



**Pacific Power
Association**

Strategic Plan and Implementation Approach

September 2025 – August 2029

23 September 2025

PPA gratefully acknowledges the assistance of the
World Bank in supporting the development of this strategic plan.

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Acronyms and Abbreviations

ADB	Asian Development Bank
BESS	Battery Energy Storage System
CADS	Corporate and Data Services (proposed for PPA)
CEO	Chief Executive Officer
CROP	Council of Regional Organisations in the Pacific
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Australia)
DFAT	Department of Foreign Affairs and Trade (Australia)
DSM	Demand Side Management
EC	Executive Committee
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
FESRIP	Framework for Energy Security and Resilience in the Pacific: 2021–2030
GHG	Greenhouse Gas
GWh	Gigawatt Hours
HR	Human Resource
IFC	International Finance Corporation
IPP	Independent Power Producer
IRENA	International Renewable Energy Agency
JICA	Japan International Development Agency
KPI	Key Performance Indicator
KWh	Kilowatt Hours
M&E	Monitoring and Evaluation
MFAT	Ministry of Foreign Affairs and Trade (New Zealand)
MW	Megawatt
MWh	Megawatt Hours
NDC	Nationally Determined Contributions (for greenhouse gas reductions)
NZ	New Zealand
PDMC	Pacific Developing Member Country (ADB)
PIC	Pacific Island Country
PICT	Pacific Island Country and Territory
PIEMA	Pacific Island Emergency Management Alliance
PMU	Project Management Unit (PPA)
PNG	Papua New Guinea
PPA	Pacific Power Association or Power Purchase Agreement
PREIF	Pacific Renewable Energy Investment Facility (ADB)
PRIF	Pacific Regional Infrastructure Facility
PRISM	Pacific Regional Infrastructure and System Metrics (benchmarking)
PV	Photovoltaic (solar electricity production)

SCADA	System Control and Data Acquisition
SEIAPI	Sustainable Energy Industry Association of the Pacific Islands
SEIDP	Sustainable Energy Industry Development Project
SIDS	Small Island Developing States
SPC	Secretariat of the Pacific Community
TA	Technical Assistance
TASU	Training and Skills Unit (proposed for PPA)
TRAS	Technical Response and Advisory Services (proposed for PPA)
TVET	Technical and Vocational Education and Training
UNDP	United Nations Development Programme
USD	United States Dollar
VRE	Variable Renewable Energy

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Message from the Chair

The Pacific power sector stands at a critical juncture. While we have made notable progress in shifting from high cost imported petroleum fuels to renewable energy deployment across our region, the scale of challenges facing our member utilities remains significant. This demands a different approach from PPA.

For too long, our utilities have struggled with inadequate technical support when systems fail, limited access to specialised expertise, and fragmented responses to the complex demands of energy transition. The traditional model of coordination and occasional workshops for capacity building, while valuable, falls short of what our members need in an era of rapid technological change, climate pressures, reliance on growing private sector investments, and managing the effects of growing skilled workforce migration.



This strategic plan represents PPA's most significant institutional transformation since our establishment in 1992. We are moving beyond our historical role as a coordination body to become a direct service provider with the technical capacity to support utilities when they need it most.

The Board has approved the creation of four new delivery units within PPA: a Technical Response and Advisory Services unit to provide rapid on-site support, a Training and Skills Unit to address workforce development systematically, a Corporate and Data Services unit to strengthen our analytical capabilities, and a Project Management Unit to help utilities access development financing more effectively.

Our goal is to establish PPA as the key support provider within the Pacific energy sector – a trusted partner that member utilities turn to first when facing technical challenges, and a key point of engagement for development partners seeking to support energy transition across the region.

This approach builds on PPA's established relationships with utilities, development partners and other regional bodies to create a more integrated regional response to energy challenges in the Pacific. We recognise that this transformation will require significant initial support from development partners to establish the new delivery capabilities, but we have also carefully considered pathways to long-term sustainability that will deliver lasting value for our members.

Our member utilities deserve more than good intentions and annual conferences. They need practical, responsive support that recognises their operational realities and helps them deliver reliable, affordable, and increasingly clean electricity to our Pacific communities. Our commitment to this is reflected in our updated vision and mission that explicitly recognise energy security and affordability as fundamental objectives, reflecting member utility priorities and the challenging economic environment facing Pacific communities.

This strategic plan provides the framework for PPA to become the technical partner our utilities require, working closely with development partners to coordinate support and accelerate energy transition across the Pacific. Implementation will demand sustained effort from the Secretariat, active engagement from development partners, and continued support from utility leadership. The Board is committed to making this transformation succeed.

Wallon Young

Executive Director, American Samoa Power Authority, American Samoa
and Chairman, PPA Board of Directors

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Pacific Power Association

VISION

Access to sustainable, secure and quality electricity services that are affordable for the people of the Pacific Islands region

MISSION

To support the Pacific Island Country and Territory (PICT) power utilities in the provision of high quality, secure, efficient and sustainable electricity services that improve energy security and affordability for Pacific communities

In this context, PPA will:



be the regional voice for the PICT power utilities



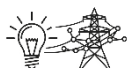
provide a forum for PICT utilities to address their needs



contribute to the development of policies and programs to improve electricity services for the benefit of the PICTs, consistent with the Framework for Energy Security and Resilience in the Pacific: 2021-2030



provide strategic information and institutional strengthening services to member utilities



improve knowledge of the electricity supply business within the region

1. About PPA

The Pacific Power Association (PPA) is a regional agency and a member of the Council of Regional Organisations in the Pacific (CROP), an inter-organisational consultative body working collaboratively on various regional projects and policy initiatives.

PPA was established in 1992 through initial support from the UNDP/ESCAP Pacific Energy Development Programme that was based in Suva, Fiji, and later the Asian Development Bank (ADB). PPA's primary purpose is to promote cooperation among Pacific Island power utilities in technical training, information exchange, sharing of skilled staff and engineering expertise and other activities of benefit to members.

There are three main categories of PPA membership:

1. Active (Pacific Island power utilities)
2. Allied (other power utilities, organisations and individuals with an interest in the region's power sector including suppliers of services and products)
3. Affiliate (any organisation that does not seek to gain financial benefits or direct services from PPA).

In 2025, there are 25 Active members operating in 20 Pacific Island Countries and Territories (PICTs), 88 Allied Members and 26 Affiliated Members. Active Members and an Allied Member representative have voting rights. Core funding is through annual membership fees but PPA also receives financial and technical support from a number of development assistance agencies.

PPA's Board of Directors consists of the CEOs or representatives of all Active Members and a member elected from Allied members. The Allied Members' representative has a three-year term. Other Board Members are permanent unless they resign from or are replaced by their utility. Day-to-day affairs are managed by a Secretariat headed by an Executive Director who is an ex-officio board member.

An Executive Committee (EC) of the Board guides the Secretariat between annual PPA meetings and has the authority to make decisions on behalf of the Board between board meetings. An Annual General Meeting (AGM) is held at least once every calendar year, with a quorum of ten directors (present or represented by proxy) representing not less than eight of member PICTs. There are alternates for each EC member.

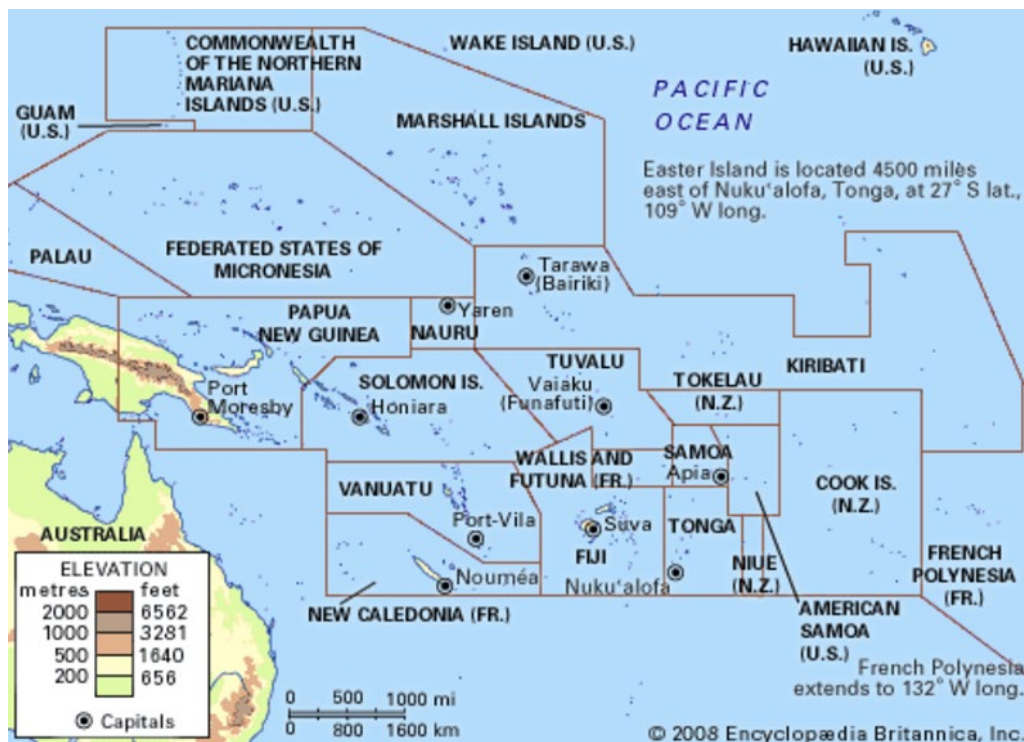
The Board Chair is a director, appointed by the Board for a term not exceeding three years. The EC is appointed from members of the Board, comprising the Board Chair, the Secretary, the Treasurer, the elected Allied member representative, and the board member representing the Active member hosting the next AGM.

PPA's core activities include:

1. ongoing regional technical and non-technical training;
2. a managerial, technical and financial cooperation programme for sharing utility expertise and experiences;
3. a power sector database and benchmarking system under periodic development,
4. publication of a quarterly magazine *Pacific Power*;
5. technical studies and advisory services;
6. organising an annual meeting with a separate workshop for board members and donors and a concurrent trade exhibition;
7. organising and conducting a bi-annual engineering workshop; and
8. other miscellaneous services.

2. The Power Sector in the Pacific

PPA's 25 utility members operate in 20 PICTs across the Pacific, varying widely in size from Nauru, with only 21 km² of land area to Papua New Guinea (PNG), with 463,000 km² and with populations ranging from barely a thousand people to nearly 11 million, spread over an ocean area larger than Europe.



There are PPA member utilities throughout the Pacific except Hawaii and Wake Island

Source: <https://www.britannica.com/place/Pacific-Islands>

Between 1998 and 2023, access to electricity globally increased from 73% of the population to nearly 92%. For Pacific Island Small States, it grew considerably more dramatically from 57% to 89%, with only three below 90% access nationally.

Unsurprisingly, PPA member utilities are characterised by extreme diversity: ¹

- Small organisations with barely 1 MW of capacity operating a single grid for a few hundred customers to hundreds of MW and thousands of customers providing a national service with multiple grid systems on different islands.
- Some provide both grid and off-grid supply whereas others supply only grid-based electricity, with household consumption ranging from about 80 kWh to over 700 kWh per month.
- Electricity sales are taxed in some PICTs, with several utilities paying no import duty or tax on fuels, whereas others are taxed. There are flat-rate tariffs in some utilities, but stepped rates varying with monthly consumption in others. Some include demand charges for commercial / industrial customers while others do not. Some utilities have a single national tariff with cross subsidies from the main centres to rural or remote island consumers, while others have tariffs that vary according to cost of supply by location.
- All utilities have invested in solar PV generation, but most remain highly dependent on diesel fuel. An increasing percentage of PV supply is from Independent Power Producers (IPPs), with varying degrees of success.
- About 60% of member utilities are self-regulating, whereas others have external regulation for tariffs and/or technical standards. A few utilities are private profit-making entities with full cost recovery, but most have government-established tariffs that are below the cost of supply, resulting in operational and maintenance difficulties.

