

May 8, 2013

**VIA E-MAIL DOCKET@ENERGY.
CA.GOV**California Energy Commission
Dockets Office, MS-4
Re: Docket No. 13-IEP-1K
1516 Ninth Street
Sacramento, CA 95814-5512

California Energy Commission

**DOCKETED
13-IEP-1K**

TN 70694

MAY 08 2013

Re: 2013 Integrated Energy Policy Report: Staff Workshop on Natural Gas Issues and
Forecast Scenarios – Comments of Pacific Gas and Electric Company**I. INTRODUCTION**

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to provide comments on the California Energy Commission's (CEC) April 24 Staff Workshop titled "Natural Gas Issues and Forecast Scenarios" (April 24 Workshop). The April 24 Workshop marked the second time the CEC's natural gas price forecast has been addressed during the 2013 Integrated Energy Policy Report (IEPR) proceeding. This iterative approach, in which stakeholders are offered the opportunity to consider Staff's initial methodology and interim work products, is appreciated and should be considered a model for other IEPR issue areas.

While the assembled panelists presented on a number of important and pertinent topics, PG&E's comments today are focused on the updated natural gas price common cases, as presented by Robert V. Kennedy. Specifically, in Section II, PG&E comments on the revised long-term range of the natural gas price forecast. In Section III, PG&E offers some additional suggestions to enhance the overall natural gas forecast.

**II. THE LONG-TERM NATURAL GAS PRICE FORECAST RANGE SHOULD
INCORPORATE MORE UNCERTAINTY**

Long-term forecasting provides the most value for planning purposes when it appropriately captures the average price year-to-year over the forecasting period in question. Ideally, while individual years may be above or below this trend line, they would hover around the long-term trajectory. High and low estimates, in this context, assist the end-user in anticipating these fluctuations, and help identify possible errors or biases in the model inputs or assumptions.

At the February 19 Lead Commissioner Workshop, titled "Economic, Demographic, and Energy Price Inputs for Electricity, Natural Gas and Transportation Fuel Demand Forecasts," Dr. Leon

D. Brathwaite discussed the CEC's initial natural gas assessment. The CEC's initial forecast showed the high-to-low range staying between approximately \$6.50 and \$5.70 out to 2035 (in 2010 dollars). PG&E subsequently filed comments expressing its view that this range was too narrow.¹

In light of its past comments, PG&E was pleased to see that, at the April 24 Workshop, Robert V. Kennedy presented revised forecasts for the high, low, and reference cases. The updated natural gas price forecast now shows a wider range, with gas prices staying between approximately \$7.36 and \$5.26 per MMBtu in 2010 dollars. PG&E believes that Staff's changes were helpful, and move the range in the right direction. However, PG&E remains concerned that the long-term range for the forecast is still too narrow.

In expressing this concern, PG&E understands that providing a high and low range for the CEC's natural gas price forecast adds an additional layer of difficulty to an already daunting task. Forecasting a high and low natural gas price range requires not only an understanding of the fundamental drivers of natural gas prices; but an understanding of what might cause those drivers themselves to change and thus cause the forecast to deviate from its expected value.

Therefore PG&E also recommends that Staff consider utilizing past forecasting errors to either inform the high and low cases for the natural gas price forecast or to develop error bands. To this point, the CEC's recent March 7 Workshop, on their Cost of Generation Model, used Energy Information Administration (EIA) historic errors to adjust the CEC's natural gas reference case. Past errors may be especially helpful in initial years of the natural gas price forecast.

III. A NUMBER OF ISSUES DESERVE FURTHER REVIEW AND ANALYSIS

The following items should be assessed and, depending on the results of the analysis, additional updates to the natural gas price forecasts may be warranted.

- **The High Case is Erratic in Initial Years.** Between 2013 and 2019, the performance of the high case is erratic, with two dramatic dips in 2015 and 2017. This feature, which was also present in the high case presented at the February 19 Workshop, has been dampened, but not eliminated. At both the April 24 and February 19 Workshops, Staff indicated that this behavior stems from changes made to the way the model considers liquefied natural gas (LNG) imports and exports. While perhaps true, PG&E urges Staff to correct this feature in subsequent iterations of the forecast.
- **CEC Gas Trade Position Differs from Other Industry Forecasts.** The CEC's reference case suggests that net imports to the U.S. will be 4.5 billion cubic feet per day or 1.65

¹ Pacific Gas and Electric Company, website: http://www.energy.ca.gov/2013_energy_policy/documents/2013-02-19_workshop/comments/Pacific_Gas_and_Electric_Company_Comments_on_Workshop_on_Economic_Workshop_2013-03-05_TN-69834.pdf

Trillion cubic feet in 2025.² In its 2012 and 2013 Annual Energy Outlook, the EIA projects that the U.S. will become a net gas exporter by 2020 due to increased pipeline exports to Mexico and LNG exports to Europe and Asia. Other industry assessments (e.g., ICF International and CERA) echo EIA's assessment. Therefore, PG&E encourages the CEC to reexamine its long-term U.S. gas trade position.

IV. CONCLUSION

PG&E is committed to continuing to work with CEC Staff and stakeholders throughout the 2013 IEPR proceeding to assess the natural gas price forecasts. The improvements captured in this iteration are positive ones, and we look forward to continued improvements in the model.

Sincerely,

/s/

Matthew Plummer

cc: R. Kennedy (Robert.Kennedy@energy.ca.gov)

² See page 11 of Robert V. Kennedy's presentation at the April 24 Workshop, website:
http://www.energy.ca.gov/2013_energypolicy/documents/2013-04-24_workshop/presentations/06_CEC_Adjusted_Cases.pdf