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ISO TC265: Process and ongoing work

7th International IEA CCS Regulatory Network Meeting
Paris, France | 22 April 2014

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Objectives for today's presentation

1. The (complex) organization of ISO TC 265
2. Activities of the six working groups (WG)
3. A dive into the work happening in WG3:
Storage
4. How you can participate in ISO TC 265
activities



Caveat

I am reporting as an observer of the ISO process, **not** as a representative of ISO, the secretariat of TC265, or any of the participating national member bodies.



ISO TC 265 Leadership and scope

- Chaired by Canada (Sandra Locke)
- Secretariat Standards Council of Canada (SCC), twinned with Standardization Administration of China (SAC)

Standardization of **design, construction, operation, and environmental planning and management, risk management, quantification, monitoring and verification**, and related activities in the field of carbon dioxide capture, transportation, and geological storage (CCS).



Organization of ISO TC265

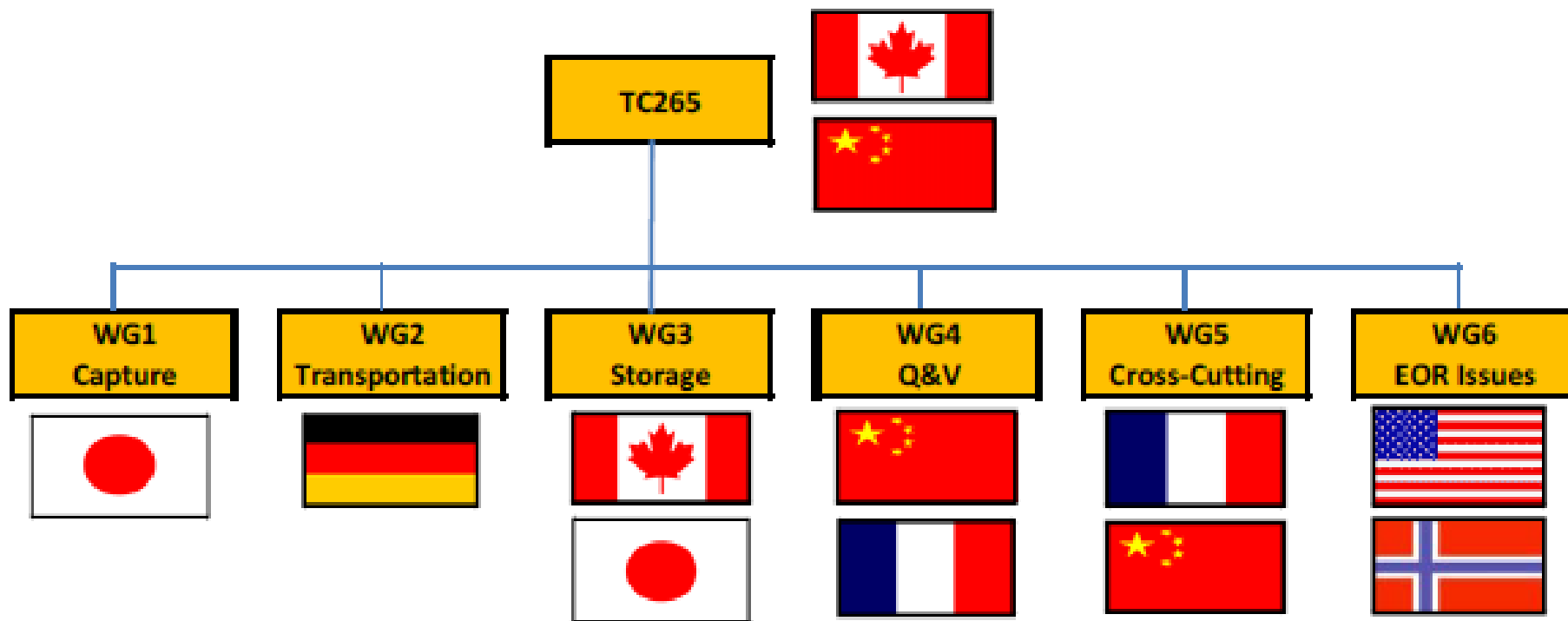


Figure: Jeff Walker, SCC



Membership of ISO TC265

Countries			Liaisons	
P- Participating		O- Observing		
Australia	Netherlands	Argentina	CO2GeoNet	ISO TC67
Canada	Norway	Brazil	CSLF	ISO TC207
China	Saudi Arabia	Czech Republic	EIGA	TC207/SC1
France	South Africa	Egypt	GCCSI	ISO TC207/SC7
Germany	Spain	Finland	IEA	ISO TC27/SC5
India	Sweden	Islamic Republic of Iran	IEAGHG	CEN TC234
Italy	Switzerland	New Zealand	WRI	
Japan	United Kingdom	Serbia		
Republic of Korea	United States	Sri Lanka		
Malaysia				



