International Symposium on "Challenge to SDGs – Target 13 Climate Change – from the Case of Kiribati"

Tokyo – 20th October 2017
United Nation University, Japan

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Outline

- Brief overview of Kiribati
- Energy policy and regulatory framework
- The Paris Agreement
- Fossil fuel reduction target
- Energy at a glance
- Climate change mitigation strategies
- Way forward

PS: Google search Kiribati location

Our efforts on mitigation to impact climate change in energy planning as a responsible member of the International community and to protect our vulnerable Kiribati

Brief overview of Kiribati

Census 2015		Population	Household
Urban	South Tarawa	56,338	7,877
	Kiritimati	6,456	418
Rural	Gilbert group (18)	43,295	8,761
	Line group (2)	4027	710
	Phoenix group (1)	20	6
	Total	110,136	17,772

- The islands are all atolls (1-3 meters asl) except Banaba
- Highly dependent on petroleum imports for electricity generation, transportation and domestic use.
- Traditional use of biomass for cooking and copra drying remain the largest use of renewables in Kiribati.
  - However, inefficient open cooking methods remain the biggest threat and cause to the health risk of our women and girls by traditional chore.
- Kiribati is blessed with an abundant indigenous energy resources from solar, wind, vast ocean, coconut copra and biomass.

Energy policy regulatory framework

- Kiribati National Energy Policy 2009
- Renewable Readiness Assessment 2011
- Pacific Lighthouses – Kiribati 2013
- Kiribati Joint Implementation Plan 2014

Strategy 9 – Promoting the use of sustainable renewable sources of energy and energy efficiency.

- Kiribati National Determined Contribution 2015

Submitted in 2015 prior the COP21 held in Paris. Moving the NDC forth is still on the table for COP23.

- Kiribati Integrated Energy Roadmap 2017:

Implementation Plan to the energy policy and strategies– awaiting Cabinet endorsement.

Climatic events 2015 – Kiribati hit that year

MV Tekeraoi

The Paris Agreement – end 2015

- Kiribati NDC was submitted in 2015 prior the COP21 held in Paris. The 2nd Pacific Island country to do after Marshall Islands.
- Kiribati signed the Paris Agreement in April 2016
- Ratification of the Paris Agreement endorsed by Cabinet in September 2016 and was therefore formally announced at the UNGA in 2016.

Context of NDC Target setting

- Kiribati emissions ~63,000tCO_2e/year.
  - approximately 0.0002% of global emissions
- No requirement or obligation for mitigation (reducing emissions) under UNFCCC – adaptation is our first priority to LDC SIDS Kiribati.

Context of NDC Target setting

Why should Kiribati contribute?

Climate change threat to Kiribati is massive, and so GoK should try and encourage an ambitious global agreement

Participating to leverage:

- influence on rest of world to do more
- Recognition of current actions
- New and additional climate finance

Accordingly, ANY contributions from Kiribati is more than fair and must be considered ambitious, given the extraordinary circumstances of the country.

