SOUTHERN CALIFORNIA EDISON
An *EDISON INTERNATIONAL* Company

Manuel Alvarez
Manager, Reg. Pol. & Affairs
manuel.alvarez@sce.com

May 26th, 2009

California Energy Commission
Docket Office, MS-4
Docket No. 09-IEP-1O
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.state.ca.us

Re: California Energy Commission (CEC) Docket No. 09-IEP-1P: Written Workshop Comments of Southern California Edison Company (SCE) On Commercial-Scale Geological Carbon Sequestration Methods

To Whom It May Concern:

Southern California Edison (SCE) appreciates the opportunity to provide comments regarding the potential of geological carbon sequestration methods as options for climate change mitigation, as discussed during California Energy Commission's (CEC) Staff Workshop[1] on Commercial-Scale Geologic Sequestration (Workshop) held on May 18, 2009. The presenters during the workshop were very knowledgeable and the comments/insights of all participants highlighted the important issues to be addressed in order to move forward with geologic sequestration. The comments provided below are intended to add value and perspective to this important industry issue.

To meet the goal of AB 1925 (Blakeslee, Chapter 471, Statues of 2006) and to provide recommendations for how the State can develop parameters to accelerate the adoption of cost-effective geologic sequestration strategies, the risks and uncertainties associated with development of sequestration technology need to be identified and resolved. Consideration of the following issues will support the acceleration efforts:

1. Long-term liability and ownership of saline aquifer sequestration sites
2. Cost recovery mechanisms for incremental plant costs related to new technology deployment
    a. Understanding and documentation of incremental costs
3. Equivalent treatment of low GHG resources and renewable resources

[1] May 18, 2009 California Energy Commission (CEC) Staff Workshop on Commercial-Scale Geologic Carbon Sequestration and Policies to Support California's AB 32Goals of 2020

SCE believes resolution of these issues will go a long way toward encouraging development of these low GHG technologies to support the long-term goal of meeting reduced GHG requirements.

Prior to any construction and use, the issue of long term stewardship of a saline aquifer sequestration site after cessation of CO2 injection and after plume stabilization, must be resolved. The uncertainty associated with unspecified requirements and durations of future stewardship are not in accord with the business requirements of a capital project. The most expeditious resolution to this issue includes State or Federal acceptance of long term liability and ownership similar to that accomplished in FutureGen.[2]

Another important issue of immediate concern is recovery of the additional plant costs expected from CO2 capture and sequestration. In order to deploy the first generation of plants, a clear mechanism leading to recovery of these additional costs is needed to mitigate financial risk and uncertainty. It is also important to understand the cost drivers and have an accurate industry understanding of the expected costs. To this end, the costs for Integrated Gasification Combined Cycle (IGCC) with and without Carbon Capture and Storage (CCS) are presented in two separate CEC documents with somewhat conflicting values.[3] SCE suggests that these values be published in either of the documents, or if published in both documents that they use consistent values. Consideration should also be given to using DOE published plant costs for these technologies.[4]

An overarching longer term strategy associated with implementation of AB 32 is identifying the potential value of the added flexibility CCS can provide in securing low greenhouse gas (GHG) resources. This value may be realized by treating low GHG and renewable resources as interchangeable. This would provide flexibility to procure the most cost effective combination of low GHG resources including both CCS technology plants and renewables. In effect, the CEC's report "Comparative Costs of Central Station Electricity Generation Technologies [5] substantiates this approach by including IGCC with CCS and other low emission technologies in Appendix B for Renewable Energy. The other alternative, to establish two separate and potentially competing policies - one for low GHG and the other for renewables, would not provide the flexibility that may be needed to optimize the combination of resources for their greatest value.

Finally, to highlight and expand on an important point from the discussion on May 18th at the Workshop, both Enhanced Oil Recovery (EOR) geologic sequestration and saline aquifer geologic sequestration are important technologies to reduce GHGs, but are different and should be considered separately in further studies. One important difference is the stage of development of each technology which is expected to affect the timing of development – while EOR may be best situated for more immediate but limited use; saline aquifer sequestration may have greater potential as a longer term and broader solution.

---

[2] FutureGen Clean Coal Plants – see http://www.netl.doe.gov/technologies/coalpower/futuregen/

[3] Comparative Costs of California Central Station Electricity Generation Technologies: Appendix B Renewable Energy Costs of Generation Inputs August 2007 and Geologic Carbon Sequestration Strategies for California: Report to the Legislature February 2008

[4] http://www.netl.doe.gov/energy-analyses/pubs/deskreference/index.html

[5] April 16, 2009 CEC Workshop based on updating the Comparative Costs of California Central Station Electricity Generation Technologies: Appendix B Renewable Energy Costs of Generation Inputs August 2007

If you have any questions or need additional information about these written comments, please contact me at 916-441-2369.

Very truly yours,

/s/Manuel Alvarez

Manuel Alvarez