



UNSW  
SYDNEY



Collaboration on Energy and  
Environmental Markets



# Pacific Island Countries and Territories Electricity Utility Boards Directors Workshop

**Jay Prasad, Professor Iain MacGill,**  
*Edoardo Santagata, Associate  
Professor Anna Bruce, Dr Maria  
Balatbat, Dr Rob Passey*

Collaboration on Energy and  
Environmental Markets (CEEM)  
UNSW Sydney

**Utility Board members workshop**  
*32<sup>nd</sup> Pacific Power Association  
Conference*  
22 - 25<sup>th</sup> September, 2025  
Koror, Palau

# Welcome to Palau and the 32<sup>nd</sup> Annual Pacific Power Association conference



# UNSW Workshop Team



**Jay Prasad**

MBA, Grad. Cert. in Electricity Supply Engineering, BE, Diploma of Contract Mngt, MIEAust, CPEng, NPER, RPEQ

Researcher PhD Candidate, UNSW

**Expertise Areas:** Regional Energy Sector, Strategic Planning, Energy Transition, Renewable Energy Integration, Electricity Utility Operations, Leadership and Capacity Development.



**Professor Iain MacGill**

Ph.D., Electrical Engineering, M.Eng.Sc., B.Eng.

School of Electrical Engineering and Telecommunications and Joint Director (Engineering) for Collaboration on Energy and Environmental Markets (CEEM), UNSW, Australia

**Expertise Areas:** Energy Sector Planning, Renewable Energy Integration, Policy and regulatory frameworks, Open-source data and tools



**Associate Professor Anna Bruce**

Ph.D., Photovoltaic Engineering, B.Eng (Hons)

School of Photovoltaic and Renewable Energy Engineering and Joint Director(Engineering) at the Collaboration on Energy and Environmental Markets, UNSW Sydney, Australia

**Expertise Areas:** Analysis and modelling of renewable and distributed energy systems, Energy transition modelling, Integration of RE,, Energy access in developing countries, Energy policy and regulation



**Dr Maria Balatbat**

PhD (Economics), M. Commerce, B.Sci (Commerce)

School of Accounting, Australian Business School, Joint Director (Business) for the Collaboration on Energy and Environmental Markets (CEEM), UNSW.

**Expertise Areas:** environmental and social accounting, corporate reporting and assurance of non-financial information such as Environmental, Social and Governance (ESG) and the value relevance of these information to the capital markets

*UNSW's participation is supported by the Australian Government's Department of Climate Change, Energy, the Environment and Water (DCCEEW)*

## AGENDA- DAY 1

Time		Presenter	Topic
8:00	8:30	Registration	
			Chair/ Moderator: Iain MacGill
8:30	8:40		Welcome/Agenda/Introductions
8:40	8:50		Discussion - Session 1: Setting the scene, key challenges and opportunities for pacific utilities, and their boards
8:50	9:00		
9:00	10:00		
10:00	10:30	Morning Tea	
			Chair/ Moderator: Jay Prasad
10:30	11:00	Iain MacGill	Clean Energy Transition - challenges and opportunities for the Pacific
11:00	11:30	Anna Bruce	Policies, Regulations and Tariff Design
11:30	12:00		Discussion - Session 2
12:00	13:00	Lunch	
			Chair/ Moderator: Olai Uludong
13:00	13:30	Olai Uludong	Regional Energy Security
13:30	14:00	Onosai Heremoni	Regulatory Reform in PICTS, Update on work of OPERA
14:00	14:30	Jay Prasad	Grid Assessment for Renewable Readiness
14:30	15:00		Q&A Discussion - Session 3
15:00	15:30	Afternoon Tea	
			Chair/ Moderator: Jay Prasad
15:30	15:50	Damon Schmidt	Modernized Resource Planning in PICs for Orderly Energy Transition
15:50	16:10	Iain MacGill	Hydrogen Road Mapping for the PICTS
16:10	16:30	Daniel Baker, Jay Prasad, Barbara Elliston	Panel Discussion, Planning Considerations for the Utilities. Q&A.
16:30	17:00		Discussion and Wrap-up Day 1

## AGENDA- DAY 2

Time		Presenter	Topic
<b>10:00</b>	<b>10:30</b>	<b>Morning Tea</b>	
			<b>Chair/ Moderator: Iain MacGill/ Jay Prasad</b>
10:30	11:00	Maria Balabat	Corporate Governance Best Practices for Utilities
11:00	11:30	Maria Balabat	ESG Risks and Opportunities
11:30	12:00		Discussion - Session 5
<b>12:00</b>	<b>13:00</b>	<b>Lunch</b>	
			<b>Chair/ Moderator: Iain MacGill/ Jay Prasad</b>
13:00	13:30	WB, ADB, PRIF, MFAT, EU etc	Energy Sector Financing, Development Partners
13:30	14:00		
14:00	14:30	Jay Prasad	Roof Top PVs- Technical Potential, Legislation, Standards
14:30	15:00		Workshop Wrap Up- Discussion, Recap, Workshop Survey Questionnaire
<b>15:00</b>	<b>15:30</b>	<b>Afternoon Tea</b>	

