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PACIFIC COMMUNITY

22nd September 2025

32ND PPA CONFERENCE, PALAU

- Progress on the 5th PRETMM outcome
- Status of the pacific energy sector
- Update on SPC Energy team and projects

Presenter Name : Ngedikes Olai Uludong
Designation : Deputy Director
Georesources and Energy Programme

Institutional Transition



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Energy Transition



GEM

Geoscience, Energy and Maritime Division

From hydrocarbon programs and energy databases in the 1990's to 70% renewable energy targets by 2030 and a Fossil Fuel Free Pacific by 2050

Who benefits from SOPAC?

Member countries are Australia, Cook Islands, Federated States of Micronesia, Fiji Islands, Guam, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Papua New Guinea, Samoa, Solomon Islands, Kingdom of Tonga, Tuvalu, and Vanuatu. French Polynesia and New Caledonia are associate members. Any island member country can request assistance from SOPAC.

SPC DIVISIONS

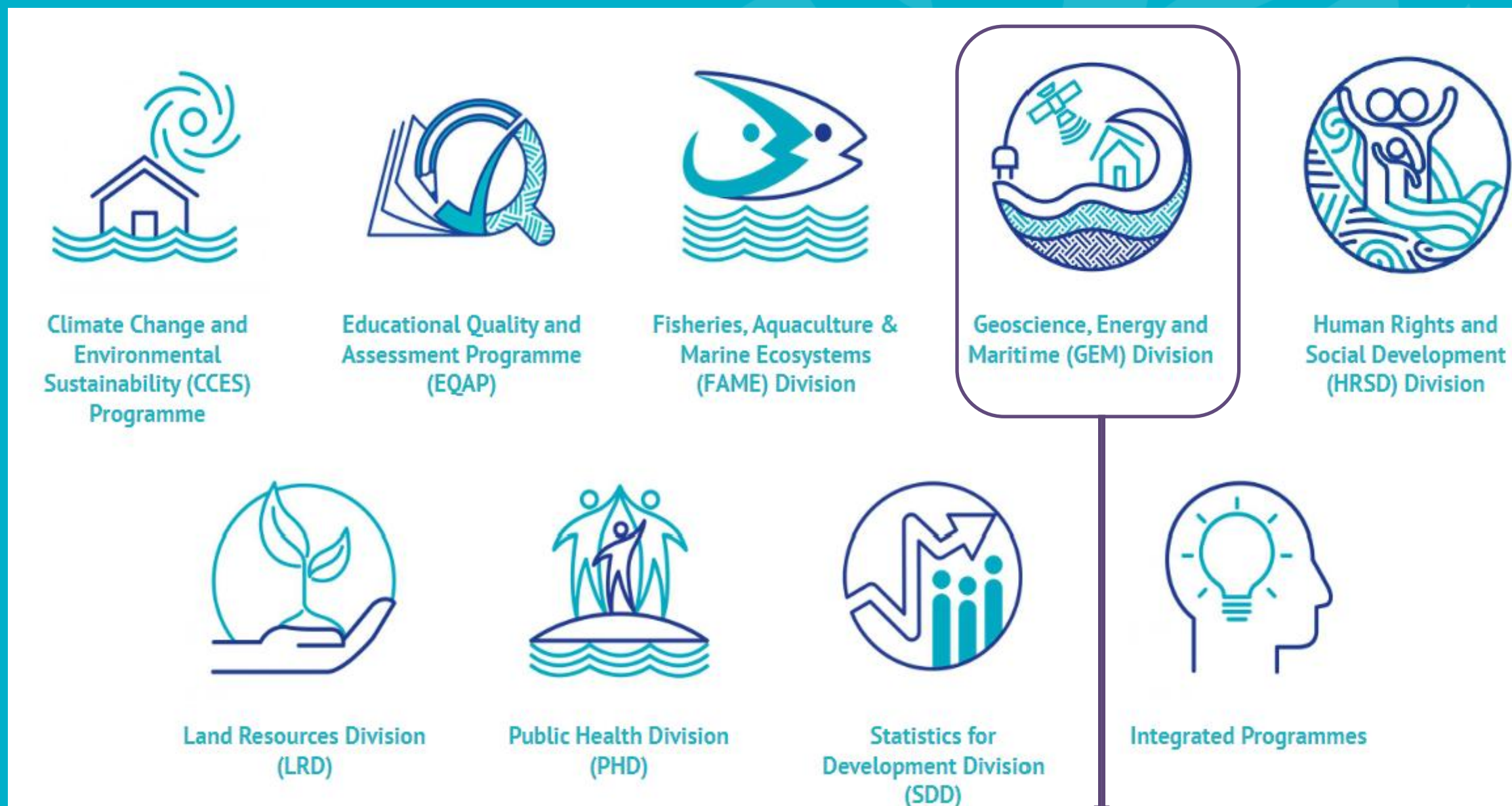


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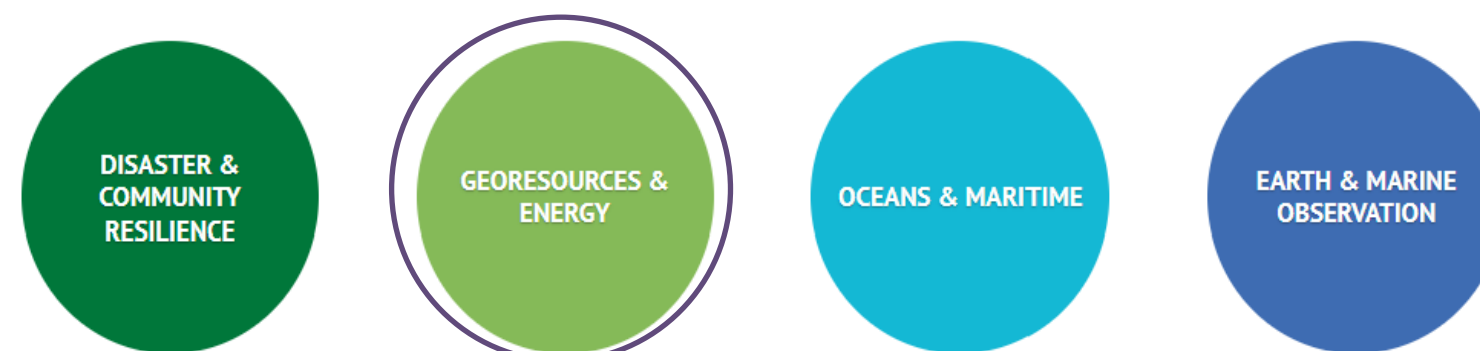
Georesources and Energy Programme (GEP)

*Objective: Science and
Technology Mandate for
PICTs:*

- Georesources
minerals (produce)
geoheritage (protect)
- Energy Security



KEY WORK



STRATEGY

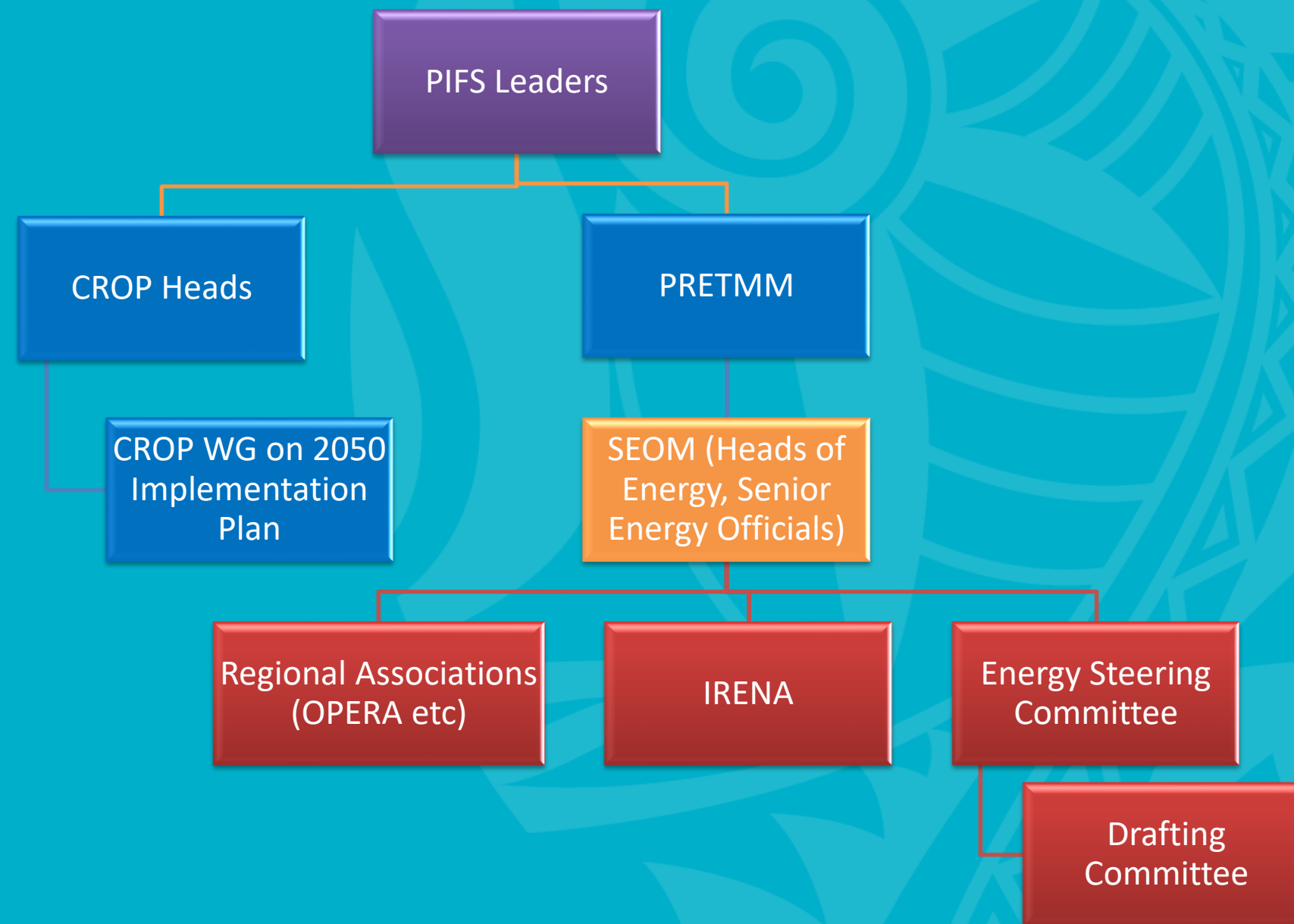
2050 STRATEGY IMPLEMENTATION PLAN 2023-2030

