

'Carbon Dioxide Capture,
Transportation and
Geological Storage'

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# Update on ISO TC 265 – 'Carbon Dioxide Capture, Transportation and Geological Storage'



- 5th meeting was 26-30 January 2015 in Birmingham Alabama
- New information on slides is in bold

#### ISO TC 265 - CCS

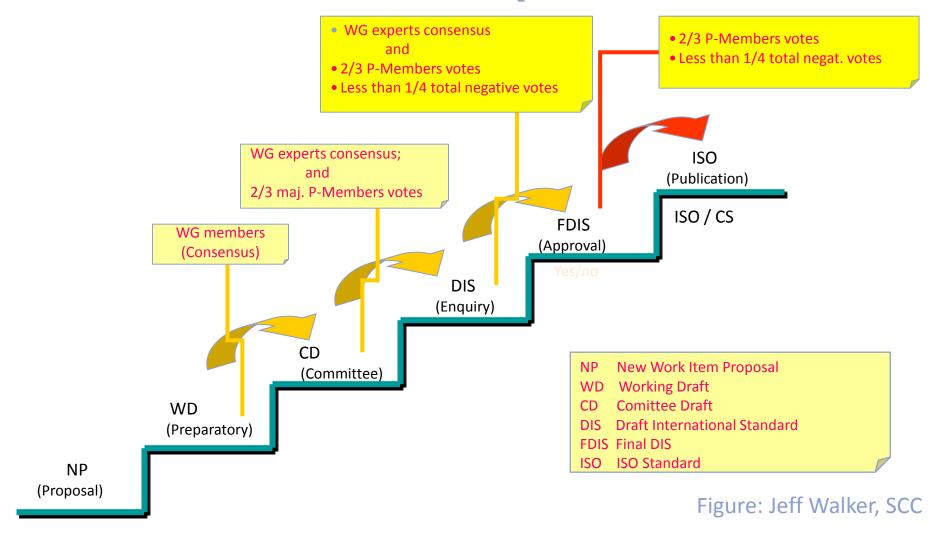


- Proposed by Canada. Technical Committee TC265 was approved by ISO members in 2011. Canadian Chair, Canada and China Secretariat. 19 participating countries, 9 observer countries, 7 Liaison orgs (incl CSLF).
- IEAGHG actively involved as a Liaison Organisation
- Objective: to prepare standards for the design, construction, operation, environmental planning and management, risk management, quantification, monitoring and verification, and related activities in CO<sub>2</sub> capture, transportation, and geological storage.
- Excluded: ocean storage of CO2 by direct injection; mineral carbonation storage; industrial uses of CO2 not related to CCS; and legal liability and permitting.
- IS = International Standard; PWI = Preliminary Working Item; NWIP = New Work Item Proposal; TR = Technical Report; WD = working draft; CD = final draft to committee TC265; Mirror Committee = a national committee for inputting to TC265





#### **ISO Standards Development Process**



## TC265 Working Groups



- WG 1 Capture Japan
- WG 2 Transport Germany
- WG 3 Storage Canada and Japan
- WG 4 Quantification and Verification China and France
- WG 5 Cross-cutting issues France and China
- WG 6 CO2-EOR USA and Norway

 IEAGHG participating in TC265 plenary, WG 1 Capture, (WG2 Transport), WG 3 Storage, WG 4 Q&V, (WG 5 Cross-cutting), and Awareness Ad Hoc Group (Outreach)



#### WG 1 Capture

- TR in 1.5 2 years. Draft TR by Q3 2014. IS by 2017
- Produced a draft Technical Report on capture technologies DTR-27912.
   Out to TC265 for comments by 7 June. Scope is pre, post, oxy, power, cement, steel, industrial gas production
- IEAGHG (Stanley Santos) Section Editor for Oxy and Steel
- NWIP for an IS on "Performance evaluation methods for postcombustion CO2 capture integrated with a power plant" issued to TC265 for voting



#### WG 2 Transport

- Draft IS on CCS Pipeline Transportation Systems. Offshore and onshore pipelines. Seed document is DNV RP J202. IS by Oct 2016
- Draft IS CD-27913 issued for comments by TC265 by 2 Dec 2014.
- 427 comments. Approved to move to draft IS (DIS), will be sent out for approval.



#### WG 3 Storage

- NWIP to produce IS. Using CSA Z741 as 'seed document'
- Saline aquifers and hydrocarbon reservoirs without hydrocarbon production
- IS by June 2017
- IEAGHG (Tim Dixon) on Tech Panels for M&V and Closure
- WD circulated to WG3 for comments by Sep 2014. 800+ comments addressed at Birmingham.
- No show-stoppers, but varying levels of detail in different sections.
- Draft IS CD-27914 will be ready to be submitted to TC265 vote summer 2015.



#### WG 4 Quantification and Verification

- Objective : GHG emissions performance.
- Produce TR first (1-2 years) then IS(s)
- NWIP approved by ballot: concerns on process and too prescriptive eg define purity, specify monitoring technologies. Revised outline agreed – not prescriptive
- IEAGHG (Tim Dixon)
- Drafting committee formed for TR 27915.
- Interaction with other WGs
- Progressing slowly on TR-27915. Scope further refined. Drafting at advanced stage. Aim is for CD by June 2015 for TC265 comments..
- WG6 (EOR) interaction and concerns



#### WG 5 Cross Cutting Issues

- Develop IS for Terminology "CCS Vocabulary" France lead.
- ISO CD 27917 (was 19251) CCS Vocabulary
- CCS Vocabulary working draft IS CD-27917 issued for comments by 29 Dec 2014.
- Concern over timings with other WGs, so CD-27917 will be revised and send out as 2<sup>nd</sup> CD later in 2015. Extend time to 4 years.
- Future work
- NWIP on TR on 'Lifecycle Risk Management for Integrated CCS' (China lead) –
  approved by TC265 voting. Draft TR by May 2016. Assess overarching
  aspects of risk analysis which fall outside other WGs. Determine whether
  any IS needed.
- Preliminary proposal (PWI) to research stakeholder engagement



#### WG6 on Storage using CO2 EOR

- USA and Norway lead
- Recognises geological and operational differences to DSF storage
- Will avoid duplication with WG3 focus on CO2-EOR specific topics
- Working to produce IS
- Discussion on structure and sub-groups
- To discuss concerns with WG4
- Meeting in June 2015 in Houston



 TC265 appreciated GHGT-12 Panel Discussion. Good attendance and questions. Recruited new members.

- Participating countries:
  - Australia, Canada, China, France, Germany, Italy, Japan, Republic of Korea, Malaysia, Netherlands, Norway, Saudi Arabia, South Africa, Spain, Switzerland, United Kingdom, United States, India, Sweden
- Observers:
  - Argentina, Brazil, Czech, Egypt, Finland, Iran, NZ, Serbia, Sri Lanka,
- Liaisons:
  - IEAGHG, IEA, GCCSI, CSLF, WRI, EIGA, CO2GEONET

#### Future ISO TC 265



- Next meeting:
- 7-11 September 2015, hosted by DNV at Oslo, Norway

 Public information on the work is available at <a href="http://www.iso.org/iso/iso-technical-committee?commid=64">http://www.iso.org/iso/iso-technical-committee?commid=64</a>

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# Thank you

Any Questions?

