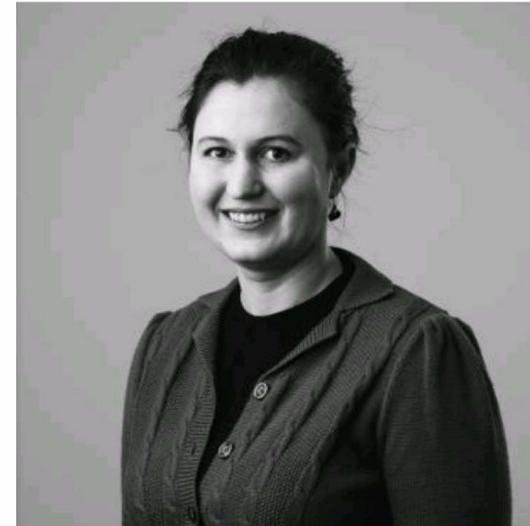




RENEWABLES

Case Study: IT Power Renewables



Julia McDonald

Head of International Development

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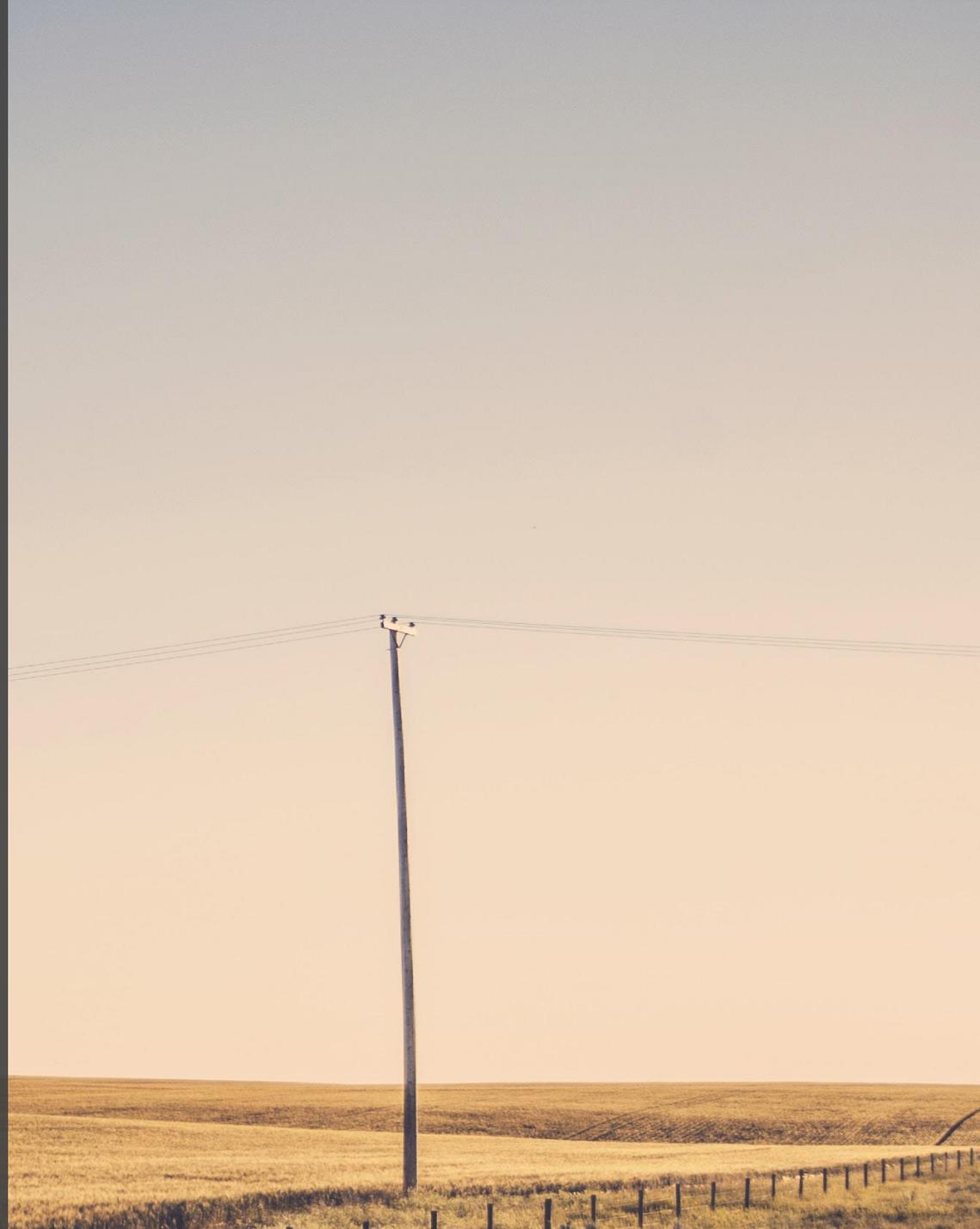
RENEWABLES

