



Plains CO<sub>2</sub> Reduction (PCOR) Partnership  
Energy & Environmental Research Center (EERC)

## **TECHNICAL ADVISORY BOARD MEETING SCHEDULED**

### **Plains CO<sub>2</sub> Reduction (PCOR) Partnership Phase III Task 13 – Milestone M36**

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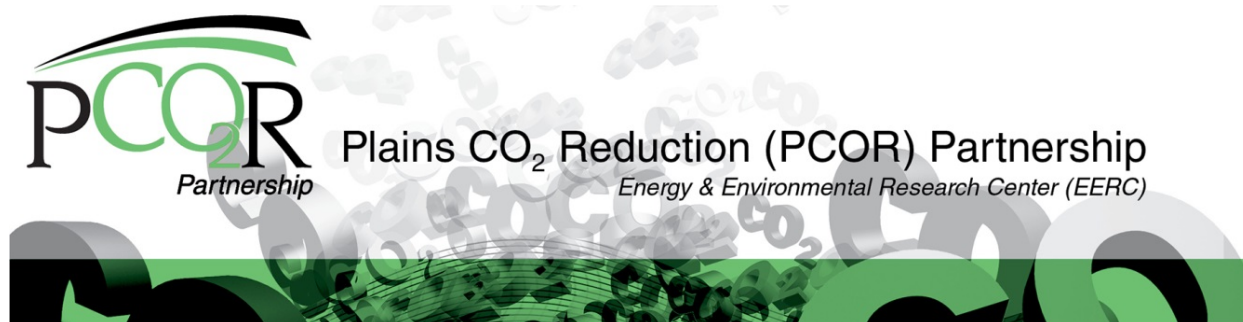
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## **TECHNICAL ADVISORY BOARD MEETING SCHEDULED**

### **BACKGROUND**

The Plains CO<sub>2</sub> Reduction (PCOR) Partnership is one of seven Regional Carbon Sequestration Partnerships (RCSPs) competitively awarded by the U.S. Department of Energy (DOE) National Energy Technology Laboratory (NETL) in 2003 as part of a national plan to mitigate greenhouse gas emissions. The PCOR Partnership is led by the Energy & Environmental Research Center (EERC) at the University of North Dakota and includes stakeholders from the public and private sectors. The PCOR Partnership region includes all or part of nine U.S. states and four Canadian provinces.

Phase III, the development phase, is a 10-year effort (2007–2017) that extends the characterization (Phase I) and validation (Phase II) phases. Currently, the Phase III efforts of the PCOR Partnership include a large-volume demonstration test in the United States (the Bell Creek project). The demonstration test focuses on injecting commercial-scale volumes of carbon dioxide (CO<sub>2</sub>) into deep geologic formations for CO<sub>2</sub> storage.

Many different aspects of carbon capture and storage (CCS) will be evaluated during the demonstrations, ranging from CO<sub>2</sub> capture, compression, and pipeline transport to injection, recycle; and monitoring, verification, and accounting.

DOE required that an independent technical review be undertaken at the outset of the RCSP Phase III Program. DOE approached the IEA Greenhouse Gas R&D Programme (IEAGHG) for this task because of its extensive experience with CO<sub>2</sub> injection projects worldwide. To review the RCSP Program and its Phase III activities, IEAGHG appointed an independent international panel of experts. The experts were drawn from onshore CO<sub>2</sub> injection projects under way in Canada, Europe, and Australia. This initial review was conducted in March 2008.

DOE, through NETL, which manages the RCSP initiative, required that a second independent review of the program be undertaken in 2011. IEAGHG again organized this review, held March 14–17, 2011, at the Hilton Hotel in Arlington, Virginia. The ten-member panel comprised experts from Canada, the United Kingdom, Germany, Australia, Japan, and the United States. The PCOR Partnership gave an hour-long presentation, followed by 90 minutes of questions and answers, on March 15, 2011.

Following the presentation and question-and-answer session, the expert panel discussed its assessment of the PCOR Partnership's two demonstration-level projects and compiled comments

and recommendations for each project. Based on these discussions and the written comments provided, IEAGHG prepared an evaluation for each project reviewed. The expert panel's evaluation of the PCOR Partnership's projects was received in June 2011. A fundamental component of the NETL expert review process is that the recommendations identified by the expert panel are required to be addressed.