# Maximising the value of this workshop

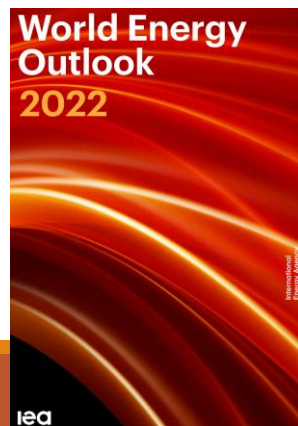
- We all bring diverse expertise and experience – please contribute your perspectives, insights and questions
- Fill in your workshop feedback form - it will be collected at the end of the workshop
- Add comments, suggestions, questions at any time on the workshop slido
- Go to [www.slido.com](https://www.slido.com) and enter code: **#4184540**



# Our energy challenge

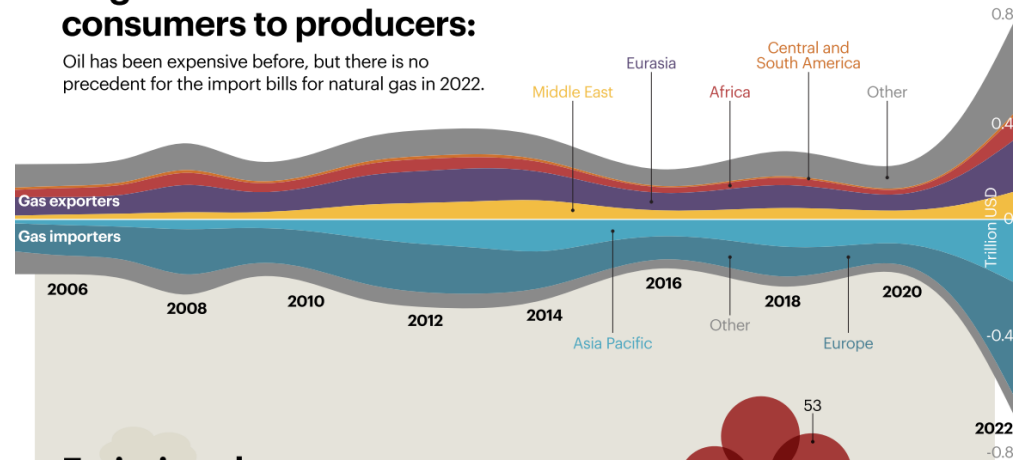
## Three global energy crises to navigate

- Recent unprecedented fossil fuel price volatility, growing risks
- Enormous wealth transfers, adverse impacts on societal progress in developing + emerging economies, recession risks in industrialised nations
- Growing climate change impacts, inadequate efforts to date avoid dangerous warming



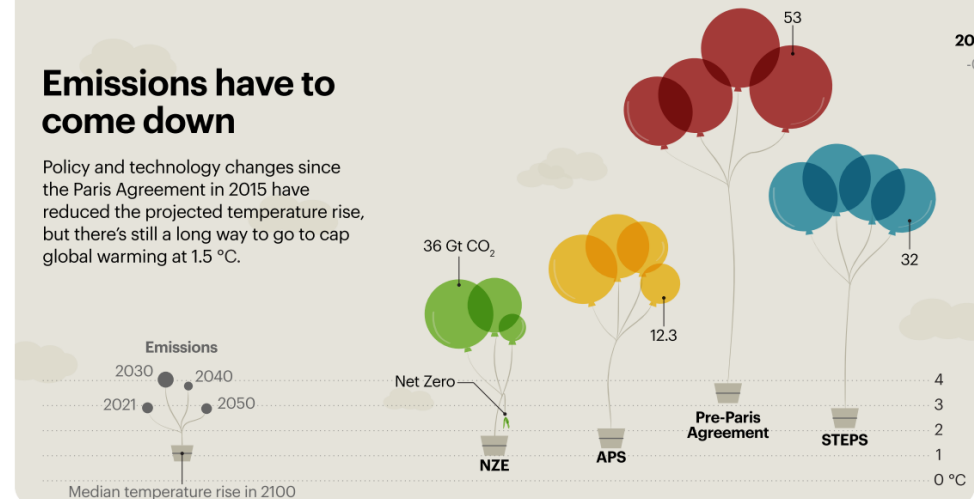
### Huge transfers from consumers to producers:

Oil has been expensive before, but there is no precedent for the import bills for natural gas in 2022.



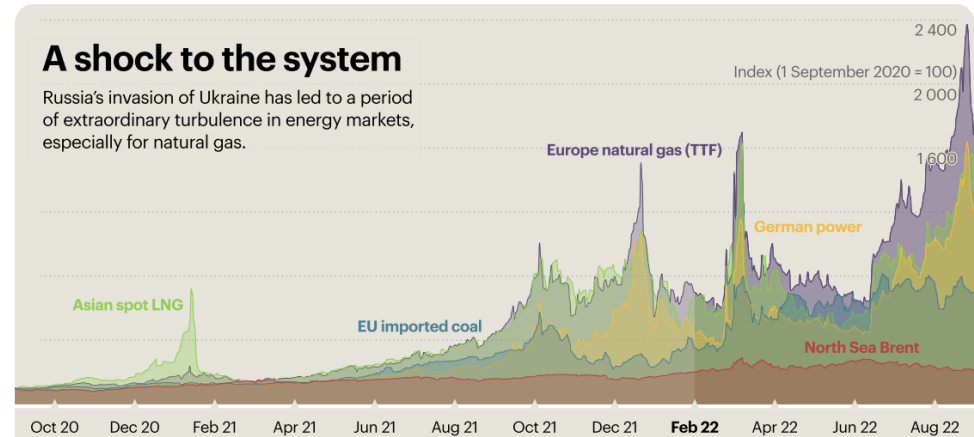
### Emissions have to come down

Policy and technology changes since the Paris Agreement in 2015 have reduced the projected temperature rise, but there's still a long way to go to cap global warming at 1.5 °C.