Working in the Pacific – Energy case studies

Julia McDonald

ITP Renewables

ENGINEERING | STRATEGY | ANALYTICS | COMPLIANCE



- Energy sector - Renewable energy specialization
- Over 30 years international experience and 1,000 projects
- Worked in all PICs, currently working on projects in PNG, Marshall Islands, FSM, Tokelau
- Completed projects in Vanuatu, Tuvalu, Niue, Palau, Tonga, Samoa, Cook Islands, Kiribati, Fiji, Solomon Islands
- Itpau.com.au

- Tuvalu Energy Sector Development Project
- FSM Energy Sector Master Plan
- Pohnpei Power Station Refurbishment
- Kosrae Battery Energy Storage System
- Solomon Islands Electrification Plan

- Engineering and consulting
- Owner's Engineer

Sample projects



Kiritimati Island, Kiribati



Nanumaga, Tuvalu

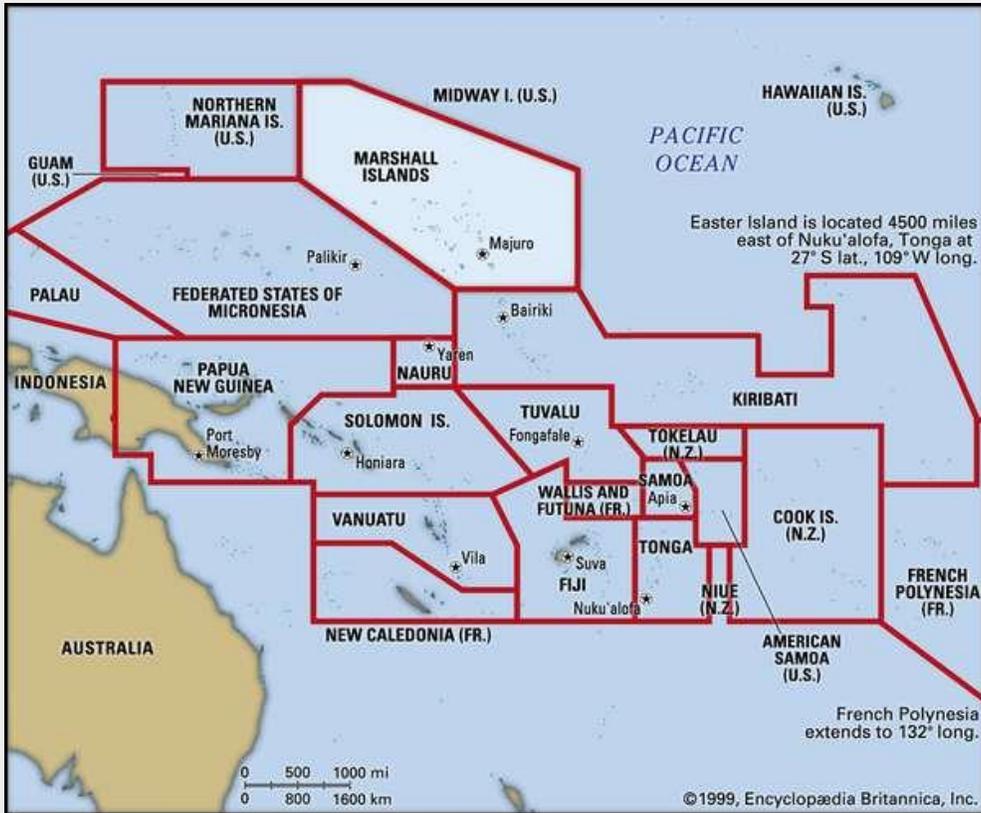
Why is renewable energy important?



- Energy access and economic development – some regions only have 15% access to electricity
- Energy security – reduce diesel reliance
- Climate change
- Affordability
- Local environmental concerns



Marshall Islands Sustainable Energy Project



~60,000 people total
~30,000 live in the capital, Majuro, others spread across 25 other islands
Lots of ocean, not much land
1-5m above sea level

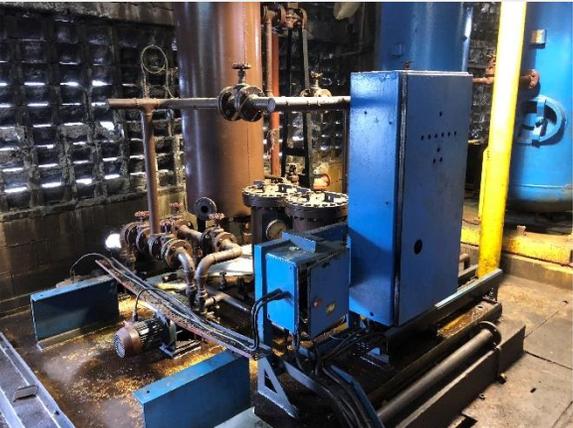
- World Bank
- Solar PV, battery systems for Majuro (main island)
- Diesel power station upgrades
- Originally to include PV and battery systems to get to 9% renewable energy for the entire country – about 3.5MW
- Currently under construction
- Construction contract signed Dec 2019 – just before COVID

