Joint IEPR and Electricity & Natural Gas Committee

3/10/09 CEC Workshop

NATURAL GAS PROCUREMENT AND HEDGING

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SMUD FACTS

• 6th largest municipal utility in the U.S.
• Serves over 600,000 customers for electric service only.
• As a municipal utility, SMUD is owned by its customers, therefore, interests align 100%.
• Goal: Provide reliable service at reasonable and stable rates.
SMUD Resource Mix

Forecast of 2009 Resource Mix (MWh)

- Annual retail revenue of $1.3 billion
- Annual power & gas budget of over $600 million
Gas Prices

HH & PGE CITYGATE Settlement Prices 2001-2008

Notes:
Prices are the average of the daily data for each month
Source: Gas Daily
Gas Hedging

Objective: Increase financial certainty by stabilizing cost, where
Cost = Price x Volume

Action: Reduce open positions by locking in price
Comparison of Gas Procurement Strategies

HH Gas Prices

- Spot Price Strategy
- Average Annual Spot Price
- Buy 12 Months Forward Strategy

$/MMBTU

Jan-99  May-99  Sep-99  Jan-00  May-00  Sep-00  Jan-01  May-01  Sep-01  Jan-02  May-02  Sep-02  Jan-03  May-03  Sep-03  Jan-04  May-04  Sep-04  Jan-05  May-05  Sep-05  Jan-06  May-06  Sep-06  Jan-07  May-07  Sep-07  Jan-08  May-08  Sep-08  Jan-09
Hedging Instruments

- Physical and financial
- Multi-year / seasonal purchases
- Storage injection / withdrawal
- Gas reserves
Key Considerations and Challenges

• Balance between price certainty and cost

• Collateral Requirements

• Default Risk

• Accounting Treatment and Reporting
Policy Issue: Balance between Price certainty and cost

Price Certainty
• Cost stability/predictability may be favored for household and business budgeting

• Economy of Scale to hedge
  – A few large customers have the capability to do so independently
  – Most small commercial and residential customers will not have the necessary capability
Policy Issue: Balance between Price certainty and cost

Cost

- Hedging has a cost
- Acts like an insurance policy by limiting cost exposure
- Is not intended to represent the lowest cost alternative
Collateral Requirements

Significant collateral/margin calls could be made as a result of marking-to-market (MtM) forward positions with counter parties.

Examples:
- Fixed price forward purchase and prices decline
- Fixed price forward sale and prices rise
Mitigation Factors for Collateral Requirements

- Tiered credit limits
- Netting arrangements
- Counterparty diversification – minimize risk concentration
- Strong balance sheet
- Liquidity facilities including Letters of Credit, non-clearing house (NYMEX) transactions; which could be costly
- Diligent modeling and stress testing
Default Risk

• Counterparty financial weakness
  – Longer term transactions - more time for potential counterparty credit deterioration
  – Market turbulence
Mitigation Factors for Default Risk

• Contractual protection – termination rights

• Collateral Requirements

• Limit setting

• Diligent Monitoring of credit
Accounting treatment and reporting requirements

- FASB and GASB – fair valuation and effectiveness testing of hedges determines impact on income statement.

- Use of standard products, independent forward price forecasts, and the matching of hedge terms with the risk to be hedged can lessen effort.
Q&A