



March 2, 2004

# HARVARD ELECTRICITY POLICY GROUP

## Natural Gas and Electricity



Ron Walter  
Executive Vice President



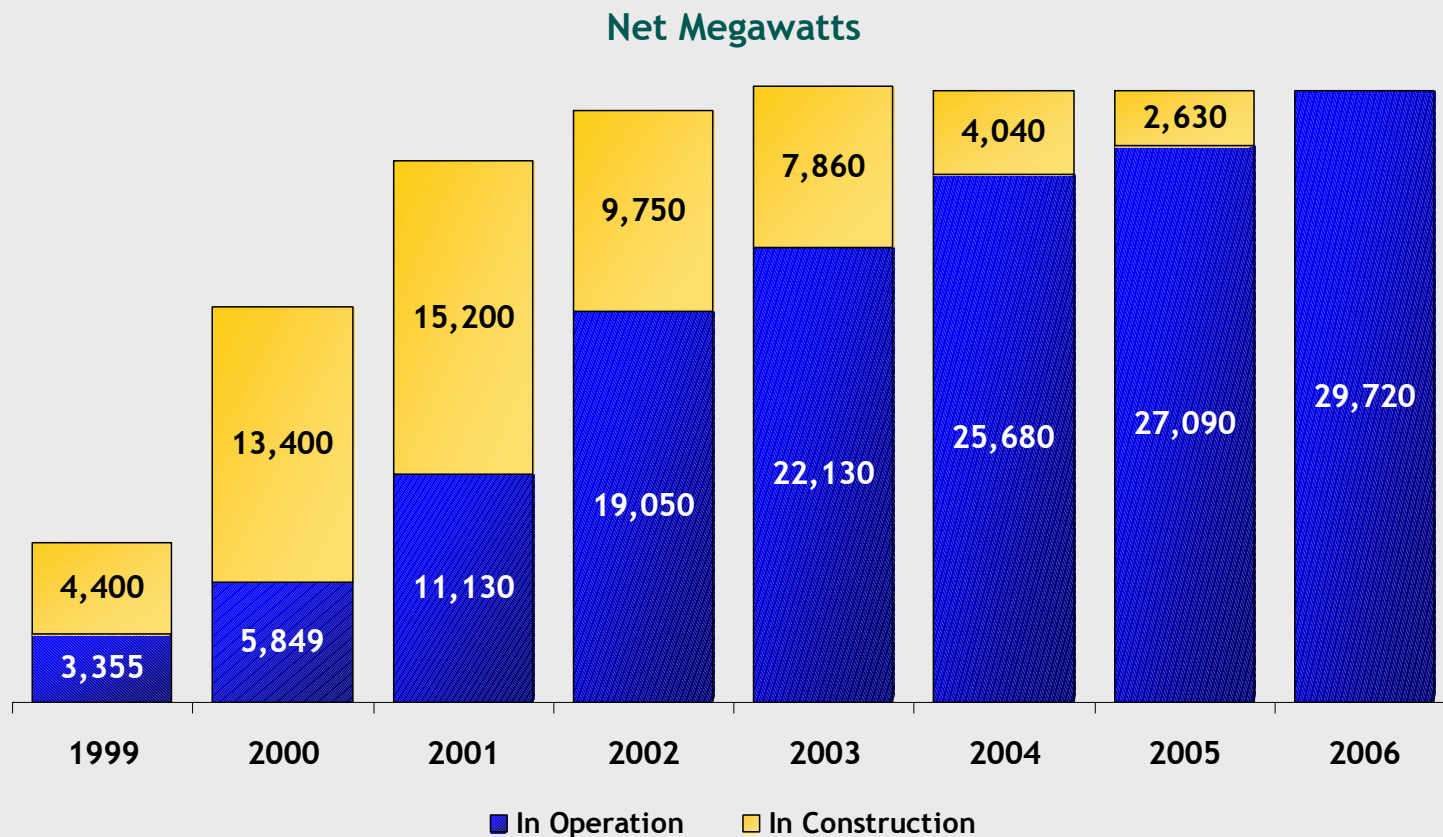
# CALPINE CORPORATION — THE FIRST 20 YEARS



