Report from the Ad Hoc Committee for Task Force Maximization and Knowledge Sharing

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Formation of Ad Hoc Committee

- Meeting in Venice 2018 determined need for:
  - Measuring progress on technical recommendations from CSLF Technology Road Map 2017
  - Assessment of impact and usage of Task Force reports

Survey

- Conducted survey summer/fall 2018 to gather details on how TRM and reports being used

- Survey sent to CSLF Technical Delegates list
  - *n = ~50 official delegates (of 567 on total list)*

- 21 responses, ~26-42% response rate for delegates/observers

General Demographic Information

- 21 respondents from at least 10 countries (Australia, Canada, China, Czech Republic, Japan, Norway, Romania, South Korea, United Kingdom, United States)

- Self-identified:
  - 13 delegates
  - 4 observers
  - 4 no identification of role

- Additional CCUS Forum Participation:
  - CEM - 12 respondents
  - Mission Innovation - 14 respondents
  - ACT - 7 respondents

TRM Data

- 20 had viewed and/or downloaded TRM

- 5 reported at least one CCS infrastructure project

- 7 reported 2-4 CCS infrastructure projects

- ~50% indicated CCS incentives have been used to implement CCS since January 2018
  - 45Q US Tax credit

- ~50% indicated incentives for knowledge sharing from large-scale projects has occurred

- RD&D budgets overall have stayed primarily the same (10 of 16 respondent countries)

- RD&D budgets have increased in 2 of 16 countries

- RD&D budgets have decreased in 4 of 16 countries

- Majority of respondents (10 of 16) indicated incentives are being used for Utilization technologies

TRM Usage

- How have, if at all, the CSLF TRMs 2013 and 2017 been used in your national CCUS strategies or in the formulation of national RD&D programs?

- The majority of respondents (12 out of 14) have used TRM in the formation of national RD&D CCS strategies.

- Types of usage include:
    - Used to define important topics
    - TRM will play a role in the upcoming US National Petroleum Council CCUS report and recommendations to US DOE in 2019
    - Plan for use in new CCUS strategies in China
    - CSLF delegates are using TRM to inform CCS development direction in Canada, not aware of non-delegates using TRM
    - Being used in RD&D strategies, but need cost-effective technologies in order to implement and meet objectives
    - Being used to set a global context for Norway's national discussions about policy and RD&D priorities for CCS
    - TRM is used to set strategic directions in calls for proposals
    - At least one country uses RD&D program to inform and input into TRM

Task Force Report Information

- Most widely used reports (in order of highest use reported):

1. Task Force on Supporting Development of 2nd and 3rd Generation Carbon Capture Technologies: Final Report (December 2015)

2. Task Force on Hydrogen Production and CCS: Results and Recommendations from "Phase 0" (June 2018)

3. Task Force on Technical Barriers and Research and Development Opportunities for Offshore, Sub-Seabed Storage of Carbon Dioxide (CO2): Final Report (September 2015)

4. Task Force on Offshore Carbon Dioxide Enhanced Oil Recovery (CO2-EOR): Final Report (November 2017)

5. Task Force on Technical Challenges of Conversion of CO2-EOR Projects to CO2 Storage Projects: Final Report (September 2013)

Task Force Report Information

- Most widely used reports focus on carbon capture technologies, hydrogen and CCS, offshore storage, and utilization through CO_2-EOR.

- Reports most often used for
  - Knowledge and Technical Gain
  - RD&D Program Planning
  - Developing Standards (ISO TC 265)

- Reports also used for Technology Assessment, Strategic Planning, and Proposal Development

- More than 50% of respondents reported that TF reports have been utilized in decision-making, policy-making or knowledge sharing forums.

- The most often cited reports focus on Offshore CO_2-EOR, Carbon Capture, and Offshore Storage

Task Force Report Information

- The most often recommended reports (in order of recommendations):
    - Practical Regulations and Permitting Process
    - Hydrogen Production and CCS
    - Offshore CO_2-EOR
    - Bioenergy CCS

Comments and Observations

- Majority of respondents have read and used TRM

- Task force reports have shifted in nature
    - Older reports focused on knowledge sharing
    - Newer reports focused on RD&D strategy

Comments

"… I use [the TRM] to prepare meeting materials and websites for upcoming CSLF meetings."

"When I came back to China, I reported to [the] Chinese government about the TRM of CSLF. I had already used the TRM in China."

"…we are accessing a wide range of relevant literature and previous analysis of CCUS. As part of this effort, we have accessed the CSLF TRM, and will be incorporating its findings and recommendations in our work."

"You can expect to see reference [to] this CSLF work, and many other reports, as part of the final NPC report to be issued…"

Comments

"Our organisation is currently developing a new strategy to address the needs of CCS. In doing this we sourced information on the international roadmaps and related reports. These included reports form CSLF (TRM), IEA, Mission Innovation, GCCSI, OGCI, and others. The various recommendations were then discussed with our members and we did find that the TRM was most aligned with our members recommendations for our companies' direction to assist in addressing CCS needs to meet the climate challenge. We shall continue to utilise the TRM as an important reference to support our recommended strategic direction as it is developed. *Unfortunately, many people in our organisation were not aware of the TRM's existence, and as a source of information that is not readily thought of in consideration of roadmaps for CCS. It is important that this roadmap gains higher prominence in the CCS space internationally.*"

For Discussion

- Tracking TRM technology recommendations
- Future work for Technical Group:
  - Hub Infrastructure
  - Support Developing Countries [connect with Capacity Building Task Force]
  - Cost-effective Capture Technology
  - More clarity on economic benefits of low-carbon policy
  - Interfacing with Policy Group
    - Technical inputs into business model discussion
    - Technical inputs into socio-economic benefits
- Workshop model
  - Hub/Infrastructure workshop with report as deliverable
- Knowledge Sharing - how measure benefits
- Mechanisms for wider distribution of TRM (beyond delegates)