Phase I - 2050 Strategy for the
Blue Pacific Continent

*Setting the Foundations Towards
Transformational Change*



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Regional Convenings:

Current Approaches to Energy Planning in the Pacific Islands

- Based on static reports
- Don't allow stakeholders to update or test new scenarios
- Based on analysis that lacks transparency
- May not be technology

Successful transition from fossil fuels to diversified renewable sources will require careful planning and detailed assessment

5th PRETMM Ministerial Resolution for Paper E8:

... to develop and use enhanced and tailored energy planning frameworks and capacity expansion tools for net zero outcomes, with a focus on future demand assessments,
... transitioning fossil fuel dependent sectors,
...meeting 100% renewable targets,
... securing island grids with high variable renewable penetrations,
...jurisdictional planning“



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Recommendations

21. This meeting is invited to:

- endorse** the collaborative efforts by UNSW, USP, SPC, PPA and other partners to jointly undertake regional studies that build upon the existing work of partners including IRENA and the World Bank to assess the renewable energy potential of the PICTs to meet future energy demand including the provision of universal energy access, electrification of key energy uses sectors currently reliant on imported fossil fuels including road transport, and the potential for renewable hydrogen and hydrogen derivatives to supply energy uses that can't be electrified.
- support** the development and use of enhanced planning frameworks and capacity expansion tools tailored for PICT countries given their unique challenges and opportunities in energy transition, and particularly including the ability to plan 100% renewables electricity sectors and growing cross sector linkages such as the electrification of road transport, household and commercial energy use, and Power2X options.
- adopt** improved tools for ensuring the security and resilience of island grids with high variable renewable penetrations and appropriately facilitate more distributed microgrids as well as solar home systems for remote communities.
- Strengthen** the regional capabilities of SPC/PCREEE and PPA to support energy transition efforts across the region, building on existing efforts and including data provision and tools to assist jurisdictions in planning and execution of net zero strategies.

5TH PRETMM

The Fifth Pacific Regional Energy and Transport Ministers' Meeting (5th PRETMM) was held in Vanuatu in May 2023, on the theme “**ACCELERATING DECARBONSATION IN THE BLUE PACIFIC**”.

The meeting aimed to address the urgent need for action on climate change and promote a **just and equitable transition to a fossil fuel-free Pacific**.

