID**  |
| TIME | ACTIVITIES | **PRESENTER**  | **FACILITATOR**  |
|  **Session 7** |  **UNDERSTANDING THE POLICY, LEGISLATIVE AND REGULATORY FRAMEWORK** |
| 0900-0930 | Grid integration & policy framework of mini grid in Tonga | Ofa Sefana | DOE |
| 0930 - 1000 | Update on the Energy Bill and its relation to micro-grid in Tonga  | Dr. Tevita Tukunga |  |
| 1000 - 1030 | The Role of the Regulator – tariff setting  | Mr. Kilisimasi Masi - TEC |  |
| **1030- 1100** | **MORNING TEA** |
| **Session 8** | **BUSINESS MODEL FOR SOLAR PV MICRO-GRID** |
| **1100 - 1130** | Associated Risks identification and its mitigation techniques for solar mini grid | Sione Tausinga | DoE |
| **1130 -1200** | Project Costing, Business Models & Contracting Framework | Akau |  |
| **1200 - 1230** | IPPs and PPAs – Basics | Jesse Benjamin |  |
| **1230-1400** | LUNCH |  |  |
| **Session 9** | Capacity Building and Future Opportunities |  |  |
| **1400 - 1430** | Status of the National Certificate on Sustainable Energy (NCSE) L 1- L4  | Mr Paea Tauaika - PCREEE |  |
| **1430 - 1500** | PCREEE & other Supports on Solar PV Mini-grid | Mr Jesse Benjamin |  |
| **1500 – 1530** | Way Forward | Dr. Tevita Tukunga |  |
| **1530 - 1600** | AFTERNOON TEA |  |  |
|  **END OF DAY 2** |

**DAY 3 – 30TH April 2021**

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| **Theme: PRACTICAL WORKS AND SITE VISITS**  |
| TIME | ACTIVITIES | **PRESENTER**  | **FACILITATOR**  |
|  **Session 10** | **PUTTING THEORY INTO PRACTICE**  |
| 0900- 1200 | Practical works and Site Visits to TPL Power plants and ‘Otea and Falevai Islands Freezer Projects. | NA | DOE |
|  **END OF DAY 3 AND END OF TRAINING**  |

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