Balancing for our existence

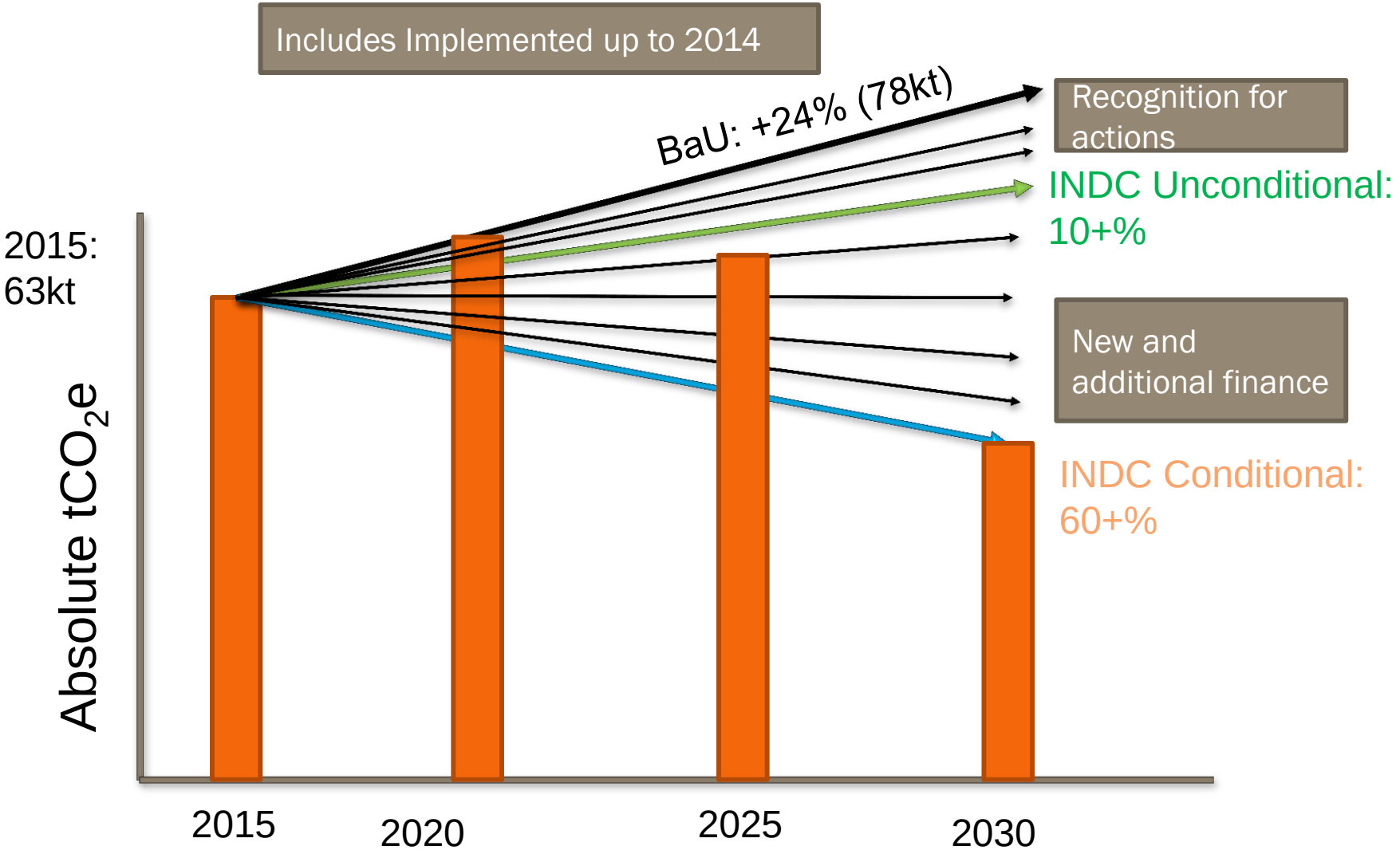
There is a balance:

- make an **ambitious** NDC to avoid 1.5^{o}C, influence the international community and attract the ‘opportunity’.
- Don’t overpromise (and under-deliver), or diminish the ‘opportunity’ potential.

- Creating the technical knowledge to enable political commitments.

Kiribati NDC submitted

Contribution in graphic



Achieving NDC

- Adaptation – high priority on Kiribati agenda
- Mitigation: on the other hand provides a renewable future, resilient and low cost means for the country and therefore mitigation is seen as an opportunity for Kiribati to enhance adaptation strategies.

unconditional (Kiribati) Contribution **outcome** of:

- 13.7 % below **Business as Usual (BaU) by 2025**
- 12.8% by 2030 compared to BAU
- Donor funded RE projects recent and ongoing

unconditional (Kiribati) Contribution **Action:**

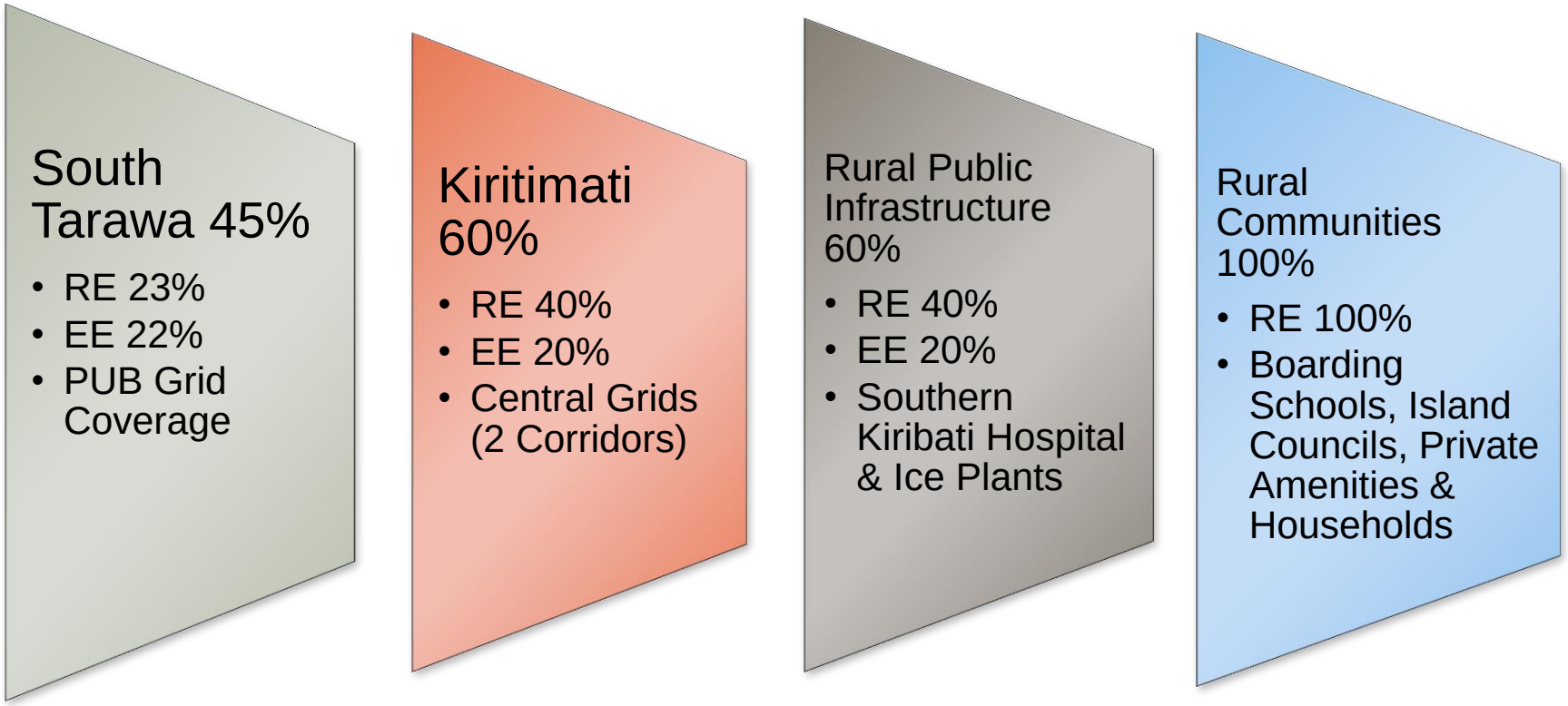
- maintain mangrove forest carbon storage, storing > 6Mt.

Conditional Contributions :