The meeting agreed on following priority areas for implementation during the 2023 - 2026 period for the energy sector:



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2023 Pacific Regional Energy & Transport Ministers Meeting



- **Regional collaboration and partnerships**
- **Financing, resource mobilisation and private sector engagement**
- **Capacity building and planning**
- **Gender mainstreaming**
- **Innovative technologies to accelerate decarbonisation**



FESRIP 2021 -20230



Framework for Energy Security and Resilience in the Pacific (FESRIP) 2021–2030

Volume 1: The Framework

April 2021

Prepared by The Pacific Community in collaboration with Pacific Islands Forum Secretariat, Secretariat of the Pacific Regional Environment Programme, The University of the South Pacific and Pacific Power Association with support from the Pacific Region Infrastructure Facility and the United Nations Development Programme



Priority A: Energy Policy, Planning and Capacity Development

1. Development and implementation of robust national energy policies, plans and legislation	SPC, lead; PPA for power sector
2. Capacity development in the energy sector	USP, lead in cooperation with the other CROP agencies
3. Database development with energy resilience/security indicators	SPC and PPA, co-leads
4. Rectifying gender imbalance in the energy sector	SPC, lead
5. Non-commercial household energy	SPC, lead in cooperation with USP

Priority B: Energy Sector Finance and Cooperation

6. Financing a regional energy framework	PIFS, with participating CROP agencies
7. Regional support to Pacific Island territories	SPC, lead
8. Cooperation in sustainable and resilient energy with other island regions	SPC, PPA and SPREP, co-leads
9. Cooperation with the private sector in energy	PPA and SPC, co-leads; PIFS



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Priority C: Sustainable Electric Power Development

(PPA lead for grid-based electrification; SPC for off-grid/mini-grid)

10. Climate-resilient power generation and distribution for island grids	PPA and SPC, co-leads
11. Overcoming technical limitations to high penetrations of renewable energy	PPA, lead
12. Financial and management mechanisms for sustainability of outer island and remote rural electrification	SPC and PPA, co-leads
13. Inspection and maintenance of RE technologies	SPC, lead with PPA
14. Regional RE standards for hurricanes and natural disasters	SPC and PPA, co-leads
15. Implementation of national goals and NDC commitments for renewable electricity	SPC, SPREP and PPA, co-leads
16. Expanding and increasing the range of RE technologies	No overall lead; SPC for ocean energy
17. Independent energy regulation	SPC, initial lead

Priority D: Low-Carbon Transport Energy

18. Land transport energy use	SPC, lead
19. Marine transport energy use	SPC, USP and SPREP, co-leads
20. Air transport energy use	No specific lead

Priority E: Improved Energy Efficiency

21. Improved energy efficiency within buildings and economy wide	No specific lead
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Priority F: Petroleum and Other Liquid Fuel Services

22. Petroleum advisory services: fuel pricing, contracting, monitoring and biofuels	SPC, lead
23. Petroleum advisory services: fuel storage, distribution infrastructure and miscellaneous	SPC, lead

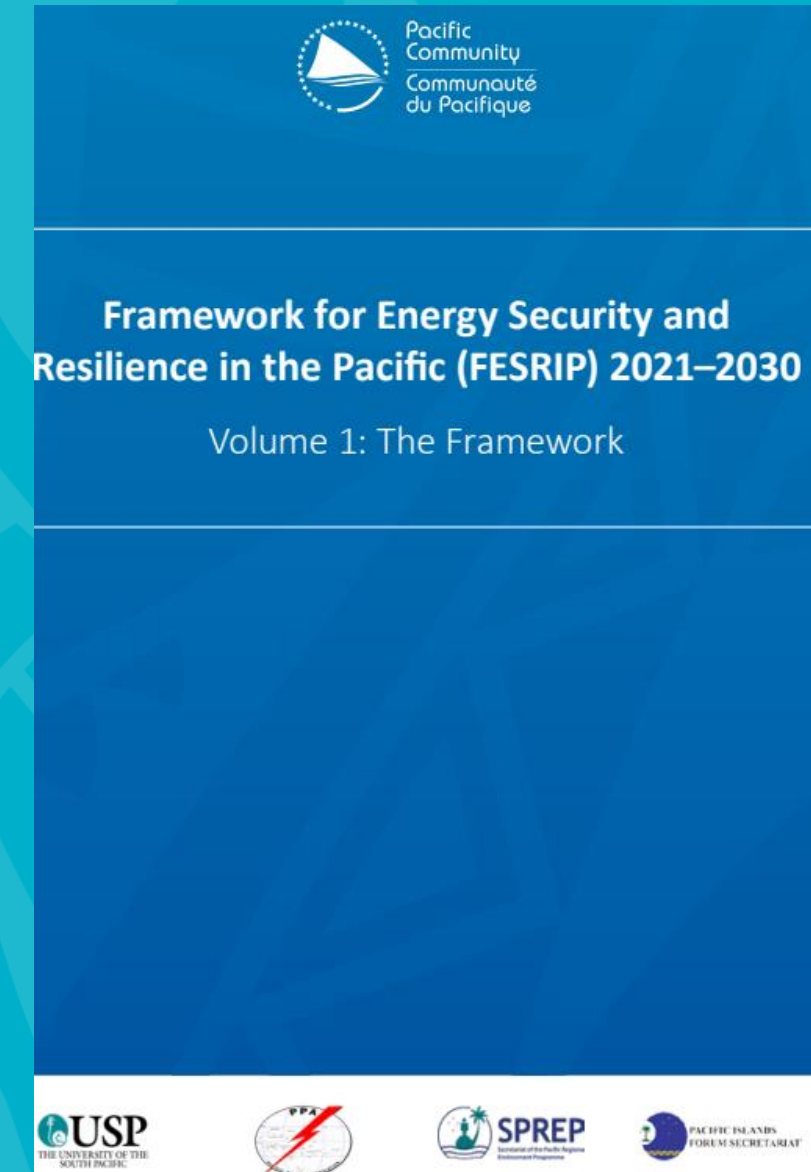
Framework for Energy Security and Resilience in the Pacific (FESRIP) 2021–2030



