

Clean Energy Needs in Pacific Island Countries

2022 Pacific Island Climate Collaborative Forum

Akuila Tawake
Pacific Community

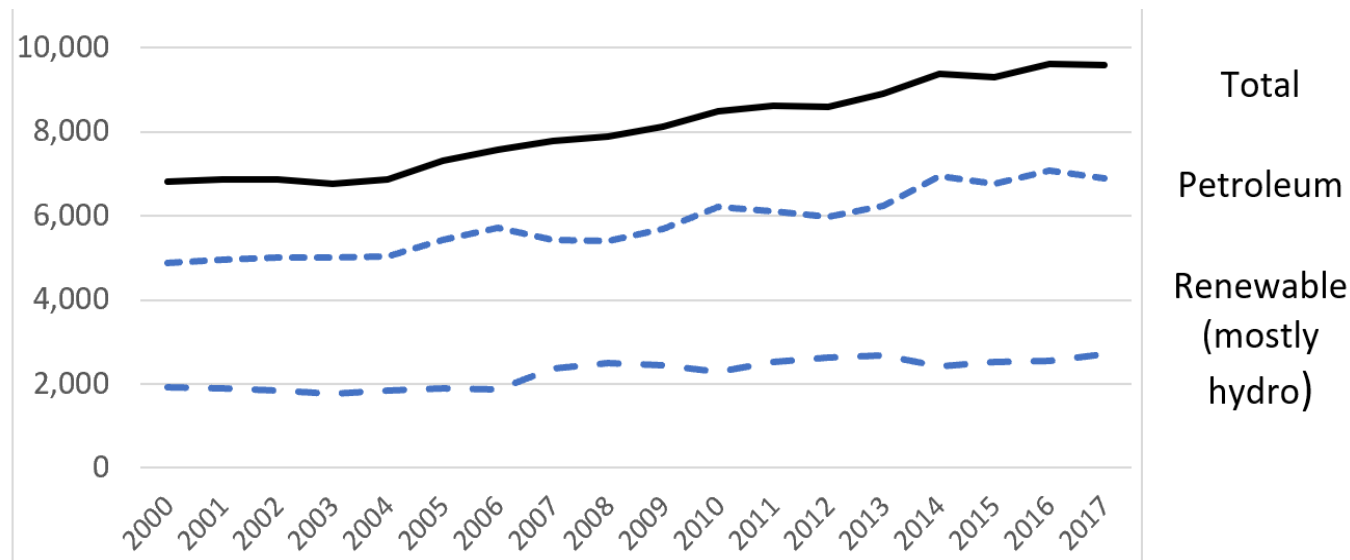
The Pacific Islands Paradox

- One of the regions with very high renewable energy potential;
 - Tropical Pacific – sun everywhere, rain regularly for hydropower, and abundant wind for wind-power;
 - Pacific Rim of Fire - have unexplored opportunities for geothermal;
 - High potential for bioenergy and ocean energy.
- Most vulnerable to CC impacts – cyclones, typhoons, storm surges, draughts, etc.
- Highly dependent on fossil fuel.



Major Issues facing PICT Energy Sector: 2020s & Beyond (page 1 of 4)

(1) Significant progress requires large increases in renewable energy (RE)



PICT Electricity Generation 2000-2017 (GWh)

72% from petroleum in 2000

72% from petroleum in 2017

- About 80% of PICT commercial energy use still petroleum; 72% of electricity is from petroleum fuel.
- Petroleum power generation has grown at same rate as RE. Rapid PV growth; most RE is hydropower.

(2) PICTs need large increase in efficiency of energy use (EE) (page 2 of 4)

- But very limited funding or progress in measuring or improving PICT EE
- Roughly **half** of PICT electricity use is in buildings but very poor baseline data on energy end-use by sector hinders region's EE efforts
- Fiji Parliament Complex –designed for low energy use – it uses 25 – 40% less energy)

