California’s Natural Gas Context

Supply/Demand Outlook and Concerns for this Winter

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Presentation Topics

- Background facts about natural gas in the US and California
- Why prices will be higher this winter
- Impacts of higher prices on consumers
- What’s being done to cushion the impact
California’s NG Outlook

- Good news:
  - Current reliability good
  - Recent infrastructure improvements help
  - Current NG storage inventories good
  - Broad public energy dialogue more focused on NG issues
  - CA has aggressive energy efficiency and renewable programs
  - CA NG R&D program is helping
  - Greater NG use has helped “clear the air”
California’s NG Outlook

• Bad news:
  □ NG prices are much higher than before
  □ Prices will be even higher this winter
  □ NG is the dominant fuel for power plants
    ◆ Up to 50% of generation
  □ CA imports 87% of its NG
  □ CA is at the end of the pipeline
  □ CA competes with all other major US markets for NG
  □ The US long term supply/demand balance outlook is pessimistic
California NG Storage Inventories

- Capacity
- Inventories
- Average inventories over the previous five years

Beginning of the month levels, unless otherwise indicated. California Energy Commission estimate
Current U.S. Natural Gas Storage Capacity: 3,294 Billion Cubic Feet; Sources: EIA
US NG Supply Forecast
by US DOE

Trillion Cubic Feet

- U.S. Natural Gas Liquefied Natural Gas Imports
- U.S. Natural Gas Pipeline Imports
- U.S. Natural Gas Production

Years: 2005 to 2025
California Energy

Source: IHS Energy Group.
CA Efficiency Gains

Billion Cubic Feet and 10,000 Customers

Residential customers (left axis)
Residential natural gas consumption (left axis)
Natural gas consumption per residential customer (right axis)
California NG Demand Projection

- Power Generation
- Industrial Demand
- Commercial Demand
- Residential Demand

Year: 2006 to 2016

Million Cubic Feet Per Day

- 7000
- 6000
- 5000
- 4000
- 3000
- 2000
- 1000
- 0

Million Cubic Feet Per Day Projection for California Natural Gas (NG) Demand from 2006 to 2016.
2004 Natural Gas Use in California

- Residential: 22%
  - Space Heating: 44%
  - Water Heating: 44%
  - Cooking: 7%
  - Clothes Dryers: 3%
- Industrial: 18%
- Commercial: 9%
- Transportation: less than 1%
- Electrical Generation: 50%
Effects of Hurricanes on Future Prices

Futures Trading Dates
2005$/Mmbtu

29-Jun-05 (Pre-Katrina)
22-Aug-05 (Just before Katrina)
06-Sep-05 (After Katrina)
16-Sep-05 (Before Rita)
27-Sep-05 (After Rita)
Future Contract Price Trends
CA Utilities Weighted Average Cost of Gas

Weighted Average Cost of Gas (WACOG): the weighted average cost of gas (commodity) and interstate pipeline volumetric charges.
Prices Around the US

- HH
- Chicago
- NY
- FL
- PGE-Malin
- SCG avg
Price Projection for Residential Customers

2004$/Mcf

PG&E
SoCalGas
SDG&E
Natural Gas Commodity Costs to California Consumers in $Billions

- 1996: $2.0
- 1997: $4.0
- 1998: $6.0
- 1999: $8.0
- 2000: $10.0
- 2001: $18.0
- 2002: $12.0
- 2003: $14.0
- 2004: $10.0
- 2005 (Est): $19.9

Years: 1996 to 2005
CA Consumers’ Cost of NG

- At $5/mmBtu, Californian’s pay about $11 billion for just the molecules.
- At $10/mmBtu, Californian’s pay about $22 billion for the molecules.
- Actions that result in a 10% savings will keep an extra $1-2 billion in our state.
California’s Energy Policy

- Governor’s energy policy priorities 2005
  - Aug 23 response to 2003/20054 IEPR
- Energy Action Plan II
  - Loading Order
Broad Policy Priorities

- Energy efficiency—NG programs
- Energy efficiency—NG standards
- Energy efficiency—electric
- Renewable electric energy programs
- Distributed generation
- Increase fuel type diversity
- Increase fuel supply diversity
- Additional NG infrastructure
Policies on NG

- Increase energy efficiency efforts
- Diversify sources of supply
- Develop alternative supplies
  - Biogas from ag operations
  - Landfill gas
  - Instate stranded gas
- Support molecules from LNG on West Coast
What Can Residential Consumers Do?

- Turn down your thermostat to 68 degrees
- Replace or clean furnace filters once a month
- Reduce hot water temperature
- Seal up the leaks
- Consider replacing your old gas appliances with an ENERGY STAR® water heater or furnace
- For more tips check the web at
  - [www.energy.ca.gov/consumerfuels/](http://www.energy.ca.gov/consumerfuels/)
Thank you

Questions?