Electrification as Percent of Population: 1998-2023



Source: <https://data.worldbank.org>

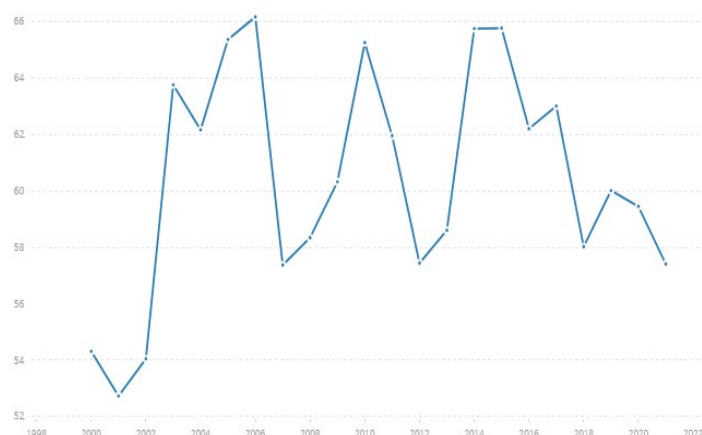
**Electrification Rate & Trends:
Pacific Island Small States 2023**

Country	%	Trend
Fiji	99.3	
Kiribati	95.9	
Marshall Is	100.0	
Micronesia	86.9	
Nauru	100.0	
Palau	100.0	
Samoa	100.0	
Solomon Is	81.3	
Tonga	100.0	
Tuvalu	100.0	
Vanuatu	61.6	
PNG & New Caledonia, shown below, are excluded from World Bank Pacific Small Island states. https://data.worldbank.org		
PNG	20.5	
N Cal	100.0	

¹ Except where noted, information in this section is from *PPA Benchmarking Report for Fiscal Year 2022* (draft summary, April 2025) and related data from 18 PICT utilities from PPA's Pacific Regional Infrastructure & System Metrics (PRISM).

- The 14 independent PICs have commitments for significant reductions in carbon emissions (the Nationally Determined Commitments – NDCs – under the 2015 Paris Agreement). The trend since 2000 is mixed, but from 2014-2021 carbon-intensive petroleum use steadily declined overall from 66% of electricity generation to 57%.²

**Electricity from Petroleum Fuel
Pacific Island Small States (Percent; 2000-2021)**



Source World Bank <https://data.worldbank.org>

- There are three sets of technical standards in the region: Australian/New Zealand for much of the south Pacific, US standards for US-affiliated PICTs, and French standards for the Francophone utilities. In various utilities, certain sections of the grid are constructed in accordance with Japanese standards due to financial contributions from Japan.

With such a diverse range of conditions and operating environments, there is a correspondingly wide variation in the management and technical and skills required by individual utilities, their ability to retain skilled personnel, and local training capacity. Providing effective and cost-effective services to meet the wide range of member utility needs has been, and remains, a major challenge for PPA.

PICT Utility Size and Renewable Energy Contribution			
Peak Demand	< 5 MW	5-30 MW	> 30 MW
utilities	4	11	3
% of utilities	22%	61%	17%
Generation	< 20 GWh	21-600 GWh	> 600 GWh
utilities	3	11	3
% of utilities	18%	65%	18%
RE Contribution	< 10%	11-50%	> 50%
utilities	12	3	2
% of utilities	70%	18%	12%

Peak is for largest grid. Covers 18 utilities submitting data for PPA's 2022 benchmarking (except 17 for RE contribution)

3. A Five-Year Plan within a Ten-Year Horizon

Five years is a reasonable period for the PPA Secretariat to access the resources needed to plan and implement, or begin to implement, the services members prioritise, that are appropriate through a multi-country, regional approach, and are consistent with the time frames of funding agencies. However, the utilities need to keep in mind a much longer period, ten years if not far longer, considering the expected lifetime of new assets, a changing climate which impacts planning for resilience, a possible realignment of the international economic, technical assistance and security context, and rapidly changing technical options and opportunities. PPA must thus be flexible and adaptive.

² The World Bank data exclude Guam. If included, this would increase the percentage of PICT generation from petroleum fuels. Guam has 464 MW of capacity, with 80% diesel-generated Source: www.eia.gov April 2025. Note that the graph range is 32-66% which can visually amplify annual differences.

Because the environment in which PICT utilities operate is changing rapidly, this strategic plan covers the fairly short period of five years, from late-2025 to late-2029. This is the minimum period during which the PPA Secretariat can realistically expect to access the additional resources necessary to develop and provide a significant increase in the level and quality of its services to member utilities and to the PICTs. However, it is important that the five-year plan carefully consider the longer term, and that PPA's activities and priorities in the medium-term five-year period be consistent with addressing anticipated longer-term issues.

4. The Evolution of PPA Strategic Planning Since 2011

PPA has faced rapid change since its inception and its planning has had to adapt to events. Since PPA's initial plan of 2011³ it has been clear that there would be an ongoing need for capacity development and skill retention and reducing petroleum-fuel considering national and regional plans of utility member countries to transition to renewables.

PPA's 2011 strategic plan was developed within a context of overwhelming dependence on petroleum fuels, with high, fluctuating prices, pressure from governments to commercialise, and expected, but uncertain, regulatory changes. There were four strategic goals: more efficient use of petroleum fuel, improved capacity to improve electricity supply, improved services by the Secretariat and improved financial sustainability. To achieve the goals, there were objectives and actions for each. There was also an implementation plan with estimates of costs of actions, plus priorities, timelines, and responsibilities for each.

As the second plan was being prepared in 2018, dependence on petroleum remained very high but fuel prices were more stable. Pressures to operate more commercially and an uncertain regulatory environment remained. Solar PV prices were declining, there was increased interest in IPPs to reduce capital costs and utility risks, and PIC governments had committed to substantially reduce carbon emissions (particularly within the energy sector), which increased pressure to transition from petroleum fuels.

The 2018-2023 plan retained the four earlier goals (though slightly rephrased) and added two more: PPA support to improve utility human resource management (including better gender balance) and to help utilities to address climate resilience.

In 2025, petroleum fuels continue to dominate generation. There has been significant investment in low-carbon renewable energy, but with inconsistent results: the transition, with its focus⁴ on VRE generation technologies, requires far more than the installation of PV panels. The entire generation, transmission and distribution system requires strengthening and VRE necessitates energy storage.

Capacity building and retention remains challenging, with the continued migration of skilled islanders overseas, and the need for adaptation to climate change and natural disasters seems more pressing than ever. Potential new challenges – such as a possible rapid shift from internal combustion to electric transport, or the impact of artificial Intelligence on utility control systems – will require adaptable and flexible responses from PPA and its member utilities.

³ There was an earlier 4-page summary *PPA Business Plan* for 2000-2001 with five Key Result Areas (International Issues Management, Regional Issues Management, Membership Satisfaction, Financial Performance, and Value Adding Services) with several objectives and actions for each.

⁴ For those PICT utilities with little or no untapped hydropower potential.

The 2025-2029 strategic plan largely retains the six goals from the 2018-2023 plan and adds a seventh: to promote and support the transition to renewable energy to meet the ever-evolving challenges and priorities faced by the power sector. Emerging challenges include increased global political, climate and economic uncertainty. Consequently, PPA's vision and mission statements were updated in 2025 to explicitly recognise energy security and affordability as fundamental objectives, reflecting member utility priorities and the challenging economic environment facing Pacific communities.

Accordingly, energy security and affordability have become central themes of this plan, with increased focus indigenous resources to reduce dependence on expensive imported fuel that will also over time reduce generation costs and improve electricity affordability for Pacific communities.

Progression of PPA Strategic Goals Over Time		
2011-2016	2018-2023	2025-2029
1: Using Petroleum Fuel More Efficiently and Reducing Utility Consumption 2: Building Capacity to Improve Electricity Supply and Quality 3: Provision of Services by PPA Secretariat to Improve Electricity Supply and Quality 4: Improving Financial Sustainability of the Utilities and PPA Secretariat	1.–4. Essentially the same as 2011-2016 plan 5. Support to utilities for human resource management 6. Support for climate change resilience in member utilities	1: Promote and Support Renewable Energy Transition 2. Support for the Development of Climate Change Resilience within Member Utilities 3: Using Petroleum Fuel More Efficiently & Reducing Utility Consumption 4: Support for Building the Technical, Administrative and Regulatory Capacity of the Utilities 5. Provision of Services to Member Utilities by the PPA Secretariat 6. Support To Utilities for Financial Sustainability 7. Support to Member Utilities for Human Resource Management

5. Developing the 2025-2029 Strategic Plan

The new plan is a logical progression, not a radical change, maintaining the strengths of the earlier approaches while addressing the main weakness. No earlier goals have been discarded as they remain relevant, but there is a new strategic goal acknowledging and explicitly focussing on the key ambition of a more effective transition to renewable low-emission energy.

In developing the plan, CEOs considered a number of informal guidelines (see box below) to guide discussions. Each PPA goal, objective and action is consistent with these principles.

Discussions were also informed by findings from interviews and questionnaires, an assessment of PPA's finances, the analysis of the previous two plans, and a number of short briefing notes on issues of potential relevance to PPA and its member utilities.

There was also more effort for alignment with the priorities, constraints, and time horizons of key financing agencies as indicated by recent policy papers, discussions and presentations to the 2024 PPA annual conference. Developing the capacity through PPA to provide a rapid, ongoing response mechanism to address pressing CEO concerns was also a key objective.

6. Strategic Goals, Objectives and Actions

The 2025-2029 plan includes high-level strategic goals for PPA's five-year planning period. For each, there are a number of objectives. For each objective there are specific actions to be begun, and in some cases completed, during the period.

The 2025-2029 plan sets out broad areas of activity (actions) for each objective. However, these actions do not provide detailed descriptions and workplans or comprehensive M&E to apply to targets. This has been a deliberate approach to recognise the following limitations and constraints:

- PPA's dependence on development agency finance with uncertain quantities, priorities and delivery timeframes for the bulk of its activities has resulted in actual work that helps address utility needs but differs substantially from the work and priorities of the formal plan.
- PPA lacks, and is expected to continue to lack, sufficient professional Secretariat staff and resources for sustained in-depth M&E. A simplified approach is more appropriate and achievable for PPA.
- Even if external financial support is secured for high-priority actions, it may not become available for expenditures during the five-year plan period, undermining plan timeline expectations and priorities.
- Donor commitments and funding priorities may unexpectedly change significantly during PPA's planning period.

Across all seven strategic goals, two themes are paramount: improving energy security by reducing reliance on imported petroleum fuels, and making electricity more affordable through improved efficiency, renewable energy transition, and better utility financial management. These themes respond directly to the challenges facing Pacific communities and guide PPA's strategic priorities.

Guidelines for Plan Development

PICT priority

Are proposed actions consistent with the national or regional energy sector priorities of the PICTs?

Utility priority

Does the plan address issues that are priorities for member utilities?

Regionality

PPA is a regional organisation. Does it address issues that can best be done on a regional or subregional multi-country level?

PPA alignment

Does it address issues that align with PPA's vision and mission?

Timescale

Is the activity expected to commence within the 5-year plan period?

Donor alignment

PPA is highly dependent on support from development agencies. Does the plan consider their priorities?

Financial sustainability

Is there a path toward financial sustainability of PPA services?

Impact

Is the action expected to have a significant and lasting positive impact?

Strategic Goal 1: Promote and Support Renewable Energy Transition

PPA's focus on energy transition is fundamental to the success of its 2025-2029 plan to support member utilities in achieving greater energy security and affordability. It recognises and is responding to the fact that member utilities are actively seeking to pursue renewable energy transition for meeting the energy policy goals and formal commitments of the 14 independent PIC governments, and the territories and dependencies, which contribute to the goals of the country with which they are associated.

Achieving the energy transition requires replacing generation from petroleum fuels with clean low-emission renewables but also activities which improve the demand-side or supply-side efficiency of fuel use during the transitional period.

What is the Energy Transition?

There is no clear, commonly agreed definition of the energy transition. It broadly refers to the energy sector's shift from fossil-based systems of energy production and consumption to cleaner renewable energy sources such as wind and solar, as well as energy storage.

Key drivers of the transition are reducing cost (VRE is cheaper than fossil fuel generation, even with energy storage) and improving energy security (using more local resources and less imported fuel). Widespread electrification, further improvements in energy storage, mitigating environmental damage, and reductions in energy-related greenhouse gas emissions are also drivers of the transition. Challenges include energy storage and grid reliability, huge investment needs but difficult market dynamics, job displacements and substantial reskilling needs, the complexity in integrating VRE into existing systems, and an equitable allocation of the costs and benefits of the required changes.

For this plan, any actions that lower emissions/kWh, lower litres/kWh from petroleum consumption, lower transmission and distribution losses, invest in improved demand-side and supply-side energy efficiency, and improved customer energy efficiency, are, like renewable energy, part of the transition process.

The three energy transition objectives and seven action areas are discussed below.