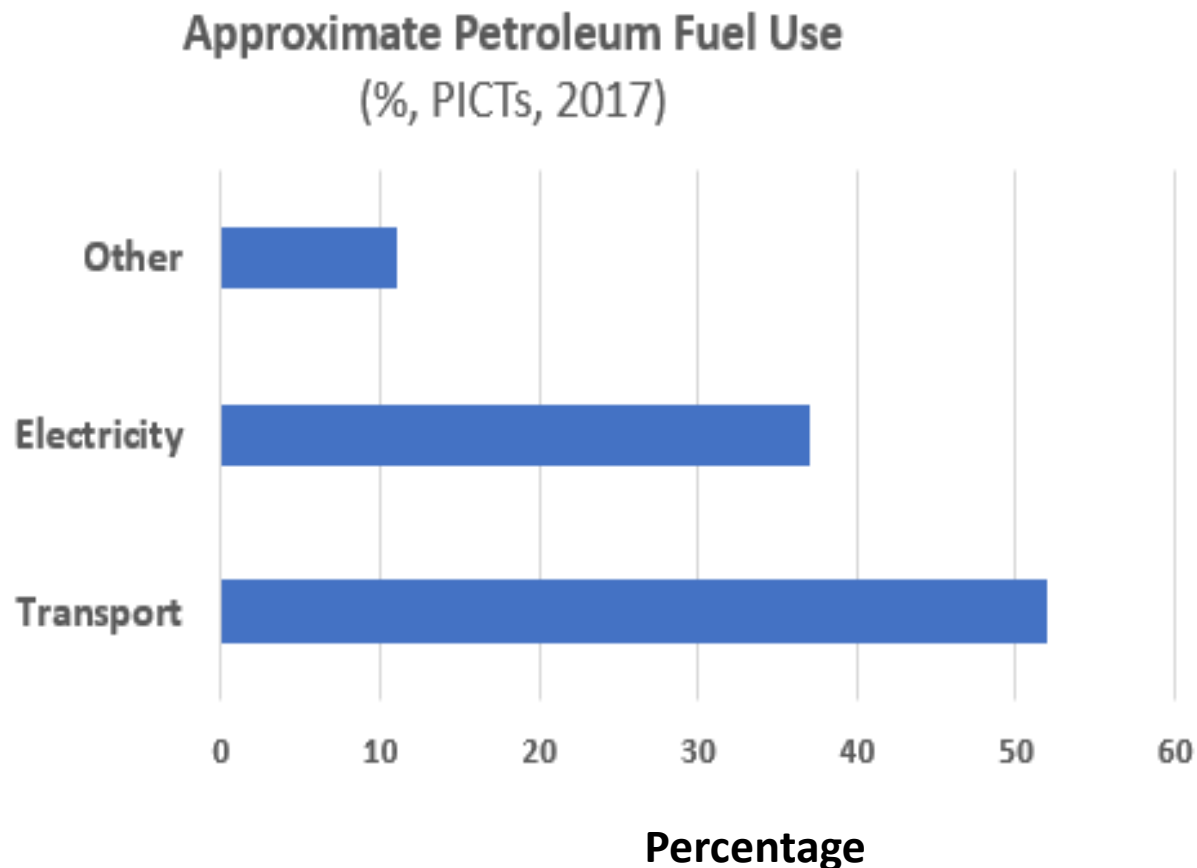


(3) Energy sector planning and Implementation faces increasing uncertainty and risks

- Need to routinely plan now for robustness & resilience over 30-year infrastructure lifetime
- But data inadequate for effective planning and measuring changes in PICT national energy security.

