



**SPC**  
Secretariat  
of the Pacific  
Community



**Australian Government**  
**Department of Industry and Science**



# **APPLIANCE LABELLING AND STANDARDS IN THE PACIFIC ISLANDS**



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**Vienna, Austria**



**COPENHAGEN CENTRE  
ON ENERGY EFFICIENCY**  
SE4ALL EE HUB



[www.energyefficiencycentre.org](http://www.energyefficiencycentre.org)

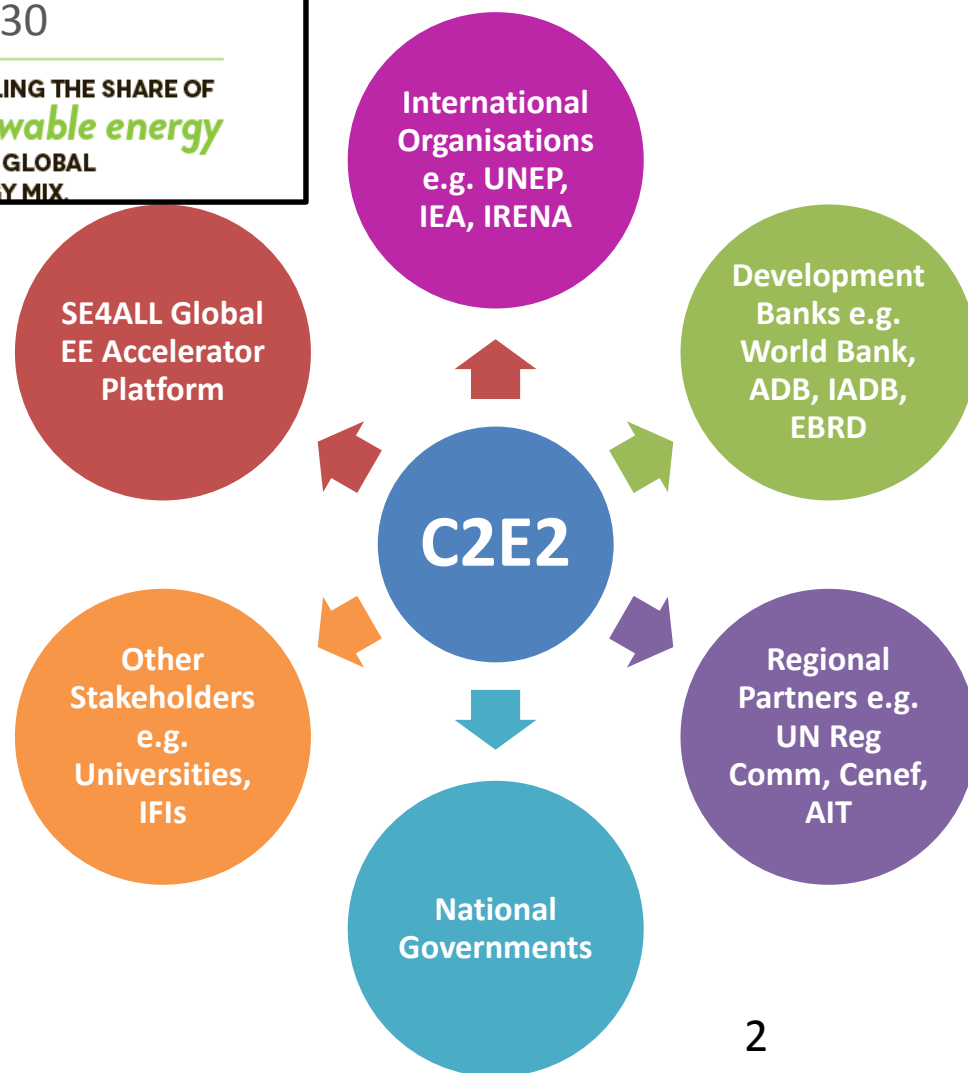
## One Goal - Three Objectives

Achieving Sustainable Energy for All by 2030

 **ENSURING**  
*universal access*  
TO MODERN ENERGY  
SERVICES.

 **DOUBLING THE GLOBAL  
RATE OF IMPROVEMENT IN**  
*energy  
efficiency.*

 **DOUBLING THE SHARE OF**  
*renewable energy*  
IN THE GLOBAL  
ENERGY MIX.

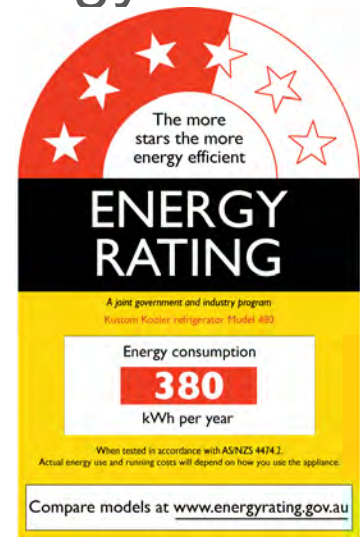


# OUTLINE

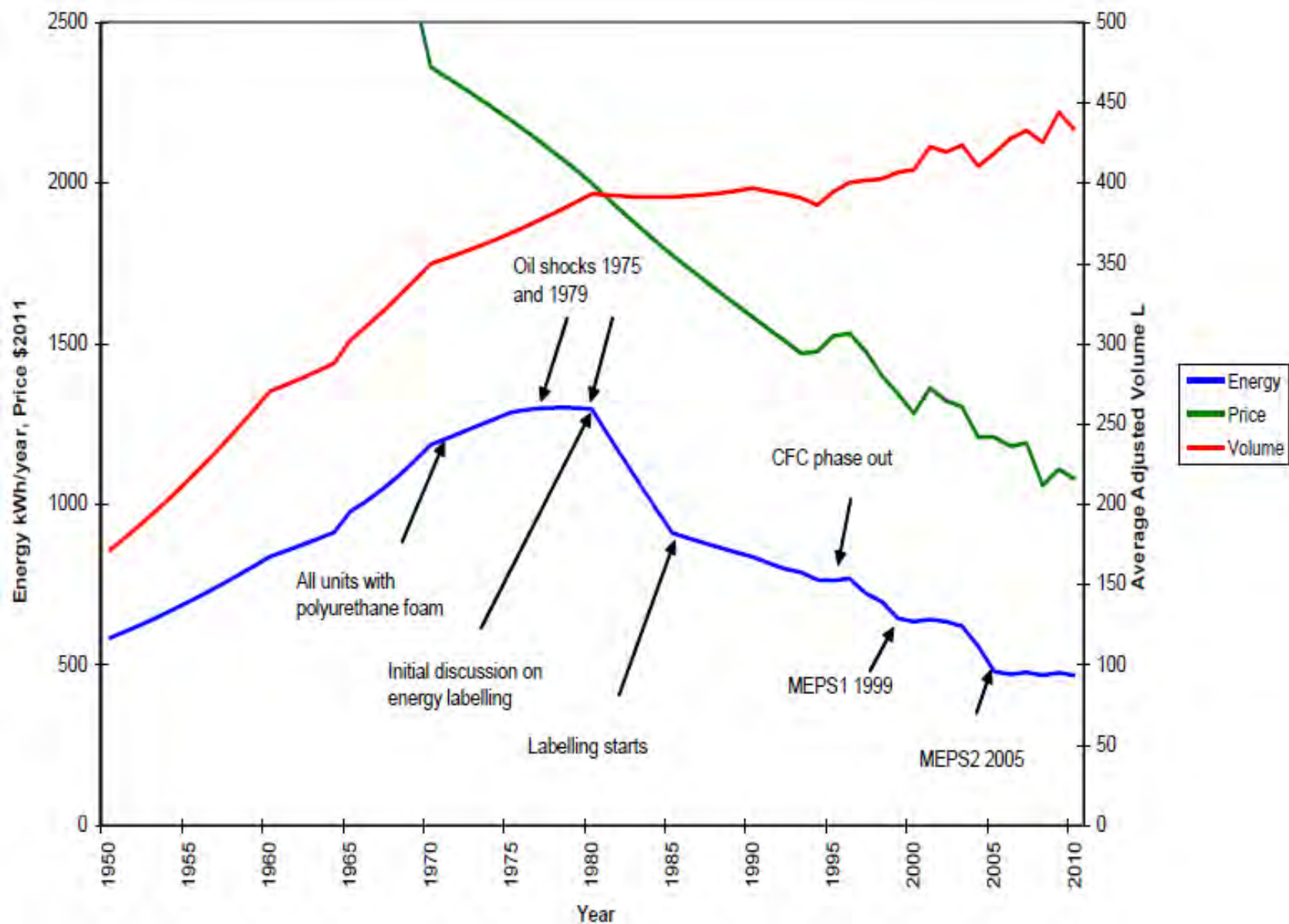
- Standards and Labelling (S&L) Program in Australia and New Zealand
- Benefits of adopting standards and labelling in the Pacific Island Countries and Territories (PICTs)
- Pacific Appliance Standards and Labelling (PALS) Program
- Key Success Factors
- Lessons Learnt

# STANDARDS AND LABELLING OF APPLIANCES IN AUSTRALIA AND NEW ZEALAND

- Minimum Energy Performance Standards (MEPS) - 'the stick'
- Energy Labels - 'the carrot'