Strategic Goal 1: Promote and Support Renewable Energy Transition	
Objective 1.1: Increase renewable energy generation in a planned and sustainable manner.	
Action 1.1.1	Resource assessments specifically for developing bankable renewable energy generation projects
Action 1.1.2	Assessment of transition status documenting RE capacity, generation and percentage of generation through RE (annually)
Action 1.1.3	Undertake full overall power system assessment modelling to support effective energy transition
Objective 1.2: Assist the utilities to assess and implement solutions for renewable energy integration and control	
Action 1.2.1	For proposed RE projects, studies shall include assessment of the network, upgrades needed for grid stability, the energy management system, BESS, and monitoring and generation control systems
Action 1.2.2	Develop a technical support facility within PPA that provides specialized expertise to assist utilities as required to support renewable energy integration
Objective 1.3: Support utilities to achieve their energy transition targets including progress towards their NDCs.	
Action 1.3.1	Guidelines and assistance for a practical energy transition including appropriate skills, tools (analysis, monitoring, modelling), policies and regulatory frameworks
Action 1.3.2	Work with development partners and regional agencies (e.g. PRIF, IRENA, SPC and the NDC hub) to create a pipeline of bankable RE projects

Objective 1.1 is better planned and more sustainable RE development through resource assessments, annual documentation of the status of the transition and improved system modelling to design, optimise, and plan energy systems in a way that balances cost, reliability, and sustainability.

Some past investments have focussed on VRE generation with insufficient attention to effectively integrating RE generation into the existing system, usually based on firm diesel and/or firm hydro capacity with networks which may become less stable with VRE. Objective 1.2 addresses these issues.

Objective 1.3 addresses the need for improved guidelines, assistance and coordination for utilities to help achieve national transition objectives.

PIC NDC commitments to reduce carbon emissions all have a strong electrical energy component but there has sometimes been insufficient coordination among national climate change authorities (which develop the NDC commitments), the national energy authorities (which develop energy sector policies) the utilities (responsible for much of the implementation) and development agencies (who provide much of the finance). PPA will encourage and assist utilities to cooperate with all of these.

PIC NDC Targets and the Power Sector

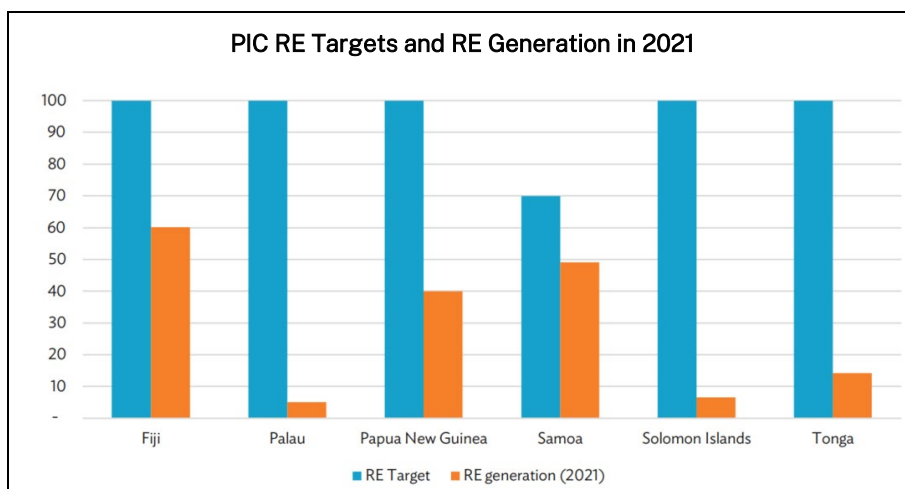
The Australian Government recently provided AUD\$9 million to the Regional Pacific Nationally Determined Contribution (NDC) Hub based at SPC in Suva. The grant supports PICs in reviewing, enhancing and implementing their commitments to transition to a low-carbon development pathway through: i) Improved NDC planning, policy, strategy & legislation, ii) a stronger enabling environment for implementation, iii) accelerated action and implementation, and iv) enhanced measurement, reporting and verification.

All 14 PICs are committed to substantial emissions reductions within the power sector.

Nauru, for example, has an aspirational goal of 100% RE to the national grid by 2050, of which about 40% is based on available (unconditional) and 60% additional (conditional) external financing. Further reductions are expected from demand side energy efficiency improvements.

Fiji plans reduce 30% of BAU emissions from the energy sector by 2030 and 'close to' 100% grid-connected RE generation by 2030 (20% conditional).

Palau has NDC targets (95% conditional) of 45% renewable energy and 35% energy efficiency improvement by 2025, with regional NDC hub assistance currently underway for the Palau Public Utilities Corporation.



Source: *Powering the Pacific: The Cost Implications of Renewable Energy* (ADB / Pacific Private Sector Development Initiative) July 2024.
RE target dates vary but are typically for 2030.

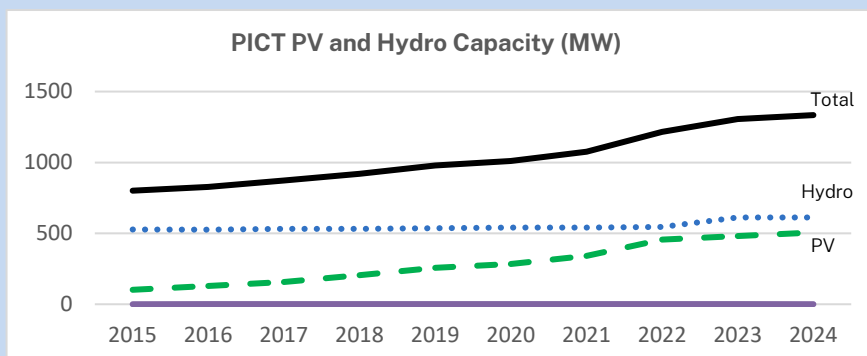
The Asian Development Bank (ADB) recently reported⁵ that throughout the Asia Pacific region, progress toward the energy transition has been slower than planned.

As in the Pacific, a common issue is inadequate grid infrastructure which is not suited to keep up with rising energy demand and smoothly integrate intermittent renewable energy sources.

Other commonalities shared by Asian countries and PICs during the rapidly increasing RE investment period are financial constraints, high energy costs, weak infrastructure, regulatory and institutional constraints, and climate risks. Furthermore, the disposal or recycling of RE waste, such as used batteries and solar panels, poses a more significant challenge in the Pacific due to limited land, transport and recycling capabilities.

PICTs have not yet reached their ambitious energy transition goals. However, recent annual growth in solar PV capacity (20%) and generation (24%) – which make up most of the RE investment – has been significant, and this trend is likely to continue.

Trends in the Transition to Renewable Energy in the PICTs



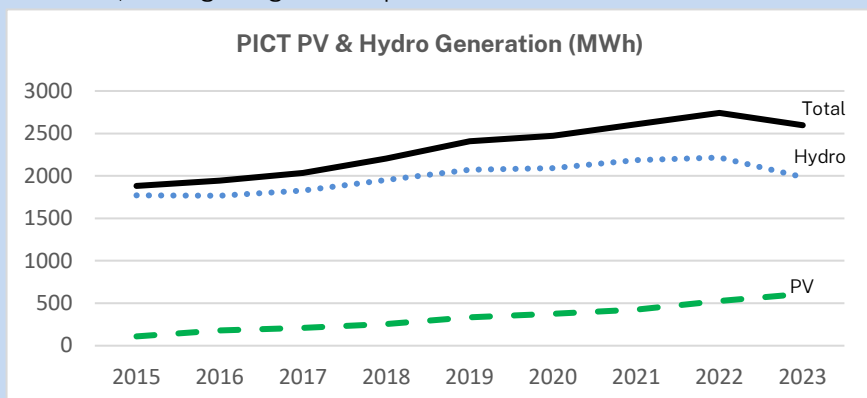
Source: *Renewable Capacity Statistics 2025* (IRENA April 2025)

Notes 1) PICTs = All Oceania minus Australia & New Zealand;

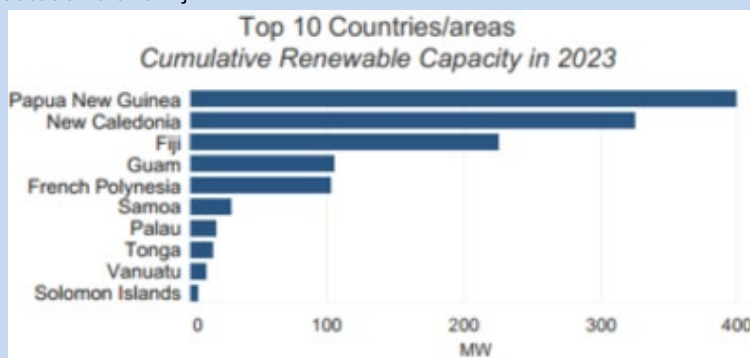
2) Installed capacity by end of each year

3) Excludes biomass and geothermal, for which growth has been insignificant

From 2015-2023, hydro output grew at an AAGR of 2.5%, whereas PV generation grew 10 times faster at 24% per year. This is based on the trendlines, not beginning and end points.



As shown below, RE capacity (MW) in 2023 was dominated by PNG, New Caledonia and Fiji.



Source: SIDS Regional Profile 2023 (IRENA, Sept 2024). Includes: American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia (Fed States), Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu.

⁵ Chapter 4: Energy Transition in Small Island Developing States in *Energy Transition Readiness Assessment for Developing Asia and the Pacific* (ADB, 2025) <https://www.adb.org/sites/default/files/publication/1050701/energy-transition-readiness-developing-asia-pacific.pdf>

A key goal of this plan is a faster and smoother energy transition. Therefore, it stresses approaches and tools to accomplish this including strengthening PPA's capacity and institutional structure, enhancing regulatory frameworks, training and retaining staff, and building resilient energy infrastructure capable of withstanding extreme weather.

One tool being advocated to assist the region meet transition goals is generative artificial intelligence (AI). Although this offers considerable promise, it will require substantial improvements to PICT utility data collection and verification, along with the appropriate AI software.

Strategic Goal 2: Support for the Development of Climate Change Resilience within Member Utilities

For Strategic Goal 2, there are three objectives with four areas of action.

Strategic Goal 2: Support for Development of Climate Change Resilience within Member Utilities	
Objective 2.1: Assist utilities prepare plans that increase utility resilience to climate change.	
Action 2.1.1	Develop regional guidelines for climate resilience specifications for all RE procurements based on credible assessments for expected climate conditions in 2040
Action 2.1.2	For coastal power utility infrastructure, seek advice of appropriate technical organisations (such as SPC Geoscience section) on sea level rise mitigation
Objective 2.2: Assist utilities with disaster management planning.	
Action 2.2.1	1 Work with the Pacific Island Emergency Management Alliance (PIEMA) for power sector specific rapid response planning and training for member utilities
Objective 2.3: Assist utilities with disaster response	
Action 2.3.1	Work with PIEMA to assist member utilities during and after a natural or other disaster

Objective 2.1 is improved climate change resilience within the member utilities through development of new procurement guidelines to cope with expected climate conditions in 2040 and technical advice for resilient coastal energy infrastructure designed to handle anticipated levels of sea level rise. 2040 is only 15 years away so the guidelines and related advisory services need to be developed and available quickly.

Dealing with Increased Uncertainty

Carbon emissions retained in the atmosphere grew at a record-breaking speed in 2024, suggesting that the planet may be on track to warm far more rapidly than climate models have predicted. The planet may be losing its natural ability to store carbon in forests and wetlands, which have historically soaked up excess emissions.

Small Island Developing Countries (SIDS) are uniquely vulnerable to impacts of climate change, including rising sea levels, storm surge, flooding, and high winds, with cyclones causing the most damage. Paris Agreement signatories are obliged to limit the global temperature increase to 1.5-2.0C, but commitments have not been met, likely to result in a 2.8C rise, with projections of actual emissions could mean a 3.5C increase.

Climate mitigation and adaptation measures are very expensive for PICTs because of high exposure to risk, the lack of climate resilience of most existing power systems, the small scale of investments, relatively poor power system planning, insufficient forecasting and dispatching and an insufficiently qualified workforce.

Unfortunately, the ten middle-income PICs – Fiji, FSM, Kiribati, Palau, PNG, RMI, Samoa, Tonga, Tuvalu, and Vanuatu – now have reduced access to concessional climate loans, which can limit borrowing for climate projects without risking debt sustainability.

Climate risks need to be accounted for in the planning stages, yet assessment of costs and benefits of resilience measures face high levels of uncertainty. The risks occur at all stages of project development, but are most prominent during the operational phase, as huge losses can occur if electricity systems are non-operational due to poor functioning of power infrastructure. Considering the growing risks, utilities should focus on making themselves better able to cope with unexpected changes.

A recent study by insurance companies concludes that many physical assets will soon be uninsurable. Allianz estimates that the cost of economic losses from natural catastrophes increasingly due to climate change is typically around 10 times higher than the cost of adaptation, noting that this provides a clear economic incentive to invest in preventative measures.

