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# Renewable Energy & Distributed Generation Taskforce

6<sup>th</sup> APP PIC Meeting  
29-30 October 2008  
Vancouver

Stephen Oxley  
Co-Chair



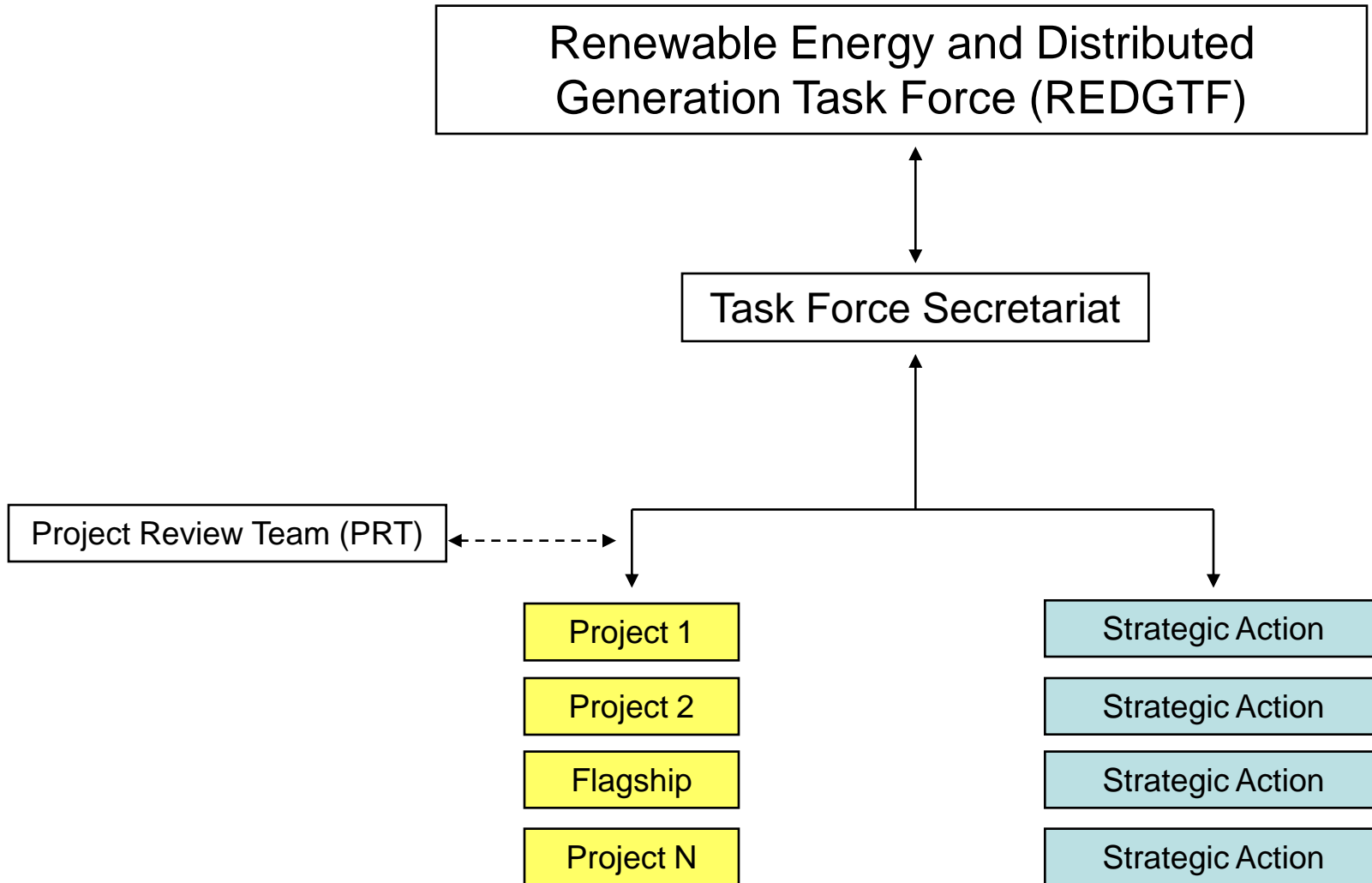
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# Operational structure





## ***Recent activities***

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- 5<sup>th</sup> REDGTF meeting hosted by Korea in Seoul, May 2008
- 39 government and industry delegates
  - Industry session and Korean industry presentations
  - Series of agenda items dealing with barrier to deployment
    - e.g. Finance, technology transfer, deployment costs
  - Project status updates and consideration of new projects
    - *Project status updates were circulated prior to the Seoul meeting.*
    - *One new project endorsed by TF out of session.*
  - Introduction to Buildings and Appliances Task Force



## ***Recent activities (5<sup>th</sup> REDGTF meeting)***

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### **– Key agenda items**

#### **➤ *Finance workshop and facilitated discussion***

- Key speakers: **Mike Allen**, *ReEx Capital Asia*, and **Ray Cheung**, *World Resources Institute*.
- Opportunity to educate both the RE and finance sectors about the needs of the other, to increase financing of RE projects.

#### **➤ *Technology transfer amongst partner countries***

- Collaboration between partner countries can achieve technology transfer while minimising IP protection concerns.



## ***Recent activities*** (5th REDGTF meeting)

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### – Key agenda items (continued)

#### ➤ *RE & DG Deployment Cost Initiative*

- **Discussion paper:** literature review and analysis of cost barriers to deployment of RE & DG.
- **Key barriers:** perception of RE&DG as “niche/high risk”; grid connection/extension costs; intermittent supply; time delays in implementing RE&DG projects; global inability to meet demand; protection of IP; and increasing capital, labour and fuel costs.



