

April 23, 2009

California Energy Commission
Dockets Office, MS-4
Re: Docket No. **09-IEP-1E**
1516 Ninth Street
Sacramento, CA 95814-5512

DOCKET	
09-IEP-1E	
DATE	APR 23 2009
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Re: 2009 Integrated Energy Policy Report (IEPR)- Docket No.
09-IEP-1E: Present and Future Central Station
Renewable Plant Costs

To Whom It May Concern:

Southern California Edison Company (SCE) hereby submits written comments on present and future central station renewable plant costs. The information provided at the April 16, 2009 workshop was valuable and the comments provided below are intended to add value to the California Energy Commission's (CEC) study of present and future costs of electricity generation from central station renewable energy facilities.

First, it is important to the industry and the public that the Integrated Gasification Combined Cycle (IGCC) plant section includes the costs of carbon capture and storage (CCS). This will provide an accurate estimate of use of this important technology in a manner consistent with SB 1368 and ensure that future trending of this technology is comprehensive. CCS has been used in industries other than power generation for many years (e.g. IGCC chemical plants and oil production through enhanced oil recovery (EOR)). So the costs of carbon capture, compression of the CO₂ to liquid form for transport and injection are known. The costs for CCS in these industries are expected to be similar to the costs in the power industry because the equipment and operation are the same.

The ability to capture CO₂ is advantageous in an IGCC plant due to the nature of the syngas produced in the gasification process. However, the original plant design needs to include the process loads required to support carbon capture, e.g. gasifier size. Also, the power required to compress the CO₂ into liquid form for transport and injection needs to be accounted in the net Megawatt electric (MWe) output of the plant. Without accounting for these additional design requirements and associated MWe loads, the plant capital and operating costs are significantly under-estimated. If this study underestimates costs at this time and then later on, the cost of CCS is added, the trend for this technology would be seen as increasing rather than decreasing as expected when more plants are built. Also, it seems inconsistent with California greenhouse gas (GHG) mitigation goals to exclude CCS which is directly intended to meet these goals.

Second, the MWe rating of the IGCC plant should be greater than 300 MWe to more accurately represent a utility sized power plant and the expected trend in the industry. Currently

operating IGCC power plants are in the 300 MWe range. However future plants, such as the Edwardsport plant mentioned in the Workshop, are in the 600 MWe range. One important distinction between IGCC with CCS and renewable power sources is that the IGCC plant has greater flexibility in where it can be sited. Therefore, strategic location of IGCC in larger sizes may become an important design element in choosing this technology over other low GHG technologies. Also, since IGCC with CCS would be a baseload resource, an economy of scale for larger plants would be expected.

Third, the costs of power plants can vary significantly with plant output capacity (MWe). While the selection of one representative plant size is important, it could be significantly misleading for technologies that have a wide variety of sizes based on the resource (e.g. geothermal). Therefore, either a sizing factor or a family of MWe output capacities should be provided for some technologies.

Fourth, based on a review of the generation cost model used in the 2007 IEPR and the resource descriptions in a consultant report distributed prior to the workshop, it appears that the levelized nominal dollar figures will be reported for technologies with economic lives ranging between 20 and 40 years. This creates a mismatch, because the “average” amount of inflation imbedded in the levelized cost of a 40-year-lived facility is greater than a 20-year-lived facility. An alternative would be to present an annualized cost instead of a levelized cost. The real economic carrying cost (RECC) method is commonly used by CPUC-regulated utilities to develop annual marginal capacity costs. SCE supports continuing to report both \$/MW and \$/MWh values, which improves the comparability of technologies with different capacity factors.

SCE appreciates the opportunity to submit these additional comments. If you have any questions or need additional information about SCE’s comments, please do not hesitate to contact me at (916) 441-2369.

Very truly yours,

/s/ Manuel Alvarez

Manuel Alvarez