Source: *Why insurers worry the world could soon become uninsurable* (Aug 2025) [Climate: Insurers are worried the world could soon become uninsurable](#)

Objective 2.2 is to develop cooperative power sector specific rapid response planning and training in cooperation with the Pacific Island Emergency Management Alliance (PIEMA).

PIEMA: Pacific Islands Emergency Management Alliance

PIEMA, managed by the Geoscience section of SPC, provides emergency and disaster management training across the Pacific, and has developed a *Regional Strategic Roadmap for Emergency Management*. In March 2025, the Pacific Islands Forum, the Pacific Community, and the United Nations Office for Disaster Risk Reduction (UNRR) signed a Letter of Cooperation sharing leadership, expertise, and disaster management coordination efforts through 2030. The agreement aims to: i) strengthen technical assistance and capacity building, ii) develop early warning systems and anticipatory action, iii) collaborate to minimise loss and damage, and iv) develop evidence-based policies and actions for disaster risk reduction. Some PPA member utilities are already using PIEMA services to improve resilience.

Objective 2.3 is assistance to member utilities to assist member utilities during and after a disaster, natural or other

Strategic Goal 3: Using Petroleum Fuel More Efficiently & Reducing Utility Consumption

Petroleum fuel still accounts for well over half of all electricity generation in the region, and this will continue for some years to come. Strategic Goal 3 is to provide assistance to use these fuels more effectively and where appropriate to reduce consumer electricity use to reduce system peaks and address grid instabilities.

Diesel Generation in PICTs

The majority of electricity in the region is still generated from petroleum fuels. In most PICTs, fuel costs remain the single largest generation cost component and the largest source of savings when diesel is replaced with solar or hydro. In 2021, the average specific fuel consumption reported from 33 systems was 3.53 kWh/litre (median of 3.68) with a range of 2.07 to 4.04. The average was about 13% higher than PPA's benchmark of 4.0.

Source: PPA benchmarking reports

Strategic Goal 3: Using Petroleum Fuel More Efficiently & Reducing Utility Consumption	
Objective 3.1: Improve the efficiency of electricity production & supply by utilities	
Action 3.1.1	Use appropriate benchmarking data (heat rates, RE capacity factors, load factor, etc) to measure efficiency and recommend improvements
Action 3.1.2	Information dissemination on technology trends that can improve fuel efficiency
Objective 3.2: Improve the efficiency of electricity use by utility customers through demand response and other measures	
Action 3.2.1	Knowledge sharing program for member utilities
Action 3.2.2	Document improvements from various measures and disseminate results to member utilities
Objective 3.3: Manage cost risk of petroleum to utilities	
Action 3.3.1	Prepare report on practical options, benefits and costs

Objective 3.1 aims to increase the efficiency of fuel use through better technical information derived from PPA's improved benchmarking system and through dissemination of practical information on technical trends. Rapidly expanding RE can stress grid stability and reduce control over system peak demand.

Objective 3.2 seeks to shift consumer demand by reducing or shifting electricity usage during peak periods in response to time-based rates, improved system modelling and other incentives.

Demand Response for Improving Grid Reliability and Peak Reduction

Demand response is a short-term, voluntary decrease in electrical consumption by end-use customers usually triggered by poor grid reliability or high prices. Customers are remunerated for curtailing their loads, which can help balance supply and demand, provide adequate capacity during times of stress on the system, and provide services such as frequency support and management of network congestion. Growth in VRE makes system stress less predictable and increases technical challenges regarding frequency and voltage control. Time-differentiated electricity prices can incentivise customers to shift consumption away from peak hours or when the power system is stressed.

The utility can directly contract for load reduction in exchange for a payment. For example, electric water heaters, air conditioners, and electric vehicle charging can be shifted with minor inconvenience to end users. Smart meters and remote monitoring and load control tools can be automated and provide better control. Demand response can provide up to 20% of a system's flexibility in developing economies.

Expanding RE penetration can rapidly overwhelm small island grids and result in substantial curtailment. Demand response can help mitigate this. Limited large industry has led island utilities to focus on controlling water heating and air conditioning as key technologies for load control.

Source: *Harnessing the Potential of Flexible Demand Response in Energy Markets* (ESMAP, Nov 2024)

Other potential developments in the region, such as a relatively rapid but unplanned shift to electric vehicles, may be unlikely but could also stress grid stability, reduce control over peak demand and require utility demand response initiatives.

Electric Vehicles: Strategic Implications for PICT Utilities

Electric vehicle imports to PICTs are very small but could grow rapidly. In 2024, China accounted for 76% of global EV (car) sales and 95% of e-buses and commercial vehicles. Faced with fierce domestic competition and high import tariffs in the US and the EU, Chinese EV companies are aggressively cutting prices and assertively developing new markets. China's largest EV manufacturer (BYD) aims to double overseas sales with great opportunities in Australia.

Most EVs in the PICTs are likely to be sourced from Australia and New Zealand, except for the north Pacific. At least one analyst believes the Australian market will likely be taken over by Chinese EVs within a few years. Global projections suggest that within 10 years, 50% of all vehicles will be electric, driven by improved battery technology, policy incentives and increased consumer demand.

A World Bank study of 20 developing countries (in Africa, Asia, Caribbean, Oceania and South America) concludes that over half would benefit economically now by adopting electric mobility: "For developing countries, the transition is no longer a question of 'if' but 'how' and 'when.'" Reducing PICT reliance on oil imports makes sense at a time of great geopolitical uncertainty. Potentially rapid growth in EVs requires utility planning now, not in 5 – 10 years.

PICT utilities have experienced periods of fuel supply constraint and/or rapidly fluctuating prices. Some, such as Energy Fiji Ltd, have addressed this through a risk management fuel hedging initiative.

EFL's Fuel Hedging Programme

The primary objective of the fuel hedging programme is to mitigate volatility on earnings arising from fluctuations in the global fuel price as well as movements in foreign exchange rates, both factors which are outside the control of EFL.

There has been unprecedented disruption and volatility in global energy markets. Russia's invasion of Ukraine exacerbated this volatility by restricting global energy supplies and constraining supply chains resulting in a spike in global fuel costs. Extremely volatile prices of Industrial Diesel Oil (IDO) and Heavy Fuel Oil (HFO) are very hard to forecast, due to their dependence on many external influences such as global politics, global economics and natural disasters. ... EFL Management continued with the proactive risk management programme to reduce the risks of rising global oil prices and increased volatility in the foreign exchange market. The performance so far via the EFL's hedging programme has been very encouraging and achieving its objectives. EFL's Foreign Exchange & Brent Oil Hedging Team, together with professional hedging consultants from New Zealand ... continued to add value to the hedging programme and ... recorded a net realised gain of \$2.9M for the year. The actual fuel cost for the year was \$192.97M compared to a revised budget fuel cost of \$245M (May 2023).

Source: *Energy Fiji Ltd 2023 Annual Report* (EFL, 2024)

Action under Objective 3.3 will assess opportunities and risks for managing petroleum supply costs and availability.

Strategic Goal 4: Support for Building the Technical, Administrative and Regulatory Capacity of the Utilities

Strategic Goal 4 is building the capacity of PICT utilities and the PPA Secretariat. There are three objectives with six action areas.

Objective 4.1 focuses on the utilities. The intention is a PPA Technical Response Unit with several highly-experienced experts available to travel quickly to utilities, or advise remotely, on a range of technical issues. This would be supplemented by pre-selected panel of rapid-response experts outside of PPA who could provide more specialised advisory services and training.

The PPA Secretariat consists of an Executive Director supported by only two administrative / accounting staff and an office assistant. Objective 4.2 is to further train staff in project development and management.

Objective 4.3 is to improve dialogue and understanding between energy regulators and utilities and improve regulatory development. Member utilities face common regulatory challenges including tariff design for renewable energy integration, grid connection standards, and performance monitoring frameworks. PPA is uniquely positioned to facilitate dialogue between utilities and regional regulatory organisations such as the Office of Pacific Energy Regulators Alliance (OPERA), providing collective utility perspectives on regulatory development while helping utilities better understand and engage with regulatory frameworks.

Addressing Critical Staff Shortages

PICT utilities often require quick, flexible technical assistance to address critical operational issues but face high costs and long delays in accessing expertise. They also face an accelerating loss of skilled technical personnel overseas. These issues undermine power system reliability, with a single technical problem having cascading effects. When generation units fail, distribution issues persist or systems malfunction, the financial viability and service quality of the utility is compromised. Many PIC utilities lack redundancy in equipment and human resources making timely technical support critical.

Regional approaches to technical training to address limited technical staffing also face challenges due to high travel costs, language barriers and financial and staffing issues. And trained staff often depart for more lucrative international opportunities. PPA's experience with the Sustainable Energy Industry Development Project (SEIDP) suggest that a Technical Response Unit within PPA – with 2 to 4 experts with a range of engineering backgrounds who can assist member utilities on short notice, including travel – could be an effective solution. PPA could also develop a framework agreement with a pool of prequalified technical specialists across different disciplines, to be deployed quickly.

Strategic Goal 4: Support for Building Technical, Administrative and Regulatory Capacity of Utilities	
Objective 4.1: Support technical and non-technical capacity building for utilities.	
Action 4.1.1	Establish a Technical Response Unit within PPA with experts with a range of engineering backgrounds who can assist utilities on short notice, including travelling to sites.
Action 4.1.2	Develop a pool of prequalified technical specialists across different disciplines who can be deployed quickly to assist utilities with specific advice and training.
Objective 4.2: Capacity building of the PPA secretariat	
Action 4.2.1	Establish a PPA staff development program to build in-house expertise in technical disciplines, project management and grant writing.
Objective 4.3: Working with regional regulatory organisations (e.g. OPERA) to provide utility perspectives	
Action 4.3.1	Conduct regular dialogues with regional regulatory organisations to present utility operational challenges, and inform regulatory framework development and application
Action 4.3.2	Prepare and disseminate periodic briefs on emerging utility challenges to inform regulatory policy development in the region
Action 4.3.3	Facilitate forums and workshops to exchange views between utilities and regulators at regional level

Strategic Goal 5: Provision of Services to Member Utilities by the PPA Secretariat

There are three objectives and six actions under Strategic Goal 5. Improving services to PPA members is Objective 5.1 to be accomplished through more timely responses to requests for a range of assistance and more formal and regular consultations with development partners such as PRIF and its Energy Working Group, which has representatives from most key development partners in the region.

Improved information dissemination is Objective 5.2, particularly through an updated and revamped benchmarking system to provide more rapid responses, become more financially secure to be self-sustainable, and to provide some of the Key Performance Indicators (KPIs) for the monitoring and evaluation of progress within this plan.

Objective 5.3 seeks to implement annual reviews of both planned activities as well as unplanned PPA activities. PPA operates in a dynamic environment where both planned strategic activities and responsive unplanned actions are necessary to effectively serve member utilities. This objective establishes annual reviews to assess progress against the strategic plan, evaluate the strategic relevance of unplanned activities, and identify necessary adjustments to implementation approaches. As a responsive organisation, PPA must balance systematic delivery of planned activities with agility to address emerging challenges and opportunities affecting member utilities. These performance reviews will examine both strategic implementation and internal processes and procedures to improve PPA's overall capacity for effective service delivery. All reviews will be conducted in accordance with the M&E guidelines for the 2025-2029 strategic plan.

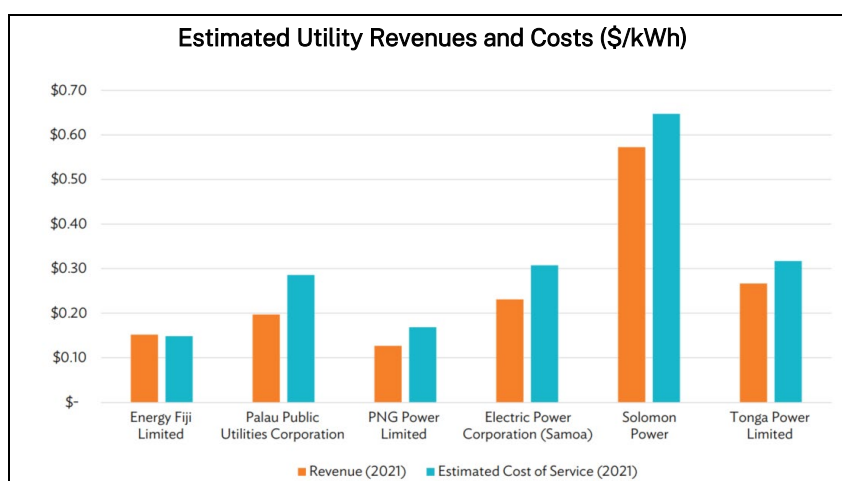
Power Utility Benchmarking

Effective benchmarking provides a useful mechanism for performance assessment, identifying improvement opportunities, and knowledge sharing among utilities and other stakeholders. PPA's annual benchmarking reports are acknowledged by stakeholders as critical. Persistent challenges have included delays in completion, data quality issues, limited data validation, and differing fiscal years for utility reporting. PPA, with ADB assistance, has been developing the *Pacific Regional Infrastructure & System Metrics* (PRISM) platform to digitise and streamline the process, providing more timely and practical value to utilities and others. PRISM is a significant improvement with better validation capabilities, streamlined submission processes, and improved visualisation tools. A fundamental challenge remains due to fragmented funding relying on a series of donor projects rather than sustainable core funding.