### A shock to the system

Russia's invasion of Ukraine has led to a period of extraordinary turbulence in energy markets, especially for natural gas.

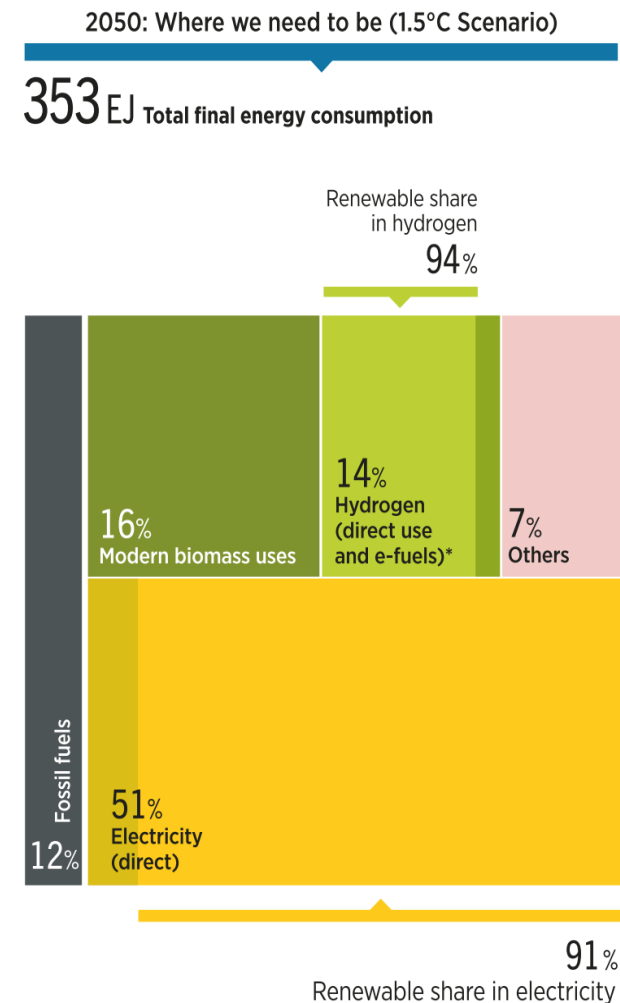


# What needs to be done?

General agreement on desirable global clean affordable energy pathways to *but also uncertainties, questions of priorities*

- **Electrification** of current non-energy sectors
- Greatly expanded, mostly renewables **electricity** sectors
- Key uncertainties – what future role for fossil fuels, biomass, hydrogen, nuclear

