

**Pacific High-level Policy Dialogue on
“The Role of Macroeconomic Policy and Energy Security in supporting
Sustainable Development in the Pacific”**

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Session 3– Developing a Shared Vision and Coordinated Actions

Presentation

**Linkages between Energy Efficiency & Renewable Energy to National
Plans and National Budget**

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LINKAGES BETWEEN ENERGY EFFICIENCY & RENEWABLE ENERGY TO NATIONAL PLANS AND NATIONAL BUDGETS

PRESENTATION BY THE PLANNING AND BUDGET DEPARTMENT FOR THE HIGH POLICY
DIALOGUE ON THE ROLE OF MACROECONOMIC POLICY & ENERGY SECURITY IN
SUPPORTING SUSTAINABLE DEVELOPMENT IN THE PACIFIC
9TH OCTOBER, 2012
NADI, FIJI

OUTLINE

1. Background on Tuvalu: Geography, population, economic setting and development plan.
2. Tuvalu's Energy Situation
3. Linkages between energy efficiency and renewable energy to national plans and national budgets
4. Challenges and issues
5. Recommendations for the way forward

Tuvalu- In a snapshot

- Population: 11,000
- Geography: 9 coral atolls with a land mass of 26 square km; EEZ is roughly 800,000 square km
- Economy:
 - GDP per capita = US\$3,200
 - GDP Growth = 1.2% (Projected 2012)
 - Private Sector activity as % of GDP = 25%
- National Development Plan = Tuvalu National Strategy for Sustainable Development 2005 – 2015 (*Te Kakeega II*)

Tuvalu's Energy situation

Funafuti:

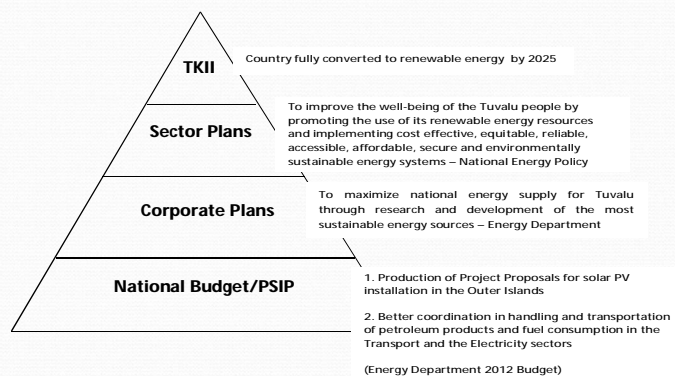
- 100% Access to power in Tuvalu (98% for the whole country)
- 420kWh demand per year
- Cost of Production \$1.05/kWh
- Average price paid \$0.48/kWh

Outer islands

- Outer islands have 12-18 hours supply per day.
- Outages are due to lack of fuel

(Source – TISIP 2011)

Linkages between energy efficiency and renewable energy to national plans and national budgets



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Tuvalu National Strategy for Sustainable Development– TKII

Strategic Area 7: Natural Resources

–GOAL: Improve the management and use of natural resources for the sustainable development of Tuvalu

–Short-term Milestones 2013

- Green economy & Blue economy programmes started

–Medium-term Milestones 2015

- Green growth projects in biogas, waste to energy, biofuels, hydroponics gardening started and continuing marketing their products.
- Blue growth projects in ocean and marine implemented

–Long-term Milestones 2025

- Reduced carbon emission and saving on import of fossil fuels

Linkages between energy efficiency and renewable energy to national plans and national budgets

Strategic Area 8: Infrastructure and Support Services

GOAL: Provide efficient quality infrastructure and support services that are competitively priced and sustainable

–Short-term Milestones 2013

- Develop and implement National Energy Plan
- Secured competitively priced, reliable supply of quality fossil fuel
- Reduced reliance on fossil fuel through energy conservation and use of alternative energy
- Use of fossil fuel and alternative energy monitored and managed

–Medium-term Milestones 2015

- NEP implementation continuing
- Negotiation for cheaper fuel with supplier completed
- Completed projects converting to photovoltaic energy for all islands
- Radio programmes continuing on alternative energy usage
- Renewable Energy and Energy Efficiency Unit continuing to manage and monitor fossil fuel and alternative energy usage

–Long-term Milestones 2025

- Country fully converted to renewable energy

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Energy Sector Plan - Tuvalu Energy Policy

– *Vision:* “By the year 2020 Tuvalu shall attain a prosperous living standard that is fostered through an energy policy that promotes the provision of socially, financially, economically, technically, politically, and environmentally sustainable energy systems that are within the Initial National Communication under the United Nations Framework on Climate Change (Oct. 1999).