- 48.8% below BaU by 2025
- 49% by 2030 compared to BAU

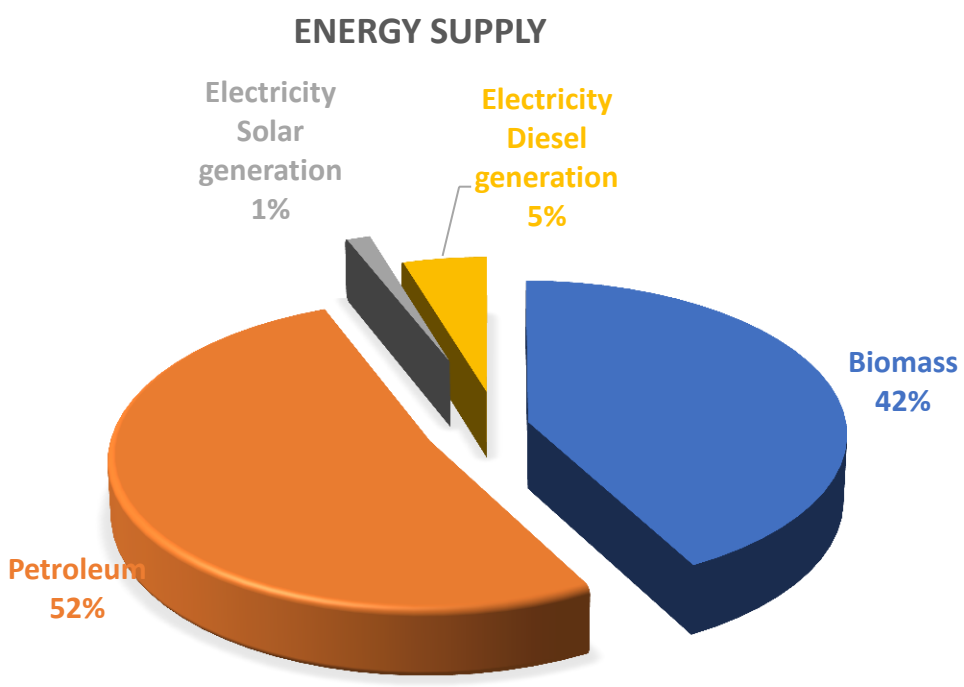
– with appropriate international assistance Kiribati can reduce further its emissions by some 60% by 2030

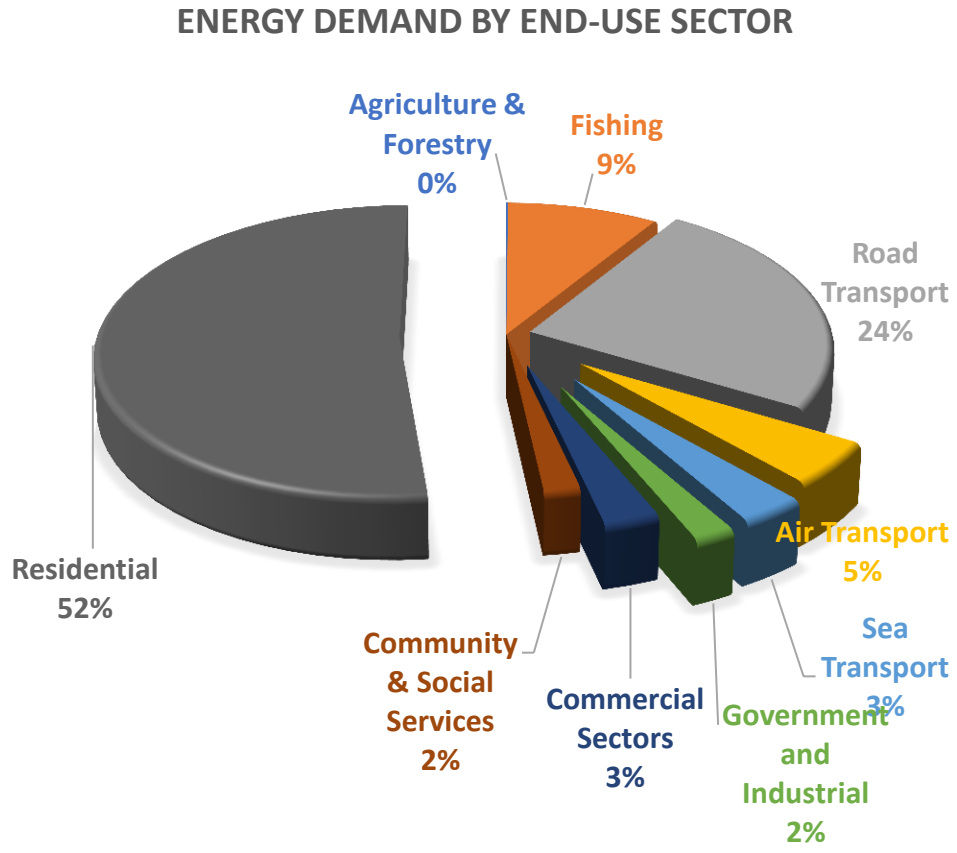
Fossil Fuel Reduction Targets



Target was set during the RRA study and declared by GoK during the 44th Pacific Forum Leaders meeting in Majuro 2013.