*Clean electricity sector transition is the key*

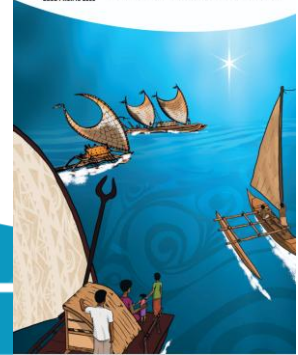




# Energy transition just one of the challenges that we face, *but a key enabler for almost all of them*



2050 Strategy for the  
Blue Pacific Continent



FIFTY-FOURTH PACIFIC ISLANDS FORUM  
HONIARA, SOLOMON ISLANDS

8 – 12 SEPTEMBER 2025

FORUM COMMUNIQUÉ



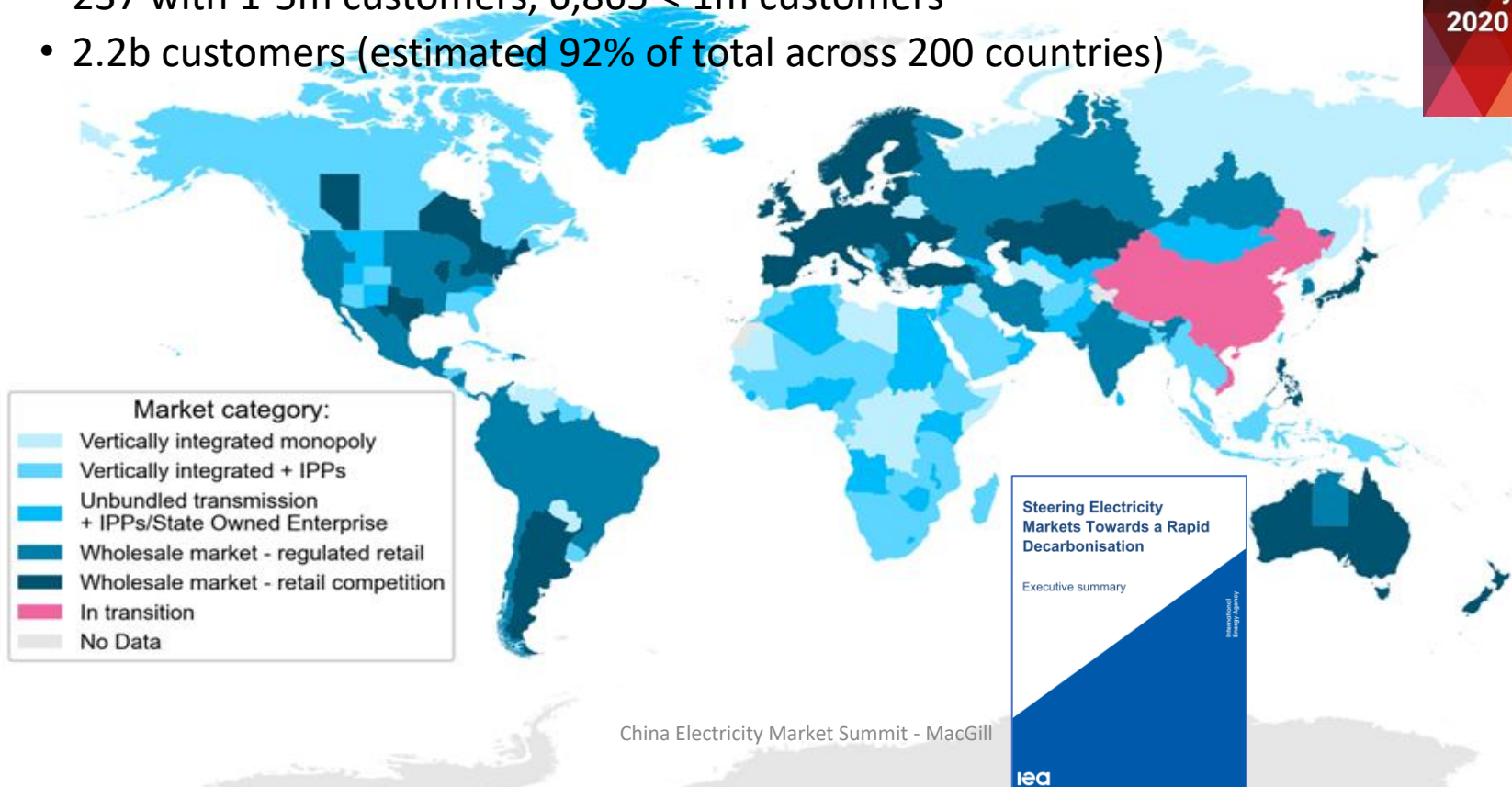
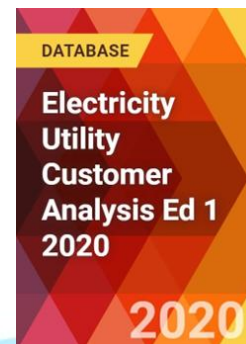
PACIFIC ISLANDS FORUM



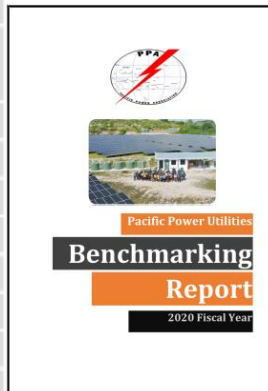
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# Electricity utilities around the world

- Near universal electricity industry arrangement for the past century
  - Provision of essential services/infrastructure, contribution to social and economic welfare, natural 'wires' monopoly, economies of scale in engineering, finance
  - More market based arrangements over past 30 years in some jurisdictions
- Estimated 900 electricity tx utilities, 7200 dx utilities globally
  - 38 utilities > 10m customers, 41 with 5-10m customers, 237 with 1-5m customers, 6,865 < 1m customers
  - 2.2b customers (estimated 92% of total across 200 countries)



# Pacific Island Countries and Territories electricity utilities



Utilities	Peak Demand (for largest Grid)	Size Category	Smaller Grids Serviced	Total Annual Energy Produced (MWH)	Renewable Energy Contribution (%)
ASPA	25.00	medium	Yes	173,582	2.3%
CPUC	2.97	small	Yes	16,894	5.1%
EEC	86.49	large	Yes	490,011	12.0%
EPC	29.99	medium	Yes	192,410	44.4%
EFL	180.22	Large	Yes	977,150	64.2%
GPA	247.00	large	Yes	1,686,618	3.0%
KUA	1.29	small	No	6,927	3.2%
MEC	9.40	medium	Yes	65,141	0.8%
NUC	5.75	medium	No	39,151	7.7%
PPL	131.40	large	Yes	1,500,704	44.7%
PPUC	11.50	medium	Yes	86,239	2.0%
PUB	5.60	medium	No	32,993	6.8%
PUC	6.15	medium	No	37,482	4.1%
SCE	5.60	medium	Yes	27,418	0.0%
SP	15.91	medium	Yes	98,950	1.7%
TAU	5.53	medium	No	31,207	13.7%
TEC	1.42	small	Yes	9,649	15.7%
TPL	11.49	medium	Yes	76,016	11.8%
UNELCO	13.20	medium	Yes	59,736	14.7%
YEPSC	1.90	small	Yes	10,646	19.5%
<b>Total</b>				<b>5,618,924</b>	<b>17.10%</b>