Membership of ISO TC265

Countries		Liaisons
P- Participating	O- Observing	
<ul style="list-style-type: none">• Member bodies that want to play an active role• Have obligation to vote• Also identify experts to contribute• Provide national delegations	<ul style="list-style-type: none">• Those who wish to follow• Can still make contributions• But do not want to commit• Open to ISO Member bodies and Correspondent members	<ul style="list-style-type: none">• International organizations• Internal liaisons (committee-to-committee)• Participation or information• Helps to ensure wider acceptance, do not have a vote, bring expertise



ISO TC 265 Meetings

- Paris, France (June 2012)
- Madrid, Spain (February 2013)
- Beijing, China (September 2013)
- Berlin, Germany (April 2014)
- Birmingham, United States (January 2015)

*Next meeting to be held in Oslo, Norway
in September 2015*



ISO Standards Development Process

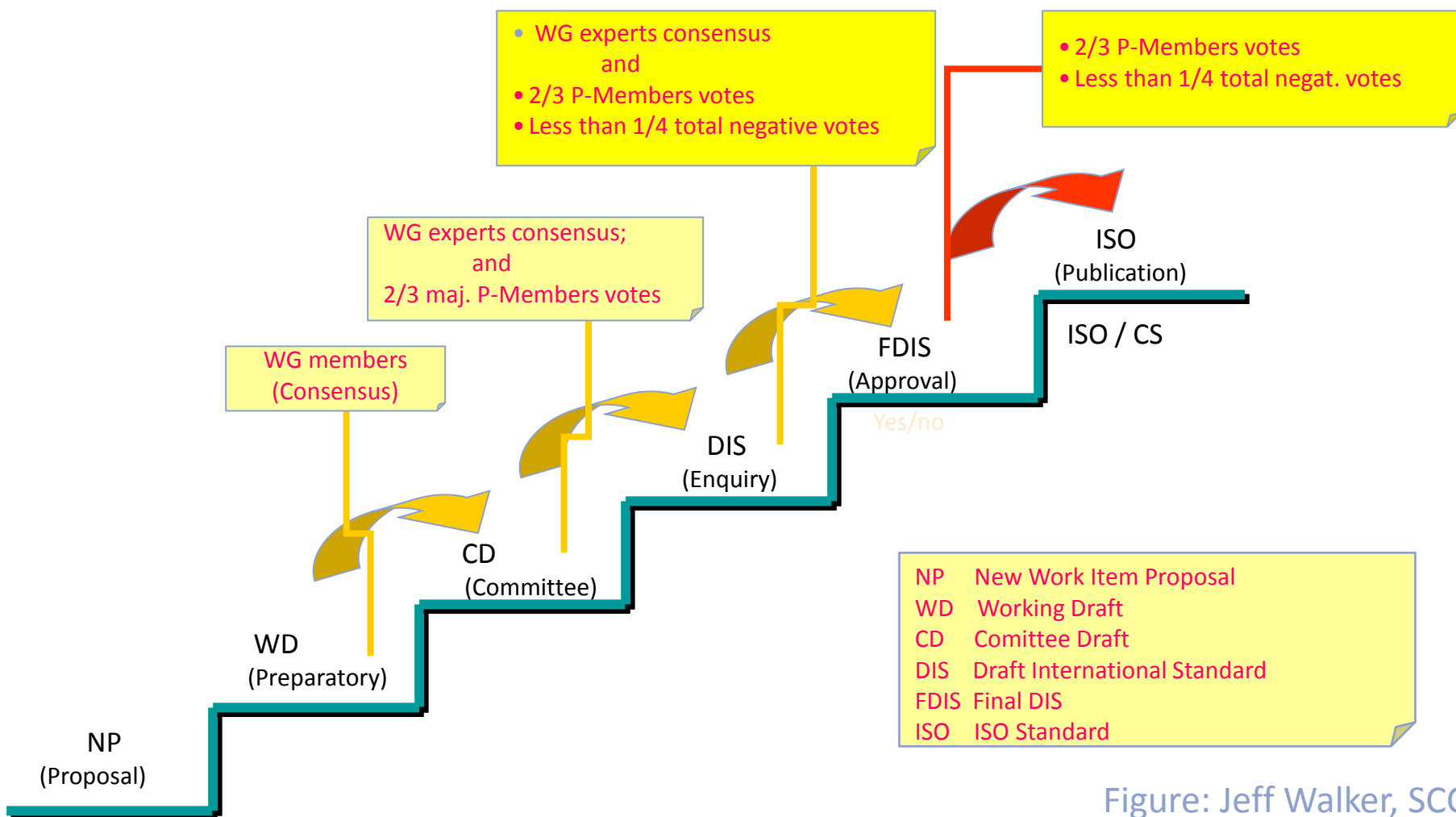


Figure: Jeff Walker, SCC



ISO TC265 Projects

- WG1** Carbon dioxide capture systems, technologies and processes
Technical report (TR) out for ballot, expected in 2015
- WG2** Pipeline transportation systems
*International standard at **CD** stage, expected by 2016*
- WG3** Geological storage of carbon dioxide
*International standard at **WD** stage, expected by 2016*
- WG4** Quantification and Verification Methodology
Technical report (TR) in development, expected in 2016
- WG5** Capture, transport and geological storage of CO₂ – Vocabulary
*International standard at **CD** stage, expected by 2015*
- WG6** Carbon Dioxide Storage using EOR
TBD



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WG3: Storage

- Chaired by Steve Whittaker (CSIRO) and Kinichiro Kusunose (AIST)
- Support from Lynn Barber (CSA Group)

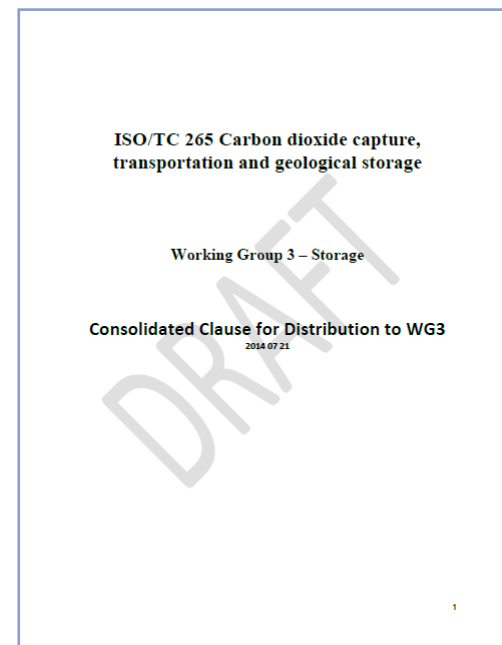
1.1 This Standard:

- (a) establishes requirements and recommendations for the geological storage of carbon dioxide streams. The purpose of these requirements is to **promote commercial, safe, long- term containment of carbon dioxide in a way that minimizes risks** to the environment, natural resources, and human health.
- (b) is **applicable to saline aquifers and hydrocarbon reservoirs without associated hydrocarbon production.**
- (c) includes, activities associated with **site screening and selection, characterization, design and development, operation, and closure of storage sites.**