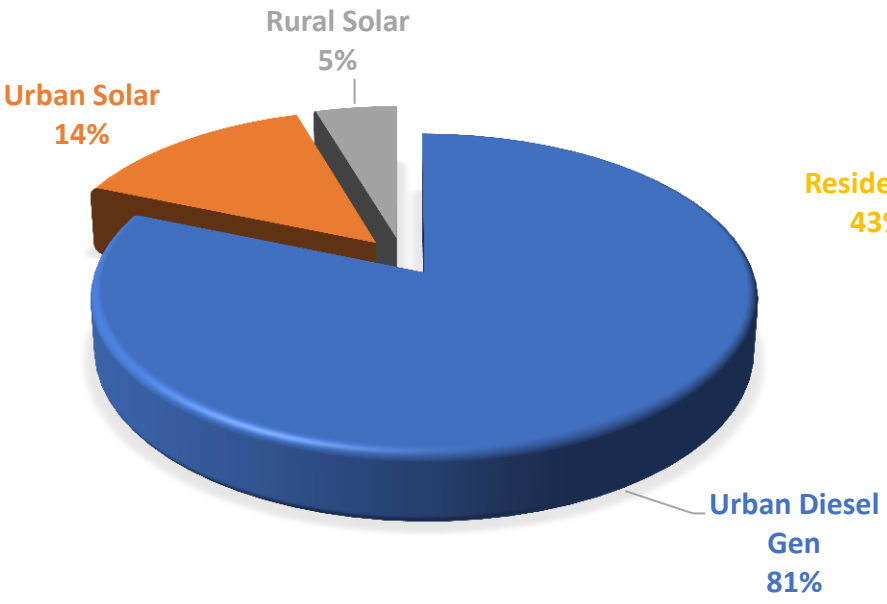
Energy Supply and Demand 2016 (TJ)



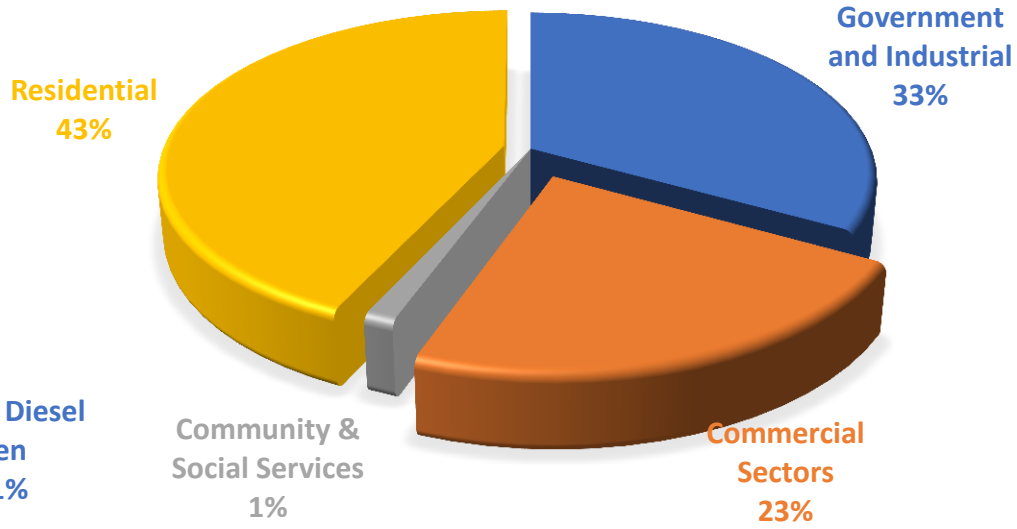


Kiribati Electricity Production and Supply 2016 (MWh)