Lesson1 – Project coordination



- Multiple energy projects simultaneously with different donors
- Coordination is critical for energy projects
- Transitioning from diesel-only to renewable energy requires careful planning and staging of work
- Poor planning will cause total blackouts
- Existing infrastructure needs to be maintained while new is being built

Power station



Majuro Power station in need of major refurbishment to enable connection of new solar projects



Land?



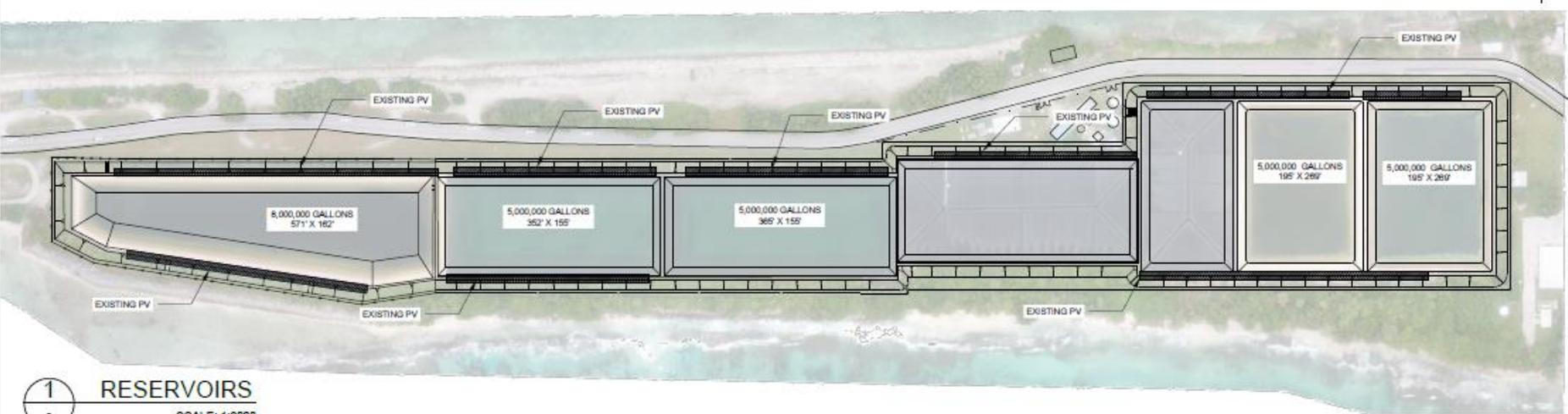
Water reservoir



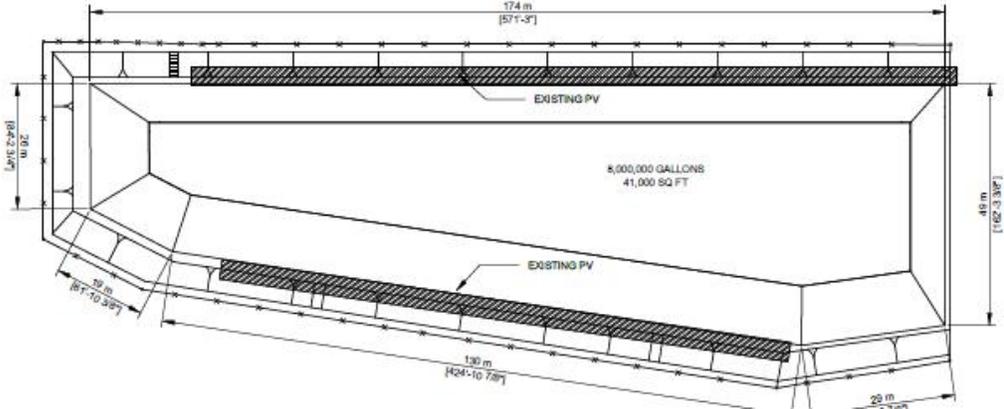
PV Site selection



PV Site selection



1 RESERVOIRS
SCALE: 1:2000



- Understand WB procurement rules and processes
- For consultants – requirements of TOR vs reality
- Use a procurement expert
- Consider logistics when delivering tenders
- Local knowledge and assistance
- Current process – CIUs for implementation
- Be aware of slow approval process for changes

- Logistics!
- Changing rules for entry to countries
- Local partners
- Flexibility
- Project delays
- Positive outcomes – changes to processes and methods of work
- Increased focus on local engagement and locally driven solutions



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