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Priority A: Energy Policy, Planning and Capacity Development

- #1. Development and implementation of robust national energy policies, plans and legislation SPC, lead; PPA for power sector.
- #2. Capacity development in the energy sector



Priority C: Sustainable Electric Power Development

(PPA lead for grid-based electrification; SPC for off-grid/mini-grid)

- #10. Climate-resilient power generation and distribution for island grids
- #11. Overcoming technical limitations to high penetrations of renewable energy
- #15. Implementation of national goals and NDC commitments for renewable electricity
- #16. Expanding and increasing the range of RE technologies

STATUS – 5TH PRETMM

“Efate” Statement



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- **Regional collaboration and partnerships**
 - SPC to provide annual update – SEOM
 - FESRIP – further implement the framework and the region’s collective efforts towards a just, sustainable and decarbonised energy sector
 - OPERA – now have 13 members (4 new members have joined since 5th PRETMM)
- **Financing, resource mobilisation and private sector engagement**
 - EU FSM SEAM
 - New funding from Australia: DCEEEW (energy planning tool), Australian Infrastructure Financing Facility for the Pacific (AIFFP)/DFAT – support to electrification works in Pingelap, Etten, Pis Paneu and Woleai
 - MFAT: Just Transition Tools
 - MFAT PCREEE: Energy Roadmaps, E-Mobility Framework, Private Sector Engagement
 - US (biogas project);
 - UK FCDO (CLEARPICs, OPERA, PEGSAP, PCREEE).
 - VREF and Sols REF
 - NDC Hub
- **Capacity Building and trainings (ECAP and USP, UPNG, NUS)**
 - Scholarships
 - Qualifications