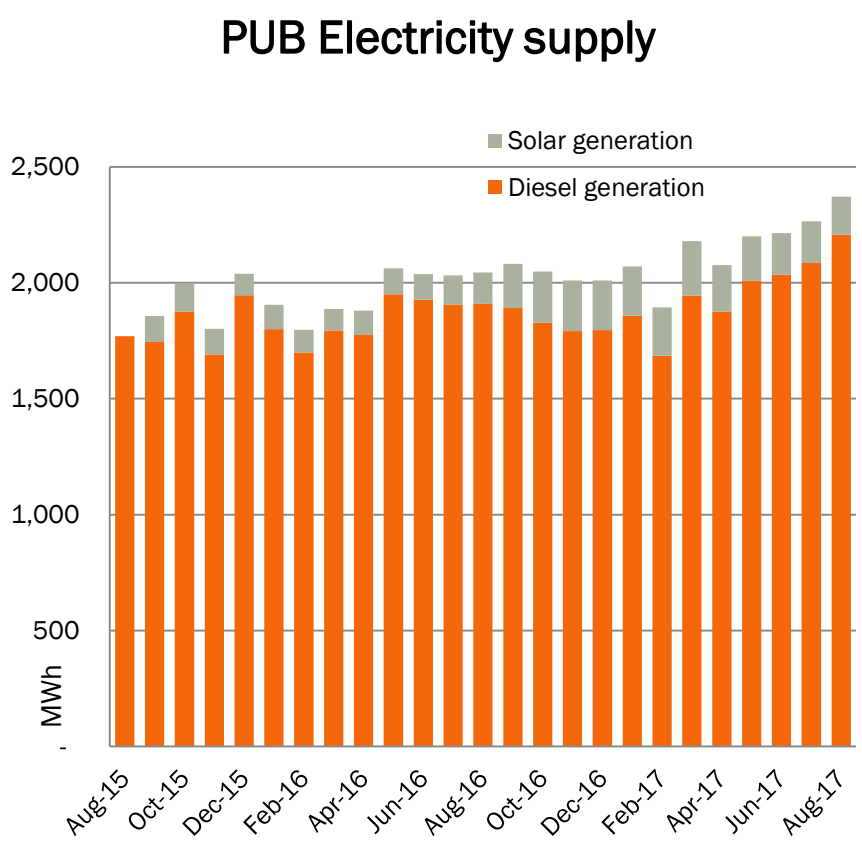
ELECTRICITY PRODUCTION 2016

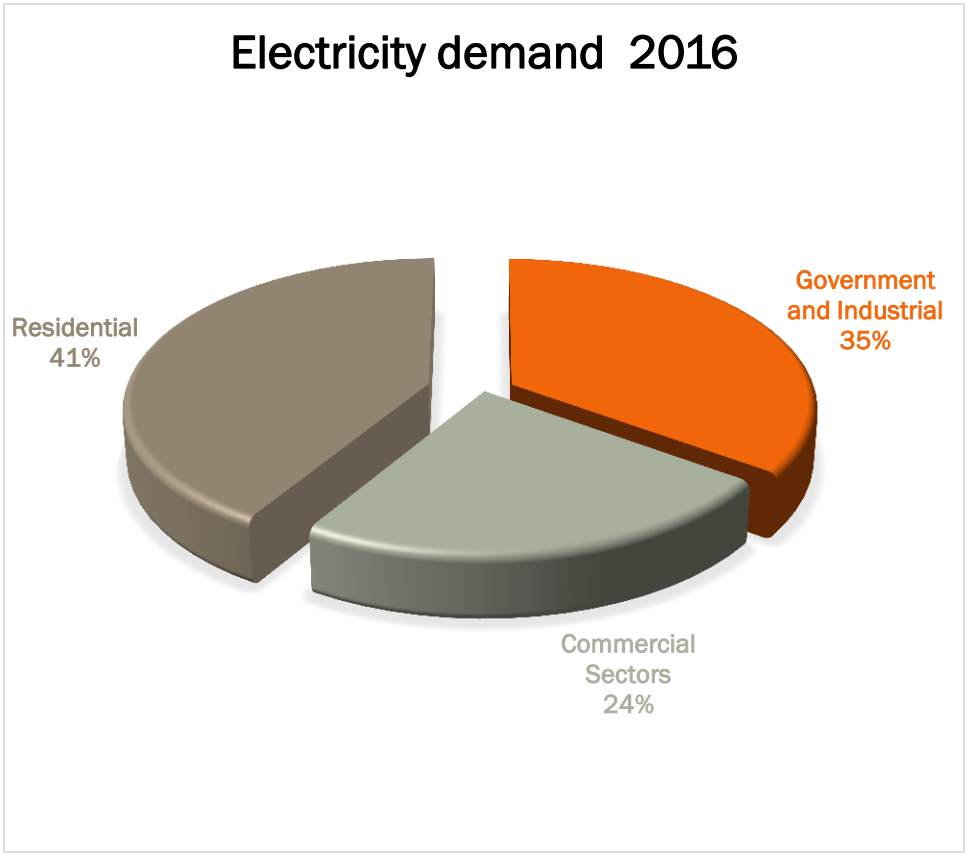


ELECTRICITY CONSUMPTION BY END USE-SECTOR 2016



Urban Tarawa – Electricity (MWh)





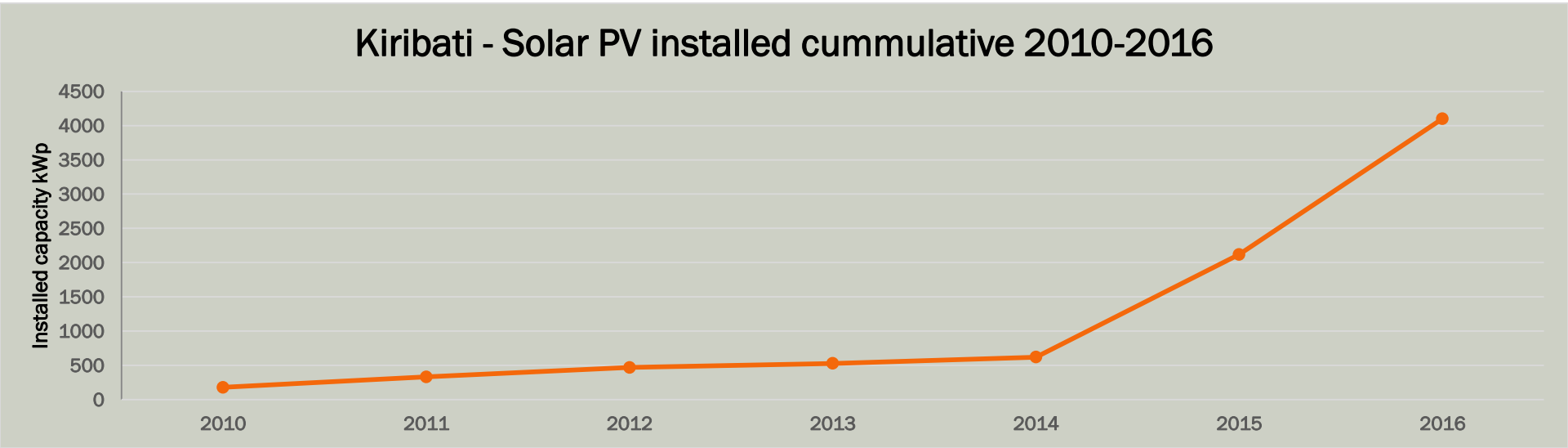
Renewable integration 14% in 2016. Another 9% more to achieve RE target of 23% by 2025. Limitation for solar penetration currently is on the grid stability thus energy storage and replacement to high speed generators will increase RE penetration

Renewable Energy recent projects - Urban

- South Tarawa PUB- PV grid project
  1. Japan PEC Project 400kWp - 2014
  2. UAE Masdar Project 500kWp - 2015
  3. Australia WB Project 550 kWp -2016
- Projects impact
  - Fuel saving from the 1.45MW Solar PV projects around AU$ 454,548 in 2016.
  - Eliminating around 1,314 tonnes of CO2 emission annually.

