

TO: Natural Gas Core Team and CEC Modeling Team

FROM: Tom Carr and Doug Larson

DATE: January 26, 2005

SUBJECT: Summary of January 19, 2005 Conference Call

Joining the call were: Dave Maul, Jim Fore, Leon Brathwaite, Jairam Gopal, Mark DiGiovanna (CEC); Carmine Vertone (BC); Chris Wilhelm (SK); Phil Carver (OR); Dick Burdette (NV); Greg Nothstein (WA); Grace Anderson (CA); Hal Chappelle (Consultant); Doug Larson and Tom Carr (WIEB).

- The CEC Modeling Team presented preliminary results for the strawman case as described in three documents distributed via email from Jim Fore (1-19-05):
 - A descriptive write up of the preliminary findings, observations, the six pending assumption changes, and graphs of the initial results for production, consumption, and prices.
 - An Excel document specifying model assumptions on macroeconomic data, financial assumptions, LNG terminals, natural gas reserves, natural gas demand by region
 - A table identifying regional pipelines and pipeline capacity.
- The preliminary findings are subject to six major changes in the assumptions of the model that will be incorporated in the next round of modeling. The identified future changes include:
 - Adjusting the demand-side of the model to be responsive to price. Ken Medlock will provide the CEC Modeling Team with spreadsheets on demand elasticities in all areas except electricity. These demand-side changes will be made within the disaggregated sectors. The CEC Modeling Team will provide a written description of how price elasticity is being treated after reviewing information provided by Ken Medlock.
 - Disaggregate Canadian demand sectors.
 - Modifications to the model structure that add new demand nodes in the U.S. and Canada. Mexico is still represented as a bundled inelastic sector.
 - A new updated oil price forecast from EIA/DOE.
 - Re-evaluation of unconventional resource assumptions in Alberta and British Columbia.
 - Review of the decline profiles for all resources to account for the speed of recovery under different technologies.
- Discussion during the call yielded the following key points and observations:
 - LNG assumptions will be an important driver of future forecasts. The preliminary findings showed that the assumed increases of LNG supplies pushed natural gas prices down in two future periods over the next five

years, and that the current assumption of no additional LNG supplies after 2010 contributed to rising natural gas prices beyond the 2010 time horizon. The CEC Modeling team recognized the importance of developing good assumptions about future LNG supplies in the U.S. and Canada.

- The current assumptions of Canadian reserves do not include unconventional gas supplies in the model. Canadian studies on unconventional resources will not be available for another six months. The CEC Modeling team will consult with Canadian representatives to address this issue.
- Estimates for future gas demand for electrical generation will be driven by assumptions for additions to new gas generation facilities. Mark DiGiovanna previously distributed the CEC assumptions of generators by state and province. WIEB staff and the CEC will collaborate with the current Seams Steering Group-Western Interconnection (SSG-WI) modeling effort to provide feedback on the assumptions of existing and future generation facilities.

Next steps

1. CEC Modeling Team will develop new results for the strawman case that incorporate the six assumption changes described above plus information on unconventional Canadian natural gas resources.
 - a. The Modeling Team will send the Core Team a description of how price elasticity of demand will be treated following receipt of information from Ken Medlock.
 - b. Until estimates of Canadian unconventional resources are completed in six months, the Modeling Team may use a sensitivity analysis to bracket the impact of unconventional Canadian resources.
 - c. Regarding LNG assumptions, the Modeling Team will examine firm contracts for LNG to check the impact of LNG on prices in 2005 and 2010.
 - d. The Modeling Team will complete the changes to the reference case in the next month.
2. The Core Team will review and comment on the strawman case, including comments on changes needed in the reference case and alternate ways of presenting the data. This feedback will lead to the final reference case.
3. The CEC Modeling Team will incorporate assumptions to the model that reflect the four scenarios recommended by the expert panel last fall.
4. The next presentation to the WIEB Board and CREPC on the status of the Natural Gas Assessment project will be in mid-April.

Next conference call for the Core Team was set for

- **February 16 at 1:30 p.m. Pac./ 2:30 p.m. Mtn.**
 - TO CONNECT TO THE CALL DIAL 973-935-2026.
 - THE PASS CODE IS 311861.