



**Task Force Update on Bioenergy with Carbon
Capture and Storage**

John Litynski
Technical Group Meeting
May 1, 2017



Task Force Mandate

- Identify the existing projects, government programs, market drivers for BECCS deployments, barriers to large-scale BECCS demonstration and deployment, and opportunities and recommendations for overcoming barriers progress;
- Provide an overview of BECCS technology options and pathways: (power; fuels and chemicals production; industrial sources; summary of technical challenges and R&D opportunities);
- Summarize resource assessments and emissions profiles: existing reports and analyses; biomass and carbon storage resource assessments; direct and indirect GHG emissions; summary of life cycle assessments; identification of gaps in analyses and future opportunities;
- Summarize economic analyses for BECCS concepts;
- Include findings and recommendations for consideration by CSLF and its member countries.



Tentative Timeline of the Task Force

- ✓ **Aug. 2016: Define report.**
- ✓ **Oct. 2016: Status update at Japan CSLF meeting.**
- ✓ **Oct. 2016: Outline of Report Drafted and shared with Task Force.**
- ✓ **Nov. 11, 2016: Call to discuss Outline.**
- ✓ **Nov. 2016: Determine Participant Section Leads.**
- ✓ **Dec. 2016 – Feb. 2017: Populated Draft Document.**
- ✓ **Mar. 2017: Revise and Finalize Draft for Review.**
- ✓ **Mar. 23 – Apr. 13, 2017: First draft of report completed. Circulated to Task Force Members for comments and edits.**
- ✓ **April 24: 2nd Draft distributed to task force to discuss in Abu Dhabi.**
- ✓ **Spring/Summer 2017: Address Task Force comments and complete all report sections.**
- ✓ **Fall 2017: Final Report submitted.**



Draft Outline

- **Executive Summary (DRAFTING)**
- 1. **Introduction** (CSLF Purpose, Task Force Mandate, Overview of BECCS and Bio-CCS, Challenges and Benefits of BECCS)
- 2. **Summary of Resource Assessments and Emissions Profiles** (Biomass and Carbon Storage Resource Assessments, Direct GHG emissions, Indirect GHG emissions, Summary of Life Cycle Assessments, Identify Gaps in Analyses and Future Opportunities)
- 3. **Commercial Status of BECCS Technology Deployment** (Planned and Existing Projects, Projects in Operation, Government Programs, Market Drivers for BECCS Deployments, Barriers to Large-scale BECCS Demonstration and Deployment)
- 4. **Overview of BECCS Technology Options and Pathways** (Power Generation, Fuels and Chemicals Production, Industrial sources, Summary of Economic Analyses, **Summary of Technical Challenges and R&D Opportunities - DRAFTING**)
- 5. **Findings and Recommendations (DRAFTING)**
- **REFERENCES**



Report Contributors

- **Draft Report sections have been authored by:**
 - U.S. Department of Energy (John Litynski, et al.)
 - IEAGHG (Jasmin Kemper)
 - Center for Carbon Removal (Noah Deich, et al)
 - International Research Institute of Stavanger (Roman Berenblyum, et al)
- **Task Force Resources and Comments have been received from:**
 - International Research Institute of Stavanger (IRIS)
 - CO2GeoNet
 - Center for Carbon Removal
 - Research Council of Norway
 - Sintef
 - Shell



Next Steps

- Address all Task Force comments/edits (28 April).
- Complete unfinished sections and distribute to TF (31 May):
 - Executive Summary
 - Summary of Technical Challenges and R&D Opportunities
 - Findings and Recommendations
- Finalize Report (30 June)
- Submit Final Draft Report to Technical Group for approval prior to Fall Ministerial (15 July)
- Address comments from TG (15 Sept)
- Finalize prior to Ministerial Meeting (1 Oct)