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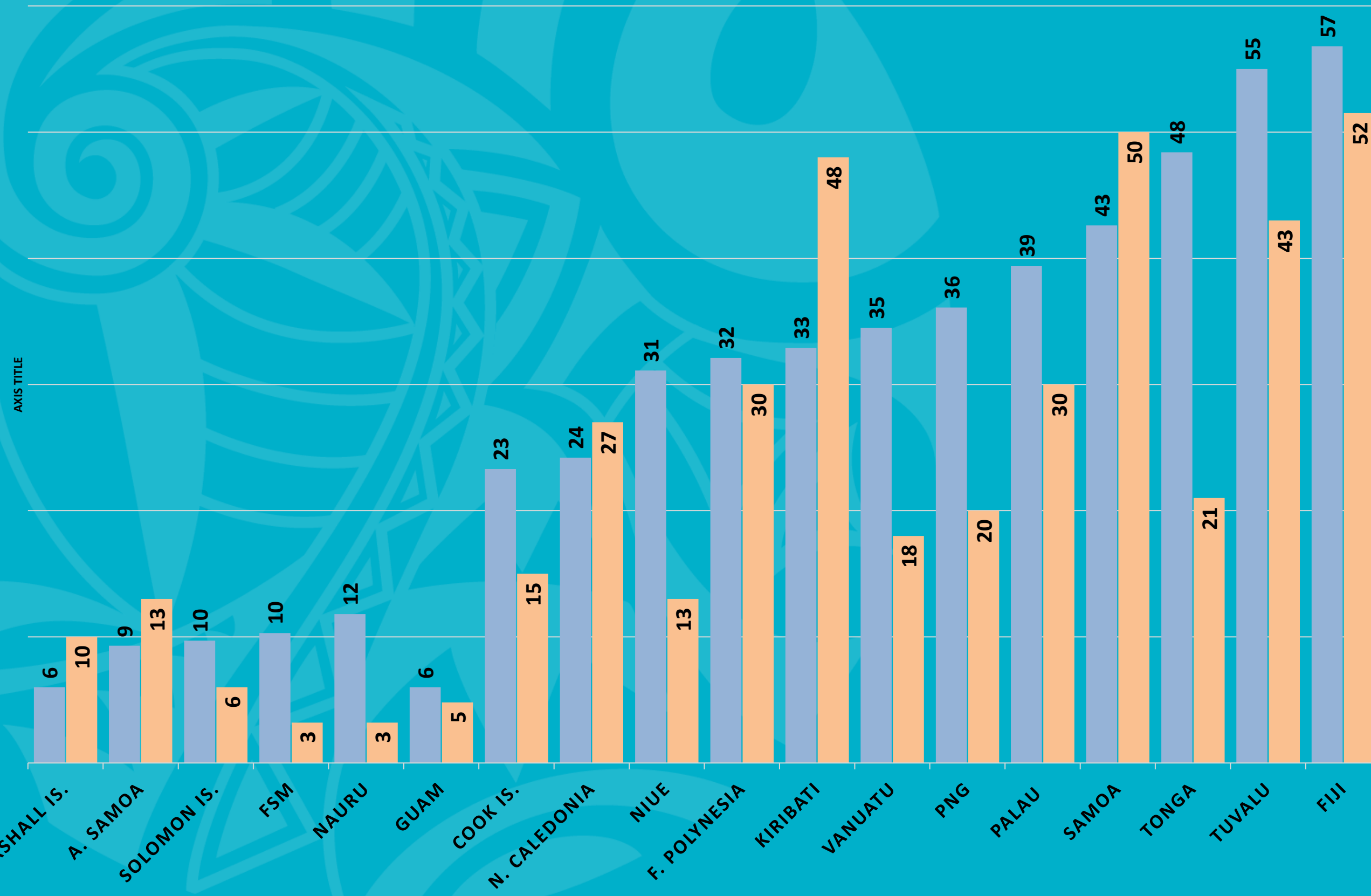
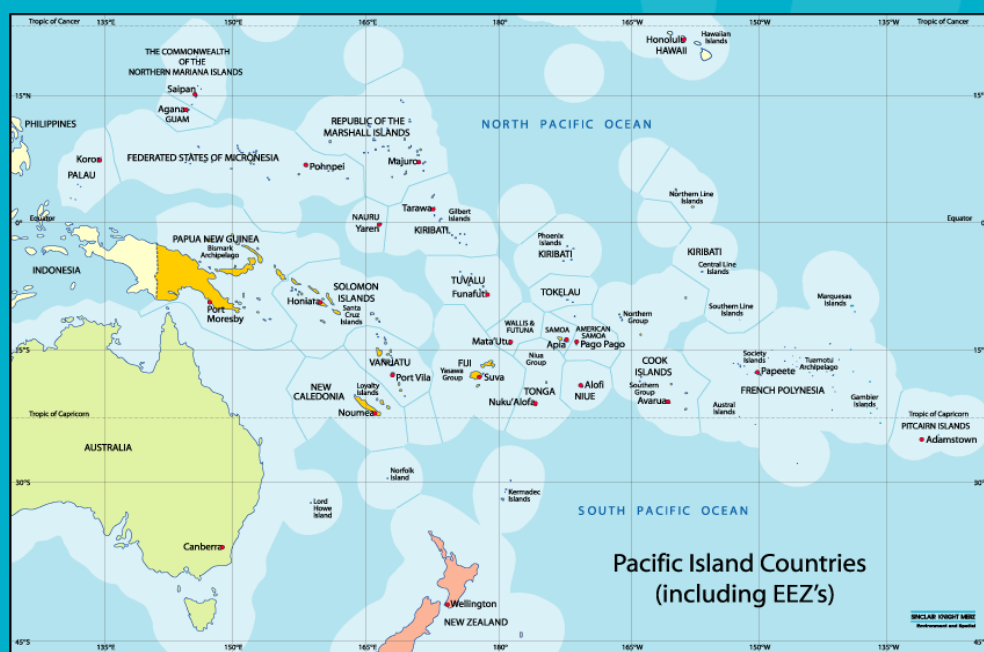
STATUS OF THE ENERGY SECTOR



