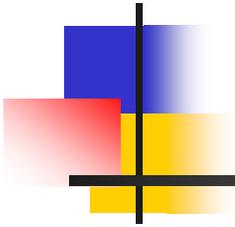


Natural Gas Model Review Status Update



Natural Gas Working Group
California Energy Commission

March 4, 2010

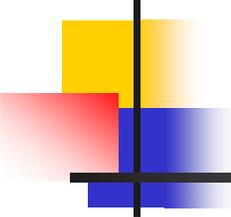
Lana Wong
Electricity Analysis Office
Electricity Supply Analysis Division
LWong@energy.state.ca.us / 916-654-4638



Overview of Natural Gas Model Review Project

- Compliance with 2007 IEPR that directs staff to evaluate natural gas analytical methods and model(s)
- Develop, implement, and document a Feasibility Study Requirement-equivalent model evaluation process
- Need to understand how others use our natural gas analysis/products and for what purpose

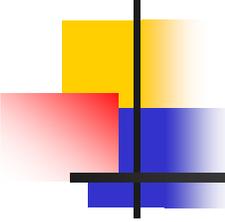




Overview (continued)

- We have two consulting firms assisting us on this project:
 - Aspen Environmental Group
 - Navigant Consulting

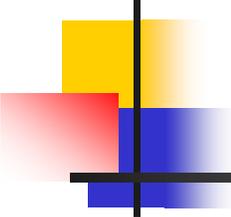




2009 IEPR

- Key points
 - Decided to move away from providing a single point date-specific gas price forecast
 - Looking at providing a range of gas price forecasts in the future
 - Provided multiple gas price forecasts to other offices at the CEC and outside agencies
 - Need to deal with uncertainty

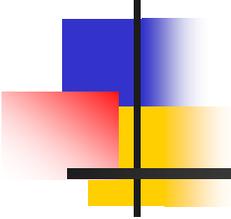




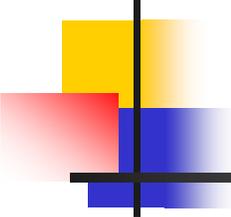
Project Scope of Work

- Identification of High-Priority Purposes for Natural Gas Analytics
- Evaluation of Natural Gas Model Platform
- Natural gas testing and training
 - Field trial of selected platform(s)
- Final selection of model(s)





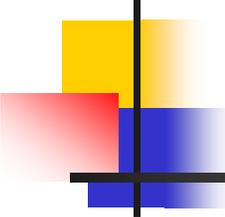
STATUS UPDATE



Identification of High-Priority Purposes for Natural Gas Analytics

- Completed interviews with internal and external stakeholders.
 - Internal stakeholders include electricity analysis, renewables, fuels and transportation, and demand offices. Also, deputy director of electricity supply analysis division and executive director.
 - External stakeholders include PG&E, Sempra utilities, CPUC, and DGS.





Potential Natural Gas Products

Ad Hoc Information Requests

California Gas Report input/observer

Comparative Assessments and Scenario Analysis*

Conversion from CA Border to Burnertip Prices by Class (CA-only)

Forecast Advisor to Other Offices/Agencies

Historical Data Compilation

Lead Natural Gas Working Group

Maps

Plausible Range Coal and Oil Prices Consistent with Gas Price Assumptions*

Plausible Range Infrastructure Needs Assessment*

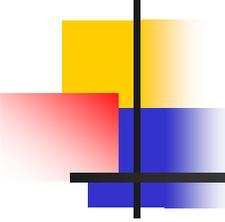
Plausible Range Price and Basis Forecast*

Short-term, Present Trends Explanation

Statewide Independent/Objective Institutional Memory

Typology to Map Regional Gas Prices to Power Plant Dispatch Areas (WECC-wide)

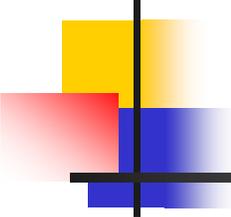




High Priority Products

- Plausible range price and basis forecast
- Plausible range infrastructure needs assessment
- Comparative assessments and scenario analyses





Evaluation Matrix

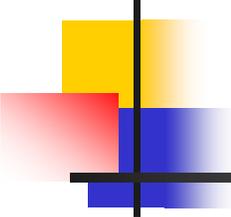
- Completed evaluation matrix with 14 potential natural gas products based on interviews.
- Identified purpose, priority rank, feasibility, model needs, and model evaluation criteria.
- Will use evaluation matrix in the next phase of natural gas model evaluation.



Evaluation of Natural Gas Model Platforms

- Navigant is working on evaluating 3 different natural gas model platforms.
 - Altos Management – North American Regional Gas (NARG) Model
 - RBAC – GPCM Natural Gas Market Forecasting System
 - ICF International's, Gas Market Model (GMM)





Project Timeline

- Evaluation of the natural gas model platforms should be completed by April 30, 2010.
- Natural gas testing and training of short list of the models will take place between May 1, 2010 and Nov. 1, 2010.
- Final selection by Nov. 1, 2010 (or earlier)