Strategic Goal 5: Provision of Services to Member Utilities by the PPA Secretariat	
Objective 5.1: Improve services to members	
Action 5.1.1	Timely response to <i>ad hoc</i> requests from utilities (e.g. Power Factory log-in problems, assistance with spare parts procurement, advice on suitable consultants, etc.)
formal Action 5.1.2	Regular formal consultation with development partners and regional organisations (e.g. with PRIF Energy Working Group), and reporting to member utilities of opportunities, status of assistance programmes, etc.
Objective 5.2 Provide information systems to support members and disseminate information to industry stakeholders.	
Action 5.2.1	Further develop a benchmarking approach which is financially secure, provides timely information to CEOs on operational issues and can provide KPIs for M&E.
Objective 5.3: Review of PPA performance.	
Action 5.3.1	Annual review of strategic plan (monitoring and evaluation)
Action 5.3.2	Annual review of non-planned actions (monitoring & evaluation)
Action 5.3.3	Review of PPA processes and procedures (finance, procurement, human resources) to improve PPA's capacity to deliver effectively.

Strategic Goal 6: Support To Utilities for Financial Sustainability

Many PPA member utilities have tariffs that do not cover costs of operation, with insufficient revenue for routine maintenance, effective asset management, upgrading grids to cope with new VRE generation and other requirements. Studies have confirmed that asset management and maintenance in PIC power utilities tend to be poor.



Source: *Powering the Pacific: The Cost Implications of Renewable Energy* (ADB/Pacific Private Sector Development Initiative) 2024

Achieving affordability for consumers while

maintaining financial sustainability for utilities requires careful balance. This strategic goal addresses both sides of this equation: helping utilities achieve cost-reflective tariffs while improving operational efficiency to reduce the underlying cost of service.

Tariffs need to be equitable and affordable for consumers, but each utility has a different generation mix today, and differing plans for implementing a transition to renewables. There is no single appropriate approach for all PPA members. So financial targets need to consider the context of each utility.

Strategic Goal 6 has two objectives and four actions for support to the utilities to improve financial sustainability.

Strategic Goal 6: Support To Utilities for Financial Sustainability	
Objective 6.1: Support to utilities for electricity tariff reform.	
Action 6.1.1	Provide technical assistance to utilities for tariff reviews and reforms through engagement of specialist tariff-design experts
Action 6.1.2	Implement a capacity building program for utilities on tariff development, cost allocation methodologies, and regulatory engagement strategies
Objective 6.2: Support with development of Power Purchase Agreements.	
Action 6.2.1	Develop standardised IPP frameworks for Power Purchase Agreements specifically tailored to utilities, including model procurement documents, clear evaluation criteria, contract templates, and practical implementation guidelines.
Action 6.2.2	Create a regional knowledge-sharing platform documenting utility IPP experiences, best practices, and lessons learned

Objective 6.1 is tariff reform through tariff reviews and design and capacity building on tariff development. Tariffs that cover full costs need to be sufficient for high-quality routine maintenance and considerably improved programmes for asset management, with a goal of ongoing improvements in power utility asset management ratings, as described in the box on page 18 below.

PICT Power Utility Asset Management and Maintenance

PICs, with substantial development assistance, have invested large sums in energy infrastructure, but this has not usually been well-maintained, substantially raising costs and reducing services over the long term. PRIF produced a series of national PIC infrastructure investment plans from 2021-2025, and a 2022 baseline maintenance benchmarking report. Capital cost is typically 20% of lifecycle O&M cost, so it is cheaper to carry out routine maintenance, than allowing such deterioration that replacement is the only option. The study considered corrective maintenance, routine maintenance, periodic preventive maintenance, rehabilitation, replacement and new assets. Six PIC power utilities were included, each self-assessing progress across 12 categories with a scale of 1 to 5:

Score	Rating	Description
1	Undefined	No recognition of need and/or no evidence of commitment to meet objective
2	Aware	Need identified and evidence of intent to progress
3	Developing	Some progress. Basic elements in place, not fully implemented
4	Competent	Systematically, consistently achieves objective. Processes in place. Partly achieved
5	Advanced	Employs leading practices. Fully meets or surpasses requirement

There was some progress (average = 2.9 or 'developing'), with part implementation of some maintenance programmes. Maintenance management for relatively new RE assets was generally poor. On average, there was progress against 63% of the assessed requirements (a score ≥ 3). Maintenance delivery was poor with progress reported against 57% of requirements. Maintenance Planning (average = 2.4) is the least developed.

Source: PRIF infrastructure reporting

Objective 6.2 is support for Power Purchase Agreement development, as some of these agreements have been highly disadvantageous to the utilities.

PPA member utilities are increasingly seeking assistance to help them be better equipped to approach IPP processes more informed to manage their risks and costs from Power Purchase Agreements.

Power Purchase Agreements in the Pacific

IPP arrangements through Power Purchase Agreements are a common approach for attracting private investment into RE in the PICTs. They can reduce upfront capital costs and risks to utilities and governments.

However, investors often seek "take-or-pay" or "minimum energy" arrangements, requiring utilities to purchase an agreed level of MWh regardless demand. The contracts vary considerably in complexity, risk allocation and value for utilities. PICT utilities can be disadvantaged during negotiations, resulting in terms favouring developers. Well-structured IPP frameworks, including standardised procurement processes, balanced contractual templates, and defined operational protocols, deliver significant benefits. These include reduced development costs, enhanced operational clarity, risk mitigation, and accelerated project implementation.

Strategic Goal 7: Support to Member Utilities for Human Resource Management

The region's utilities require considerable upskilling to meet new technical challenges. For some years, experienced qualified staff have been emigrating for better opportunities. Strategic Goal 7 is to support member utilities with human resource management improvement. There are three objectives with eight actions.

Objective 7.1 is assistance to help reduce staff turnover through annual analyses of the magnitude and extent, documentation and analyses of utility training efforts, and promoting gender equality.

Objective 7.2 is to improve the quality and quantity of technical and vocational training including special attention to attract women and retain them within senior positions.

Objective 7.3 focuses on improving technical skills within the utilities through short-term attachments, a regional training framework with certification, and the establishment of a regional technical training centre, possibly with one or more subcentres.

Strategic Goal 7: Support to Member Utilities for Human Resource Management	
Objective 7.1: Assist utilities in identifying and reducing employee turnover rate	
Action 7.1.1	Address the problem and efforts to ameliorate skill loss (annual update)
Action 7.1.2	Document the utilities training program and budget allocation (annual update).
Action 7.1.3	Assist utilities with increasing and promoting gender equality in their workforce
Action 7.2.1 Support efforts to increase the prevalence of Technical and Vocational Education and Training (TVET) programmes in schools, technical colleges, communities and universities through apprenticeships, internships, scholarships, etc specifically for women.	
Action 7.2.1	Develop regional guidelines for utilities work schedules, amenities and policies addressing reproductive issues, childcare, maternity leave and gender violence.
Action 7.2.2	Support utilities to create and deliver programs to increase the hiring of women by the utility in both technical and managerial positions.
Objective 7.3: Improve technical skills of utilities	
Action 7.3.1	Develop Technical Fellows program (short-term placement of senior engineers at utilities facing specific challenges).
Action 7.3.2	Develop a Regional Training Framework with standardised competency certifications recognised across member utilities and, where applicable, by regulators
Action 7.3.3	Establish a Regional Training Facility with remote training delivery capabilities focusing on technical skills most affected by staff turnover

A number of training needs assessments / gap analyses have been carried out by PPA.

In general, the PICT training needs have increased over time, with more complex power technologies, emigration and grid control systems requiring more specialised training.

PICT Technical Skills Gaps

Anecdotal evidence indicates that utilities (smaller utilities in particular) experience critical technical skills gaps due to staff departures, staff absence for training and/or the increasing technical complexity of the region's power systems.

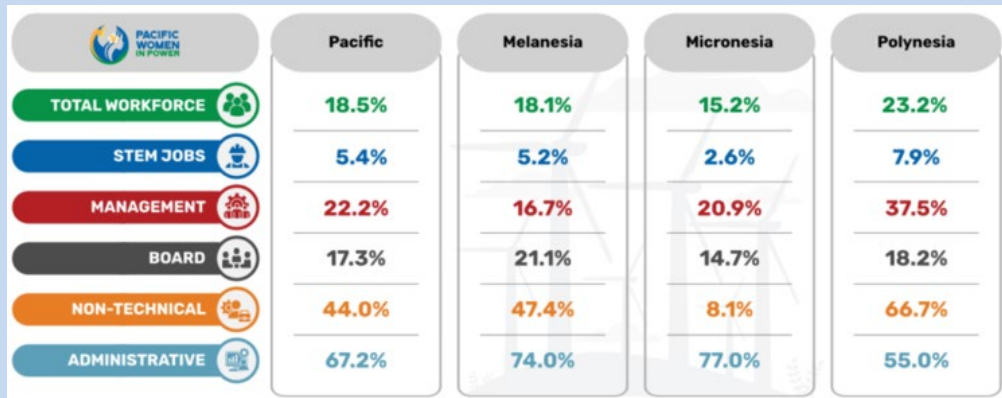
An additional challenge that has been exacerbated in recent years is the increase in migration of skilled utility staff, particularly since the end of the COVID 19 pandemic. This has caused some utilities in the region to experience acute technical staff shortages.

Increasing migration rate of skilled technical personnel puts further pressure on the utility's operational risks and regulatory compliance challenges. Replacement will be difficult given limited availability of skilled technical staff both locally and across the Pacific region. Continuous staffing shortages in critical technical positions will likely become more common as a result.

Regional approaches to technical training as a means of addressing limited technical staffing capacity also face practical challenges in the Pacific region due to high travel costs, language barriers and costly investments in staff who are increasingly likely to subsequently depart for more lucrative international opportunities.

Gender Imbalance in PICT Utilities

In 2023 a baseline assessment of World Bank member utilities showed that women are underrepresented, except in administrative roles, in which they dominate.



Few PICT utilities have formal gender strategies or action plans. Targets and programs to advance women are uncommon. Only 28% of apprentices, 16% of technical interns, and 7% of non-technical interns are women. In 2023, no PIC utility had a policy of targeting women's recruitment. The World Bank's *Pacific Women in Power* programme indicates that women's employment results in better financial performance, innovation, safer environments, and improved staff retention within the power sector. At the national level, long-term economic growth per person could on average be 22% higher for the region if women's employment rates matched men. As PPA's Gender Portal says, "women represent an untapped labour pool, and active measures to promote their inclusion offer employers an expanded talent pool."

7. Capacity and Institutional Structure to Deliver the Strategic Plan

This plan establishes an ambitious set of actions to support our member utilities across the various priority goals and objectives. The success of the 2025–2029 Strategic Plan will depend not only on the priorities it sets, but on PPA’s ability to mobilise the capacity and resources required to carry them out.

The PPA Secretariat currently comprises a small administrative team and no dedicated technical staff. This lean structure has served well for delivering core PPA activities such as coordination, annual conferences and limited training events which have been externally supported. However, the expanded expectations of member utilities and development partners in meeting PPA goals and objectives requires a more robust internal structure with expanded technical, training and implementation capacity.

To meet those expectations PPA will need to strengthen its institutional structure and delivery mechanisms, guided by four practical realities as illustrated in the box to the right:

1. Core revenue constraints. Current membership income covers only essential coordination and governance functions.
2. Limited in-house expertise. The Secretariat has no permanent engineering, training or project-delivery personnel.
3. Project-funded start-up. Most new activities will require external technical assistance (TA) financing in their early years.
4. Transition to cost-recovery. Regional services must evolve towards fee-for-service or embedded cost-recovery models to remain financially sustainable.

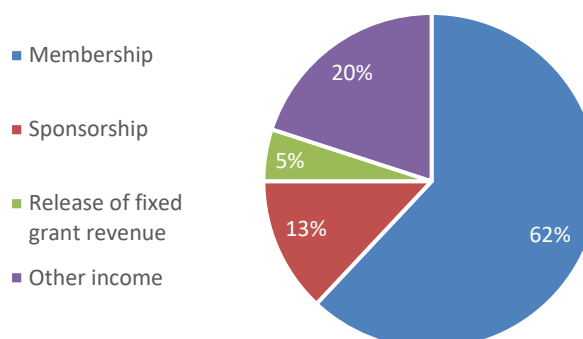
PPA Current Capacity Snapshot 2024-2025

Secretariat head-count: PPA has 4 permanent full-time staff (Executive Director, Accountant/Finance Officer, Administrative Officer, Administrative Clerk/Driver).