- (d) provides recommendations for the **development of management systems, community and other stakeholder engagement, risk assessment, and risk communication.**



August 2014: Working draft table of contents

1. Scope
2. Reference publications
3. Definitions
4. Management systems
5. Site screening, selection, characterization
6. Risk assessment
7. Well infrastructure development
8. CO2 Injection operations
9. Monitoring and validation
10. Closure





CSA Z741-12 and the ISO Process

- CSA Z741-12 is serving as the seed document for ISO TC 265 Working Group 3
- The scope was been revised to explicitly exclude storage associated with hydrocarbon recovery (e.g., CO₂-EOR)
- Each clause of the seed document is being thoroughly reviewed to:
 - ensure it is representative of international best practice;
 - appropriate for a wide variety of regulatory environments; and
 - For application to **offshore storage** (CSA Z741-12 doesn't address offshore operations)



Process and upcoming milestones

- Seven Technical Panels (TP), each composed of around ten technical experts, are revising the seed document – except for Clause 8, which is totally new
- TP are currently resolving the over 700 issues flagged during an internal review in 2015
- A committee draft will be sent to the larger TC in the summer for ballot



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Participating in TC 265 activities

Two routes to participate:

1. Participate through your national mirror committee
2. Get involved informally as a technical expert on at TP

*Feel free to contact me (or any other participant in TC265)
for more information*



A few personal observations

1. A voluntary technical standard *does not* have the force of regulation *unless* it is incorporated in to law or regulation
2. CCS standardization activities are different than traditional standards (focused on encouraging trade), and require technical experts to make subjective judgments on acceptable levels of risk
3. There is a tenancy for technical experts to defer to regulators while regulators appear to be deferring to technical experts
4. As is common in standardization processes, parties behave strategically to achieve their own objectives

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Thank-you!

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