

## Engineer's Workshop:

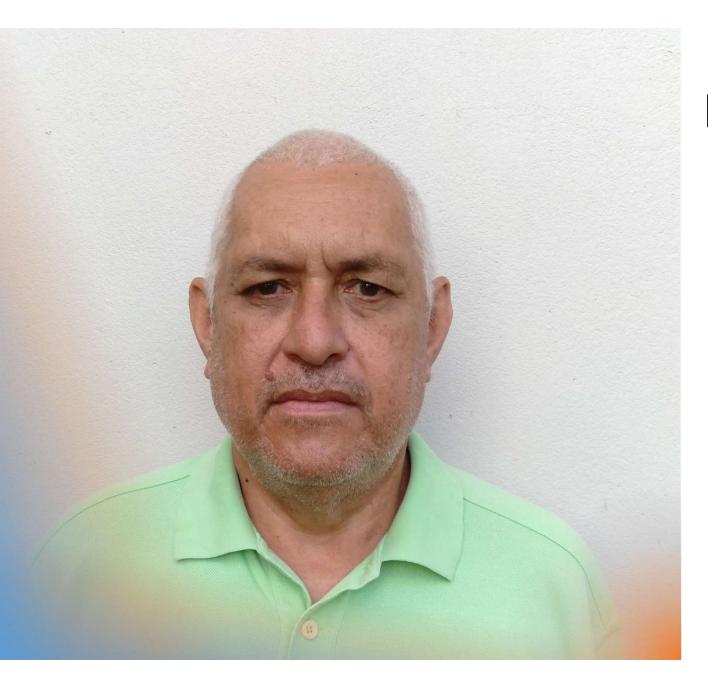
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## Introduction & Thinking Tools



### Acknowledgement of Sponsor:





## Introduction:

- Coordinator & Instructor
- Electrical Engineer
- Over 40 years of work experience
- 15 years of CEO experience: 7.5 years power utility, 3 years land transport, 3 years shipping.
- 7 years consulting Energy & Corporate Change Management
- All mixed up.

# Workshop Theme & Objective

- Theme: Planning the Transition to Renewable Energy.
- Objective: At the end of this workshop, engineer should:
  - Appreciate RE technologies and their fit in the supply side strategy for a power grid.
  - Manage the process for developing and operating RE resources.



## Agenda: Timetable

	8:30 to 10:00 am	10:30 to 12:00	13:00 to 15:00	15:30 to 17:00
Monday	<ul> <li>Planning &amp; Thinking Tools. Resource Inventory.</li> </ul>	<ul> <li>Demand Characteristics and forecasting.</li> </ul>	<ul> <li>Resource inventory &amp; Preliminary assessment of potential.</li> </ul>	<ul> <li>Resource inventory &amp; Preliminary assessment of potential (cont.)</li> </ul>
Tuesday	PPA Conference Opening	<ul> <li>(Sponsor) DCCEEW presentation.</li> <li>Elemental - Renewable Energy Project Design Considerations</li> </ul>	<ul> <li>Preliminary Assessment Wind, solar, etc</li> <li>Prefeasibility Assessment</li> </ul>	Introduction to Pacific Women in Power (WB) and PPA Members Baseline Employment Survey Results
Wednesday	<ul> <li>DFAT Session with Engineers</li> <li>Prefeasibility : Nauru Pump Storage hydro</li> </ul>	<ul> <li>Understanding Core Gender Concepts Relevant for Energy Sector Management and Planning</li> </ul>	Tour/ Presentations & Exercises	Tour/ Presentations & Exercises
Thursday	<ul> <li>Gender Expectations</li> <li>Session- Unpacking</li> <li>Workplace Experiences</li> </ul>	<ul> <li>OpenCEM</li> <li>EPC &amp; Project Management</li> </ul>	<ul> <li>Operations and performance management</li> </ul>	• Discussion & wrap up