Core revenue (2024): approximately USD 600,000. Of this, 62% was from membership dues, 33% sponsorship and conference income, and 5% from miscellaneous grants. Conference revenue income is typically offset by the corresponding expenses incurred in organising conferences.

Cost structure: Personnel and office overhead consume about 52% of revenue. After other fixed commitments, less than USD 70,000 remained in 2024 for discretionary technical activities.

PPA 2024 Total Revenue Sources



Membership dues alone are insufficient to cover additional specialist staff or major programme operational expenses. Consequently, new delivery functions must be initially funded by development partner donors.

The sections that follow set out the streamlined organisational structure, delivery units and phased resourcing approach that will enable PPA to meet these realities and implement the Strategic Plan.

New Organisational Structure

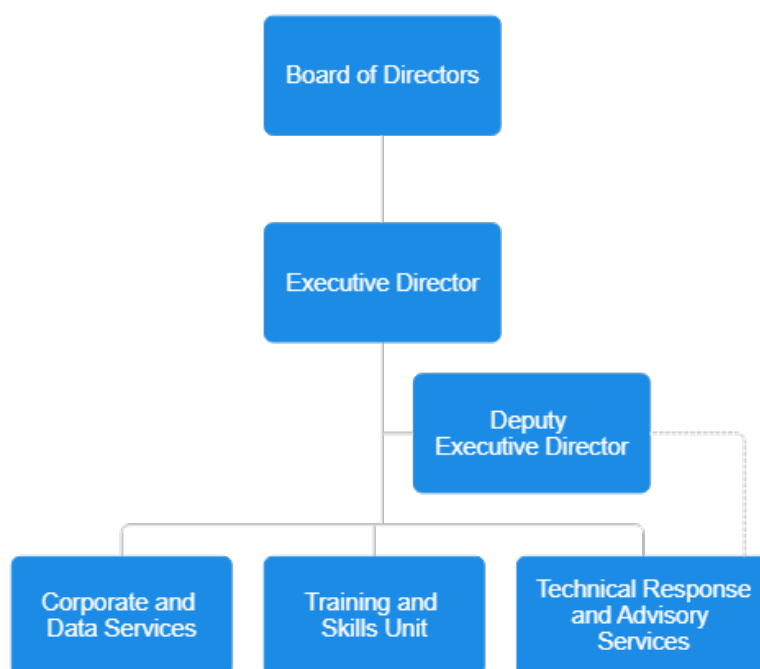
To implement this Strategic Plan, PPA will require enhanced capacity in the following core functional areas:

- **Technical Advisory and Response Services**
Provision of rapid, high-quality technical support to member utilities is a longstanding PPA priority. A dedicated *technical response function* is proposed to provide short-term field support and remote technical advice, supported by a panel of specialists. The unit will also facilitate training and diagnostics in areas such as grid performance, renewable energy integration, and asset management. PPA clearly cannot address all advisory needs of all utilities and must carefully prioritise its services.
- **Regional Capacity Building and Training**
A regional training service is proposed as a delivery platform for targeted technical and management training aligned with energy transition needs. This function will coordinate partnerships with training providers, develop standardised curricula, and deliver both in-person and remote training.
- **Benchmarking, Data and M&E**
Strengthening the collection, analysis and use of performance data is essential to track utility progress and strategic plan implementation. This function will maintain the benchmarking platform (PRISM), support KPI tracking, and produce regular utility performance briefs.
- **Stakeholder Engagement and Policy Dialogue**
As the regional voice for Pacific utilities, PPA must allocate resources to coordinate dialogue with regulators, national policymakers and regional energy coordination bodies. This includes preparing technical briefs, facilitating consultation forums, and maintaining regular communication with CROP agencies and development assistance agencies.

To effectively undertake each of these functions, PPA will need to adopt a modular structure that preserves a lean core while adding two specialised delivery units. The figure below shows the new PPA structure that is envisaged to support this strategic plan. The table on page 25 summarises the arrangement and the principal responsibilities of each component, the funding modality to support it and the proposed path to sustainability in the longer term.

The former Deputy Executive Director position will be reinstated to provide transitional oversight to a Training and Skills Unit (TASU) during its start-up period and to share the increased management workload of the Secretariat. Detailed staffing numbers will be reviewed and confirmed through the annual work-plan process. The numbers presented on page 25 represent the minimum complement required to initiate each function.

Proposed New PPA structure



Corporate and Data Services (CADS)

CADS will be PPA Secretariat’s administrative anchor. It will keep PPA operational and credible by handling governance, finance, budgeting, procurement, human-resources support and membership coordination, much the same as it is now. However, a key addition is that it will also manage the region’s power-sector data through the PRISM benchmarking platform, maintain the strategic plan KPI dashboard, and prepare the annual utility benchmarking reports. These functions are largely expected to be funded from membership dues, with scope to offer subscription services to external parties to access benchmarking data once the PRISM platform is fully established.

Training and Skills Unit (TASU)

The purpose of TASU is to convert identified skill gaps in the Pacific region’s power sector into structured learning for regional member utility support and assistance. It will design short courses, coordinate internships and programs such as the proposed Technical Fellows placements and develop standardised competency certificates that regulators and employers can recognise across the region. Initial donor technical assistance staff will be required to establish a catalogue of training services that can later be offered on a fee-for-service basis, allowing TASU to become self-financing.

Technical Response and Advisory Services (TRAS)

TRAS will be required to provide rapid, hands-on technical help when a utility faces an urgent problem or needs specialised analysis. PPA envisages at least two in-house engineers along with an “on-call” roster of pre-qualified specialists who can deploy quickly for technical assistance such as on the ground diagnostics support, develop scope for grid-integration studies, conduct tariff or finance workshops, and provide post-disaster assessments etc. The same team would lead longer-term advisory work on system optimisation and climate resilience. In the start-up phase, costs will need to be met from donor grants. However, it is envisaged that by the end by year 3 of this planning period, this service can progress to recovering most costs through a user-pays basis with a pool of experts on retainer.

Project Management Unit (PMU)

The PMU concept has been endorsed in principle by PPA CEOs.⁶ It is envisaged to be a lean, region-wide project-delivery vehicle. Its purpose would be to provide project design, procurement, contract management, safeguards and reporting services that many smaller utilities cannot staff themselves. PICs and member utilities would retain project ownership and the PMU would simply pool scarce expertise to expedite investment projects — especially renewable energy and grid-upgrade packages — through the development partner pipeline more quickly and at lower transaction cost. Staffing would need to begin with at least two technical-assistance advisers and expand as projects are secured. Financing arrangements are to be determined for this but possibly from budget lines embedded in each externally-funded project.⁷ The PMU would be housed within TRAS to minimise additional administrative overheads.

New PPA business unit structure to support 2025-2029 Strategic Plan

Component	Principal functions	Indicative start-up resources	Funding Modality	Cost-recovery approach in longer term (3-5 years)
Corporate and Data Services (CADS)	Corporate governance, finance, administration, annual benchmarking survey, KPI dashboard	Existing administrative staff plus a data analyst to support benchmarking and other data services (to maintain PRISM, KPI dashboard, utility briefs etc).	Funded largely from membership revenues and existing annual benchmarking funding support.	Possible provision of benchmarking data and services to external parties in future through paid subscriptions
Training and Skills Unit (TASU)	Design and deliver technical courses and guidelines, coordinate internships and technical fellows program; and support inclusive workforce initiatives.	One training coordinator and two subject-matter trainers (TA funded positions).	Initial development partner grant support.	Transition to self-financing via course fees and sponsorship as programmes mature.
Technical Response and Advisory Services (TRAS)	Rapid diagnostics, commissioning support, tariff and finance workshops, disaster assessments. PMU will be attached to TRAS and will provide pooled project delivery expertise (design, procurement, safeguards) available when multi-utility investment projects proceed.	Two engineers on retainer, small specialist roster; plus, a project manager and procurement / safeguards adviser mobilised as required for PMU assignments.	Initial development partner grant support	Transition to cost recovery via retainer fees and user pays basis Inclusion of PMU management costs in externally financed project budgets

⁶ This was during discussions with development agencies at the 2024 PPA annual conference and further workshops during the 2025 Asia Clean Energy Forum.

⁷ It is premature to suggest precise sources of funding but among potential sources are the ADB (Pacific Renewable Energy Investment Facility; PREIF), World Bank & JICA (regional training and skills support), Australian DCEW (Australian Pacific Partnership for Energy Transition) plus numerous others, and indirectly through various public-private efforts such as Powering Pacific Island Countries Renewable Electricity Generation in the Pacific (IFC), the Transforming Island Development through Electrification and Sustainability (TIDES; MFAT, UK), & the Australian Infrastructure Financing Facility for the Pacific (AIFFP).

It is premature to provide the probable costs of the proposed new structure as this will depend on the particular skill sets needed for detailed actions which PPA will need to develop and prioritise, plus likely available resources and their timing. However, PPA has provided broad rough estimates based on current USD costs. This assumes that PPA engages the following staff: a Deputy Executive Director, a data/benchmarking analyst, and initially two professional staff each for the Training and Skills Unit (TSU) and Technical Response and Advisory Services (TRAS).

Indicative Costs of New PPA Staff and Services (USD Thousands; 2025 value)

New Staff or Service	PPA Unit	Initial Costs	Annual Costs	Total
Deputy Executive Director	Office of ED		120	120
Data / benchmarking / M&E services	CADS		50	50
Computers, etc.	Office of ED	20		20
Initial airfares	TSU & TRSU	30		30
Two engineers (one to each unit)	TSU & TRSU		472	30
Work permits & visas (2) @15 eqch	TSU & TRSU	30		
Workshop Costs (6/year @ 180 each)	TSU		780	
TOTAL		80	780	1,512

The cost is likely to be about US\$80,000 for initial establishment costs for new staff and services. The annual costs are about US\$1.5 million (in current 2025 dollars). This includes the costs of six training workshops per year. It does not include PPA core costs (Executive Director, current support staff, office rental and operating costs, annual conference, etc) or the costs of other potential services (such as a project management unit).

Alignment of Strategic Goals and Action with Delivery Units

A clear assignment of responsibility within each new PPA delivery unit will streamline implementation and reporting against the 2025-2029 strategic goals. The table below shows how each Strategic Goal will link to the unit that will lead delivery, with supporting units noted where joint effort adds value.

Strategic goal linked to each PPA delivery unit

Strategic Goal	Lead unit	Supporting unit(s)
SG1: Promote and Support Renewable Energy Transition	TRAS + PMU	TASU; CADS
SG 2: Support for the Development of Climate Change Resilience within Member Utilities	TRAS	TASU
SG 3: Support to Member Utilities for Human Resource Management	TASU + PMU	TASU; CDS
SG4: Support for Building the Technical, Administrative and Regulatory Capacity of the Utilities	TASU (Objectives 4.1 & 4.3) CDS (Objective 4.2) TRAS (specific rapid support)	
SG 5: Provision of Services to Member Utilities by the PPA Secretariat	CADS	TRAS
SG 6: Support To Utilities for Financial Sustainability	TASU	TASU; PMU
SG7: 7 Support human-resource management in utilities	TASU	TRAS; CADS

All actions in the strategic plan have been grouped into five new service categories for PPA and assigned to a lead unit as shown in the table below.

Service category groupings to deliver strategic plan actions

Service category	Lead delivery unit	Examples of representative actions
Energy transition & system optimisation	TRAS + PMU	Grid-loss studies, utility storage tenders, IPP contract support
Training & knowledge exchange	TASU	Course core curriculum, inclusive workforce programme, CEO mentoring, development of guidelines
Climate resilience & disaster response	TRAS	Rapid post-disaster assessment, resilience audits, disaster recovery toolkit
Rapid technical support	TRAS	On-call diagnostics, tariff & finance workshops, standards compliance checks
Data & benchmarking	CADS	Annual benchmarking report, KPI dashboard, datasets availability and reporting

This service category configuration gives each stakeholder a single, clearly identified point of contact for every type of support within PPA. By grouping related activities under one specific responsible unit, PPA can build focused expertise, apply consistent procedures, and coordinate its resources more efficiently to serve member utilities across the region in delivering this strategic plan effectively.

This strategic plan has 40 action areas described in the previous chapter, some of which overlap in part, spread across the seven overall goals. Annex 1 provides a detailed cross-reference for all actions under each strategic goal and objective, with actions linked to specific PPA service units.

