

# Capacity Building and Awareness Program on Sustainable Energy for Ha'apai Outer Islands



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

- Established in 2017  
(office based in Tonga)
- Going 9 years now
- UNIDO, Austria,  
Norway, UK & NZ  
funding support





# BUSINESS PLAN 2020-2030

Pacific Centre for Renewable  
Energy and Energy Efficiency



## 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.

# 1. 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.





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



### 1. Subsidized the purchase of PUE technologies

- One rural community in the Solomon Islands 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.





### 3. 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



#### Annie Marie Malolo

The PCREEE is pleased to welcome Ms Annie Marie Malolo who is on a 6 months internship with the PCREEE that started on 14 th November 2024. Ms Malolo is a Graduate of the University of the South Pacific, majoring on Information Systems and Geography. She is a keen Taekwondo enthusiast and loves to do further studies on climate change.



NEW ZEALAND  
FOREIGN AFFAIRS & TRADE  
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UKaid  
Department for International Trade  
energy  
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PCREEE  
Pacific Centre for Renewable Energy and Energy Efficiency  
S441, Centre of Excellence for Pacific Sustainable Energy, Water, Industry and Innovation

# 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.





# Example of E-mobility Demo projects in the PICs

## 1. Nauru Electric Bus





2. Tuvalu





### 3. Samoa





## 4. Cook Islands





# 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.

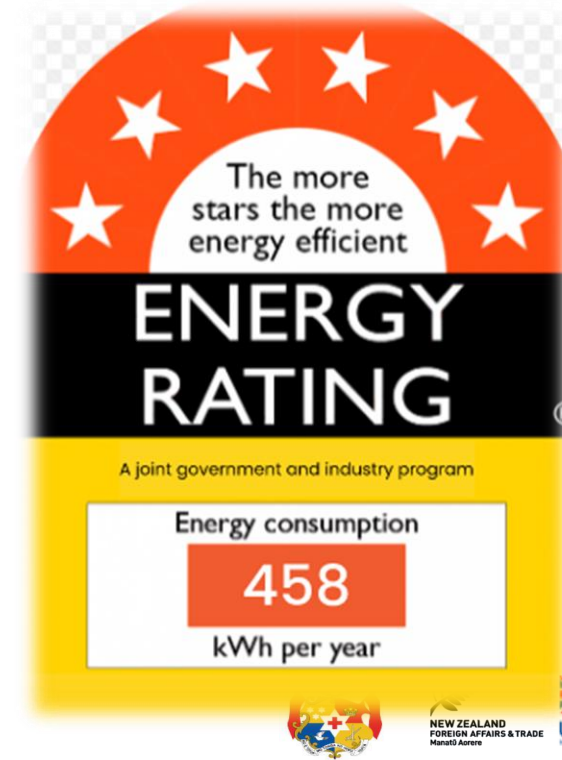




# Highlight of Experiences

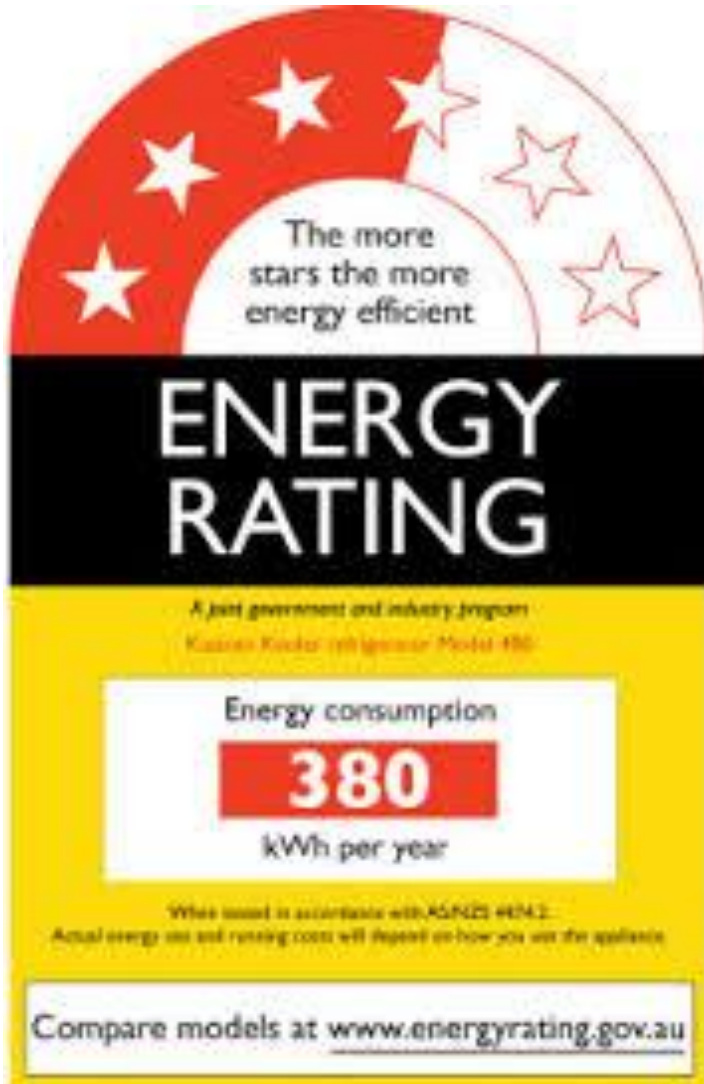
## Programme 4. Energy Efficiency Investment