- Well established S&L Program
- Supported by a comprehensive Monitoring, Verification and Enforcement (MV&E) Program
- [www.energyrating.gov.au](http://www.energyrating.gov.au)
- Energy Labels can also be used to promote energy efficiency through:
  - Government Procurement Policies
  - Government Grants or Rebate Programmes
  - Utility-led Rebates Programmes
  - Fiscal incentives



# AUSTRALIAN FRIDGE CONSUMPTION





# TEST DATA FROM A FRIDGE FOR SALE IN THE PACIFIC

Energy Test Period	Test Duration h	Energy Wh/24 hrs	Energy kWh/year	Exceed Label	Comment
1	8.43	3450	1259	115%	Mode 2 high power
2	10.44	3668	1339	129%	Mode 2 high power
3	9.45	1889	690	18%	Significant period of Mode 1 low power
4	8.86	3439	1255	115%	Mode 2 high power
5	8.19	3561	1300	122%	Mode 2 high power
6	8.01	2687	981	68%	Some period of Mode 1 low power
7	8.97	3534	1290	121%	Mode 2 high power
8	10.89	3650	1332	128%	Mode 2 high power
9	8.13	3417	1247	113%	Mode 2 high power
10	10.77	3629	1324	126%	Mode 2 high power
11	8.47	2259	825	41%	Some period of Mode 1 low power
12	8.37	3535	1290	121%	Mode 2 high power
13	9.58	3590	1310	124%	Mode 2 high power
14	8.33	2716	991	69%	Some period of Mode 1 low power
15	8.76	3532	1289	120%	Mode 2 high power
16	7.26				Incomplete defrost period – testing ceased

