



Empowering Vava'u Communities: Accelerating Energy Efficiency and Renewable Energy Goals through Local Engagement

Neiafu, Vava'u | 27 Nov 2024

What is PCREEE? – Pacific Centre for Renewable Energy and Energy Efficiency

- Established in 2017
(office based in Tonga)
- Going 8 years now
- UNIDO, Austria, Norway
& NZ funding support



BUSINESS PLAN 2020-2030

Pacific Centre for Renewable
Energy and Energy Efficiency



Four (4) Strategic Areas

- **Programme 1. RE&EE Business Start-Up and Entrepreneurship Support**
- **Programme 2. RE&EE for Sustainable Mobility**
- **Programme 3. RE Mini-grids**
- **Programme 4. Energy Efficiency Investment**



Support to PICs

1. Capacity Buildings Program
2. Energy Policy Development – (incl. guidelines /standards)
3. Energy Forum, Awareness
4. Development/review of Concept Note and Project Proposal.

Highlight of Experiences

Programme 1. RE&EE Business Start-Up and Entrepreneurship Support

a) Supported the Development AND Delivery of National Qualifications in Sustainable Energy



- NSCE Level 1 & 2 successfully started on the 12 September 2022 with 20 students (71% female, 29% male) registered under Level 1 and 30 students for Level 2 (21% female, 79% male).



- Certificate Level 3 successfully registered in Tonga 2023.
- Next step is for TIST to seek accreditation from TNQAP to deliver these registered Level 3 courses
- Development of SE National Certificates Level 4 is underway.
- Hopes to extend the qualifications to Diploma level in the future.

b. Support the Productive Use of Energy [20 – 30%]



At the Solomon Islands:

- One rural community reached out to PCREEE for funding assistance to purchase solar freezer systems that could be used to store their catches /fish for sale at the markets in Honiara.
- PCREEE provided subsidy ~ 30% of the total cost.



c. Internship Opportunities



Tiueti Sisilia Fangupo

Ms. Tiueti Fangupo completed her 6 weeks Summer Internship with the PCREEE in February 2019. She was a Structural Engineering student from the University of Technology, Auckland, NZ. Tiueti started her Summer Internship in December 2018 and her internship included working with the Tonga Department of Energy exposing her to some of the small scale and community-based Renewable Energy projects that the department is working on.

Intern



Sione Folau

Mr. Sione Folau was a Master of Science in Climate Change student from the Pacific Centre for Environment and Sustainable Development (PaCE-SD) of the University of the South Pacific. Sione completed 3 weeks with PCREEE in March 2018, doing research for his thesis on the topic – Carbon Footprint Mitigation Strategies for the Kingdom of Tonga. The research is based on Tonga's Energy Sector. Sione worked closely with the PCREEE team together with the Tonga Department of Energy and was grateful for their inputs to his research.

Intern

Highlight of Experiences

Programme 2. RE & EE for Sustainable Mobility

- Supported the development of Regional E-mobility Policy – started rolling out in 2021.
- Supported the development of EV standards and guidelines in [ADB-funded project and managed by PRIF)
- Supported the demonstration of EV technologies and business services.



Highlight of Experiences (continue)

Programme 3. RE Mini-Grids

- Supported with capacity programs and trainings on mini-grids maintenance and operation.
- Supported the development of standards and guideline for Minigrids
- Conducted Feasibility Study and National Mini-Grid awareness, information and promotion campaign.