8. Monitoring and Evaluation of the Strategic Plan

PPA recognises that effective M&E is essential for demonstrating progress, learning from implementation experience, and maintaining stakeholder confidence in its activities and achievements. This strategic plan establishes a practical M&E framework designed to track performance while recognising PPA's capacity constraints and operational realities.

The M&E framework is based on four core principles:

1. Practicality (implementable within PPA's existing resource constraints)
2. Relevance (provision of meaningful information for decision-making)
3. Proportionality (proportionate to the scale and complexity of PPA's activities, while recognising limited administrative capacity)
4. Sustainability (maintainable over the strategic planning period without additional M&E staff).

Key Performance Indicators

PPA has established specific KPIs for each of the seven strategic goals and their underlying objectives and actions as shown in Annex 2. These indicators use quantitative and qualitative metrics that can be measured through existing data collection or simple additional tracking. Examples include:

- Number of renewable energy resource assessments completed
- Effectiveness ratings for technical assistance (1-5 scale)
- Response times to member utility requests
- Completion status of key initiatives (not commenced/in progress/completed)
- Number of training programs delivered and staff trained

Target Setting and Performance Expectations

Specific quantitative targets for KPIs are not prescribed in this strategic plan due to significant dependency on external funding for most new activities. This approach reflects the operational reality that meaningful targets cannot be established until funding sources and levels are confirmed. Instead, PPA will adopt a flexible target-setting framework:

- Annual Work Planning: Specific targets will be established during annual work planning processes once grant funding or other financing is secured for particular activities
- Baseline Establishment: Where activities are already underway, 2025-2026 performance will serve as baseline for future target setting
- Minimum Process Commitments: Regardless of funding, PPA commits to completing all governance and review processes (annual strategic reviews, Board reporting, benchmarking surveys where feasible)
- Indicative Benchmarks: For fully-funded activities, targets will aim for measurable improvement over baseline performance, with effectiveness ratings targeting 3.5+ on the 1-5 scale

This approach maintains accountability for PPA while acknowledging the funding realities it faces in undertaking activities amidst shifting priorities across stakeholders.

Reporting and Review Mechanisms

PPA will prepare an annual dashboard report for the Board presenting key achievements, performance against KPIs, and strategic impacts in a visual format. This report will coincide with the AGM to inform Board discussions and planning. The Board will conduct formal annual reviews of whether the KPI results are showing satisfactory progress.

The Secretariat will conduct six-monthly internal reviews to track progress and identify implementation challenges. These brief reviews will focus on operational issues and provide early warning of problems requiring Board attention.

A comprehensive mid-term review will be conducted in 2027 to assess overall strategic progress and consider necessary adjustments to goals, objectives, or implementation approaches.

Implementation Risks and Mitigation

PPA's strategic plan implementation faces several key risks that require active management as shown below.

PPA 2025-2029 Strategic plan risks and mitigation actions

Risk category	Risk	Mitigation
Funding and Resource Risks	Delayed or reduced development partner funding limiting activity implementation	Phased implementation approach, flexible work planning, maintaining multiple donor relationships, developing fee-for-service revenue streams
Capacity and Staffing Risks	Insufficient technical staff to deliver expanded services, particularly for TRAS and TASU functions	Staged recruitment aligned with funding confirmation, use of specialist rosters, partnerships with regional training providers
Member Utility Engagement Risks	Limited utility uptake of services due to competing priorities or resource constraints	Regular CEO consultation, responsive service design, demonstration of clear value through pilot activities
External Dependency Risks	Changes in development partner priorities or regional political dynamics affecting programme continuity	Diversified funding portfolio, alignment with multiple regional frameworks (FESRIP, NDCs), building indigenous capacity for service delivery
Technology and Infrastructure Risks	Challenges in maintaining data platforms and remote service delivery capabilities	Robust data backup systems, multiple communication channels, technical support partnerships

PPA will conduct annual risk assessments as part of work planning processes, with high-impact risks reported to the Board for strategic guidance.

Implementation Integration

M&E activities will be integrated into existing operational processes, with staff maintaining simple tracking systems as part of regular duties. Annual implementation plans will be adjusted based on M&E findings to reflect changing priorities, funding opportunities, and lessons learned.

This M&E framework provides PPA with the tools to demonstrate impact, support improvement, and maintain transparency with member utilities and development partners while remaining practical and sustainable for the organisation's capacity.

Annex 1: Strategic Plan Actions Mapped to the Lead PPA Delivery Unit and Service Category

2025-2029 Strategic Plan Action	Lead unit	PPA Service-category
Action 1.1.1 Resource assessments specifically for developing bankable renewable-energy generation projects	TRAS + PMU	Energy transition & system optimisation
Action 1.1.2 Assessment of transition status documenting RE capacity, generation and percentage of generation through RE (annual)	TRAS	Energy transition & system optimisation
Action 1.1.3 Undertake full overall power-system assessment modelling to support effective energy transition	TRAS	Energy transition & system optimisation
Action 1.2.1 For proposed RE projects, studies shall include assessment of the network, upgrades for grid stability, EMS, BESS, and monitoring & generation-control systems	TRAS + PMU	Energy transition & system optimisation
Action 1.2.2 Develop a technical support facility within PPA that provides specialised expertise to assist utilities with RE integration	TRAS	Energy transition & system optimisation + Rapid technical support
Action 1.3.1 Guidelines & assistance for a practical energy transition – skills, tools, policies, regulatory frameworks	TRAS	Training & knowledge exchange
Action 1.3.2 Work with development partners/regional agencies (e.g. PRIF, IRENA, SPC) to create a pipeline of bankable RE projects	TRAS + PMU	Energy transition & system optimisation
Action 2.1.1 Develop regional guidelines for climate-resilience specifications for all RE procurements (expected 2040 conditions)	TRAS	Climate resilience & disaster response
Action 2.1.2 For coastal power-utility infrastructure, seek advice (e.g. SPC Geoscience) on sea-level-rise mitigation	TRAS	Climate resilience & disaster response
Action 2.2.1 Work with PIEMA for power-sector-specific rapid-response planning & training for member utilities	TRAS	Climate resilience & disaster response
Action 2.3.1 Work with PIEMA to assist member utilities during and after a natural or other disaster	TRAS	Climate resilience & disaster response
Action 3.1.1 Use benchmarking data (heat-rates, RE capacity factors, load factor, etc.) to measure efficiency & recommend improvements	TRAS	Energy transition & system optimisation
Action 3.1.2 Information dissemination on technology trends that can improve fuel efficiency	TASU	Training & knowledge exchange
Action 3.2.1 Knowledge-sharing programme for member utilities	TASU	Training & knowledge exchange
Action 3.2.2 Document improvements from various measures & disseminate results to member utilities	TASU	Training & knowledge exchange
Action 3.3.1 Prepare report on practical petroleum-cost-management options, benefits & costs	TRAS	Energy transition & system optimisation
Action 4.1.1 Establish a Technical Response Unit within PPA to assist utilities on short notice (incl. site visits)	TRAS	Rapid technical support
Action 4.1.2 Develop a pool of pre-qualified technical specialists deployable quickly for advice & training	TRAS	Rapid technical support
Action 4.2.1 Establish a PPA staff-development programme to build in-house expertise (technical, PM, grant writing)	CADS	Training & knowledge exchange
Action 4.3.1 Conduct regular dialogues with regional regulators to present utility challenges & inform frameworks	CADS	Training & knowledge exchange
Action 4.3.2 Prepare & disseminate periodic briefs on emerging utility challenges for regulatory policy development	CADS	Training & knowledge exchange

2025-2029 Strategic Plan Action	Lead unit	PPA Service-category
Action 4.3.3 Facilitate forums/workshops to exchange views between utilities & regulators at regional level	CADS	Training & knowledge exchange
Action 5.1.1 Timely response to ad-hoc requests from utilities (e.g., software log-ins, spare-parts help, consultant advice)	TRAS	Rapid technical support
Action 5.1.2 Regular formal consultation with development partners & regional organisations and reporting back to utilities	CADS	Training & knowledge exchange
Action 5.2.1 Further develop a financially secure benchmarking platform that provides timely operational KPIs	CADS	Data & benchmarking
Action 5.3.1 Annual review of the strategic plan (monitoring & evaluation)	CADS	Data & benchmarking
Action 5.3.2 Annual review of non-planned actions (monitoring & evaluation)	CADS	Data & benchmarking
Action 5.3.3 Review PPA processes & procedures (finance, procurement, HR) to improve delivery capacity	CADS	Data & benchmarking
Action 6.1.1 Provide technical assistance for tariff reviews/reforms via specialist tariff-design experts	TRAS	Rapid technical support
Action 6.1.2 Implement a capacity-building programme on tariff design, cost allocation & regulatory engagement	TRAS	Training & knowledge exchange
Action 6.2.1 Develop standardised IPP frameworks (model procurement docs, clear criteria, templates, guidelines)	TRAS + PMU	Energy transition & system optimisation
Action 6.2.2 Create a regional knowledge-sharing platform on utility IPP experiences and best practices	TASU	Training & knowledge exchange
Action 7.1.1 Address the problem and efforts to ameliorate skill loss (annual update)	CADS	Data & benchmarking
Action 7.1.2 Document the utilities' training programme & budget allocation (annual update)	CADS	Data & benchmarking
Action 7.1.3 Assist utilities with increasing & promoting gender equality in their workforce	TASU	Training & knowledge exchange
Action 7.2.1 Support efforts to expand TVET pathways for women (apprenticeships, internships, scholarships etc.)	TASU	Training & knowledge exchange
Action 7.2.2 Develop regional gender-sensitive workplace guidelines (schedules, amenities, maternity leave, GBV)	TASU	Training & knowledge exchange
Action 7.2.3 Support utilities to create programmes to increase hiring of women in technical & managerial roles	TASU	Training & knowledge exchange
Action 7.3.1 Develop Technical Fellows programme (short-term placement of senior engineers at utilities)	TRAS	Rapid technical support
Action 7.3.2 Develop a Regional Training Framework with standardised competency certifications recognised region-wide	TASU	Training & knowledge exchange
Action 7.3.3 Establish a Regional Training Facility (incl. remote-training delivery) focusing on critical technical skills	TASU	Training & knowledge exchange

Annex 2: KPIs for 2025-2029 Strategic Plan

Table 1: KPIs for Strategic Goal 1

Strategic Goal 1: Promote and Support Renewable Energy Transition		
Objective 1.1: Increase renewable energy generation in a planned and sustainable manner		
Actions	KPI	KPI Reporting Metrics
Action 1.1.1 Resource assessments specifically for developing bankable renewable energy generation projects	Number of resource assessments undertaken or underway	Number (#)
Action 1.1.2 Assessment of transition status documenting RE capacity, generation and percentage of generation through RE (annually)	Annual RE transition status report	Completed Not completed
Action 1.1.3 Undertake full overall power system assessment modelling to support effective energy transition	Number of utilities using power system modelling tools	Number (#)
	Effectiveness rating of power system modelling tools	1-5 scale
Objective 1.2: Assist the utilities to assess and implement solutions for renewable energy integration and control		
Actions	KPI	KPI Reporting Metrics
Action 1.2.1 For proposed RE projects, studies shall include assessment of the network, upgrades needed for grid stability, the energy management system, BESS, and monitoring and generation control systems.	Effectiveness rating of PPA-assisted studies	1-5 scale
Action 1.2.2 Develop a technical support facility within PPA that provides specialized expertise to assist utilities as required to support renewable energy integration	Technical support facility development	Not commenced In progress Completed
	Number of technical requests received and responded to	Number (#)
Objective 1.3: Support utilities to achieve their energy transition targets including progress towards their NDCs		
Actions	KPI	KPI Reporting Metrics
Action 1.3.1 Guidelines and assistance for a practical energy transition including appropriate skills, tools (analysis, monitoring, modelling), policies and regulatory frameworks	Energy transition guidelines development	Not commenced In progress Completed
	Effectiveness of PPA-assistance to utilities	1-5 scale
Action 1.3.2 Work with development partners and regional agencies (e.g. PRIF, IRENA, SPC) to create a pipeline of bankable RE projects	Number of meetings and engagements per year	Number (#)

