

**MEHC – PacifiCorp
Integrated Gasification Combined Cycle Working Group**

**Thursday, September 14, 2006
9:00 am – 2:00 pm (Pacific Time)
10:00 am – 3:00 pm (Mountain Time)**

Meeting Summary

California	Lanie Motamedi (CPUC)
Idaho	Harry Hall (IPSC)
Oregon	Lowrey Brown (CUB); Phil Carver (ODOE), Ed Durrenberger (OPUC), Steve Weiss (NW Energy Coalition), Jeff King (NPCC), Irion Sanger (ICNU), Lisa Schwartz (OPUC); Mike Jones (Puget Sound Energy)
Utah	Andrea Coon (DPU); Sam Liu (DPU), Cheryl Murray (CCS), John Harvey (UT-PSC), Carol Revelt (UT-PSC), Betsy Wolf (SLCAP), Kathy VanDame (Wasatch Clean Air Coalition), Milind Deo (University of Utah), Rebecca Wilson (UT-PSC)
Wyoming	Commissioner Mary Byrnes (Wyoming), Steve Ellenbecker (Wyoming Governor's Office), Bryce Freeman (WY-OCA)
PacifiCorp	Salt Lake City: Nick Rahn, Jim Lacey, Greg Betenson, Ian Andrews, Jeff Larsen, Dave Mosier, Dave Taylor; Dave Eskelsen Portland: Laura Beane, Greg Duvall, Michael Liljenwall, Stacey Kusters, Shay Labray, Melissa Seymour Phone: Bob Tarantola, Cathy Woollums (MidAmerican Energy Holdings Co.)
Other	Vicki Stamp (CO ₂ Program Manager, DOE), Roger Swenson (E-Quant), Eric Guidry (Western Resource Advocates), Liangxiong Li (Univ NM), Colby Drechsel (Wyoming Pipeline Authority), Kevin Whitty (Univ of Utah), Tim Wagner (Sierra Club), Marc Peterson (GE Energy)
Phone-In	Graciela Etchart (WUTC), Yohannes Mariam (WUTC), Gary Dodge (Hatch, James & Dodge), Don Biederman (WyPSC), Robert Pomeroy (Holland & Hart)

Introduction

This was the fourth meeting of the Integrated Gasification Combined Cycle (IGCC) Working Group. The following presentations were made by Commissioner or Commission staff on their respective states' energy policy and views on IGCC:

Harry Hall, Idaho Public Utilities Commission
Lisa Schwartz, Oregon Public Utility Commission Staff
Becky Wilson, Utah Division of Public Utilities
Graciela Etchart & Yohannes Mariam, Washington Utilities & Transportation Staff
Commissioner Mary Byrnes, Wyoming Public Service Commission

A short summary of the available commercial “wraps” that technology suppliers would be willing to provide was made. A presentation was made that contrasted the estimated operating and maintenance costs for an IGCC plant with a supercritical pulverized coal-fired plant. A presentation was made comparing the estimated water consumption rates for an IGCC plant with a supercritical pulverized coal-fired plant.

Summary of Presentations

The meeting was held in Salt Lake City and video-linked with PacifiCorp's Portland office. A number of individuals also participated via phone. The meeting agenda and presentations had been posted on the PacifiCorp IGCC Working Group site (<http://www.pacificorp.com/Article/Article66610.html>) on September 13, 2006.

Both commissioners and commission staff graciously agreed to make presentations on their various states perspectives and policies with regard to CO₂ and IGCC. Those presentations are available on the IGCC Working Group webpage. Multiple issues were raised but the general themes that appeared common to most of the presentations were:

- Keen interest in IGCC technology
- Some states (Idaho, Utah, and Wyoming) did not have any specific state policies regarding CO₂.
- The evaluation of the technology needs to consider the potential impacts of future CO₂ constraints.
- The utility has the burden of proof to make the appropriate technology selection.

A presentation was made on different technology supplier's commercial “wraps” or coverages that they would be willing to provide under an Engineer-Procure-Construct Lump Sum Turn Key contract. Marc Peterson from General Electric Energy made a presentation on their process to identify the scope, firm price, and commercial terms for an IGCC project. Mr. Peterson also identified the expected deliverables that would be made available during the major stages of the process. It was pointed out that the process that GE Energy presented was similar to that of the other technology vendors. Mr. Peterson

pointed out that GE Energy's sub-bituminous IGCC solution is expected to be released in the near future.

PacifiCorp made two technical presentations; the first was a comparison on the expected water consumption needs of both supercritical pulverized coal and IGCC technologies. The second presentation was a comparison of the expected operating and maintenance costs of both supercritical pulverized coal and IGCC technologies.

Issues Raised at the Meeting

There was some discussion on whether or not alternative CO₂ control strategies needs to be considered. It was pointed out by Mr. Ellenbecker, and others, that there is a near term need for base load resources and that the focus of the group needs to take into account the utility's need to make a technology decision in that context and that needs to focus on a coal-based technology.

Another issue raised is whether or not, mercury, and other emissions, had been considered when evaluating different kinds of coal-fired resources. It was pointed out that costs for emissions had been included in the environmental cost adders when reporting the cost of energy.

One party asked if biological sequestration potential should also be considered in the context of sequestration. It was pointed out that this had been briefly covered in Travis McLing's presentation in August.

The issue was raised in what would be the connection between the newly formed PacifiCorp Global Climate Change working group (GCC) and the IGCC Working Group. Nick Rahn indicated that within PacifiCorp, some of the participants in the IGCC Working Group would be participating in the GCC working group.

One participant asked for information on the additional costs for CO₂ capture and sequestration. It was pointed out that a presentation had been made in August on that issue (the presentation is available on the IGCC Working Group webpage).

Future Meeting Topics

The group identified the following as potential topics or areas of interest for the next meeting:

1. A presentation on the expected costs to transport CO₂. Kinder-Morgan was recommended as a company that may be willing to make a presentation. PacifiCorp will follow up on this.

2. Water consumption requirements for IGCC with and without CO₂ capture. PacifiCorp will find out if information is available on this topic to make a presentation.

From earlier meetings the following potential topics or areas of interest

1. A presentation by the University of Utah on Enhanced Oil Recovery (EOR) projects in Utah.
2. A review of current state laws with regard to states assumption of long term CO₂ sequestration risks.

PLEASE FORWARD IDEAS FOR FUTURE TOPICS OR AGENDA ITEMS FOR IGCC WORKING GROUP MEETINGS TO IAN ANDREWS (Ian.Andrews@pacificorp.com; 801-220-4286).

Next Scheduled Meeting of the IGCC Working Group

The next IGCC Working Group Meeting is scheduled for Thursday, October 25, 2006 starting at 10:00 AM (Mountain), 9:00 AM (Pacific).

The meeting in Salt Lake City will be held in room 130 K at the North Temple Office, 1407 West North Temple, Salt Lake City, Utah.

The meeting in Portland will be held in PacifiCorp's offices in room 1075 G at the Lloyd Center Tower, 825 NE Multnomah, Portland, Oregon.