The panel's recommendations for the PCOR Partnership included the "appointment of scientific and/or operational advisory boards or committees." When formal responses to the recommendations were submitted in August 2011, the EERC decided to establish a single-panel advisory board to provide scientific guidance on the entire PCOR Partnership Program, including its demonstration sites.

In September 2011, DOE issued a contract modification, No. 21, authorizing the creation of an advisory board under Statement of Project Objectives (SOPO) Task 13 – Project Management. DOE also agreed to fund meetings and associated expenses through September 30, 2015. The SOPO was amended to include the following provisions:

#### Subtask 13.2 – Advisory Board Meetings

*Subtask 13.2.1 – Select Advisory Board Members.* An advisory board, consisting of no fewer than five non-EERC advisors, will be selected from among knowledgeable persons in the fields of CCS and enhanced oil recovery (EOR). The advisors will have no term requirements or limits, but their service will be dependent upon availability.

*Subtask 13.2.2 – Hold Advisory Board Meetings.* Advisory board meetings will be scheduled to occur prior to the annual project meeting and will take into consideration the availability of selected advisors and, when feasible, be held in conjunction with another carbon management event or conference. The recommendations of the advisory board will be reported at the successive annual project meeting.

In addition, a new milestone (M), M36, was created, and due dates were scheduled on March 31 for Program Years 5–8 (2012–2015).

#### **Creation of the PCOR Partnership Technical Advisory Board (TAB)**

The PCOR Partnership TAB was created in 2012 with various CCS and EOR experts. The following individuals comprised the first TAB:

- Bill Jackson, BillyJack Consulting, Inc. (Chair)
- Stefan Bachu, Alberta Innovates – Technology Futures
- Ray Hattenbach, Blue Strategies
- Lynn Helms, North Dakota Industrial Commission
- Mike Jones, Lignite Energy Council
- Steve Melzer, Melzer Consulting
- Tom Olle, Lonestar Resources, Inc.

- Steve Whittaker, CSIRO (Commonwealth Scientific and Industrial Research Organization)
- Neil Wildgust, Global CCS Institute

### **PCOR Partnership TAB Membership Change**

In 2015, TAB member Steve Whittaker accepted a position with the Illinois State Geological Survey. Following discussions with the PCOR Partnership management team, it was mutually agreed that Dr. Whittaker would no longer be participating in the TAB because of potential conflict of interest with his new position. The remaining eight members of the original group continue to serve on the board. An invitation to join the TAB was extended to Dr. Jim Erdle, VP-USA and Latin America, Computer Modelling Group Ltd. (CMG), which he accepted. The following individuals comprise the current membership of the PCOR Partnership TAB:

- Bill Jackson, BillyJack Consulting, Inc. (Chair)
- Stefan Bachu, Alberta Innovates – Technology Futures
- Ray Hattenbach, Industry Expert
- Lynn Helms, North Dakota Industrial Commission
- Mike Jones, Lignite Energy Council
- Steve Melzer, Melzer Consulting
- Tom Olle, Lonestar Resources, Inc.
- Jim Erdle, CMG
- Neil Wildgust, Global CCS Institute

### **TAB MEETING SCHEDULED**

The fifth annual TAB meeting was scheduled to be held April 5–6, 2016, in New Orleans, Louisiana (see Appendix A for the meeting agenda). Members in attendance will be reported in the PCOR Partnership April monthly report.

Several presentations are planned to update the TAB on the most recent status of PCOR Partnership projects. Topics covered will include the Bell Creek and Aquistore projects, outreach activities, the upcoming edition of the PCOR Partnership Atlas, best practices manuals, and future work.

### **ADDITIONAL TAB ACTIVITY**

Two additional TAB activities took place between March 2015 and March 2016, including a WebEx meeting and a 2-hour face-to-face meeting held in conjunction with the PCOR Partnership Annual Membership Meeting. The WebEx discussion was focused on the transition of CO<sub>2</sub> enhanced oil recovery to CO<sub>2</sub> storage. Topics for the face-to-face meeting included the transition between CO<sub>2</sub> EOR and CO<sub>2</sub> storage, areas needing additional research, and potential journal article ideas.

