RE development in Kiribati

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Outline

• Background
• Fuel use in Kiribati
• National energy target.
• Barriers
• Summary of Actions
• Conclusion
Background

• **Country context**
  – 33 Islands
  – Population of 114,000

• **Energy Sector context**
  – Ministry of Infrastructure and Sustainable Energy (MISE)
  – Public Utilities Board (PUB)
    • Tarawa
  – Ministry of Line and Phoenix Islands Development
    • Kiritimati Island
  – Kiribati Solar Energy Company (KSEC)
    • Outer Island rural electrification
  – Kiribati Oil Company (KOIL)
  – Private Businesses

Kriibati Integrated Energy Roadmap: 2017–2025
Fuel Use in Kiribati

The chart above illustrates the fuel use in Kiribati from 2010 to 2018, broken down by category:

- **Cooking**
- **Air transport**
- **Land and marine transport**
- **Power generation**

The percentages for each category are shown to give an overall view of fuel use trends over the years.
## National energy target

<table>
<thead>
<tr>
<th>Location</th>
<th>2025 fossil fuel reduction goal</th>
<th>Of which</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Renewable energy</td>
</tr>
<tr>
<td>South Tarawa</td>
<td>45%</td>
<td>23%</td>
</tr>
<tr>
<td>Kiritimati</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Outer Islands</td>
<td>60% (100% in public/private institutions)</td>
<td>40%</td>
</tr>
</tbody>
</table>
Barriers

1. **Regulatory and institutional**
   - Absence of legal framework
   - Technical Standard/guidelines

2. **Technical/Capacity**
   - Capacity to operate and maintain Outer Island power generation system
   - Concern about grid stability

3. **Environmental**
   - Limited land area

4. **Financial**
   - High cost of importing RE technologies
   - Investment climate is risky

5. **Social and cultural**
   - Lack of awareness about proper use of the technology
Summary of actions

<table>
<thead>
<tr>
<th>MISE</th>
<th>Current Actions</th>
<th>3 years</th>
<th>10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>➢ Enabling RE/EE framework</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>➢ Capacity building support</td>
<td>➢ Better coordination.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Support KSEC in rural electrification project implementation –</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Solar PV mini grid</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ Fish center</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ Secondary Schools</td>
<td></td>
<td></td>
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</tbody>
</table>
## Summary of actions

<table>
<thead>
<tr>
<th>Utilities</th>
<th>Current Actions</th>
<th>3 year</th>
<th>10 year</th>
</tr>
</thead>
</table>
| PUB (Tarawa) | • Solar PV with Storage  
• OTEC  
• Capacity building  
• PV penetration 12% | • More solar + storage  
• Distributed generation – Households/Commercial buildings.  
• Pre paid meter | • Smart grid  
• Solar/Storage/Other resources. |
| MLPID (Xmas) | • Distribution network rehabilitation and expansion  
• Electricity demand study | • Power generation capacity upgrade  
• Solar PV/Wind plus storage | • Smart grid  
• Solar PV/Wind with Storage |
## Summary of Actions

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<th>Current Actions</th>
<th>3 year</th>
<th>10 year</th>
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<tbody>
<tr>
<td><strong>KSEC</strong></td>
<td>• Distribution/Selling, O&amp;M of Solar Home System/solar lighting kit.</td>
<td>• Project Management, Procurement.</td>
<td>• Project Management, Procurement, etc</td>
</tr>
<tr>
<td></td>
<td>• Solar PV mini grid system installation.</td>
<td>• Project/ system Design and feasibility studies</td>
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</tr>
<tr>
<td><strong>Private Business</strong></td>
<td>• Selling of Solar Home System, solar lighting kit, etc</td>
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- KSEC: Public Sector Organizations
- Private Business: Commercial or Private Entities
Conclusion

Let's work together to create the vision for the future