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PICT Renewable Energy Electricity Generation

 Total (IRENA, 2024)
 Actual (IRENA, 2022)



% RE Energy Impact

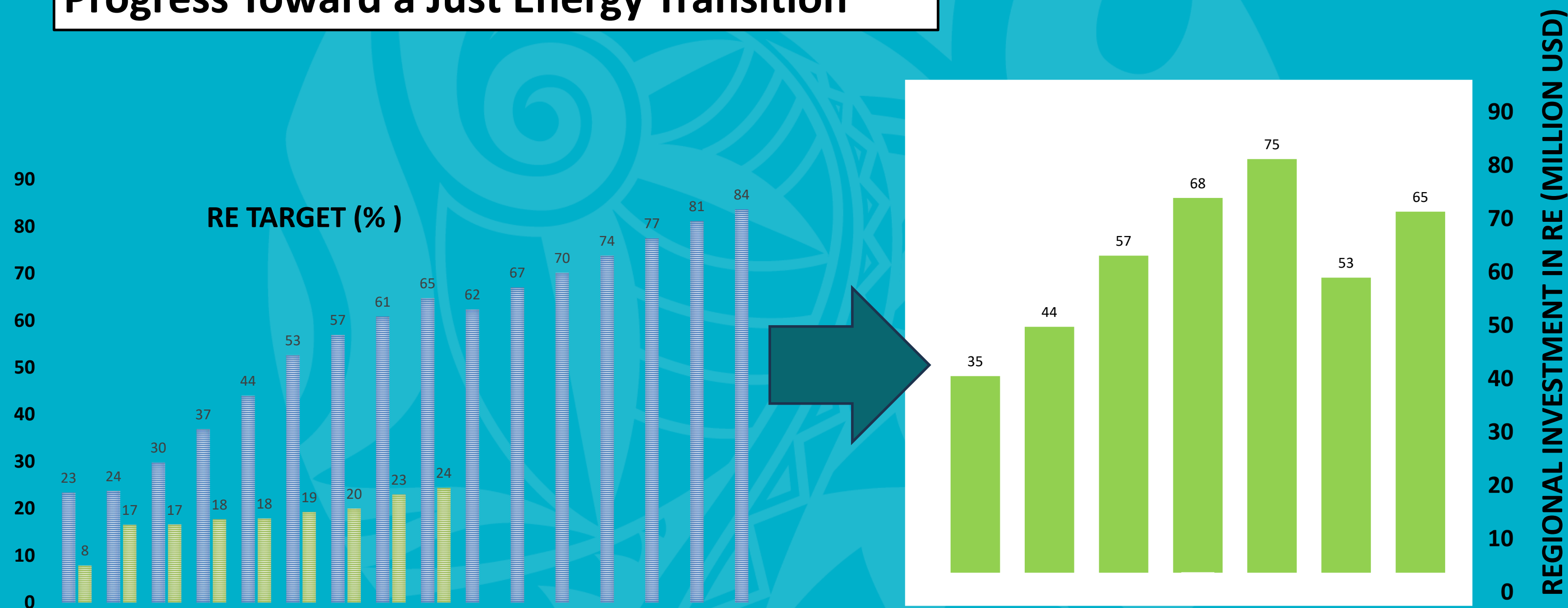


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Country/Territory	Geography	Population (2023)	Installed Capacity (MW)	Peak Demand (MW)	Annual Electricity (MWh)	Access to Elect. Rural (%)	Access to Elect. Urban (%)	Access To Electricity (%)	% RE in final Energy Consumption
Papua New Guinea	Over 600 Islands	10,142,619	1139	232.00	1145000	14.03	65.18	20.92	54
Vanuatu	80 Islands , 65 Inhabited	326,740	32	14.20	79000	60.73	97.01	70.04	26
Solomon Islands	1000 Islands , 350 Inhabited	724,273	40	17.80	98421	75.38	79.22	76.35	49
FSM	607 Islands	114,164	22	6.15		79.44	97.59	83.62	2
Fiji	320 Islands , 106 Inhabited	929,766	289	171.57	1081461	86.77	96.00	92.10	32
Kiribati	32 Widely Scattered Atolls	131,232	8	4.90	5000	90.07	88.27	93.00	43
Samoa	10 Islands	222,382	71	25.00	11630	97.93	100.00	98.30	38
Niue	Single Island	1,935	2	0.65	NA	N.A	100.00	99.53	23
Tuvalu	9 Atolls	11,312	3	1.40	2000	99.10	100.00	99.68	7
Marshall Islands	34 Islands	41,569	32	8.90	2000	100.00	96.01	99.75	12
Cook Islands	14 Islands	17,072	15	N.A	7000	N.A	100.00	100.00	13
French Polynesia	121 Islands	306,279	186	N.A	148000	100.00	100.00	100.00	8
Nauru	Single Island	12,668	15	5.00	5000	100.00	100.00	100.00	1
New Caledonia	140 Islands	269,220	517		654000	100.00	100.00	100.00	6
Palau	596 Islands , 12 Inhabited	18,055	28	12.80	742700	100.00	100.00	100.00	1
Tonga	176 Islands, 36 Inhabited	106,858	25	10.40	77200	100.00	100.00	100.00	2
American Samoa	5 Islands , 2 Atolls	44,273	45	N.A	N.A	N.A	N.A	N.A	1