– *Goal:* To improve the well-being of the Tuvalu people by promoting the use of its renewable energy resources and implementing cost effective, equitable, reliable, accessible, affordable, secure and environmentally sustainable energy systems.

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Tuvalu Energy Policy: Guiding Principles

1. Sustainability
2. Gender Equity
3. Environment Compatibility
4. Stakeholder Participation
5. Good Governance
6. Cultural & Traditional Compatibility

Linkages between energy efficiency and renewable energy to national plans and national budgets

Tuvalu Energy Policy: 7 Strategic Areas

1. Energy Sector Planning, Coordination and Management
2. Petroleum
3. Transport
4. Electricity
5. Renewable Energy
6. Conservation and Efficiency
7. Environment

Linkages between energy efficiency and renewable energy to national plans and national budgets

Corporate Plan - Tuvalu Energy Strategic Action Plan

Strategies

1. **Impose taxation based on imported fuels vs fuels produced in Tuvalu. Revenue raised to be used to support the development of renewable energy.**
2. **Impose taxation based on emission and carbon credits following international protocol. Revenue raised to be used to support the development of renewable energy.**
3. **Demonstrate the use of successful RET's, including inter-island visits/visitors & workshops & demonstrating domestic RET applications.**
4. **Raise awareness amongst all stakeholders (GOT, private sector & community groups) about successful applicable RET's in the region (solar pv; solar thermal; biogas; gasification; biodiesel; wind).**
5. **Strengthen Energy Service providers.**
6. **Develop uses & markets for process by-products (e.g. copra cake, glycerol, compost).**
7. **Promote biogas in conjunction with activities that use the compost by-products (such as family gardens).**
8. **Engage the help of dedicated, trained business development personnel to develop external partnerships and networks and communicate these to local stakeholders.**

Linkages between energy efficiency and renewable energy to national plans and national budgets

Tuvalu Infrastructure Strategic Investment Plan (TISIP)

–Renewable Energy Project: (TEC and DoE)

Features of the Project

- Provide grid-connected renewable energy systems to all populated islands of Tuvalu with backup batteries at house level
- Primarily via PV solar arrays and a few wind turbines
- Batteries (\$15 million) to be replaced every 10 years

Linkages between energy efficiency and renewable energy to national plans and national budgets

National Budget – Programme Descriptions

Objectives	Purpose	Outputs	Key Performance Indicators
Maintain and strengthen the department of Energy's capacity to plan, and manage the implementation of the national energy policy	Implementation Plan for the installation of solar PV for all the islands of Tuvalu by 2020	Production of Project Proposals for solar PV installation in the Outer Islands	Achieve 100% use of renewable energy for power generation by 2020
Provide reliable and cost-effective RE project implementation	Conduct research on appropriate renewable energy technologies for Tuvalu	Reports on appropriate renewable energy technologies for Tuvalu	Use of alternative fuels and renewable energy sources for generation encouraged Fuel conservation promoted through sea and land transportation efficiency measures
Provide up-to date energy information for planning purposes	Monthly reports on Petroleum, Transportation and the Electricity sector	Better coordination in handling and transportation of petroleum products and fuel consumption in the Transport and the Electricity sectors	Up to date monthly reporting of Energy data

Challenges

- 1) High cost of energy production for a small economy
- 2) Limited market capacity for private investment in the energy sector
- 3) Limited knowledge on privately investing in the energy sector
- 4) Limited technical local capacity to implement and maintain RE projects
- 5) Limited capacity of the main government body that oversees all energy programmes
- 6) Sustainability of RE projects

Recommendations

- 1. Encourage the implementation of Tuvalu Energy Policy and marketing of TISIP for funding assistance**
- 2. Encourage tax policy for improving renewable energy programmes**
- 3. Continue and enhance capacity development of private sector in order to meet TKII targets**
- 4. Enhance training on RE technologies**
- 5. For donor funded RE projects to have realistic "handing over plans" - to address issue of sustainability**

Fakafetai lasi/Thank You