ENERGY SITUATION IN ASIA AND THE PACIFIC – EMERGING AND PERSISTENT ISSUES

Kingdom of Tonga
CURRENT ENERGY SITUATION

- Key points on energy trends
  - Commercial Energy Mix: 96% pet. 3.9% solar, 0.1 Wind
  - Infrastructure development: Tonga Energy Road Map targets for 1.100% share of renewable by 2020 on Total Electricity Mix; 2. 11% network losses by 2020
  - Key challenges: Funding and Technical Stability of Electricity Network
  - High Political Will and Donors support

<table>
<thead>
<tr>
<th>Main Island</th>
<th>Census Population</th>
<th>1996 Households</th>
<th>2006 Households</th>
<th>2011 Households</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Rural</td>
<td>Urban</td>
<td>Rural</td>
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<tr>
<td>Tongat</td>
<td>63,794</td>
<td>66,979</td>
<td>72,045</td>
<td>75,158</td>
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<tr>
<td>Vava'u</td>
<td>15,175</td>
<td>15,715</td>
<td>15,505</td>
<td>14,936</td>
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<td>Ha'apai</td>
<td>8,919</td>
<td>8,138</td>
<td>7,570</td>
<td>6,650</td>
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<td>Eua</td>
<td>4,393</td>
<td>4,934</td>
<td>5,206</td>
<td>5,011</td>
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<td>Niuas</td>
<td>2,368</td>
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<td>Tonga</td>
<td>94,649</td>
<td>97,784</td>
<td>101,991</td>
<td>103,036</td>
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</tbody>
</table>

2014 Policy Dialogue on Energy for Sustainable Development for Asia and the Pacific
26-28 November, 2014 | Bangkok
ENERGY POLICY DEVELOPMENT

• (List your nation’s key recent policy developments, including programmes and changes in the institutional arrangements)
  – Energy institutional system that struggles to address significant problems such as:
    • high cost fossil fuels,
    • diseconomies of scale,
    • remoteness
    • and heavy reliance on donor financial resources
  – In order to address these capacity barriers the government of Tonga is incorporating sustainable development into the national strategic development framework (NSDF).
AREAS FOR COOPERATION

• (Tonga’s perspectives on the priority key areas for regional cooperation to enhance energy security and the sustainable use of energy at the national and regional levels.)
  – 100% share of renewable by 2020
  – Petroleum Supply Business Model for Tonga
  – Climate Change Mitigation
  – Financial Partnerships on Energy
  – Sustainable Energy Development
Thank you.
INTEGRATING VARIABLE RENEWABLE ENERGY INTO THE POWER SECTOR

Kingdom of Tonga
CURRENT VRE INTEGRATION SITUATION

- (List key points on the current variable renewable energy situation in Tonga)
- Total Installed Capacity (Power Generation), 2013 in MW
  - Tongatapu 12.580 MW; Vava’u 1.860 MW; Ha’apai 0.558MW; ‘Eua 0.360 MW
    - (Existing Trend of VRE use?)
      - Tongatapu: 1MW solar NZAID 2013; 11kW Wind 2013 Power Utility; 1MW solar JICA 2014; 0.2 MW Solar Water Pump, 2014 IUCN,
      - Vava’u: 0.5MW UAE 2013, 0.15MW Solar Water Pump PEC JICA, 2014
      - Ha’apai: 0.35MW Solar Water Pump PIGARREP, 2014
      - ‘Eua
  - Endorsed Future Renewable Electrification Projects, OIREP ADB
    - Tongatapu:
      - Vava’u: 0.4MW Solar
      - Ha’apai: 0.2 MW Solar; 0.07MW ‘Uiha; 0.07MW Solar Nomuka; 0.07MW solar Ha’ano; 0.07MW Solar Ha’afeva
    - Eua: 0.2MW Solar ‘
    - Niuatoputapu: 0.15MW Solar power distribution system
    - Niuafou’ou: 100 new SHS
  - In view of current trend and political will and donors support, the 100% RE target in Tonga can be achieved by 2020 through continuous push.
VRE POLICY FRAMEWORK

• (List your nation’s key policy points related to variable renewable energy use – i.e. wind, solar or tide – for electricity generation)
  – Tonga Renewable Energy Act, 2010
  – Tonga Energy Road Map, 2010; 50% share of RE
  – Tonga Energy Road Map, 2014; 100% share of RE

• Financial Incentives
  – IPP and PPA Policy (under developed)
  – Net Metering Policy (under developed)
VRE INTEGRATION KEY CHALLENGES

• Distorted government policy implementation
• Desire for better stakeholders partnerships
AREAS FOR COOPERATION

• (List your country’s perspectives on the priority areas for regional cooperation to improve national and regional VRE integration.)
  – Community Partnership
  – Private Sector Investment Environment
  – Government monitoring and regulatory roles
Thank you.
PROMOTING HIGH-EFFICIENCY LOW-EMISSION COAL POWER PLANTS

(insert country name)
CURRENT COAL SITUATION

• (List key points on the coal for electricity situation in your country.)
  – (Trend of coal use.)
  – (Technology employed in existing and new coal power plants.)
COAL POLICY FRAMEWORK

• (List your nation’s key policies/plans/programmes related to coal for electricity generation)
  – (Policy framework – key policies/plans/programmes?)
  – (objectives/goals/targets?)
  – (implementation status?)
CLEANER COAL KEY CHALLENGES

• (List your country’s key challenges related to formulating and implementing policies/plans/programmess for the cleaner use of coal)
AREAS FOR COOPERATION

• (List your country’s perspectives on the priority areas for regional cooperation to improve national and regional cleaner coal technology adoption.)
  – Point 1
  – Point 2
  – Point 3
Thank you.