# TEST DATA FROM A FRIDGE FOR SALE IN THE PACIFIC

- Two distinct modes of operation
- One has a high energy of around 1250 to 1300 average (120% above label and fails MEPS by 35%).
- The second mode has a low energy consumption of about 630 kWh/year (8% above label)
- In Australia, manufacturers of this fridge has contacted all customers and offered to replace fridge and offered financial compensation for running costs.
- Once standards and labelling has been introduced in Pacific region products like this can be kept out.



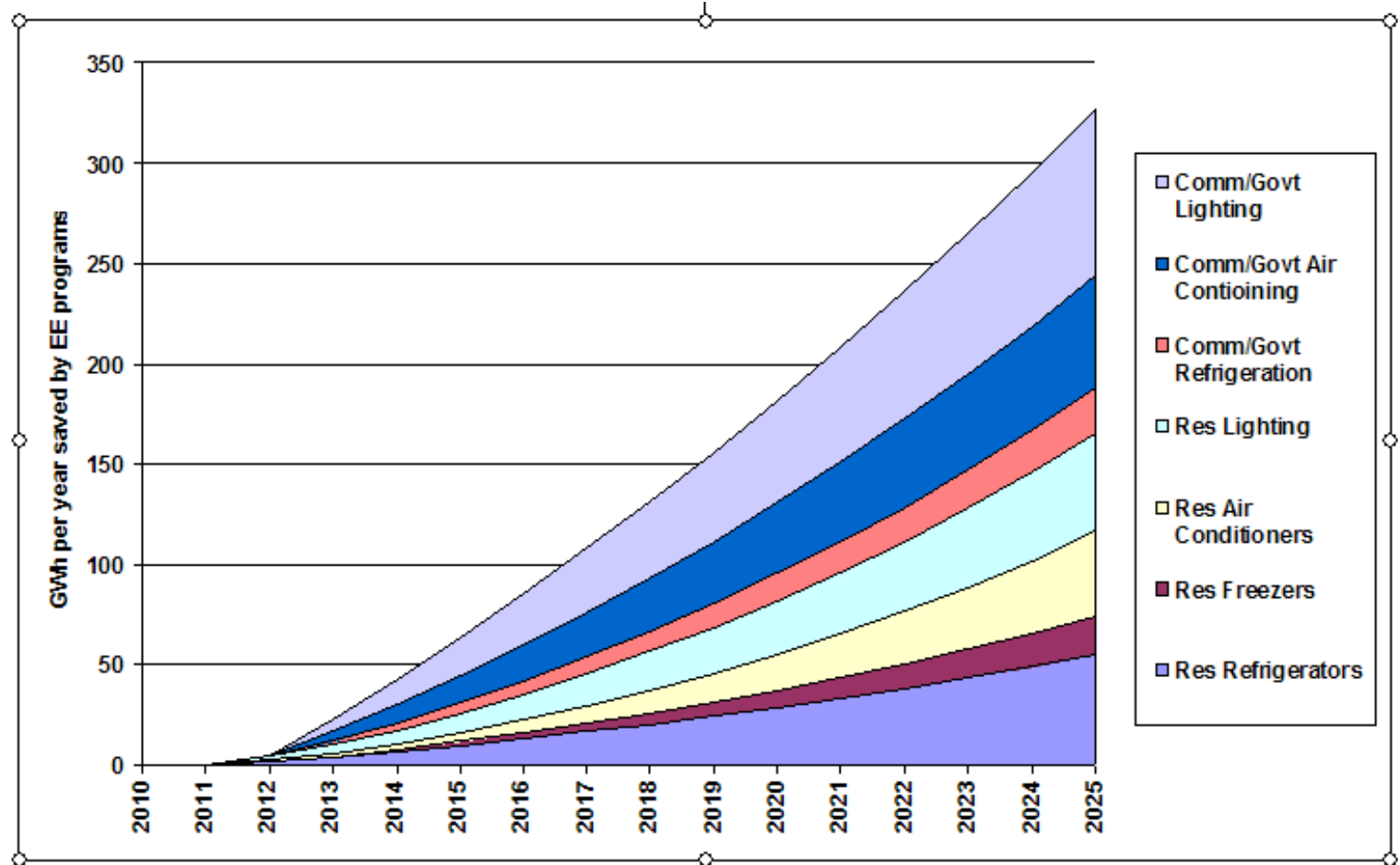
# BENEFITS OF EXPANDING STANDARDS AND LABELLING TO THE PACIFIC

- Financial savings
  - Reduced diesel imports through lowering energy demand
  - Reduced energy bills for consumers
- Avoided infrastructure costs –reduced capital and maintenance costs
- Improved livelihood through access to better quality products
- Energy efficient products – Ensuring PICTs do not have to accept inefficient products banned from sale elsewhere
- Emissions reductions

