

**Barry Worthington Comments
On the
Closing Panel of the Global Carbon Capture & Storage Institute
2012 Annual Members Meeting**

**Calgary - Alberta, Canada
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Good afternoon, ladies and gentlemen. It is a pleasure and an honor for me to be asked to provide a set of comments on my observations on the discussions, the past two days here in Calgary, as part of the global GCCSI Annual members meeting. I thank Brad Page and Barry Jones for including me in this wrap up panel.

The United States Energy Association has been a GCCSI member since its founding and has been involved in the global conversation on CCS since we helped the U.S. Department of Energy organize the inaugural Carbon Sequestration Leadership Forum Ministerial Meeting in 2003, outside of Washington, D.C.

First, I want to observe that I do not agree with those who suggest that we will have a global agreement to replace the Kyoto Protocol by 2015. Our United States Senate must approve International Treaties and in the current political climate, it is unlikely to consider a replacement to Kyoto until you have a large turnover from the existing composition of the body.

And it is worth noting that climate change has not been an issue in our current Presidential campaign. Neither side has raised climate as an issue.

I do note that I believe that China will move forward with CCS and CCUS demonstration projects, and I predicted three years ago that they will beat both Europe and North America to having ten commercial scale demonstration projects. Today, my observation is that the

Chinese are on the path to being a first-mover and will sell technology that they demonstrate to North America and Europe.

When China figures out how to propose that they earn carbon credits for the technology they demonstrate, they will rush to the UNFCCC process with a proposed treaty – call it the Beijing Protocol, and the U.S. will be hard pressed not to sign on. This may not be until after 2020.

I have suggested that the global CCS community needs to develop a communications strategy. Perhaps we need to develop a CCS global communications network. I am not sure if this is the role of the Institute or the IEA, or the Carbon Sequestration Leadership Forum.

I do know that we, as the CCS industry, must begin talking to others. We have a tendency to go to conferences and only talk to each other. We are continuing to preach to the choir, although I will say that the choir does still need to hear the sermon sometimes. In looking at a communication strategy, we collectively need to consider who can be effective messengers and what effective messages do we wish to communicate. For example, our nuclear industry has learned that the phrase “nuclear facility” has more appeal to a U.S. audience than does “nuclear plant”.

My personal view is we need to communicate that to our industry, safety is the number one priority, and safety in every respect.

Carmen earlier referred to the phrase “DAD”, as in Decide, Announce, Defend. We have a slightly modified phrase, “DADA”: Design, Announce, Defend and Abandon. I think this was coined in reference to U.S. LNG import facilities, and hopefully we won’t need to use this in regard to CCUS or CCS projects.

One key communication point that we need to resolve is the answer to “Does It Work?” Critics say it does not and never will. They cite lack of warranties and guarantees. Yet, most vendors I

am familiar with have indicated that they will provide both for the capture component. It will be useful if we can arrive at a single answer to the questions, “Does It Work?”

We have focused a lot on CCUS in regards to enhanced oil recovery. This presents a wonderful opportunity where it works, but this will not be a solution for every country or every project. But, EOR can help to drive the cost of capture down for everyone.

Another message point to consider is if we are talking enough about the need to capture CO₂ on gas-fired power generation. If we are to reach the reductions of CO₂ in the atmosphere that is expected, we will need to capture on gas fired units as well. Just this week, a 900 megawatt gas-fired power plant was permitted in my home state of Pennsylvania, with no intention to provide for carbon capture. This plant is certainly expected to be in service in 2050.

It was interesting to note the issue of “differentiation” in regard to climate discussions. I wonder if we are “differentiating” enough in our CCUS discussions. Three quick points:

1. EOR is not possible everywhere.
2. Natural gas is not cheap everywhere.
3. Poverty reduction is still important.

Amit reminded us of nearly 300 million people in 31,000 villages in India that have no access to electricity. Maybe the practical solution and relevant message in India is “CCS Ready” for new plants, so retrofits are possible when costs come down, and more people escape poverty.

One final word about the Institute’s future, I heard comments about not being duplicative and not doing what others are doing. I disagree when it comes to public communication. More voices are better than fewer. Seven natural gas organizations exist in Washington.

The renewable industry has duplicative groups. They create this perception of many and multiple voices, when you peel the onion back; you see many of the voices are really the same individuals and organization. So, duplicative, coordinated messages are not themselves, necessarily bad.

Thank you for the opportunity to share some of my observations.