Energy policy: the way ahead

The Hon. Tom Roper
Board Member, Climate Institute
Project Leader, Global Sustainable Energy Islands Initiative (GSEII)

PPA CEO’s Conference
American Samoa, August, 2009
Overview

- Pacific policy
- The cost of fuel
- The path forward
- Finance
- Targets for the Pacific
“Promote renewable energy” - says the Forum

- Renewable energy offers the promise of cost-effective, reliable energy services to rural households and will contribute to global greenhouse gas mitigation efforts. Now is the time, with appropriate technology and expanding carbon markets, to develop projects that bring renewable solutions to the region’s energy needs.

- Renewable energy targets can drive the transition of national energy sectors to a low carbon future. Tonga and Tuvalu were commended for incorporating renewable energy targets into national energy strategies.
Islands as leaders

- Tuvalu has set a 100% renewable energy target by 2020
- It will cost $20 million to generate all electricity from solar and wind and end dependence on diesel
- “We look forward to the day when our nation offers an example to all – powered entirely by natural resources such as the sun and the wind” Minister Natano
The rise in oil prices is having a huge impact in the Pacific

Fuel imports as a per cent of GDP, 2002 and 2008
Overcoming barriers

- Weak national and utility plans
- Dependence on traditional diesel systems
- Inadequate awareness and experience of various technologies
- The capital cost differential between diesel and renewables
- Lack of development capital and donor consistency
- Fly by night operators and consultants – poor quality products/systems
The path forward

- An agreed government and utility plan
- A practical renewable energy target including the phase out of older diesels
- Increased technical capacity and experience (sharing with other utilities)
- Resource assessments and the identification of renewable and energy efficiency projects
- A comprehensive energy efficiency programme to stop expensive wastefulness
- Performance benchmarking to assess and improve efficiency
Amory Lovins,
Rocky Mountain Institute

“There is no cheaper or cleaner power than the power you don’t produce. I call it negawatts.”
Power and energy losses in Dominica

DOMLEC 2005 Loss Reduction Study

<table>
<thead>
<tr>
<th>Year</th>
<th>Net Generation</th>
<th>Net Losses</th>
<th>%</th>
<th>Annual Cost of Losses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>78,843,220 kWh</td>
<td>13,482,190 kWh</td>
<td>17.1</td>
<td>1,463,970 USD</td>
</tr>
</tbody>
</table>

Identified interventions to reduce Technical Losses

<table>
<thead>
<tr>
<th>Efficiency Measures</th>
<th>Loss Reduction</th>
<th>% *</th>
<th>Annual Loss Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reconductoring 400V Lines</td>
<td>3,043,920 kWh</td>
<td>3.9</td>
<td>330,524 USD</td>
</tr>
<tr>
<td>Capacitors Addition</td>
<td>174,302 kWh</td>
<td>0.2</td>
<td>18,824 USD</td>
</tr>
<tr>
<td>Reconductoring 230V Lines</td>
<td>1,628,847 kWh</td>
<td>2.1</td>
<td>175,915 USD</td>
</tr>
</tbody>
</table>

Annual Diesel Savings: 344,400 gallons
Annual Avoided Emissions of CO2: 3,470 tons
Barefoot Power

Recommended retail price $US 24.50
Who benefits from the CDM?

<table>
<thead>
<tr>
<th>SIDS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cape Verde</td>
<td>1</td>
</tr>
<tr>
<td>Fiji</td>
<td>1</td>
</tr>
<tr>
<td>Cuba</td>
<td>2</td>
</tr>
<tr>
<td>Jamaica</td>
<td>2</td>
</tr>
<tr>
<td>Cyprus</td>
<td>8</td>
</tr>
<tr>
<td>Mauritius</td>
<td>1</td>
</tr>
<tr>
<td>Dominican Republic</td>
<td>5</td>
</tr>
<tr>
<td>Papua New Guinea</td>
<td>1</td>
</tr>
<tr>
<td>Singapore</td>
<td>7</td>
</tr>
</tbody>
</table>

**SIDS:** 0.006 of total CDM projects
Harnessing finance

- Develop expertise in writing proposals and planning and administering projects
- Investigate donor, bank and carbon finance schemes that can be accessed
- Require donors to coordinate their programmes and provide training
- Set up financing mechanisms at the national, village and family levels
Targets for the Pacific by 2020

• Introduce 25% renewable energy targets
• Improve existing diesel generation and transmission efficiency by at least 20%
• Reduce oil use for transportation by 20%
• Set efficiency targets for motors, A/C, appliances and lighting
• Reduce energy consumption in public offices and buildings by 10 to 15% immediately
• At least double village and outer island access to electricity
Conclusion

- With the assistance of the PPA develop practical and achievable plans and share your experiences and lessons learnt.

- Pacific Governments and you as their utility managers must act quickly to take up the new opportunities for renewable and energy efficiency projects.

- Pacific islanders must not miss out.