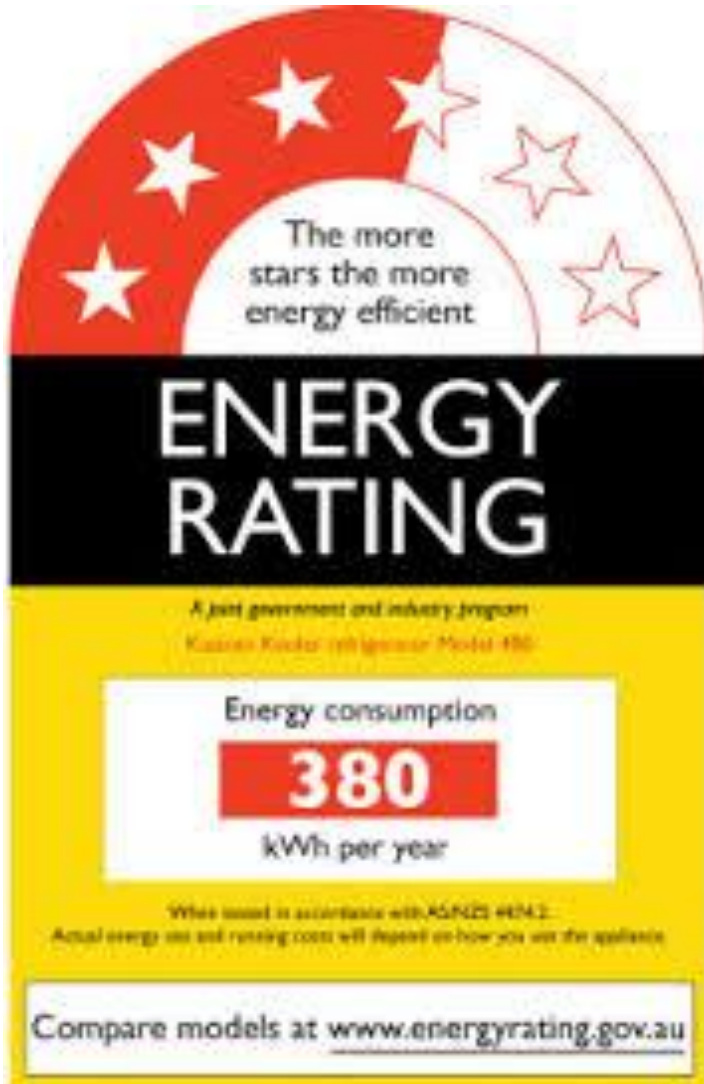
Highlight of Experiences

Programme 4. Energy Efficiency Investment

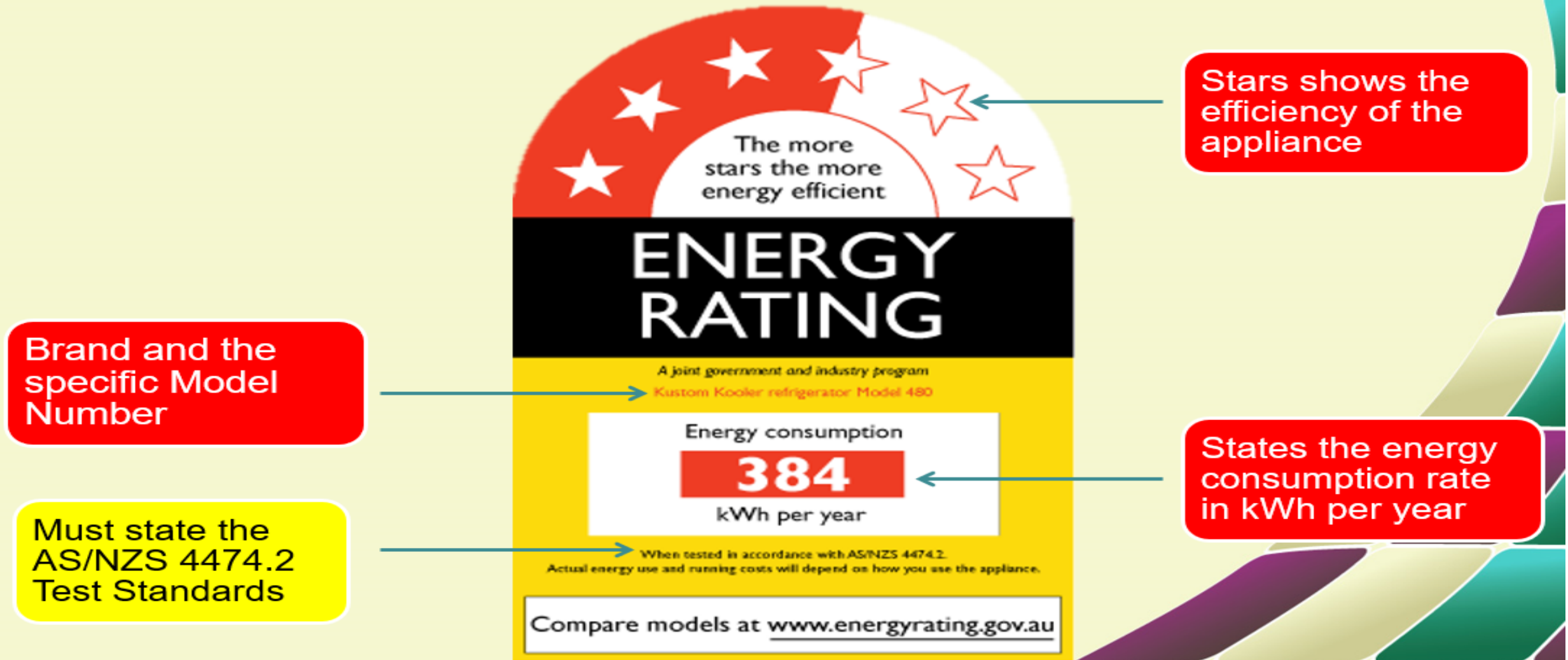
- Supported the Pacific Island Countries with operationalizing the Energy Efficiency Legislations – such as the Minimum Energy Performance Standards and Labelling regulation.
- Supported the national energy forum /events



Minimum Energy Performance Standards & Labelling [MEPSL] program





Identifying Energy Rating Labels



THE ENERGY RATING LABEL

Calculating Cost to Run [Compare the labels on two similar sized fridges]:

- Annual Cost to Run = Energy Consumption (kWh) x Electricity Tariff (TOP/kWh)
- **Example** – Kapau fie fakatau ha’o ‘aisi fo’ou ‘I Tonga, pea ko e totongi ‘o e ‘uhila ki he ‘iuniti (kWh) ko e TOP\$1.10

	‘Aisi 1		‘Aisi 2	
Lahi e fetu’u he Leipolo	Fetu’u e 3		Fetu’u e 6	
Lahi ‘o e fakamole ki he ‘aisi takitaha	542 kWh x \$1.10 = \$596 .20 ki he ta’u		318 kWh X \$1.10 = \$349. 80 ki he ta’u	



Malo 'aupito