Renewable Energy recent projects- Rural

- **Rural Electrification (components of Kiribati Integrated Energy Roadmap – KIER)**
  1. Italy : 8 boarding school s solar pump project 0.3kWp- 2013
  2. JICA/EU: Solar home system 94kWp
  3. JICA/EU: Solar Maneaba system 27 kWP
  4. Taiwan/EU: Solar lighting kits 392 kWp
  5. EU-EDF10 : 8 Communities PV hybrid 189 kWp - 2015
  6. Italy & Luxembourg : 2 Communities PV hybrid 50kWp - 2016 - Apr 2017



Renewable Energy ongoing projects

- Italy: Phase 1 -10 rural Ice plant PV system 110 kWp – Nov 2017
- Italy: Phase 2 -10 rural Ice plant PV system 100 kWp – late 2018
- EU/NZ: Poland village (Kiritimati) mini-grid PV system 25kWp – Nov 2017
- EU/NZ: Kiritimati PV-grid 200kWp – 2018
- EU/GIZ: 2 rural communities PV hybrid 50 kWp - 2018

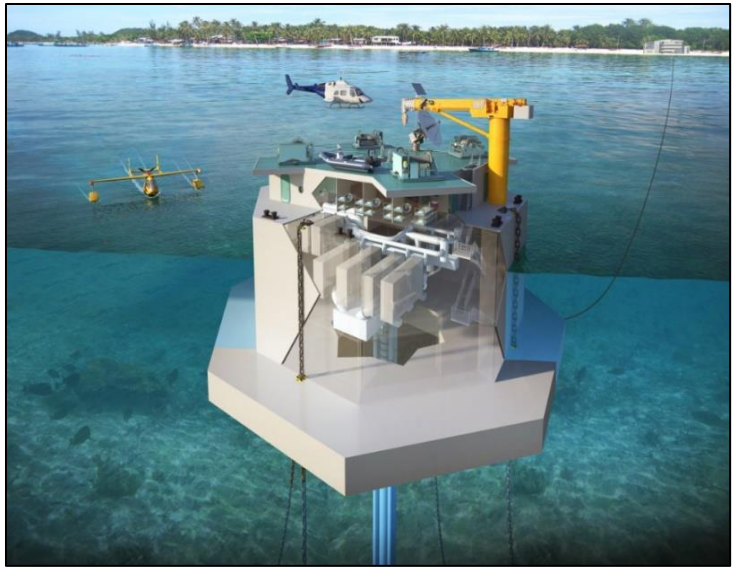

Ice plant Marakei


Poland PV hybrid upgrade


Kiritimati energy project

Renewable Energy future projects

- South Korea: Ocean thermal energy conversion (OTEC) 1MW plant planned for 2020 in Tarawa
  - OTEC to contribute RE 26% contribution
  - Proposed PV and Battery RE 35% contribution (sourcing donors)
  - Tarawa total RE 61%



- RE Pipelines (sourcing donors)
  - Rural communities and villages
  - Southern Kiribati Hospital
  - Health centers and clinics
  - Primary and Junior Secondary schools
  - Church communities
  - Motels and resorts
  - Desalination to vulnerable communities
  - Cooking for life – domestic and communities (woodstoves, solar cookers, LPG)

Way forward

- Endorsement and launching of the KIER to development partners
- External support in moving forth Conditional Contributions as identified in the NDC.
- Financial support is an issue – Kiribati has many plans, frameworks and strategies in place but with no funding support for implementation or a lack of to fully fund existing plans.
- Monitoring of these actions will be done through Office of President's KNEG to fully coordinate actions and see that target are being met at the national level, but also national stocktaking efforts.

Domo Arigato

"Where are you ?"

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