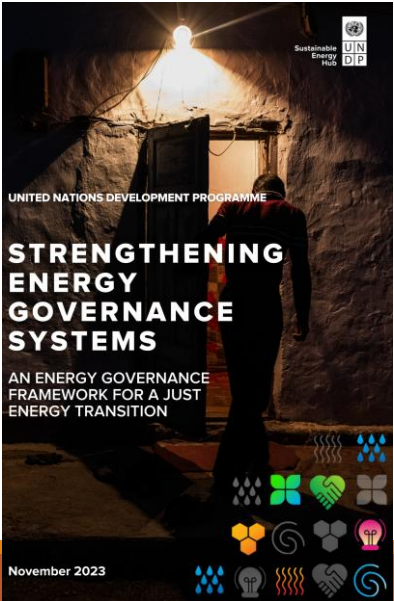
Pacific Island Country/ Territory	Utility
American Samoa	ASPA
Fed. Staes of Micronesia (FSM)	CPUC
Commonwealth of Northern Marianas	CUC
French Polynesia	EDT
New Caladonia	EEC
Wallis & Futuna	EEWF
New Caladonia	ENERCA
Samoa	EPC
Fiji	EFL
Guam	GPA
Marshall Islands (RMI)	KAJUR
Fed. States of Micronesia (FSM)	KUA
Marshall Islands (RMI)	MEC
Niue	NPC
Nauru	NUC
Papua New Guinea (PNG)	PPL
Palau	PPUC
Kiribati	PUB
Fed. States of Micronesia (FSM)	PUC
Santa Catalina Island	SCE
Solomon Islands	SP
Cook Islands	TAU
Tuvalu	TEC
Tonga	TPL
Vanuatu	UNELCO
Fed. States of Micronesia (FSM)	YEPSC

# Energy governance

Effectiveness	Accountability	Inclusiveness
Competence Sound policy making Collaboration	Integrity Transparency Independent oversight	Leaving no one behind Non-discrimination Participation Subsidiarity Intergenerational equity

## What is energy governance?

Energy governance is the exercise of economic, political, and social authority to manage the spatial planning, production, transmission, distribution, storage, access to and use of energy. It includes the ways by which decisions are made about where and how energy resources are developed, regulated, and consumed. It comprises the mechanisms, processes, and institutions through which governments, people, communities, and corporations articulate their interests, exercise their legal rights, meet their obligations, and mediate their differences in relation to energy.

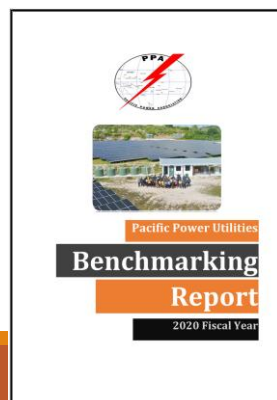




# Possible measures of governance

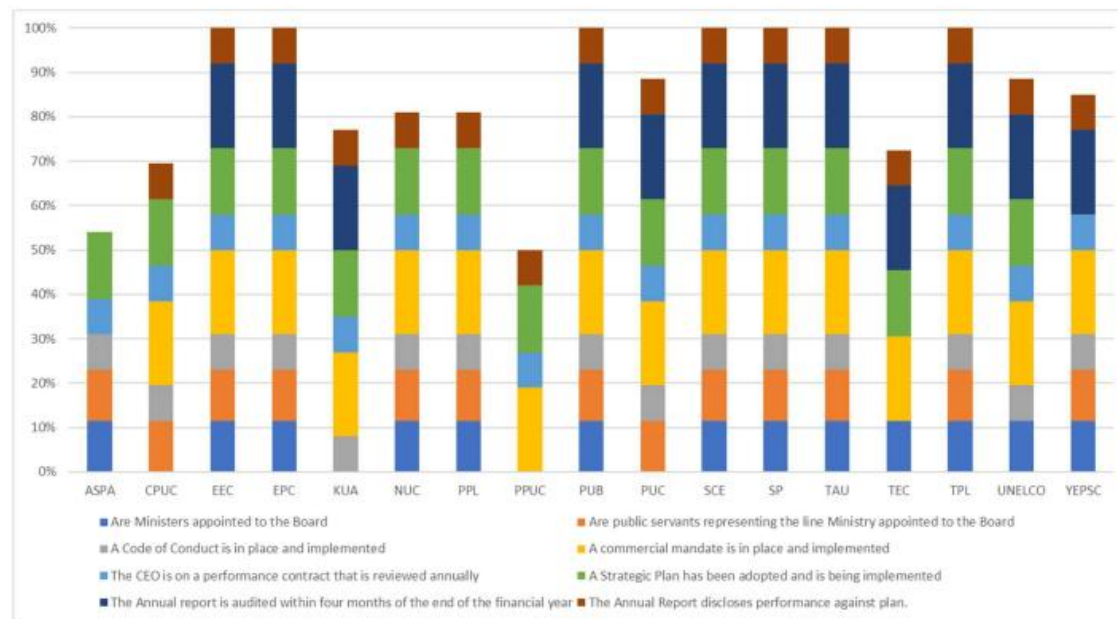
Utilities	Power Quality Standards	Self-Regulated or Externally regulated	Public or Private Ownership
ASPA	Self	Self	Public
CPUC	US	Self	Public
CUC	US	External	Public
EDT	concession contract	External	Private
EEC	EN50160	External	Private
EPC	AUS/NZ	External	Public
EFL	AUS/NZ	External	Public
KAJUR	self	Self	Public
KUA	KUA	Self	Public
MEC	MEC	Self	Public
NUC	AUS/NZ	Self	Public
PPL	AUS/NZ	External	Public
PPUC	JIS, NEC	Self	Public
PUB	Self	Self	Public
PUC	Self	Self	Public
SCE	US	External	Private
SP	Self	Self	Public
TAU	AUS/NZ	External	Public
TEC	AUS/NZ	Self	Public
TPL	Self	External	Public
UNELCO	Concession contract	External	Private
YEPSC	NEC	Self	Public