## **IMPACT AND FUTURE OF THE TAB**

The PCOR Partnership has greatly benefited from TAB recommendations and guidance since its inception. The annual face-to-face meetings, combined with shorter Webinars throughout the year, provide regular opportunities for the TAB to comment on the PCOR Partnership's activities from both technical and strategic perspectives. This consistent feedback provides an independent review by industry-leading experts and contributes to a more scientifically sound and robust research program. From the PCOR Partnership's perspective, these meetings have been invaluable in guiding the technical components of the PCOR Partnership's work. For example, during a Webinar on soil gas- and groundwater-monitoring activities at Bell Creek, the TAB recommended that the PCOR Partnership drill two deep groundwater-monitoring wells. The Bell Creek Field operator took this recommendation seriously and implemented it, resulting in a stronger overall monitoring program for the project.

The original scope as established by the PCOR Partnership SOPO provides funding for the TAB through September 2015, which was extended through March 31, 2016, with the approval of a 6-month extension of Budget Period (BP) 4. However, because of the enormous benefit to the PCOR Partnership Program, the EERC has requested additional funding from DOE in the BP5 Continuation Application. The requested funding is similar to the original request and would allow the PCOR Partnership to continue its TAB-related activities. Should DOE provide funding to continue the TAB activities, the next annual TAB meeting is tentatively scheduled for March 2017.

## **APPENDIX A**

# **PLAINS CO<sub>2</sub> REDUCTION PARTNERSHIP TECHNICAL ADVISORY BOARD MEETING AGENDA**



**2016****PCOR PARTNERSHIP TECHNICAL  
ADVISORY BOARD MEETING**

# NEW ORLEANS

April 5–6, 2016 • AC Hotel New Orleans Bourbon/French Quarter Area • New Orleans, LA

## AGENDA

### 2016 Technical Advisory Board Meeting

#### TUESDAY, APRIL 5

TIME	ACTIVITY	DISCUSSION LEADER(S)
8:30 a.m.	Welcome and Introductions/Breakfast	All
<b>Program Plan and Update</b>		
9:30 a.m.	PCOR Partnership Program Through December 2018	Charles Gorecki
10:15 a.m.	Break	
10:45 a.m.	Project Updates: Bell Creek, Aquistore, Permitting Guidance Document, Outreach, Complementary Projects	Charles Gorecki
11:45 a.m.	Working Lunch	
<b>Continuing the Legacy</b>		
1:00 p.m.	Clean Power Plan and Implications for CCS	Charles Gorecki, Dave Nakles
2:15 p.m.	Update: CO <sub>2</sub> EOR Life Cycle Analysis	Dave Nakles
2:45 p.m.	Break	
3:15 p.m.	PCOR Partnership: Regional Vision	Charles Gorecki
4:00 p.m.	PCOR Partnership and DOE Best Practice Manuals and PCOR Partnership Value-Added Products	Dave Nakles
4:45 p.m.	Update of Peer-Reviewed Journal Publications	Charles Gorecki
5:00 p.m.	Adjourn	
6:30 p.m.	Business Dinner	All and Guests

Continued on Back

## WEDNESDAY, APRIL 6

TIME	ACTIVITY	DISCUSSION LEADER(S)
8:30 a.m.	Working Breakfast	All
9:00 a.m.	Members' Time	Dave Nakles
10:30 a.m.	Break	
11:00 a.m.	Continue Member's Time (Mike Jones to call in)	Dave Nakles
11:30 a.m.	Wrap-Up	Charles Gorecki
11:45 a.m.	Working Lunch	
12:45 p.m.	Adjourn	

### PCOR Partnership TAB Members:

Bill Jackson, BillyJack Consulting, Chair  
Stefan Bachu, Alberta Innovates – Technology Futures  
Ray Hattenbach, Industry Expert  
Lynn Helms, North Dakota Industrial Commission  
Mike Jones, Lignite Energy Council  
Steve Melzer, Melzer Consulting  
Tom Olle, Lonestar Resources  
Jim Erdle, Computer Modelling Group  
Neil Wildgust, Global CCS Institute (GCCSI)

### Meeting Facilitator:

Dave Nakles, The CETER Group, Inc.

### Ex Officio Members:

John Harju, EERC  
Ed Steadman, EERC  
Charles Gorecki, EERC  
Jim Sorensen, EERC

### Additional Participants:

Scott Ayash, EERC

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