## ***Recent activities*** (5th REDGTF meeting)

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### – Key agenda items (continued)

#### ➤ *Government Measures to Increase Deployment*

- Facilitated by Barry Worthington, President US Energy Association
- **REDGTF Policy Inventory and Analysis** recognised as a collation of a significant amount of valuable data on global RE&DG initiatives, useful for policy makers.

#### ➤ *Country Roundtable*

- Member countries update on government policies/initiatives relevant to RE&DG.



## ***Recent activities*** (5th REDGTF meeting)

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### – Key agenda items (continued)

#### ➤ *Industry Roundtable*

- Industry opportunity to raise any issues
- Linking with industry associations
- Balance between discussion on policy and project deployment
- Opportunities to leverage project finance from external foundations



## **Recent activities** *(5th REDGTF meeting)*

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- **5<sup>th</sup> REDGTF meeting outcomes**
  - *1 new project endorsed out-of-session*  
(US-led: Technical Exchange with China on PV Module Reliability)
  - *1 project completed*
  - *5 new strategic actions*
- **Cross Task Force Activities**
  - *Continuing to explore opportunities to collaborate with BATF, CFETF and PGTTF*



## ***Strategic actions (for 6<sup>th</sup> REDGTF meeting)***

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- **Increasing financial capacity in the RE&DG sector**
  - What resources exist in member countries to support matchmaking and build financial skills and knowledge amongst the financial and RE&DG sectors?
- **Expertise available to exporting RE&DG companies**
  - What resources exist in member countries to provide detailed expertise to RE&DG industries looking to export/deploy their technologies overseas?



## ***Strategic actions*** (for 6th REDGTF meeting)

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- **Barriers to RE&DG deployment**
  - Member countries to identify and categorise the barriers to RE&DG deployment as a first step to prioritisation of those barriers that are within the capacity of the TF to address.





## *Current status of projects*

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- 37 REDGTF-endorsed and PIC-approved projects to date
  - 13 led by USA, 15 led by Australia, 3 led by Korea, 1 led by Japan, 1 jointly led by Japan/Korea, 4 led by China
  - 7 projects cancelled/inactive (4 led by the USA, 3 led by Korea)
  - 1 Australian project completed



# Flagship Project 1

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<b>Title</b>	<b>High Efficiency Solar Power Stations for Affordable Energy</b>
<b>Lead Country</b>	Australia
<b>Partner Countries</b>	USA and potentially India, Korea and China
<b>Locations</b>	Australia, USA and other APP countries
<b>Objective</b>	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
<b>Financial Resources</b>	\$AU4.5 million – Australian Federal Government APP funding \$AU4.5 million – Victorian State Government \$AU17.2 million – private sources
<b>Project Type</b>	Deployment



# Flagship Project 1

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## Solar Systems – Concentrating PV towers in Australia

Australia/China partnership

**Aim:** Build 2 MW repeatable power station unit using concentrating PV towers.

**Progress:** Construction of 140kW testing & development facility completed and connected to grid.





## ***Flagship Project 2***

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



## *REDGTF projects on the ground*

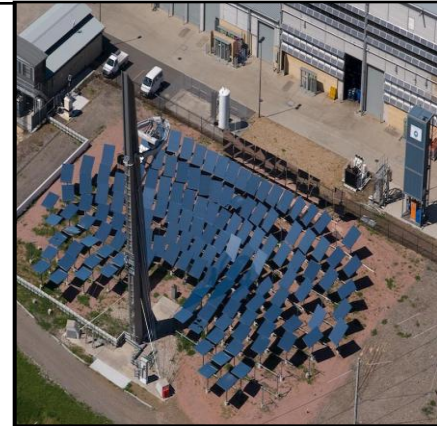
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### **CSIRO – Solar Enhanced Fuels for Electricity and Transport**

Australia/Japan partnership

**Aim:** Demonstrate ~1 MW solar system converting steam and natural gas to “Solar Gas”= hydrogen and carbon monoxide, for power & transport.

**Progress:** Reactor designed and fabricated, ready for installation on solar tower.





## *REDGTF projects on the ground*

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### **Global Sustainable Energy Solutions – RE Training in China and India**

Australia/US/China/India partnership

**Aim:** Establish skilled people to operate a RE training accreditation program in China; strategy for quality-focused RE training in India.

**Progress:** Halfway. 4 workshops in India and well received Indian survey, 1 workshop in China.





## *REDGTF projects on the ground*

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### **Monash University – Cost-effective Biomass Gasification Technology**

- Australia/China/Korea/Japan partnership
- **Aim:** Demonstrate low cost & reliable biomass gasification technology.
- **Progress:** Milestone 2 complete. Scientific papers published. Technology shows good potential for commercialisation.





## ***Next REDGTF meeting***

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- 6<sup>th</sup> meeting of the REDGTF to be hosted by Japan in early 2009
- Key agenda items
  - Update on strategic actions arising from 5<sup>th</sup> meeting, e.g.
    - *Increasing financial capacity in the RE&DG sector – country reports*
    - *In-country expertise available to RE&DG sector – country reports*
    - *Barriers to RE&DG – country reports*
    - *Cooperation with CFETF project on Cost & Diffusion Barriers project*
    - *Proposals for collaboration with the BATF*
  - Country and industry roundtable
  - Status of existing, and consideration of new, projects



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THANK YOU