



Renewable Energy & Distributed Generation Taskforce

5th APP-PIC Meeting

19-20 May 2008

Seattle

Stephen Oxley

Co-Chair

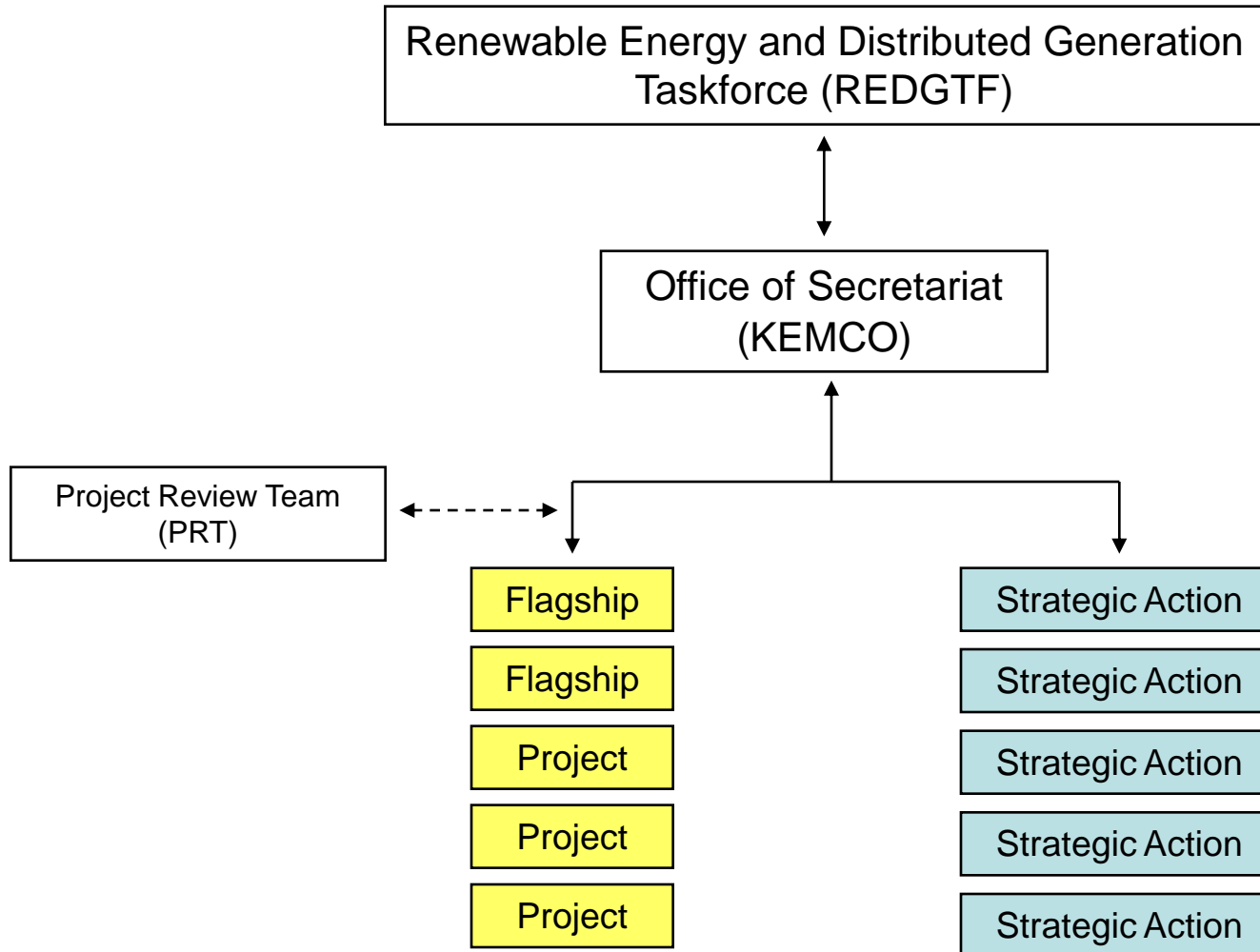


Presentation overview

- Operational Structure
- Recent Activities
- Strategic Actions
- Status of Projects
- Where to from here?



Operational structure





Recent activities - WIREC

- REDGTF side-event at Washington International Renewable Energy Conference
- REDGTF delegates from Australia, Canada, India, Japan, Korea and USA in attendance
- Activities covered:
 - An overview of the partnership
 - Panel presentation
 - *How government benefits from the Partnership*
 - *How business benefits from the Partnership*
- Country pledges





WIREC – key issues

- Renewable energy = energy security
- Strong focus on food versus fuel debate
- Call for free trade in clean energy technology
- Adequate capital available
 - but needs better information flow
- Need continuing investment in R&D
- Technology transfer a key focus
- Concern about adequacy of human capital
- Need to link incentives to performance



4th REDGTF meeting - Bangalore

- **Connecting theme:** creating the right environment to stimulate scaled up investment in RE&DG
- Key session based on Policy Inventory & Analysis – a strategic action from San Diego meeting
- Examined challenges from Indian perspective
 - using report from Project RDG-06-10: Pursuing Clean Business in India
- Distributed generation opportunities/barriers
- Energy services companies



Policy Inventory & Analysis

- Peer-reviewed inventory of measures currently in place in APP countries that support RE & DG deployment.
- Includes government and industry analysis of success of measures/learnings for future.
- Reference document for government policy making
- Foundation for developing a “guide” describing the market conditions/institutional environment required by the private sector to invest in RE & DG technology deployment.