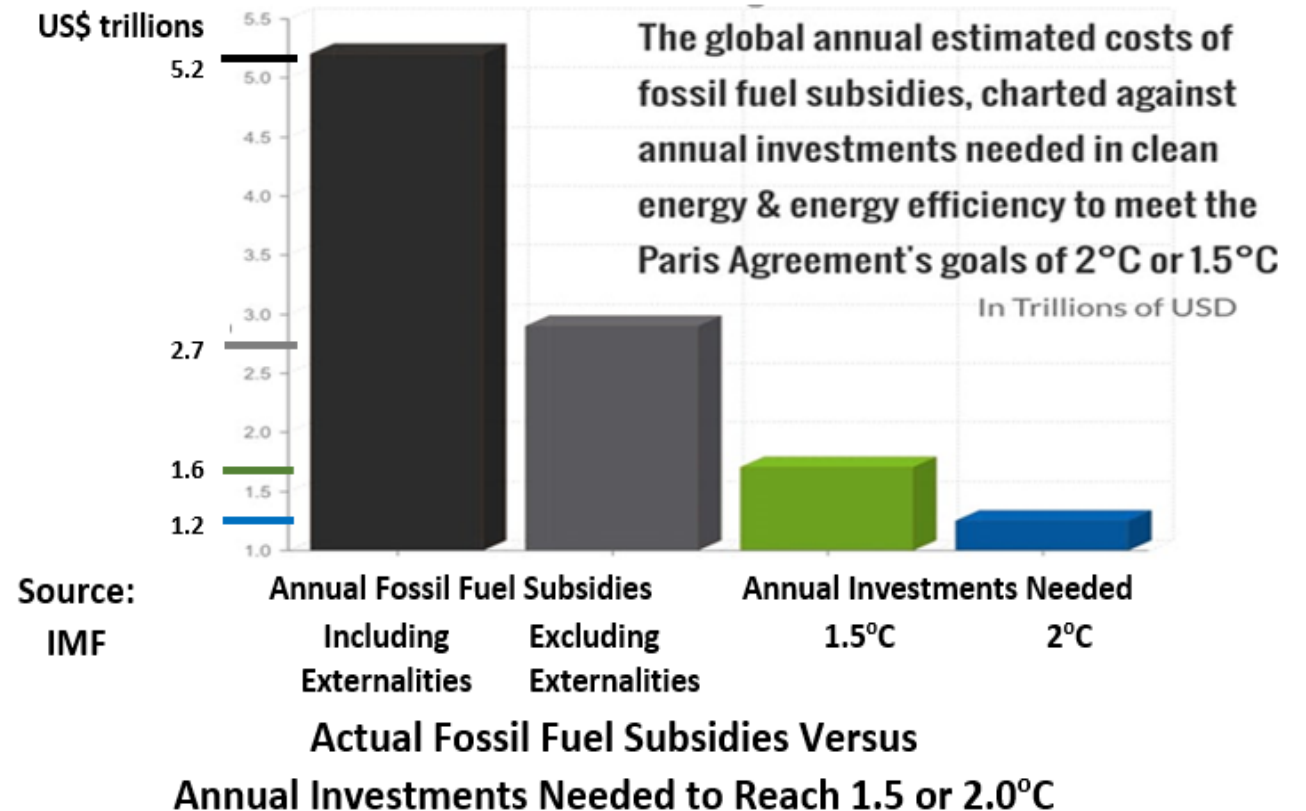
(4) PICT transport remains nearly 100% petroleum-fuelled (page 3 of 4)

- Transport now uses about 40% more fuel than power generation in PICTs.
- Transition to low-carbon PICT transport is very challenging (technically, economically)
- SPC is the lead agency for transport energy and national responsibilities often dispersed.



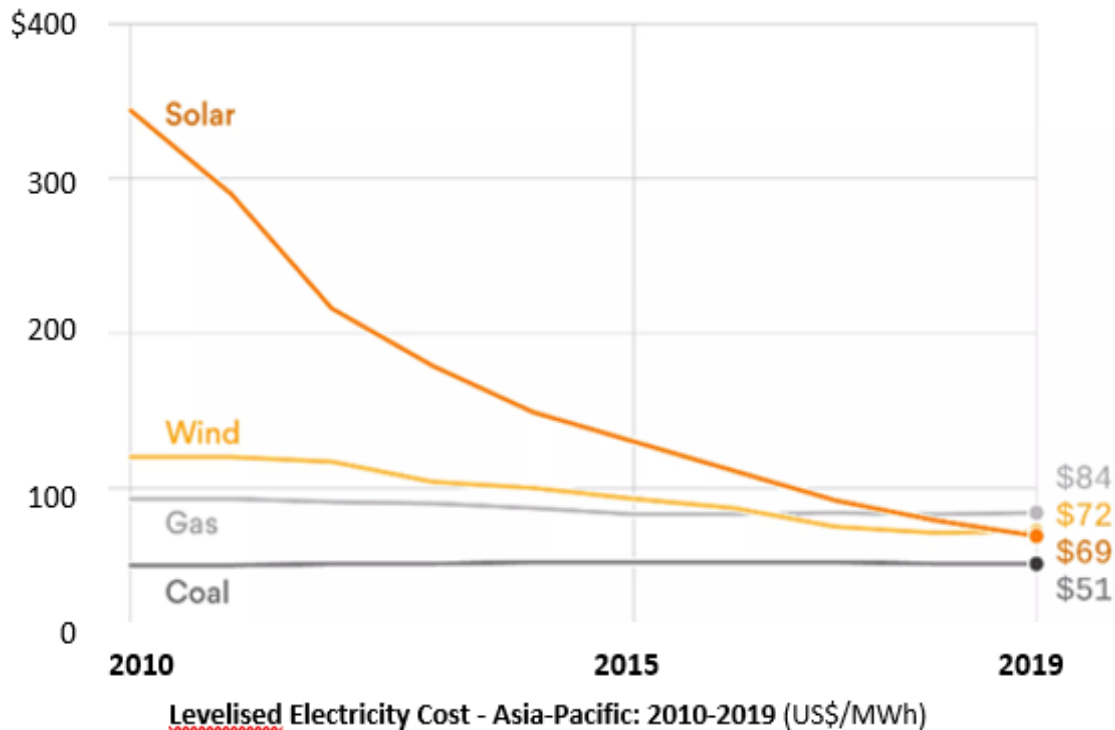
(5) Petroleum sector may become less stable, supply less secure & costs more variable (page 4 of 4)

