CALIFORNIA’S NATURAL GAS CONTEXT

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Today’s Topics

- California’s unique NG situation
- NG demand
- NG supply
- Options for consideration
California’s Unique NG Situation

- Good news
- Bad news
- Good news
California’s Unique NG Situation

● 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 EE and renewable programs
  □ CA starting new NG R&D program
  □ Greater NG use has helped “clear the air”
California’s Unique NG Situation

- Bad news:
  - NG prices are much higher than before
  - NG is the dominant fuel for power plants
  - CA imports 85% of its NG
  - CA is at the end of the pipeline
  - CA competes with all other major US markets for NG
  - The US supply/demand outlook is pessimistic
California’s Unique NG Situation

- Good news:
  - CA has several options available to it
    - Short term
    - Mid term
    - Long term
  - Policy makers are focused on improving California’s situation
CA NG Demand

California Natural Gas Consumption (by sector)

- Electricity Generation
- Industrial
- Commercial
- Natural Gas Vehicles
- Residential

Trillion Cubic Feet

NG Supply

2003 California Natural Gas Supply
(5,962 MMcfd)

- California: 16%
- Southwest: 39%
- Rocky Mtns: 21%
- Canada: 24%
CA NG Supply Sources
California’s NG Supply System
US NG Prices, Drilling, and Production

Wells Drilled and Wellhead Prices, 1990 to 2003

- **Dry Natural Gas Wells Drilled**
- **Wellhead Price ($/Mcf)**
- **Dry Natural Gas Production (Bcf)**
US Individual Well Productivity Declines

US Well Productivity Declines

Number of Producing Wells vs Natural Gas Well Average Productivity
US NG Production Forecasts

US Natural Gas Production Forecast (Lower 48)
Historical Wellhead Prices in the Lower 48 – Monthly Averages

Year 2000 $ per Mcf

- $1.00
- $2.00
- $3.00
- $4.00
- $5.00
- $6.00
- $7.00
- $8.00

- 1983
- 1984
- 1985
- 1986
- 1987
- 1988
- 1989
- 1990
- 1991
- 1992
- 1993
- 1994
- 1995
- 1996
- 1997
- 1998
- 1999
- 2000
- 2001
- 2002
CA Cost of NG

Cents/Therms

SoCalGas Core Procurement Rate
PG&E Core Procurement Rate
CA Consumers’ Cost of NG

$ (Billions)

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CA Consumers’ Cost of NG

- At $5/mmBtu, California’s pay about $11 billion for just the commodity.
- Actions that result in a 10% savings will keep an extra $1 billion in our state.
Options for Consideration

- Energy efficiency—NG programs
- Energy efficiency—NG standards
- Energy efficiency—electric
- Renewable energy programs
- Distributed generation
- New sources of NG supply
- Additional NG infrastructure
Questions?