Workforce Gender Make-up	
Total Employees	5,126
% Male employees	80.3%
% Female employees	19.7%
Total Technical Employees	2,630
% Technical Male employees	95.0%
% technical Female employees	5.0%
Total Management Staff	141
% Management Staff - Male	73.8%
% Management Staff - Female	26.2%



Governance Indicator	Good Governance	Poor Governance	Score
Are Ministers appointed to the Board?	No	Yes	12%
Are Ministers/ public servants representing line/ sector Ministry appointed to the Board?	No	Yes	12%
Is a Code of Conduct in place and implemented?	Yes	No	8%
Is a commercial mandate in place and implemented?	Yes	No	19%
Is the CEO on a performance contract with annual reviews?	Yes	No	8%
Has a Strategic Plan (at least 3 years forecasts) been adopted and implemented?	Yes	No	15%
Is the Annual Report (audited) completed within four months of the end of the reporting year?	Yes	No	19%
Does the Annual Report disclose performance against Plan?	Yes	No	8%
<b>Total Score</b>			<b>100%</b>

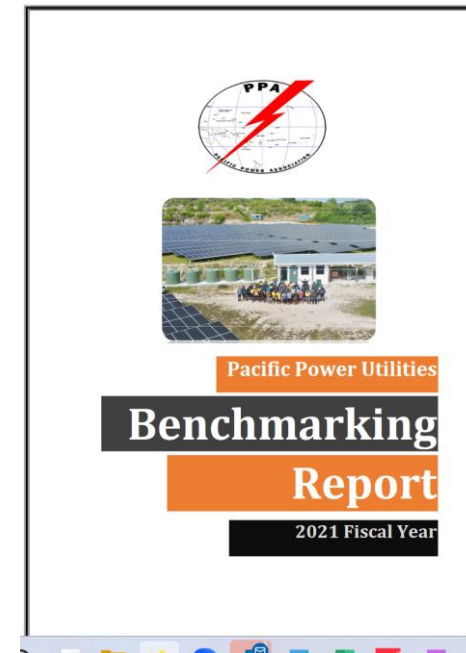
Figure 2.1: Composite Governance Score for 2020 FY



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# Possible measures of utility performance



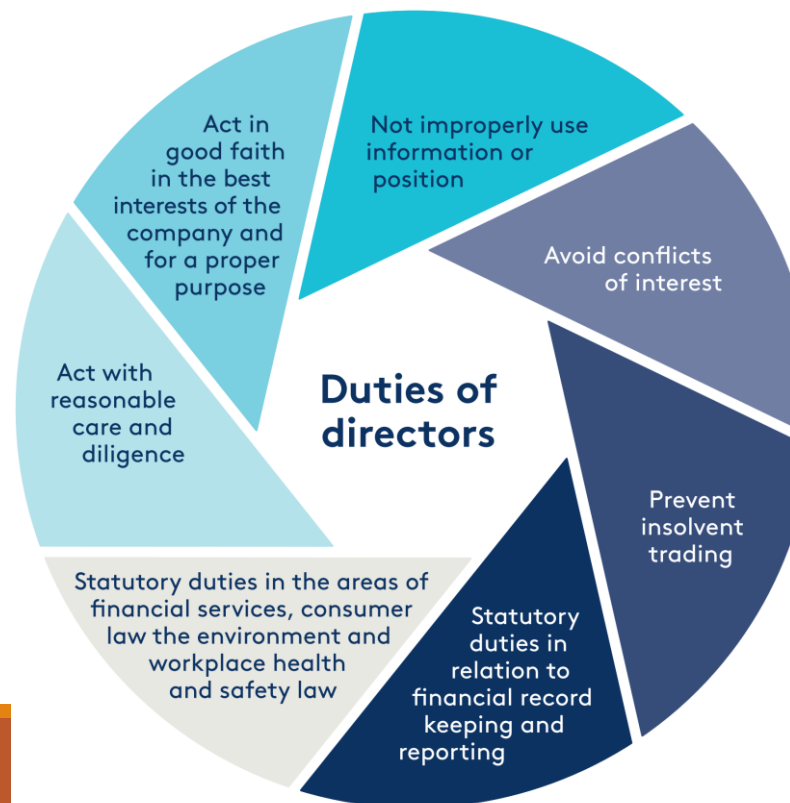
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# The role of boards



Boards of directors are responsible for the overall governance and strategic direction of an organisation. They provide “overall superintendence”<sup>1</sup> of a company, overseeing both performance and compliance in accordance with the organisation’s purpose and objectives.

## The Role of Boards of Directors in Corporate Governance



BOARD GOVERNS, GUIDES, AND DIRECTS	EXECUTIVES MANAGE, ADMINISTER, AND OPERATE
Decides what	Decides how
Requests information	Seeks and provides information
Considers issues	Provides recommendations
Creates, reviews, adopts policy	Recommends and implements policy
Approves and reviews plans	Implements plans
Monitors progress	Reports progress
Supervises and evaluates CEO	Supervises and evaluates personnel
Approves and reviews budget	Formulates budget





## DID YOU KNOW?

Household leaks not only drive up your utility bill, but also causes damage to your home and impacts public water supply.