Table 2: KPIs for Strategic Goal 2

Strategic Goal 2: Support for the Development of Climate Change Resilience within Member Utilities		
Objective 2.1: Assist utilities prepare plans that increase utility resilience to climate change		
Actions	KPI	KPI Reporting Metrics
Action 2.1.1 Develop regional guidelines for climate resilience specifications for all RE procurements based on credible assessments for expected climate conditions in 2040.	Regional climate resilience guidelines development	Not commenced In progress Completed
Action 2.1.2 For coastal power utility infrastructure, seek advice of appropriate technical organisations (such as SPC Geoscience section) on sea level rise mitigation.	Number of utilities advised facilitated by PPA	Number (#)
Objective 2.2: Assist utilities with disaster management planning		
Actions	KPI	KPI Reporting Metrics
Action 2.2.1 Work with the Pacific Island Emergency Management Alliance (PIEMA) for power sector specific rapid response planning and training for member utilities	Number of disaster response workshops and training sessions delivered	Number (#)
	Number of utility staff trained	Number (#)
Objective 2.3: Assist utilities with disaster response		
Actions	KPI	
Action 2.3.1 Work with PIEMA to assist member utilities during and after a natural or other disaster	Number of disasters that affected utilities	Number (#)
	Number of assistance responses provided	Number (#)

Table 3: KPIs for Strategic Goal 3

Strategic Goal 3: Using Petroleum Fuel More Efficiently & Reducing Utility Consumption		
Objective 3.1: Improve the efficiency of electricity production & supply by utilities		
Actions	KPI	KPI Reporting Metrics
Action 3.1.1 Use appropriate benchmarking data (heat rates, RE capacity factors, load factor, etc) to measure efficiency and recommend improvements	Efficiency improvement recommendations	Not commenced In progress Completed
	Effectiveness of PPA-recommendations to utilities	1-5 scale
Action 3.1.2 Information dissemination on technology trends that can improve fuel efficiency	Number of information disseminations made	Number (#)

Objective 3.2: Improve the efficiency of electricity use by utility customers through demand response and other measures		
Actions	KPI	KPI Reporting Metrics
Action 3.2.1 Knowledge sharing program for member utilities	Number of knowledge sharing sessions conducted	Number (#)
Action 3.2.2 Document improvements from various measures and disseminate results to member utilities	Number of utility network sessions held	Number (#)
	Number of results disseminated per year	Number (#)
Objective 3.3: Manage cost risk of petroleum to utilities		
Actions	KPI	KPI Reporting Metrics
Action 3.3.1 Prepare report on practical options, benefits and costs	Petroleum cost management options report	Not commenced In progress Completed

Table 4: KPIs for Strategic Goal 4

Strategic Goal 4: Support for Building the Technical, Administrative and Regulatory Capacity of the Utilities		
Objective 4.1: Support technical and non-technical capacity building for utilities		
Actions	KPI	KPI Reporting Metrics
Action 4.1.1 Establish a Technical Response Unit within PPA with experts with a range of engineering backgrounds who can assist utilities on short notice, including travelling to sites.	Technical Response Unit establishment	Not commenced In progress Completed
Action 4.1.2 Develop a pool of prequalified technical specialists across different disciplines who can be deployed quickly to assist utilities with specific advice and training.	Technical specialist pool	Not commenced In progress Completed
Objective 4.2: Capacity building of the PPA secretariat		
Actions	KPI	KPI Reporting Metrics
Action 4.2.1 Establish a PPA staff development program to build in-house expertise in technical disciplines, project management and grant writing.	Staff development program implementation	Not commenced In progress Completed
	No of training programs completed by staff	Number (#)
Objective 4.3: Working with regional regulatory organisations (e.g. OPERA) to provide utility perspectives		
Actions	KPI	KPI Reporting Metrics
Action 4.3.1 Conduct regular dialogues with regional regulatory organisations to present utility operational challenges, and inform regulatory framework development and application	Number of meetings and engagements per year	Number (#)
Action 4.3.2 Prepare and disseminate periodic briefs on emerging utility challenges to inform regulatory policy development in the region	Number of policy briefs disseminated	Number (#)
Action 4.3.3 Facilitate forums and workshops to exchange views between utilities and regulators at regional level	Number of utility-regulator forums and workshops held	Number (#)

Table 5: KPIs for Strategic Goal 5

Strategic Goal 5: Provision of Services to Member Utilities by the PPA Secretariat		
Objective 5.1: Improve services to members		
Actions	KPI	KPI Reporting Metrics
Action 5.1.1 Timely response to ad hoc requests from utilities (e.g. Power Factory log-in problems, assistance with spare parts procurement, advice on suitable consultants, etc.)	Number of utility requests received	Number (#)
	Response rate	Percentage (%)
	Average response time	Number of days (#)
Action 5.1.2 Regular formal consultation with development partners and regional organisations (e.g. with PRIF Energy Working Group), and reporting to member utilities of opportunities, status of assistance programmes, etc.	Number of development partner consultations	Number (#)
Objective 5.2 Provide information systems to support members and disseminate information to industry stakeholders		
Actions	KPI	KPI Reporting Metrics
Action 5.2.1 Further develop a benchmarking approach which is financially secure, provides timely information to CEOs on operational issues and can provide KPIs for M&E.	Benchmarking program funding secured	Yes No
	Annual benchmarking report published by end of each calendar year (within 6 months of the end of reporting period)	Achieved Not achieved
	Number of M&E KPIs tracked	Number (#)
Objective 5.3: Review of PPA performance		
Actions	KPI	KPI Reporting Metrics
Action 5.3.1 Annual review of strategic plan (monitoring & evaluation)	Annual strategic plan review	Completed Not completed
Action 5.3.2 Annual review of non-planned actions (monitoring & evaluation)	Annual non-planned actions review	Completed Not completed
Action 5.3.3 Review of PPA processes and procedures (finance, procurement, human resources) to improve PPA's capacity to deliver effectively	Process and procedures review	Not commenced In progress Completed

Table 6: KPIs for Strategic Goal 6

Strategic Goal 6: Support To Utilities for Financial Sustainability		
Objective 6.1: Support to utilities for electricity tariff reform		
Actions	KPI	KPI Reporting Metrics
Action 6.1.1 Provide technical assistance to utilities for tariff reviews and reforms through engagement of specialist tariff-design experts	Technical assistance provision	Not commenced In progress Completed
Action 6.1.2 Implement a capacity building program for utilities on tariff development, cost allocation methodologies, and regulatory engagement strategies	Capacity building program implementation	Not commenced In progress Completed

Objective 6.2: Support with development of Power Purchase Agreements		
Actions	KPI	KPI Reporting Metrics
Action 6.2.1 Develop standardised IPP frameworks for Power Purchase Agreements specifically tailored to utilities, including model procurement documents, clear evaluation criteria, contract templates, and practical implementation guidelines.	Standardised IPP framework development	Not commenced In progress Completed
Action 6.2.2 Create a regional knowledge-sharing platform documenting utility IPP experiences, best practices, and lessons learned	IPP knowledge-sharing platform development	Not commenced In progress Completed
	Number of IPP framework knowledge sharing sessions with utilities	Number (#)

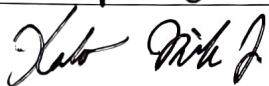
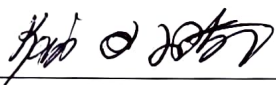
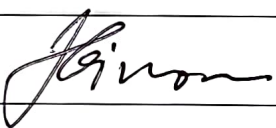
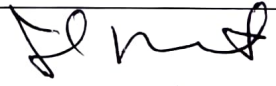
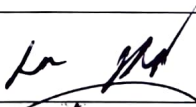
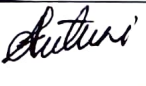
Table 7: KPIs for Strategic Goal 7

Strategic Goal 7: Support to Member Utilities for Human Resource Management		
Objective 7.1: Assist utilities in identifying and reducing employee turnover rate		
Actions	KPI	KPI Reporting Metrics
Action 7.1.1 Address the problem and efforts to ameliorate skill loss (annual update)	Annual skills loss assessment report to PPA Board	Completed Not completed
Action 7.1.2 Document the utilities training program and budget allocation (annual update).	Annual training program and budget report to PPA Board	Completed Not completed
Objective 7.2: Assist utilities with increasing and promoting gender equality in their workforce		
Actions	KPI	KPI Reporting Metrics
Action 7.2.1 Support efforts to increase the prevalence of Technical and Vocational Education and Training (TVET) programmes in schools, technical colleges, communities and universities through apprenticeships, internships, scholarships, etc specifically for women.	Improvements in gender representation KPIs across member utilities	As reported in annual benchmarking report
Action 7.2.2 Develop regional guidelines for utilities work schedules, amenities and policies addressing reproductive issues, childcare, maternity leave and gender violence.	Gender workplace guidelines development	Not commenced In progress Completed
Action 7.2.3 Support utilities to create and deliver programs to increase the hiring of women by the utility in both technical and managerial positions.	Improvements in gender representation KPIs across member utilities	As reported in annual benchmarking report
Objective 7.3: Improve technical skills of utilities		
Actions	KPI	KPI Reporting Metrics
Action 7.3.1 Develop Technical Fellows program (short-term placement of senior engineers at utilities facing specific challenges).	Technical Fellows program implementation	Not commenced In progress Completed
Action 7.3.2 Develop a Regional Training Framework with standardised competency certifications recognised across member utilities and, where applicable, by regulators	Regional training framework development	Not commenced In progress Completed
Action 7.3.3 Establish a Regional Training Facility with remote training delivery capabilities focusing on technical skills most affected by staff turnover	Regional training facility establishment	Not commenced In progress Completed

Annex 3: Board Authorisation of the Strategic Plan

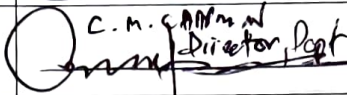
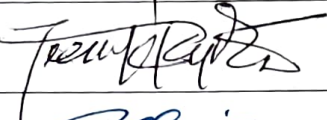
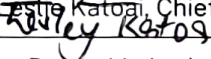
This strategic plan entered into force when it was endorsed by a quorum of members of the board or their representatives. According to PPA's Memorandum & Articles of Association: "The quorum for a general meeting shall be ten of the representatives of Active Members of the Association personally present or represented by proxy and being representatives of members in not less than eight of the Member Countries."

We, the following members of the Board of Directors of the Pacific Power Association approve the strategic direction for PPA as described in this document:

PPA member utility, name and title	Signature	Date
American Samoa Power Authority Mr Wallon Young, Chief Executive Director		23/9/2025
Chuuk Public Utility Corporation Mr. Kasio Kembo Jr. Mida, Chief Executive Officer		9/23/2025
Commonwealth Utilities Corporation, Saipan Mr. Kevin Watson, Executive Director		9/23/2025
Electricite de Tahiti Mr. François-Xavier de Fromont, Chief Executive Officer		
Electricite et Eau de Caledonie Mr. Phillipe Mehenberger, Managing Director		
Electricite et Eau de Wallis et Futuna Mr. Johann Levant, Managing Director		
Electric Power Corporation, Samoa Faumui lese Toimoana, General Manager		23/09/25
ENERCAL (Societe Neo-Caledonienne D'Energie) Mr. Jean-Gabriel Flaget, Chief Executive Officer		
Energy Fiji Limited <i>Operation</i> Mr. Fatiaki Gibson , Chief Executive Officer <i>Bobby Narman</i>		23/9/25
Guam Power Authority Mr. John Benavente, General Manager		23/9/25
Kosrae Utilities Authority Mr. Casey Freddy, General Manager		20/9/25
Kwajalein Atoll Joint Utility Resources Mr Joseph Pedro, General Manager		Sept 23. 2025
Marshall's Energy Company Mr Jack Chong-Gum, Chief Executive Officer		Sept 23. 2025

Continued on the following page

We, the following members of the Board of Directors of the Pacific Power Association approve the strategic direction for PPA as described in this document:

PPA member utility, name and title	Signature	Date
Nauru Utilities Authority Mr. Anthony Dimapilis, Chief Executive Officer		23/09/25
Niue Power Corporation Mr. Brandon Kulatea, General Manager	 C. M. CAMMILL Director of Utilities	23/09/25
Palau Public Utilities Corporation Mr. Frank Kyota, Chief Executive Officer		9/22/25
PNG Power Ltd Mr. Paul Bayly, Chief Executive Officer	 for	25/09/25
Pohnpei Utilities Corporation Mr. Nixon Anson, Chief Executive Officer		9.23.25
Public Utilities Board, Kiribati Mr David Drake, Chief Executive Officer		23/9/25
Solomon Islands Electricity Authority Ms Delilah Homelo, Acting Chief Executive Officer		23/09/2025
Te Aponga Uira O Tumu-Te-Varovaro (Cook Is) Ms. Leslie Katoai, Chief Executive Officer 		23/9/25
Tonga Power Limited Mr. Scott Westbury, Chief Executive Officer		
Tuvalu Electricity Corporation Mr. Mafalu Lotolua, General Manager		23/09/25
UNELCO Engie, Vanuatu Frédéric Petit, Managing Director		23/09/25
Yap State Public Service Corporation Mr. Victor Nabeyan, General Manager		24/9/25