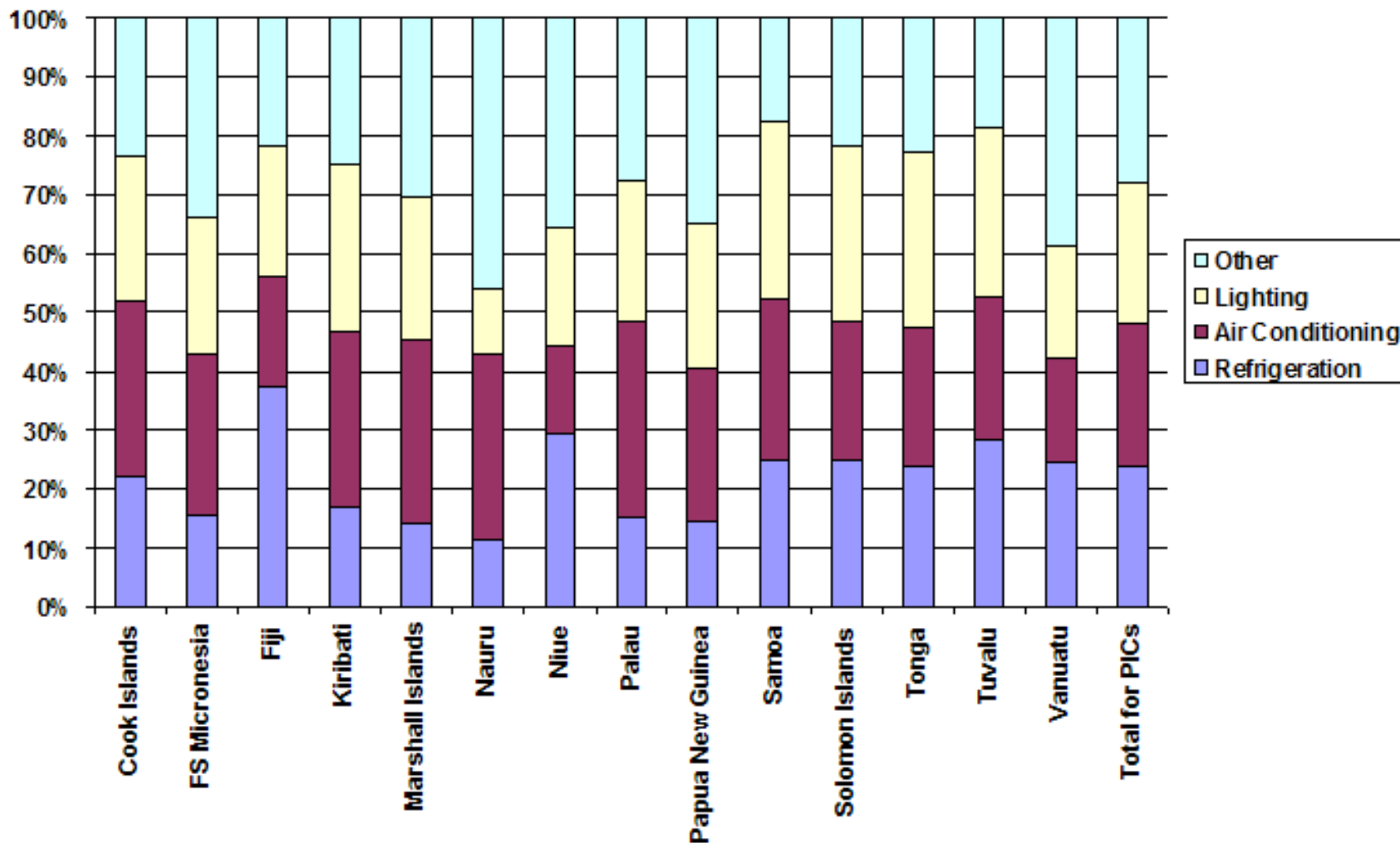




# END-USE SHARE OF ELECTRICITY USED IN RESIDENTIAL, COMMERCIAL & GOVERNMENT



# PROJECTED ELECTRICITY SAVING FROM EE MEASURES, BY END USE



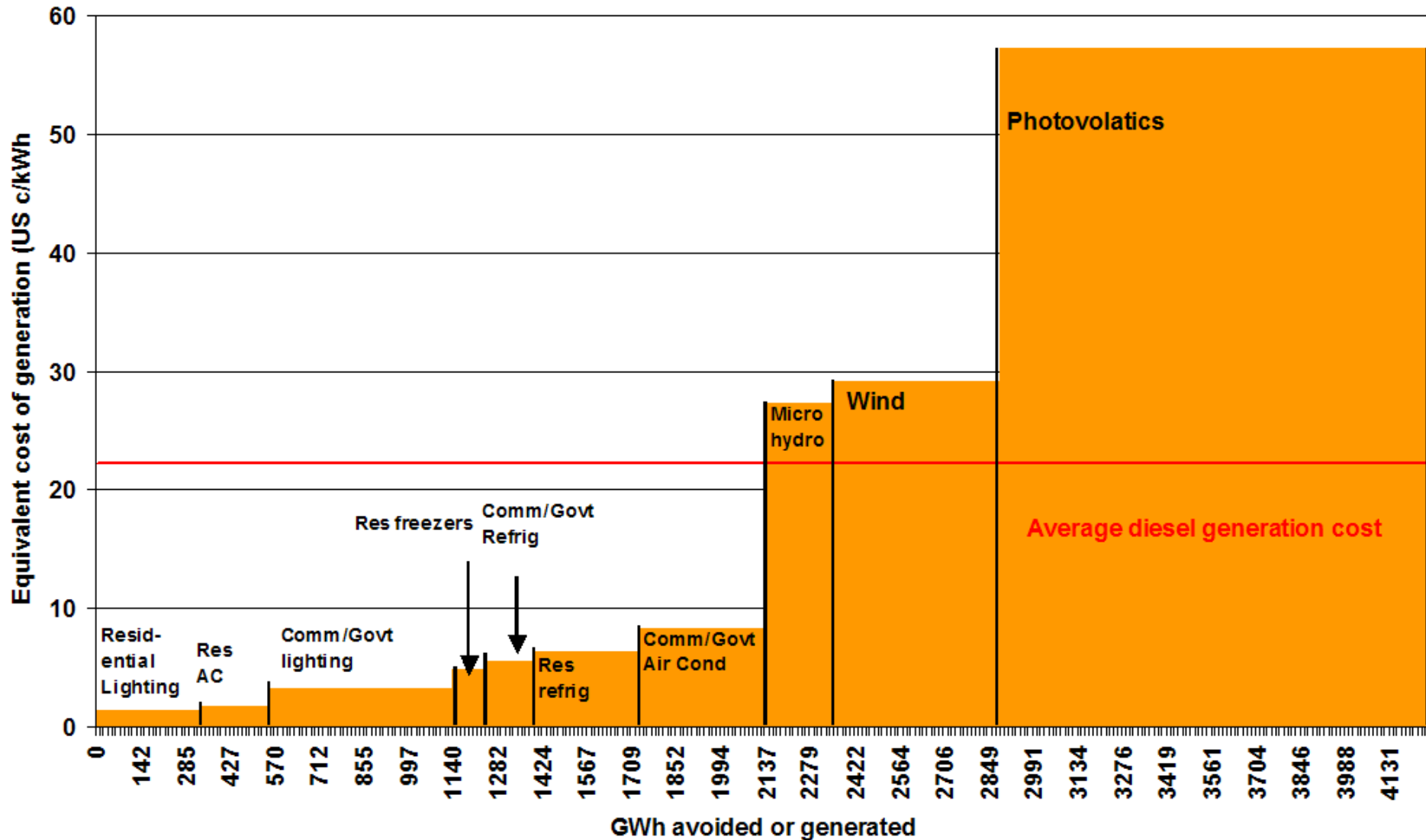
# HOW MUCH COULD STANDARDS AND LABELLING SAVE THE PACIFIC BY 2025?

- USD \$525 million in fuel, generation & maintenance
- 630 million litres of diesel
- 1.7 million tonnes of emissions



***By 2025, these energy efficiency programmes could be 'supplying' one eighth of the electricity used in the PICTs, pollution free. This would also mean a 12% reduction in generation fuel import costs.***

# ELECTRICITY SUPPLY COST CURVE





## BACKGROUND TO PACIFIC SUPPORT

- **2009 Pacific Islands Forum Leaders Meeting:** the Leaders highlighted the urgency in improving energy efficiency and conservation to reduce high dependencies on imported fossil fuels.
- **September 2011 Pacific Islands Forum Leaders Meeting:** the Leaders emphasised the importance of meeting energy efficiency targets, including expanding the existing electrical appliance energy efficiency standards and labelling program as a means to achieving energy savings in PICTs.

# PACIFIC APPLIANCE LABELLING AND STANDARDS (PALS) PROGRAM

- **Objective:** A regional program to assist PICTs develop and implement legislation on performance standards and energy rating labels of electrical appliances.
- Implemented by the Secretariat of Pacific Community Economic Development Division in partnership with the Australian Government Department of Industry and Science.



# PACIFIC APPLIANCE LABELLING AND STANDARDS (PALS) PROGRAM

- **Outputs.**
- One of the main outputs of the Programme is for PICTs to adopt Australian and New Zealand standards for refrigerators, freezers, air conditioners and lighting.
- Assisting PICTs to legislate so that they do not receive inefficient products banned from sale elsewhere.
- Focusing on building capacity in the region.