- PICT petroleum dependency will continue for some years
- Negotiation/implementation of PICT fuel supply agreements is weak (so prices may be unnecessarily high)
- Safety concerns for coastal bulk fuel storage from the impact of CC.



FESRIP 2021-2030 framework tries to address the key issues

Opportunities for PICT Energy Sector: 2020s & Beyond (page 1 of 3)



Same decreasing trends for Solar PV in the PICTs

- (1) Improving PICT energy security and resilience through renewable electricity**
 - Costs continue to decline and technologies are rapidly improving.
- (2) Improving energy security and resilience through energy efficiency investments**
 - Practical cost-effective opportunities for buildings, lights, cooling, transport

Opportunities for PICT Energy Sector: 2020s & Beyond (page 2 of 3)

(3) Improving energy security and resilience through low-carbon transport technologies

- Transport energy efficiency can improve by 35-40% (2050) without radical technology changes



(4) Improving petroleum supply security, costs, & storage/distribution safety

- Excellent opportunities: benefits to PICTs can be 10 times costs of service
- Donors reluctant to support it.



Electric mini-bus and delivery van

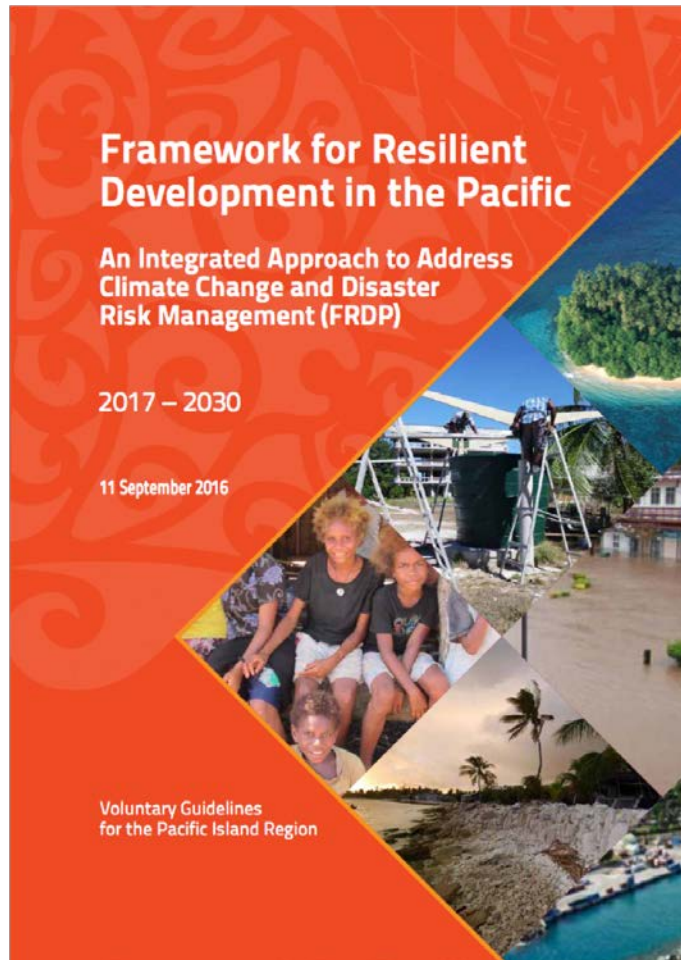
(5) Improving energy security & resilience: improved data and analysis (page 3 of 3)

- Enhance and expand PRDR.
- CROP agencies (SPC, PPA) hope for World Bank assistance for substantial improvement to energy data and its analysis.

