Australian perspectives on enhancing international technology RD&D

A presentation for the LCA Workshop on cooperation on research and development of current, new and innovative technology, including win-win solutions

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Context

- RD&D is a key part of the continuum in the technology development process
- It encompasses a spectrum of activities from "blue sky" research through to demonstration and even early stage commercialisation
- Technology R&D, like other forms of R&D, is often high risk and not all benefits can be fully captured.
  - Private sector will therefore tend to under-invest and government can be nervous about funding failure
- Promoting R&D outcomes requires well developed national and international systems of innovation which support public and private sector investment, seek out the benefits of collaboration and which address the challenges of the technology development process.

Australia's framework

- Strong domestic and international technology development matrix set within a comprehensive climate change and economic development policy framework
  - Deployment measures as well as targeted RD&D support provides a strong mix of "push" and "pull" technology development drivers
- Focused on developing a balanced portfolio of technology interests which accord with national priorities (carbon capture and storage, renewable technologies and adaptation related research)
- Clear feature of our efforts is promoting collaboration between business, research community and international partners and leveraging resources/sharing risks and benefits

- Internationally Australia participates in a wide range of multilateral and bilateral initiatives such as:
  - The Global Carbon Capture and Storage Institute
  - Asia Pacific Partnership on Clean Development and Climate
  - Technology specific partnerships (e.g. CSLF, M2M, IPHE, REEP)
  - IEA R&D programs/implementing agreements
  - Australia-China Joint Partnership on Clean Coal

- Domestic R&D programs include:
  - $100 million Solar Institute
  - Geothermal industry roadmap and drilling program
  - $500 million National Low Emissions Coal Initiative
  - National Low Emissions Coal Research Program
  - National Climate Change Adaptation Research Facility
  - CSIRO Flagship programs
  - Renewable energy technology programs

Global Carbon Capture and Storage Institute

- In September 2008 Australia committed up to $100 per year to support the establishment of a new Global Carbon Capture and Storage (CCS) Institute
- The Institute's mandate and objective is to accelerate the global adoption of commercially and environmentally sustainable CCS.
- Will complement and leverage the work in existing international forums partnerships.
- Membership is open to all governments, industry and NGO's.
- Business model based 4 core programs:
  - Core projects of at least 20 integrated demonstration projects by 2020
  - Science and Technology Program to support R&D on critical path to demonstration projects
  - Regulatory and economics analysis program
  - Communications and analysis program

Asia Pacific Partnership

- Seven member countries: Australia, US, China, Japan, Korea, India and Canada

- Based on a sectoral/technology Task Force approach

  > Aluminium
  > Buildings & Appliances
  > Cement
  > Cleaner Fossil Energy
  > Coal Mining
  > Power Generation & Transmission
  > Renewable Energy & Distribution Generation
  > Steel

- Each Task Force has an agreed Action Plan, outlining specific projects
- Action Plans endorsed by the APP Policy and Implementation Committee (PIC)
  - **US provides central Secretariat**

- Projects required to be consistent with objective of sustainable development and must be collaborative in nature.
- No central fund – each country determines which projects it will fund/participate in. Projects identified through a bottom up process and are required to secure own resources.
- Projects cover benchtop R&D through to demonstration as well as information/capacity building

Lessons learned/observations

- There is a tremendous amount already going on so make best use of existing mechanisms and processes, and to complement these efforts where gaps exist
- Collaborative partnership models such as the APP work well especially where backed by high level commitment from all stakeholders
- Sustained R&D outcomes are most readily achieved through cooperative approaches
- Promoting collaboration requires genuine partnership and incentives that can be captured by all participants
- Strong enabling frameworks at the national level are essential to support R&D
- Clear and mutually agreeable processes to manage IP issues and disburse technology outcomes are important and should be addressed up front
- One size doesn't fit all and flexibility is essential
- Australia supports the need for further efforts to enhance technology R&D in the context of the Bali Framework and considers that this may be most effectively achieved through a facilitative framework/approach that leverages and supports.