#### Participants who completed the survey

Andrew Kautoke **Tonga Power Limited** Major Projects and Strategic Business Development manager **Robert Taualupe Kosrae Utilities Authority** KUA Operation Manager Ken Blake Nauru Utilities Corporation **General Manager Generation** JUNG-DUPOUX Patrice **UNELCO VANUATU** Operating manager electricity Tei Nia **Acting Chief Engineer** TAU John A. Chieng Yap State Public Service Corporation **Engineering Division Manager** Steven Wakefield Chief Technical Officer Marshalls Energy Company Simon Reiher Public Utilities Board Kiribati Engineering Planning and Compliance Manager Alex Nanpei **Pohnpei Utilities Corporation** Chief, Department of Engineering and Planning Dennis A. Triana Chuuk Public Utility Corporation. Head, Power Generation & Maintenance. Marshall Energy Company **Carthney Laukon Jr** Jr. Civil Engineer Wayne Raymi Kijiner Marshalls Energy Company **Electrical Engineer** Latuselu Posi **Electric Power Corporation** Engineering officer Jiten Lal **Energy Fiji Limited** SCADA Engineer Solomon Power Joshua Liuga Suiramo **Deputy Chief Engineer** Latuselu Posi **Electric Power Corporation** Engineering Oficer **Bwatirine** Kiribati Public Utilities Board Solar and Battery Energy Storage system engineer Taaku Sekielu **Tuvalu Electricity Corporation Distribution Manager** Sidney Kilmete **Pohnpei Utilities Corporation** Chief Power Distribution Ivan Harris Pohnpei Utilities Corporation (PUC) **IT** Specialist

#### 4. Qualifications:

#### More Details

Diploma in Engineering, Mange... 7
Bachelor in Engineering, Manag... 13
Master in Engineering, Manage... 0



#### 5. Experience in Power System Planning

#### More Details

0-5 years	10
🥚 5-10 years	6
Over 10 years	4



6. Do you have historic and forecasted annual energy and maximum demand up to 10 years for the power grids operated by your utility? (If yes - please have them available at the workshop for exercises on forecasting demand)

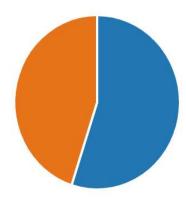


7. Does your organisation produce a Long term (5 to 20 years) Power System plan? (If yes please bring the report with you)

More Details







8. Select topics that most interest you

#### More Details

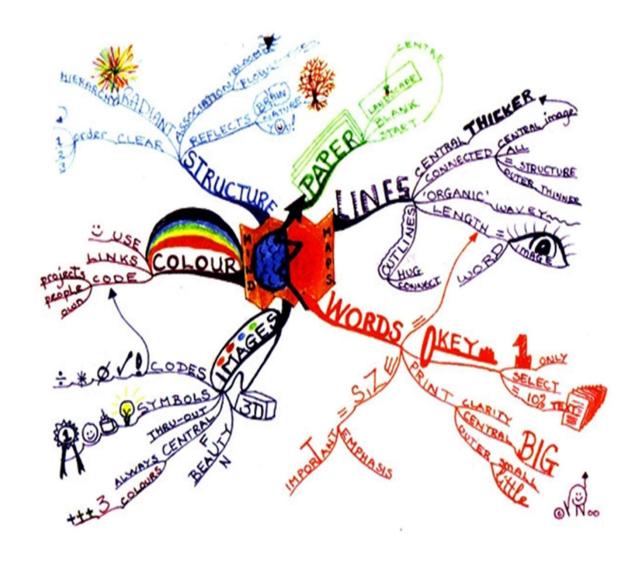
	Demand forecasting	2
	Priliminary investigations of Sol	0
	Priliminary investigations of Win	0
	Priliminary investigations of Hyd	1
	Priliminary investigations of OTE	0
	Pump storage hydro	1
	Battery Energy storage	8
	Grid connection challenges for	4
0	Development process for RE	0
	Other	4

4 respondents (20%) answered system for this question.

## Grid Integration Solar and Battery battery storage Pacific Grid connection battery energy OTEC generation System storage system COTEC generation system storage system Connection challenges energy storage VRE Hybrid Grids storage hydro challenges for VRE SAIDI & SAIFI

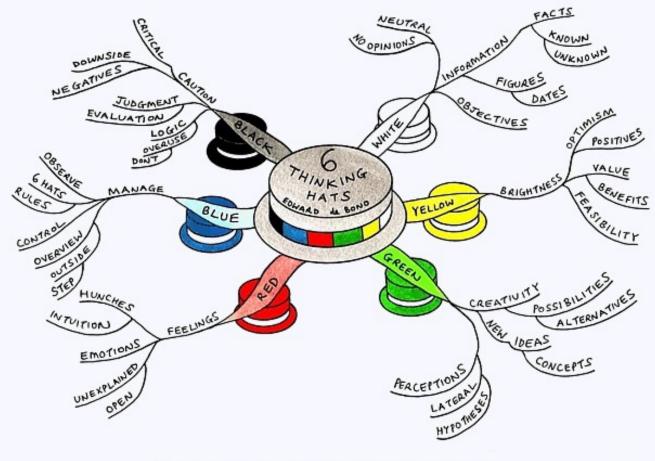
Thinking Tools Useful in Planning: Mind Mapping

Exercise: Use a mind map to potential RE sources for your country!



## Thinking Tools Useful in Planning: Six Hats

Exercise: Use the six hats to explore options for RE



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