Policy Group-Technical Group Task Force Co-chaired by Canada and Norway



Accelerating the Adoption of 2nd and 3rd Generation Carbon Capture Technologies What We Learned

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Context for Task Force



At the 2013 CSLF Ministerial in Washington, it was determined that CSLF needed to better understand role of emerging generation technologies.

- Cost of CCS (especially capture) is a significant barrier to its deployment
- Role of next gen tech to potentially lead to cost reductions

Joint Policy Group-Technical Group Task Force co-chaired by Canada and Norway was formed to address this need by undergoing a joint study.

Recall...

The Policy Group Meeting Regina, June 2015



- Norway presented the Technical group's findings on emerging technology groupings and test facilities
- Complementing the technical analysis, Canada reported on existing/potential policy and funding mechanisms to drive RD&D and reduce costs
 - Consultant interviewed over 35 CCS stakeholders

ConclusionsTechnologies & Test facilities



Technical literature review identified:

- Approx. 30 groupings of emerging technologies
 - Most are 3rd generation, ie. unlikely to reach large scale implementation before 2030
 - Minority classified as 2nd generation, ie. ready for large scale implementation by 2020 – 2025
- 11 test facilities around the world to speed up the development of emerging technologies
 - Majority designed for post-combustion capture of CO₂

ConclusionsPolicy/Funding Mechanisms



Barriers	High priority mechanisms identified in interviews
Lack of a market	Carbon pricing
High costs	 Government funding programs Tax incentives for research and development Operational support programs Test centers / facilities Cooperation and knowledge-sharing networks
Technical and operational challenges	 Government funding programs Operational support programs Test centers / facilities Cooperation and knowledge-sharing networks
Insufficient test sites in key geographies/sectors	Test facilities, ie. Industrial pilots/demos
Storage availability and lack of clear regulations	Cooperation and knowledge-sharing networks

The Reported Findings



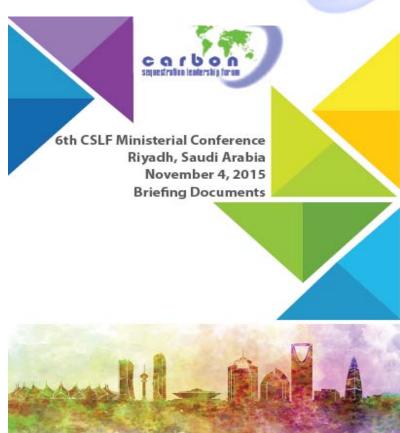
View the Executive Summary posted in CSLF Policy Group Meeting documents



The Reported Findings



A Ministers' brief was also prepared



7 Recommendations for CSLF for Ministerial Consideration



- 1. Enhance membership network to cover additional regions, sectors, and levels of scale
- 2. Sustain a **global inventory of test facilities**
- Implement mechanisms that allow developers of emerging technologies and operators of test facilities to cooperate in mutually beneficial and cost-effective ways
- **4. Assess cooperative mechanisms between projects**, similar to EU twinning approach, to enhance global knowledge and cooperation in emerging technologies

7 Recommendations for CSLF for Ministerial Consideration



- 5. Foster the **sharing of best practices**, including funding mechanisms
- 6. Contribute to consistent terminology and performance evaluation methods for emerging technologies, project maturity levels, and testing scales
- 7. Enhance opportunities for researchers and developers to participate in extended visits, training opportunities, and staff exchanges

How Do We Deliver



With enhanced networks:

- Increase coverage, using successful models like International CCS Test Centre Network (ITCN), European Carbon Dioxide Capture and Storage Laboratory Infrastructure (ESSCEL)
- Match projects, similar to EU twinning approach

With expanded online tools:

- Make global inventory of all large and small test facilities accessible
- Highlight all next gen technologies and leaders, with CSLF playing a facilitative role
 - * Include CSLF disclaimer

How Do We Deliver



With enhanced research cooperation:

- Create opportunities for researchers and developers for extended visits, staff exchanges, training (with CSLF Academic Community Task Force)
- Document best practices of funding mechanisms
- Facilitate bi-lateral and/or multi-lateral agreements between facilities

How Do We Deliver



Other suggestions / proposals?