[Click here for more.](#)

PPUC is pleased to introduce E-Billing. Please sign up now by completing the [E-Billing Application/Agreement](#).



## About Us

The Palau Public Utilities Corporation (PPUC) is a public corporation established to manage and operate the electrical power and the water and wastewater systems of the Republic of Palau.

Comprised of seven board members appointed by the President with the advice and consent of Senate, the board of directors leads the affairs and exercises the corporate powers of PPUC.

The board of directors appoints a Chief Executive Officer with proven ability and skills in the operation of finances, personnel, and management of a utility company. The CEO is responsible to take charge of and control the operation and maintenance of the daily affairs and facilities of PPUC.

As the sole energy and water provider for the Republic of Palau, the Palau Public Utilities Corporation (PPUC) embraces a new era for our islands.

Less than a decade ago, the villages in Babeldaob and the outer states of the Republic had limited hours of electricity and water. As the integration of technology into Palauan society increased the demand for the electricity and water, PPUC invested millions into the utilities infrastructure, providing access to electricity and water and 24-hour service to Palauan communities from Kayangel State all the way to Angaur State. As the local population continues to spread throughout Babeldaob, PPUC must continue to increase the utilities infrastructure to accommodate the demand. As continued reliability of service to our customers remains a priority, quick response to emergencies lessens the inconvenience of power and water outages.

Moreover, PPUC recognizes the importance of conservation. As Palau is an island nation whose economic and social well-being is reliant on a sustainable way of life, we encourage our customers to conserve energy and water whenever possible. Innovation today, for a cleaner tomorrow, PPUC will soon begin to research and implement alternative renewable and cost efficient energy sources, such as solar and hydro power, and thereby reflecting the savings back to our customers. Additionally, PPUC has begun researching on ways to provide cost effective clean water for all its customers.

Adhering to our open door policy, we welcome your comments, suggestions and feedback, so that we may better serve you as Palau's utilities provider.

## The Board of Directors



Ngratmetuchel R. Belech  
Chairman



Kyonori Tellames  
Director



Jeffrey Titiml  
Director



Jacqui Alexander  
Director



Richard Misech  
Director



Salvador Remoket  
Director

Charlene Mersai  
Director



[Meet the Board](#)[Executive Management](#)[Acts & Regulation](#)[Annual Reports](#)[Partner Agencies](#)[Overview of the Company](#)

## Meet the Board

- [Role of the Board](#)
- [Directors' Duties](#)
- [Statutory Duties of the Board](#)
- [Here is the Current Board of Directors](#)

### Role of the Board

As required by Section 6 (4) of the State Owned Enterprises Act 2007, the Board is responsible for charting the Company's strategic direction, for the setting of objectives, policy guidelines, goals management, and for monitoring the achievement of these matters.

The Board is also responsible for reviewing the Business Plan, Corporate Plan and Statement of Corporate Intent, and approves Operating and Capital Budgets each year. The Board also reviews matters of a major or unusual nature, which are not in the ordinary course of business.

### Directors' Duties

The role and duties of the Directors are defined in regulations 17 to 27 of the SOE Regulations, 2010. A key responsibility of the Directors is to achieve the principal objective of the Authority, as stated in Section 5 of the SOE Act: The principal objective of every State Owned Enterprise shall be to operate as a successful business and to this end, to be

- a) As profitable and efficient as comparable businesses that are not owned by the Crown or established as statutory bodies by an Act of Parliament,
- b) A good employer, and
- c) An organization that exhibits a sense of social responsibility by having regard to the interests of the community in which it operates.

### Statutory Duties of the Board

In addition to the above duties, the Board of Directors of SIEA collectively and individually have agreed on the fulfillment of the following duties toward the company:

- When exercising powers or performing duties, Directors must act in good faith and in what the Director believes to be the best interests of the State Owned Enterprise.
- A Director of a State Owned Enterprise, when exercising a power as Director, must exercise that power for a proper purpose.
- A Director of a SOE must not:
  - a) Agree to the business of the SOE being carried out on or in a manner likely to create a substantial risk of serious loss to the SOE creditors or,
  - b) Cause or allow the business of a SOE to be carried out on or in a manner likely to create substantial risk of loss to the SOE creditors.
- A Director must not agree to the SOE incurring an obligation unless the Director believes at the time, on reasonable grounds, that the SOE will be able to perform the obligation when it is required to do so.
- A Director of a SOE, when exercising powers or performing duties, must exercise the care, diligence, and skills that a reasonable Director would exercise in the same circumstances.
- Another controlling measure imposed on Directors is the requirement to enter any conflict of interest in an interests register.



## Board Members Representative

Board Member Representative are elected members of Nauru Utilities Corporation by the approval of the Cabinet Ministers. Their role is to advise the Minister for Nauru Utilities Corporation about matters related to NUC operations.



Abraham Aremwa  
Chairman



Leo Scotty  
Director



Ruswell Engar  
Director



Rocky Olsson  
Director



Kenneth Dowedia  
Director

## Executive Members Team

Introducing Nauru Utilities Corporation Executive Member Team, Each member have their own respective role within the body of NUC.



