HARVARD ELECTRICITY POLICY GROUP

Natural Gas and Electricity

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Ron Walter
Executive Vice President
Largest Independent Power Company in North America

Most Modern, Efficient Fleet of Power Generation Assets
  - 87 Plants, 22,130 mw in Operation Today
  - Growing to Over 30,000 mw in 2006

Proved Gas Reserves - 1 tcf

Assets Managed by Calpine Energy Services
  - 3.4% of U.S. Electrical Consumption
  - 3% of U.S. Natural Gas Supply
CALPINE’S GROWING PORTFOLIO

Net Megawatts

Assumes No New Projects
CALPINE’S POWER PORTFOLIO

In Operation

87

Under Construction

13

12 - New Projects
1 - Expansion Projects
MOST EFFICIENT NORTH AMERICAN POWER GENERATION FLEET

Combined-Cycle Megawatts By Company

- **Calpine** (2)
- **Duke** (2)
- **FPL** (1)
- **FPL** (2)
- **Southern** (2)
- **Xcel** (2)
- **Southern** (1)
- **Progress** (1)
- **Exelon** (2)

(1) Regulated  (2) Non-Regulated
Source: Company Data
Natural Gas Will Remain the Fuel of Choice for Power Generation
THE PRICE OF NATURAL GAS WILL BE REASONABLE

- Responds Well to Market Forces
- Spot Prices vs. Long-Term Prices
- Expected Range of Prices
  - < $2.50/mmbtu - No New Investment
  - > $5.00/mmbtu - New Supply
- Calpine Strategy to Manage Price Risk
THE SUPPLY OF NATURAL GAS WILL REMAIN SUFFICIENT

- Proven Reserves Don’t Tell the Whole Story
- 2003 Report of Potential Gas Committee
  - 1,311 Trillion Cubic Feet
  - 65X Annual Production Rate
  - 3.3% Increase in Supply From 2000
- New Supply
  - Eastern Canada
  - Deep Gulf
  - MacKenzie Delta
  - Alaska
  - LNG
- LNG
  - Large World Resource Base
  - U.S. Deliverability
    - 1 bcf 2003
    - 4 bcf 2004
    - 9 bcf 2007
New Natural Gas-Fired Plants are 40% More Efficient

During the Height of the New Power Plant Additions January 2002 - January 2003
  - Megawatt-Hours Increased by 8%
  - Gas Consumption Increased by 2%

Less Efficient Plants are Being Displaced / Retired
ENVIRONMENTAL BENEFITS OF NATURAL GAS

- Lower Air Emissions
  - 98.7% Less NOx Than Coal
  - 99.9% Less SO2
  - 65% Less CO2
  - 100% Less Mercury

- Lower Land Use

- 40% - 60% Lower Water Consumption

- Reduces Global Warming
MARKET FORCES ARE BEST DRIVER FOR CHOICES ON FUEL USE

- Government Intervention Has Not Been Successful
  - Nuclear Energy
  - Fuel Use Act
  - Clean Coal
  - Renewable Standards

- Economics and Environmental Considerations Should Shape Fuel Use

- Supply and Price of Natural Gas Will Best be Moderated by Market Forces