POLICY DIALOGUE

“reducing the reliance on imported fossil fuels in the pacific countries”

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SUSTAINABLE ENERGY TRANSITION IN KIRIBATI

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Brief background

• Highly dependent on imported fuel for electricity generation, transportation and domestic usage in the urban and rural areas
• Traditional use of biomass for cooking and copra drying remain the largest use of renewables in Kiribati
• Kiribati is blessed with an abundant indigenous energy resources from solar, wind, and surrounding ocean.
• Solar energy use for electrification account for 13% of the total national electricity use.
Urban Energy and Electrification

Solar PV grid connected project on South Tarawa 2015 -2016
- 500 kW - World Bank project (AUSAID and GEF)
- 400 kW - Masdar Project (UAE)
- 400 kW - Pacific Environment Community Fund (Japan)

6 diesel generators installed for South Tarawa Power Utility
- Around 6.9 MW in total

2 new diesel generators donated by the Republic of China (not yet installed)
- Around 2.4 MW in total

Additional fuel storage tanks
- 3 new tanks commissioned in 2016 (capacity - 4 million litres)
- Another 2 storage tanks proposed (to store around 4 million liters of fuel)
Outer island electrification

- Household solar home systems/solar kits
- Community Hall solar PV electrification
- Senior Secondary Schools PV mini-grid system
- Ice plants solar systems (100% RE)
- Council offices solar system (95% powered by solar)
- Vulnerable rural community's solar system (16 kW in total)
• Transport sector is predominantly supplied by fossil fuels
• Residential sector is mainly met by biomass which account for 86%. These include firewood and coconut residue for cooking
• Electricity is primarily generated from fossil fuel (30% from total fuel consumption).
• Solar contribution to the power grid is around 13%.
Policy, Planning and Coordination

  • Policy planning and coordination
  • Power
  • Outer islands
  • Petroleum
  • Efficiency and conservation
  • Renewable energy
  • Environment
  • Transport

• Kiribati Integrated Energy Roadmap 2017-2025
• Energy bill - first reading in August 2022
KIER 2025 Power Generation
Fossil Fuel Reduction Targets

South Tarawa 45%
- RE 23%
- EE 22%
- PUB Grid Coverage

Kiritimati 60%
- RE 40%
- EE 20%
- Central Grids (2 Corridors)

Rural Public Infrastructure 60%
- RE 40%
- EE 20%
- Southern Kiribati Hospital & Ice Plants

Rural Communities 100%
- RE 100%
- Boarding Schools, Island Councils, Private Amenities & Households
Possible areas for intervention

Urban areas

- Upgrading PUB grid to increase RE penetration
  - Additional solar project with storage
  - 2 new additional tanks proposed

Rural areas

- Promoting outer islands development through the KIER
  - Education facilities solar PV electrification (Junior secondary schools)
  - Community facilities solar PV electrification (boarding schools, private amenities and households)
  - Solar powered desalination plant for vulnerable communities
  - So far, 2 pilots projects funded by Italy were operate successfully
Support needed for Sustainable transition

- Capacity building on integrated energy planning
- Support on energy efficiency activities
- Feasibility study to explore other resources apart from solar
- Master plan development for sustainable transport
Conclusion

• The transport sector has good mitigation potential, but it is constrained by ever increasing travel demands and consumer behavior

• Energy efficient engines and electric vehicles promotion could decrease the growing demand for gasoline fuel.

• Changing the mindset of people to adapt to new practices.
“Pioneering in the utilization of alternative energy technologies existing will fast pace the transition to an energy secure Kiribati”