Anthony Dimapilis  
CEO



Mark Hiram  
General Manager Water



Jonpel Rodiben  
General Manager Network



Semaima Kunavore  
Finance Controller



Sinderina Adeang  
A/General Manager Corporate Service



Nasio Jeremiah  
General Manager Sanitation



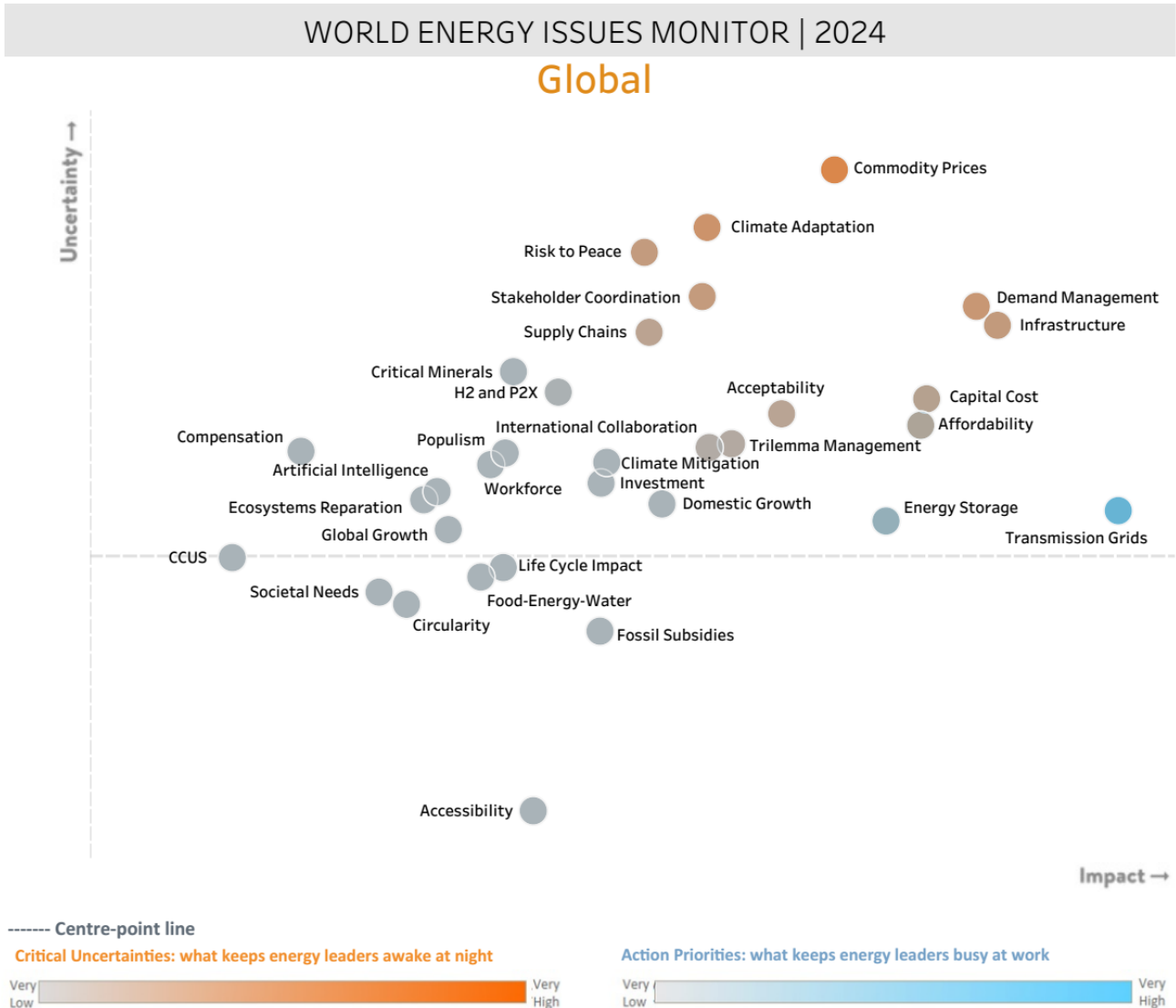
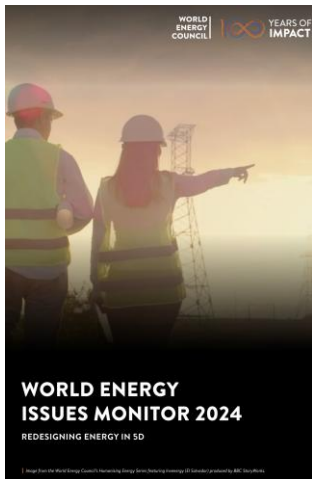
Vacant  
General Manager Generation

# Prioritising diverse utility board roles

What action priorities  
are keeping you  
busy at work?

versus

What critical  
uncertainties are  
keeping you awake at  
night?



# Introductions

- Yourself and which organisation do you represent as well as any specific roles?
- What utility board issues are keeping you **busy** at work?
- What power sector **uncertainties** (might) be keeping you up worrying at night?
- What is a key **question** that you have for other regional Utility Board Director colleagues? *Can you help me ....*
- What is a key piece of **advice** that you have for regional Utility Board Director colleagues? *From my experience...*