(6) New policies, plans & implementation addressing risk & uncertainty should improve robustness and resilience of their implementation

- Important that CROP advice routinely helps PICTs address risk & uncertainties

Relevant Frameworks

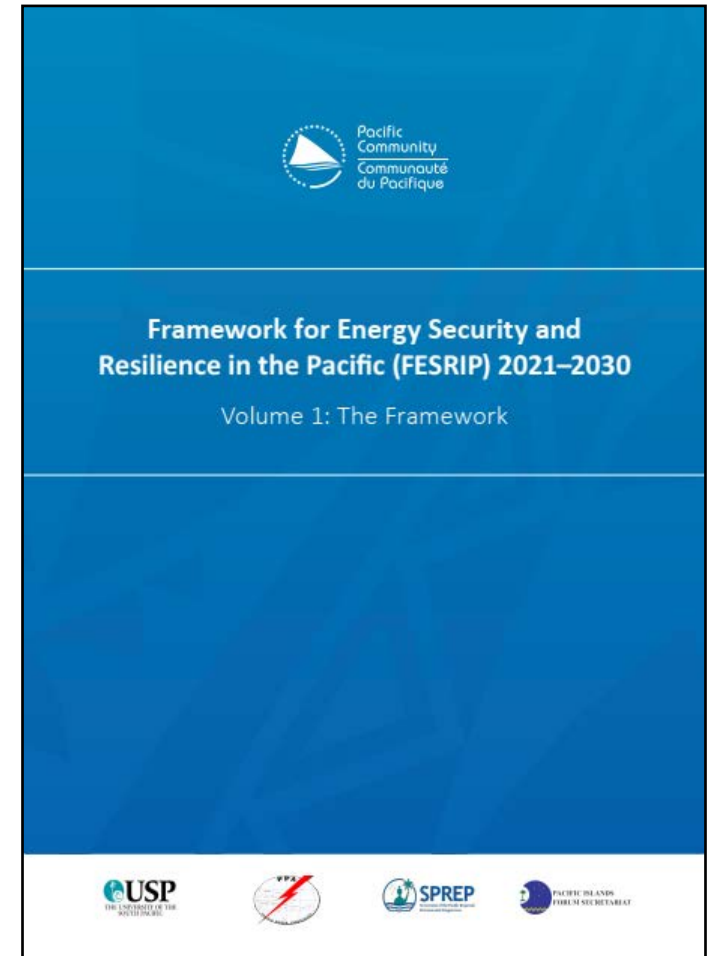


- SDGs: 7, 9 and 13
- FRDP – Goal 2: Low Carbon Development
- **Framework for Energy Security and Resilience in the Pacific (FESRIP) 2021 – 2030**
- FESRIP endorsed by Pacific Forum Leaders in August 2021

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

LONG-TERM GOAL: Access to secure, robust, sustainable and affordable electricity, transport fuel and household energy services that are resilient to climate change and natural disasters.

- SPC (lead);
- SPREP (environmental aspects & CC);
- PPA (power utilities);
- USP (education, training & research); and



FESRIP Priority Areas

Priority A	Energy Policy, Planning and Capacity Development
Priority B	Energy Sector Finance and Cooperation
Priority C	Sustainable Electric Power Development
Priority D	Low-Carbon Transport Energy
Priority E	Improved Energy Efficiency
Priority F	Petroleum and Other Liquid Fuel Services



FESRIP – A total of 23 Priority Initiative

ONE FRAMEWORK MANY PARTNERS



Other Partners:

PICTs, EU, JICA, ADB, Mana Pacific, GGGI, WB, MFAT, UNESCAP, DFAT, Power Utilities, FNU, MV Solar, AUT, Uni Fiji, IFC, ComSec, CFAN, GCF, USAID, UNDP, UNIDO, WB, ADA, MCST, Hale & Twomey, NDC Hub, ADB, Energy Regulators, SEIAPI, GET.Invest.