Progress Toward a Just Energy Transition





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SPC Energy team and projects

SPC ENERGY TEAM

In Suva

- Perelini, Team Leader
- Ernest, SREL
- Anthony, OPERA Coordinator
- Heremoni, CLEARPICs PM
- Therese, PEGSAP PM
- Inia, Energy Officer
- Christine, PAWES PM
- Moala, Programme Admin
- Vinana, Finance and Admin
- Emma, Programme Accountant
- Sheetal, Finance and Admin
- Jacob, MEL Adviser
- Joseph, Communications Coordinator

In FSM

- Frank, SEAM PM
- Tulaulelei, MEL
- Marla, FSM SEAM PA
- Saram, DFAT REEPP PA
- Heilala, Procurement

PCREEE - Tonga

- Solomone, PCREEE Manager
 - Lusia, Programme Officer
- ## EKLIPSE - Kiritimati
- Jake, Project Manager

NDC Hub - CCES



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ENERGY PROJECT STATUS

FSM SEAM



DFAT: electrification of 4 islands in FSM



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PCREEE



Tuvalu biogas



CLEARPICS – PNG, Vanuatu and Sols EKLIPSE - Kiritmati

Projects	Programme
PCREEE	<ul style="list-style-type: none"> • RE&EE Business Start-Up and Entrepreneurship Support • RE and EE for Sustainable Mobility • RE Mini-grids • Energy Efficiency Investment
PEGSAP	<ul style="list-style-type: none"> • Strengthened gender – responsive energy policy • Employment opportunities for women in clean energy • Women's access related decision making • Enhances Agency & Skills for Women and girls to voice energy needs and engage in the clean energy value chain
CLEARPICS	<ul style="list-style-type: none"> • Enhance Electrification in Remote Locations using offgrid/minigrid solar technology or any productive use of energy (PNG, Vanuatu & Solomon)
PAWES	<ul style="list-style-type: none"> • Enhance Solid Waste Management and Energy Security in the Pacific Region by enabling national and sub-national governments to make informed decisions on developing a sustainable WtE sector and supporting tertiary education providers in offering updated training and conducting research • Offers Scholarships for PNG, RMI, Samoa, Solomon Islands and Tuvalu
FSM SEAMS	<ul style="list-style-type: none"> • Support to strengthening FSM Policy Instruments • Capacity Building Support • Promotion of a One IPP initiative for FSM. • Electrification of Fefen Island
DFAT REEPP	<ul style="list-style-type: none"> • Electrification of Piis Paneu, Etten, Woleai and Pingelap in the 3 States (Chuuk, Yap & Pohnpei) • Rehabilitation of Woleai in Yap



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OPERA Updates

Membership: 13 member countries to date, including:

Category

Established Regulators

Emerging Regulators

Proposed or Under Transition

Countries

Fiji, Samoa, Vanuatu, PNG

Cook Islands, Tonga, Solomon Islands, Kiribati, Tuvalu, Marshall Islands

Niue, FSM, Palau

Institutional Reform Momentum:

- *Solomon Islands, Cook Islands, and Niue* are at critical regulatory junctures, with active legislative reforms introducing or reshaping independent regulatory bodies.
- Samoa and PNG are modernizing frameworks to integrate Renewable Energy (RE), Distributed Energy Resources(DER), and consumer protection mandates.
- OPERA Coordinator Recruited as of 18th August 2025

Ongoing Activities:

1. Training & Capacity Building: Tariff modelling, etc
2. Solar PV + BESS Waste Management Study (Asian Development Bank, TA)
3. Regulatory Benchmarking Study (DHInfrastructure)
4. OPERA Legislative and Regulatory reform



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Kom Kmal Mesulang

THANK YOU