Policy inventory & Analysis

- **Market Making** – Mechanisms that encourage development of markets for RE & DG technologies
- **R, D & D** – Mechanisms that support research, development and demonstration of new RE & DG technologies
- **Capacity Building** – Mechanisms that support development of institutional, financial, political or human infrastructure to increase uptake of RE & DG
- **Industry Support** – Mechanisms assisting industry development and growth in a targeted market sector or sectors



Strategic actions - Bangalore

- **ESCO's**
 - Investigate establishing a joint working group with Buildings and Appliances TF to examine how energy service companies can be engaged to leverage investment in RE deployment
- **Development bank investment**
 - An issues paper in consultation with development banks to summarise the imperative of deploying RE&DG technologies in the context of poverty alleviation
- **RE&DG financiers workshop**
 - Workshop to increase RE&DG knowledge amongst the finance sector



Strategic actions - Bangalore

- RE&DG deployment cost initiative
 - the higher cost of deploying RE&DG technologies when compared to higher emissions energy options is resulting in sub-optimal deployment of RE&DG in target communities.
- RE&DG deployment measures
 - Inclusion in the Policy Inventory of policy measures currently in place in Canada
 - A literature review of available data on RE&DG policies in Europe
- Transmission constraints and gaps
 - Potential for cross TF activity with the PGTTF to identify constraints and gaps in transmission systems, including in relation to access, as they relate to RE&DG



Status of projects

- 32 REDGTF-endorsed and PIC-approved projects to date
 - 14 led by Australia, 13 led by USA, 3 led by Korea, 1 led by Japan, 1 jointly led by Japan and Korea
- 4 projects cancelled
 - Primarily due to lack of funding
- 5 Chinese-led projects and 7 Indian-led projects currently under development/seeking partners



Completed project

Pursuing Clean Energy Business in India

- Cleantech AustralAsia
- Survey/consultation with 200+ RE professionals
- Policy, technical and financial barriers
- Identified 5 market accelerators:
 - Create a favourable policy environment
 - Increase technology uptake and development
 - Increase access to innovative finance
 - Improve RE market knowledge
 - Expand partner country commercial engagement



Flagship Project 1

Title	Building Critical Mass for Ultra High Efficiency Solar Power Stations
Lead Country	Australia
Partner Countries	USA and potentially India, Korea and China
Locations	Australia, USA and other APP countries
Objective	To demonstrate and optimise Solar System's zero-emissions Heliostat Concentrated Photovoltaic (HCPV) technology on a large scale to enable cost effective commercial "roll out" in Australia and other APP countries
Financial Resources	\$AU4.5 million – Australian Federal Government APP funding \$AU4.5 million – Victorian State Government \$AU17.2 million – private sources
Project Type	Deployment



Flagship project 2

<i>Title</i>	Feasibility study and development of microgrid smart energy solutions
<i>Lead Country</i>	Korea and Japan
<i>Partner Countries</i>	Japan and Korea – Australia as a potential partner for the next phase of development
<i>Locations</i>	Japan, Korea and (potentially) other APP countries
<i>Objective</i>	To develop an integrated microgrid management system and a manual for optimal combination of various distributed resources considering environmental conditions and customer energy patterns
<i>Financial Resources</i>	\$US572,000 (\$US374,000 cash / \$US198,000 in-kind)
<i>Project Type</i>	Market enabling



Cancelled projects

- RDG-06-02: Commercial demonstration of a proton exchange membrane fuel cell for power generation (USA, India)
- RDG-06-03: Biofuel promotion for environmentally sustainable energy and water services (India, USA)
- RDG—6-20: Commercialisation of distributed power generation using hydrogen fuel in India (USA, Australia)
- RDG-06-24: Development of materials and interface engineering technologies for dye-sensitised solar cells (Korea, Japan, China)



Upcoming Seoul meeting

- 5th meeting in Korea on 27-29 May 2008
- Workshop on RE&DG finance
 - Government measures to increase deployment of RE&DG technologies
 - Technology transfer among partner countries
 - Updates on projects & strategic actions
 - RE&DTG deployment costs



Closing observations

- Industry engagement is inconsistent across partner countries
- Excellent spread of projects – next 6 months will be critical to delivery
- Industry is looking for more
 - Move beyond specific deployment projects
 - Want to see key barriers addressed
 - Looking for clear, consistent and predictable policy settings from government
 - Want APP partners to lead globally



THANK YOU