# 12 PICTS JOINED THE PALS PROGRAM

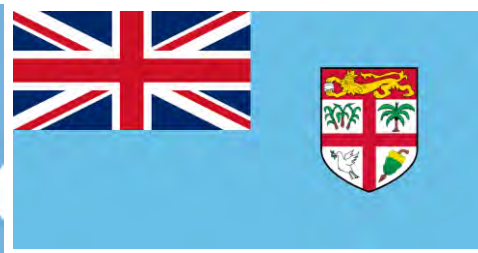
**Cook Islands**



**Federated States of  
Micronesia**



**Fiji**



**Kiribati**



**Palau**



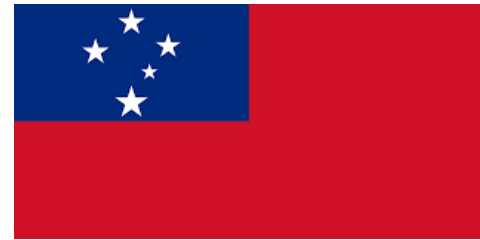
**Papua New  
Guinea**



**Republic of  
Marshall Islands**



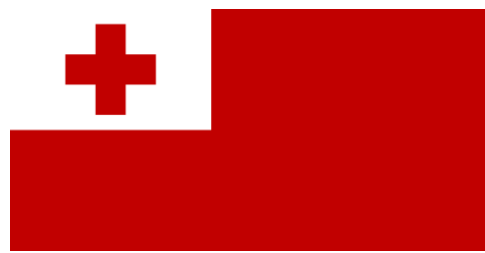
**Samoa**



**Solomon Islands**



**Tonga**



**Tuvalu**



**Vanuatu**





# KEY COMPONENTS

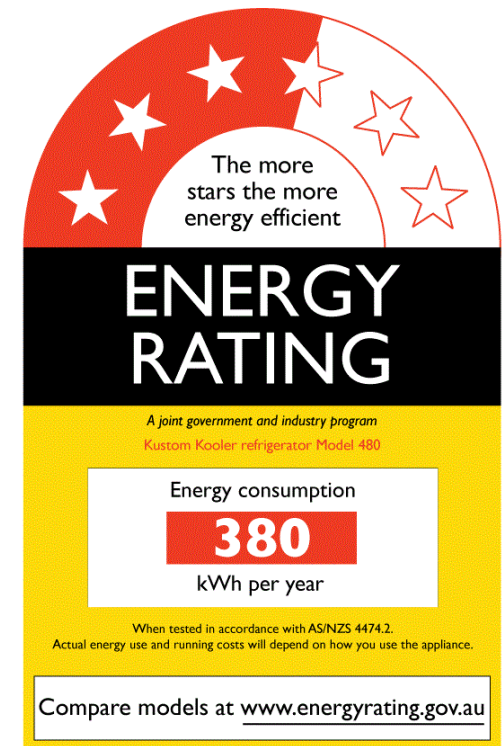
- Building Capacity of PALS National Coordinators
- Development of legislation/regulation
  - Engaging a legal expert
  - Drafting of legislation/regulation
  - Approval of legislation/regulation
- Public awareness campaign
- Training
  - Training of retailers (shop floor staff), importers, registration of importers, training of Government Officials
- Monitoring and Evaluation
  - Compliance and assessment

# PURCHASING AN ENERGY EFFICIENT FRIDGE

Stars	2	4
Price	\$1000	\$1200
Running Costs (10 years)	\$1850	\$1050
Total Costs	\$2850	\$2250

Savings \$600

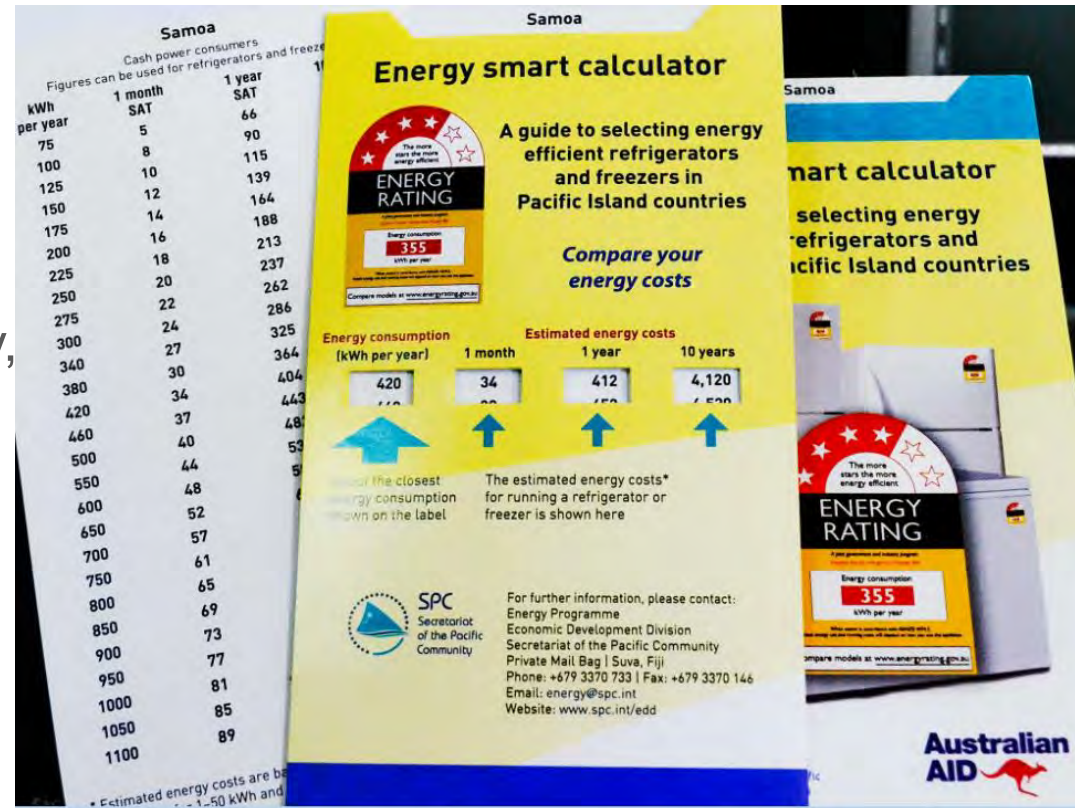
*It pays to compare the energy labels!*



# PALS AWARENESS ACTIVITIES

- Energy Smart Calculators
- Radio talk back shows, radio interviews
- TV advertisements
- Outreach programmes such as roadshows, national energy day, public service day
- Websites
- Brochures, magazines
- Drama groups
- Public presentations in schools, communities and NGOs