- 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



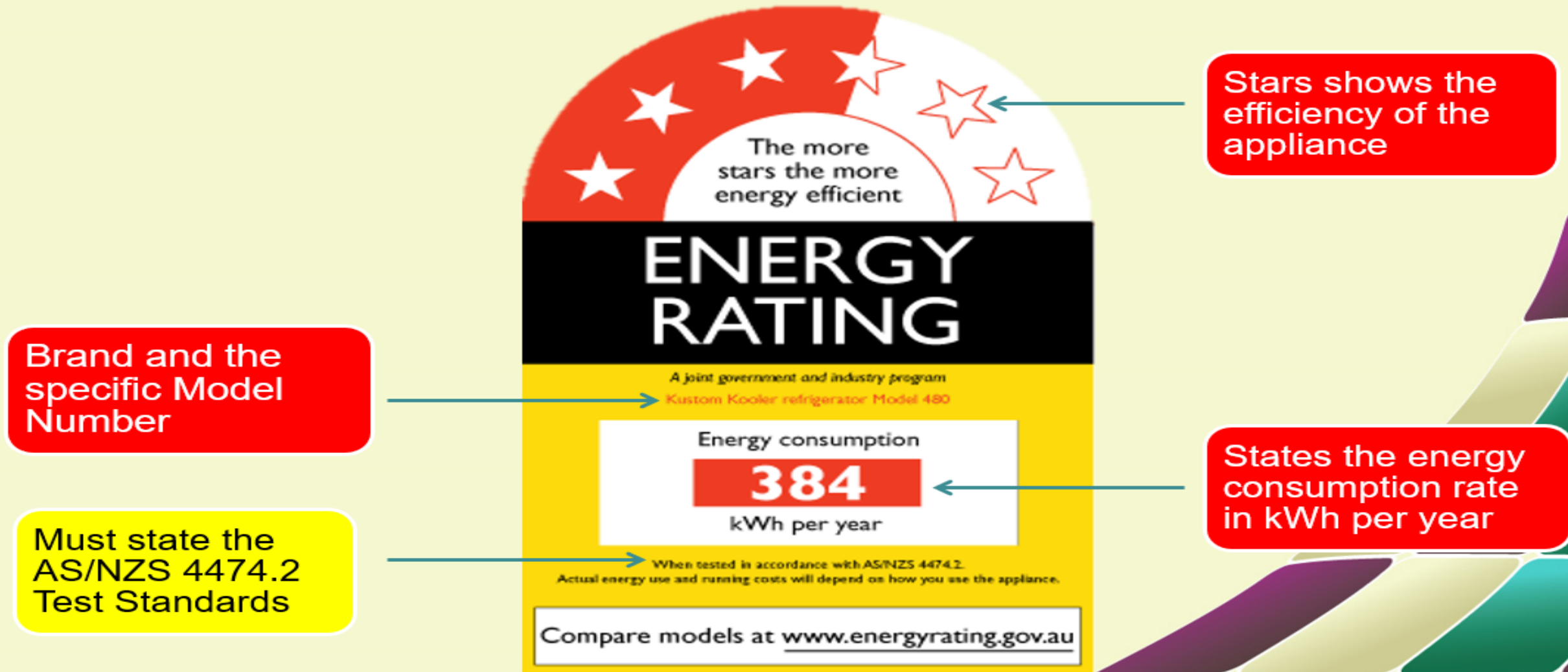


# Minimum Energy Performance Standards & Labelling [MEPSL] program





# 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 = <b>\$596 .20 ki he ta’u</b>	318 kWh X \$1.10 = <b>\$349. 80 ki he ta’u</b>





# Malo 'aupito