#### PIRT Meeting

01 November 2015 Riyadh, Saudi Arabia



# Report from Secretariat

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CSLF Secretariat



# **CSLF** Recognized Projects

- As of October 2015: 44 recognized projects
  - 29 were active; 15 have been completed
  - Wide geographical distribution: projects are located on five different continents
  - http://www.cslforum.org/projects/
- Recent changes: CGS Europe, CO2CRC Otway
   Project Stage 1, and CCP3 projects have concluded.
- This meeting: 4 new projects proposed for CSLF recognition.



# Consensus from Regina Meeting

- The PIRT recommends approval by the Technical Group for the Jingbian CCS Project.
- The PIRT will decide the format and frequency of future CSLF Technology Roadmap updates at its next meeting.



# TRM Interim Report

- 2013 CSLF Technology Roadmap (TRM) was launched at 5<sup>th</sup> CSLF Ministerial Meeting in November 2013.
- An objective of 2013 TRM was to answer three key questions:
  - What is the current status of CCS technology and deployment, particularly in CSLF member countries?
  - Where should CCS be by 2020 and beyond?
  - What is needed to get from Point A to Point B, while also addressing the different circumstances of developed and developing countries?



# TRM Interim Report

#### 10 Technology Needs Areas identified in TRM:

- a) CO<sub>2</sub> capture in power generation
- b) CO<sub>2</sub> capture in the industrial sector
- c) CO<sub>2</sub> transport
- d) Large-scale CO<sub>2</sub> storage
- e) Monitoring stored CO<sub>2</sub>
- f) Mitigation / remediation procedures
- g) Understanding storage reservoirs
- h) Infrastructure and the integrated CCS chain (capture to storage)
- i) CO<sub>2</sub> utilization, non-EOR
- j) CO<sub>2</sub> utilization, EOR



# TRM Interim Report

- Template was developed for gathering information about ten technology needs areas identified in 2013 TRM.
- Template was sent to representatives of many different research organizations working on various aspects of CCS.
- Survey information fed into the initial draft of the TRM Interim Report (Regina meeting).
- Technology sections written by PIRT members.



# TRM Interim Report

- Initial draft was deficient, as it inexactly described the progress in technology needs areas.
- Second survey obtained viewpoints of world-class experts on technology readiness in the technology needs areas.
- New graphics developed for report. Emphasis now on current 1<sup>st</sup> generation technologies.
- Final version of report completed in October and is a deliverable at 6<sup>th</sup> CSLF Ministerial.



# TRM Interim Report

#### **Conclusions:**

- The 2013 TRM established the year 2020 as an achievable timeframe for demonstration of the 1<sup>st</sup> generation of CCS technologies and 2030 for demonstration of 2<sup>nd</sup> generation technologies.
- Two years later, barriers are still in place that inhibit the accomplishment of these goals.



# TRM Interim Report

#### **Conclusions:**

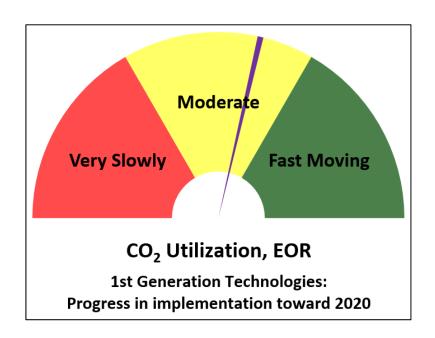
 Except for a very few niche industrial sector applications, for the current generation of CCS technologies, none of the ten technology needs areas perceived as progress being 'fast moving'.



# TRM Interim Report

#### **Conclusions:**

'Slow to moderate'
 progress toward
 implementation was
 perceived, in general,
 mainly because of
 existing policy and
 economic barriers.

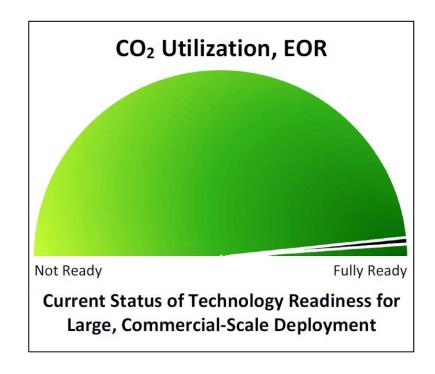




# TRM Interim Report

#### **Conclusions:**

 Technical readiness of CCS technologies were perceived, in general, as ready for large-scale commercial deployment.

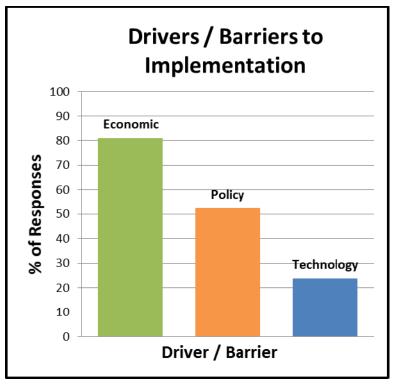




# TRM Interim Report

#### **Conclusions:**

 Next several years are a critical time.
 Regulatory policies and approaches toward financing must also become mature.
 Barriers must be lowered.



CO<sub>2</sub> Utilization, EOR



# TRM Interim Report

#### **Recommendation #1**:

Concerning economic barriers, governments should urgently consider methods to assist stakeholders to significantly drive down the cost of CCS deployment, since it is the stakeholders who will be making the majority of the financial investments.



# TRM Interim Report

#### **Recommendation #2**:

Concerning policy barriers, governments should review institutional regulatory policies to identify how these barriers to CCS deployment may be reduced.



# TRM Interim Report

#### **Recommendation #3**:

Concerning any remaining technology barriers, stakeholders should increase their mechanisms for sharing best practices, particularly regarding communications, regulation and cost reduction, and pledge to engage in public-private partnerships to encourage the development of additional demonstration projects and facilitate the development of CCS projects internationally.



# TRM Interim Report

#### **Messages to Ministers**:

- Ministers should be champions of CCS. CCS should be a key component of any CO<sub>2</sub> emissions reductions strategy.
- Ministers should recognize the contribution that CCS can provide in terms of energy security.
- Ministers should understand that CCS deployment will create and preserve jobs.

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