## Energy Smart Calculator - Samoa



# PALS PROGRESS

## Residential Voltage

'North Pacific'  
230/240 V  
50 Hz

'South Pacific'  
110/120 V  
60 Hz

Country	Cabinet endorsed commencing S&L Program	Commenced Awareness & Training	Commenced drafting legislation	Completed final draft legislation	Implemented S&L Program
Fiji	✓	✓	✓	✓	✓
Vanuatu	✓	✓	✓	✓	
Kiribati	✓	✓	✓	✓	
Samoa	✓	✓	✓	✓	
Tonga	✓	✓	✓	✓	
Cook Islands	✓	✓	✓		
Tuvalu	✓	✓	✓		
Solomon Islands	✓	✓	✓		
PNG					
Palau					
RMI					
FSM					



# PRODUCTS RECOMMENDED FOR INCLUSION IN FIJI'S MEPSL PROGRAM (2015 EVALUATION)

Product group	Energy use	Standard	Label presence	Admin difficulty	Regional support	Strategic value
Domestic refrigerators and freezers (in place)	High	ANZ	High	Medium	PALS, ANZ	High
Air conditioners	High	ANZ	Low	Medium	PALS, ANZ	High
Lighting products (AC and MV)	High	ANZ (some types)	NA	Medium	PALS, ANZ UNEP	High
Commercial refrigeration	High	ANZ	NA	High	ANZ, Kiribati	Med
Televisions	Medium	ANZ	Medium	Low	ANZ	High
Clothes washers	Low	ANZ	High	Low	ANZ, Cook Is	Med
Dishwashers	V. low	ANZ	Medium	High	ANZ	Med

# FIJI - EVALUATING THE BENEFITS OF EXPANDING PRODUCT COVERAGE (2015 EVALUATION)

- Monetary costs and benefits of expanding the MEPSL program
  - Over the period 2015-2030, the projected energy savings from new MEPSL measures is projected to be about 4.2 times as great as the energy savings from MEPSL already implemented from domestic refrigeration.
  - By 2030, annual electricity savings will total about 118 GWh/yr, a reduction of nearly 17% of 'business as usual' (BAU) electricity consumption of the sectors affected.
- Without MEPSL, it is projected that average household electricity bills will increase from FJD 532 in 2012 to FJD 615 in 2030, due to rising ownership of household appliances and greater use of lighting.
- MEPSL for refrigerators and freezers will reduce bills by FJD 35 per year, and MEPSL for air conditioners, television and lighting by a further FJD 60.
- By 2030 the total savings will reach by FJD 95 per household per year,

