

Joint IEPR and Electricity & Natural Gas Committee

3/10/09 CEC Workshop

**NATURAL GAS PROCUREMENT
AND HEDGING**

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SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT

The Power To Do More.SM



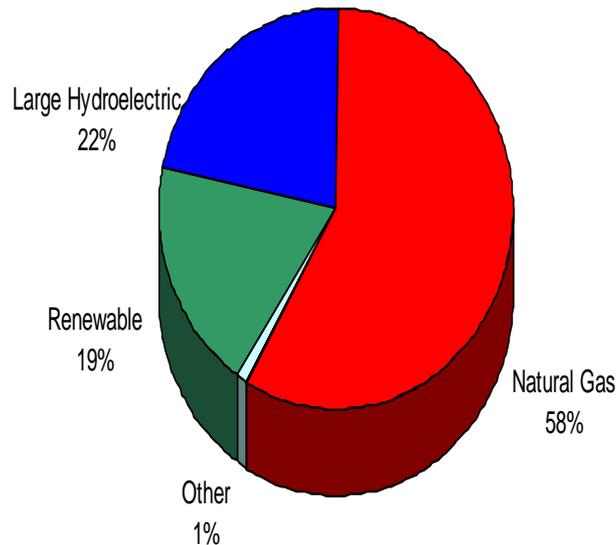
SMUD FACTS

- 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

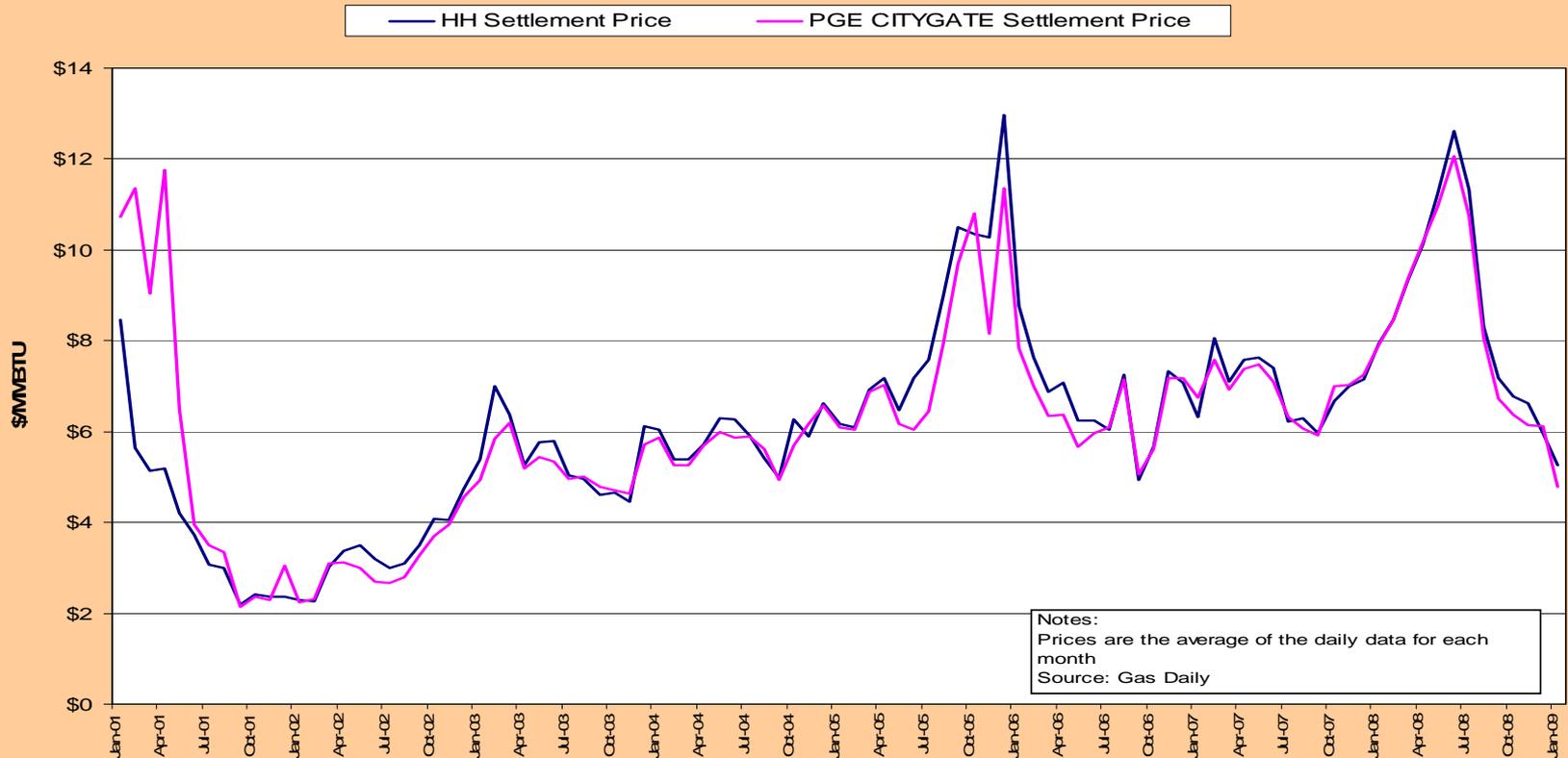
Forecast of 2009 Resource Mix (MWh)



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

Gas Prices

HH & PGE CITYGATE Settlement Prices 2001-2008



Gas Hedging

Objective: Increase financial certainty by stabilizing cost, where

$$\text{Cost} = \text{Price} \times \text{Volume}$$

Action: Reduce open positions by locking in price



Comparison of Gas Procurement Strategies

HH Gas Prices



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