# KEY SUCCESS FACTORS

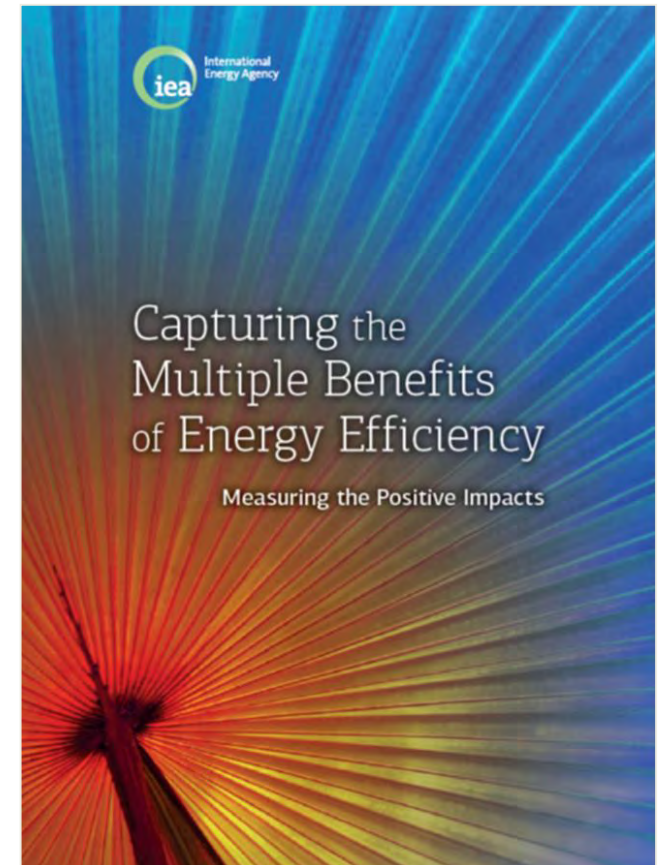
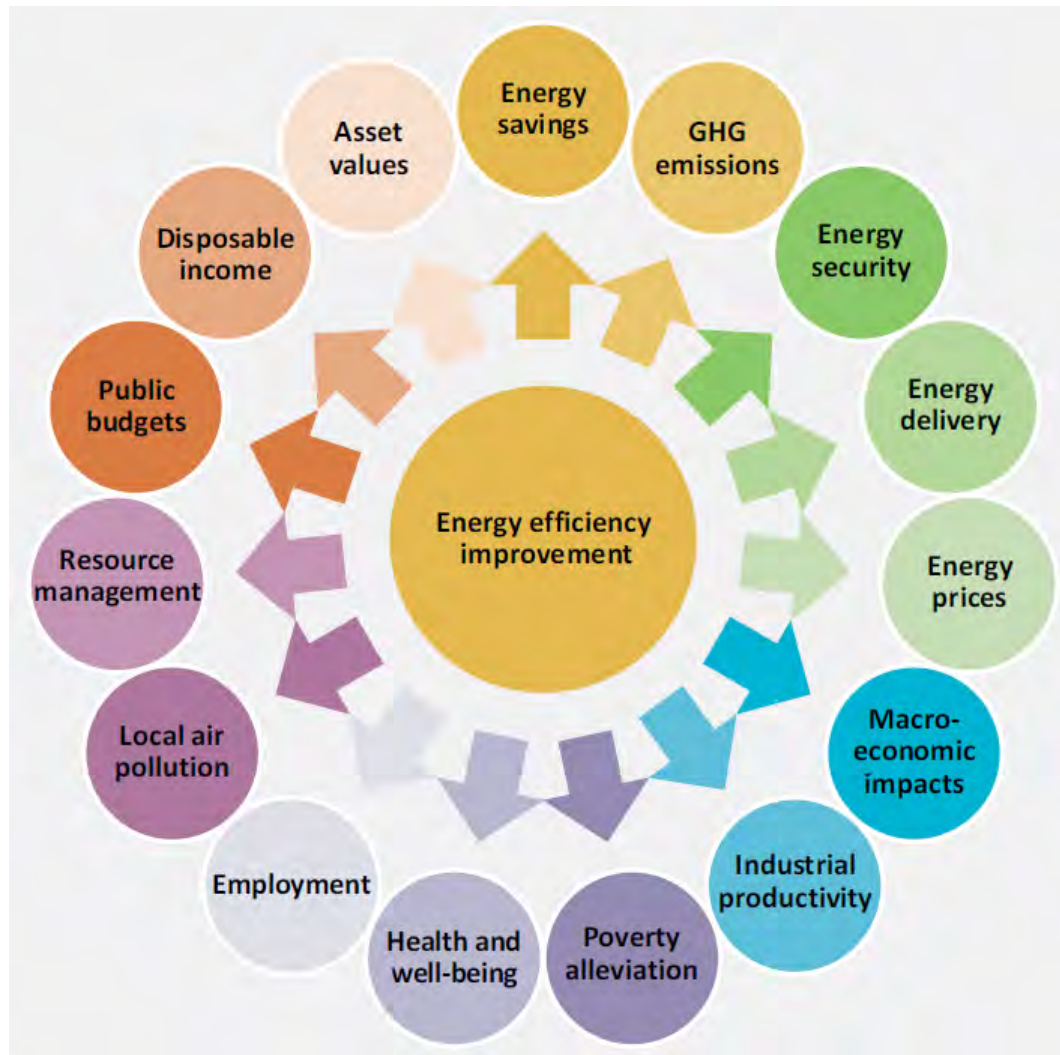
- **Regional Commitment by Pacific Leaders** to prioritise energy efficiency, specifically implementing a Standards and Labelling Program.
- Preparing a report to **highlight the benefits** of implementing a Standards and Labelling Program in the Pacific.
- Successful establishment of a **collaborative institutional framework** including:
  - PALS Steering Committee
  - PALS Coordinator at SPC
  - PALS National Coordinators - country champions.
  - Australia - provided technical, legislative and capacity building support
- **Healthy competition** among countries and having a **front runner** like Fiji was beneficial (expansion & evaluation).
- **Face-to-face workshops and study tours** (Australia and Fiji) have been critical in building collaboration, sharing experiences and highlighting achievements/challenges.
- **Early engagement** and outreach to commercial stakeholders (importers and retailers).
- Delivering **training activities** on understanding the legislation/regulation and its requirements for key stakeholders (customs officers, government officials, suppliers, retailers, shop floor staff and the general public).

# LESSONS LEARNT

- **Quantifying the benefits** of adopting standards and labelling was important to gain Government support.
- Seeking **joint commitments** of Senior Officials and Ministers is critical.
- Establish **which Government agency is responsible** for taking the lead on drafting legislation.
- Delivery and capacity building through a regional centre (SPC) and individuals PALS National Coordinators was a successful delivery mechanism.
- Legislation **takes time** - you can provide assistance (e.g. funding drafters) but you can't push sovereign countries.
- Adopting a **single existing label** has been promoted such as the Australia/New Zealand labels in the South Pacific.
- Importance of **progressing countries** at various rates and **incentivising progress** e.g. Energy Smart Calculators provided to PICTs once legislation commenced.
- Appreciate that **capacity issues** exist in PICTs and staff are often **overloaded** with multiple projects.



# MULTIPLE BENEFITS OF ENERGY EFFICIENCY



Source: IEA (2014)

**It is far less costly for Pacific Island Countries and Territories to import more efficient refrigerators, air conditioners and lights than to import diesel fuel.**

**Thank you**



***PALS Workshop - 30 May 2014, Fiji***