- 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

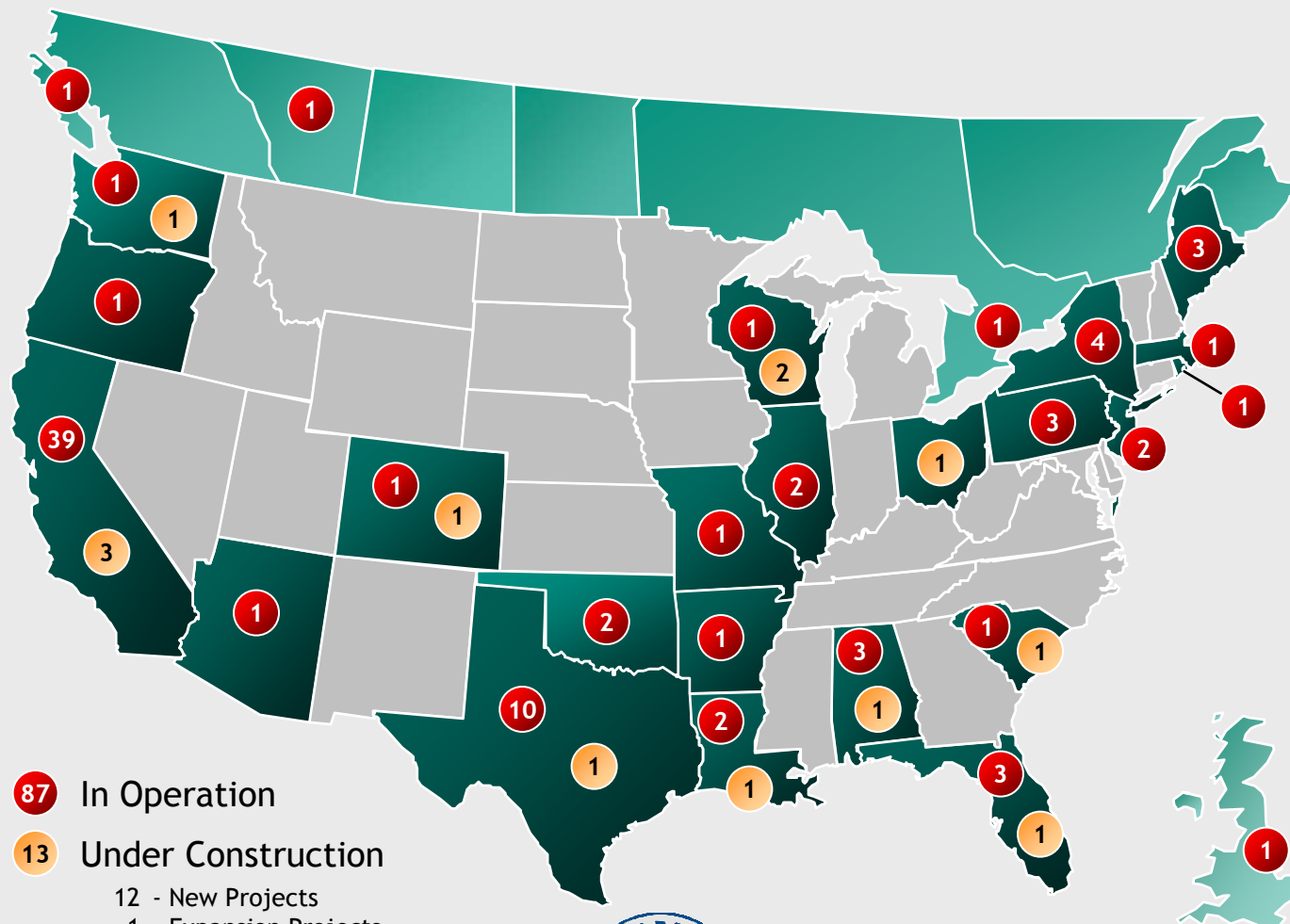


Assumes No New Projects





# CALPINE'S POWER PORTFOLIO

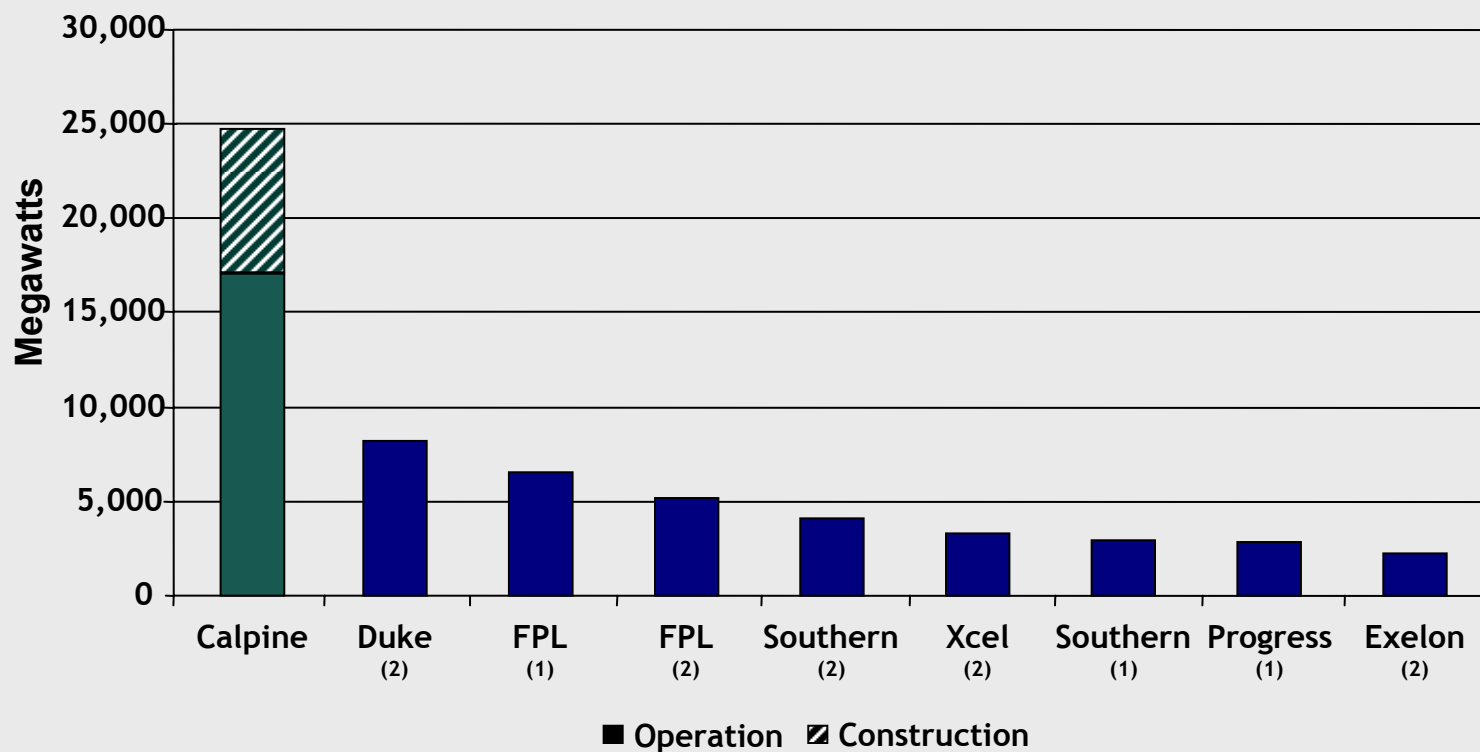


**87** In Operation  
**13** Under Construction  
12 - New Projects  
1 - Expansion Projects



# MOST EFFICIENT NORTH AMERICAN POWER GENERATION FLEET

## Combined-Cycle Megawatts By Company

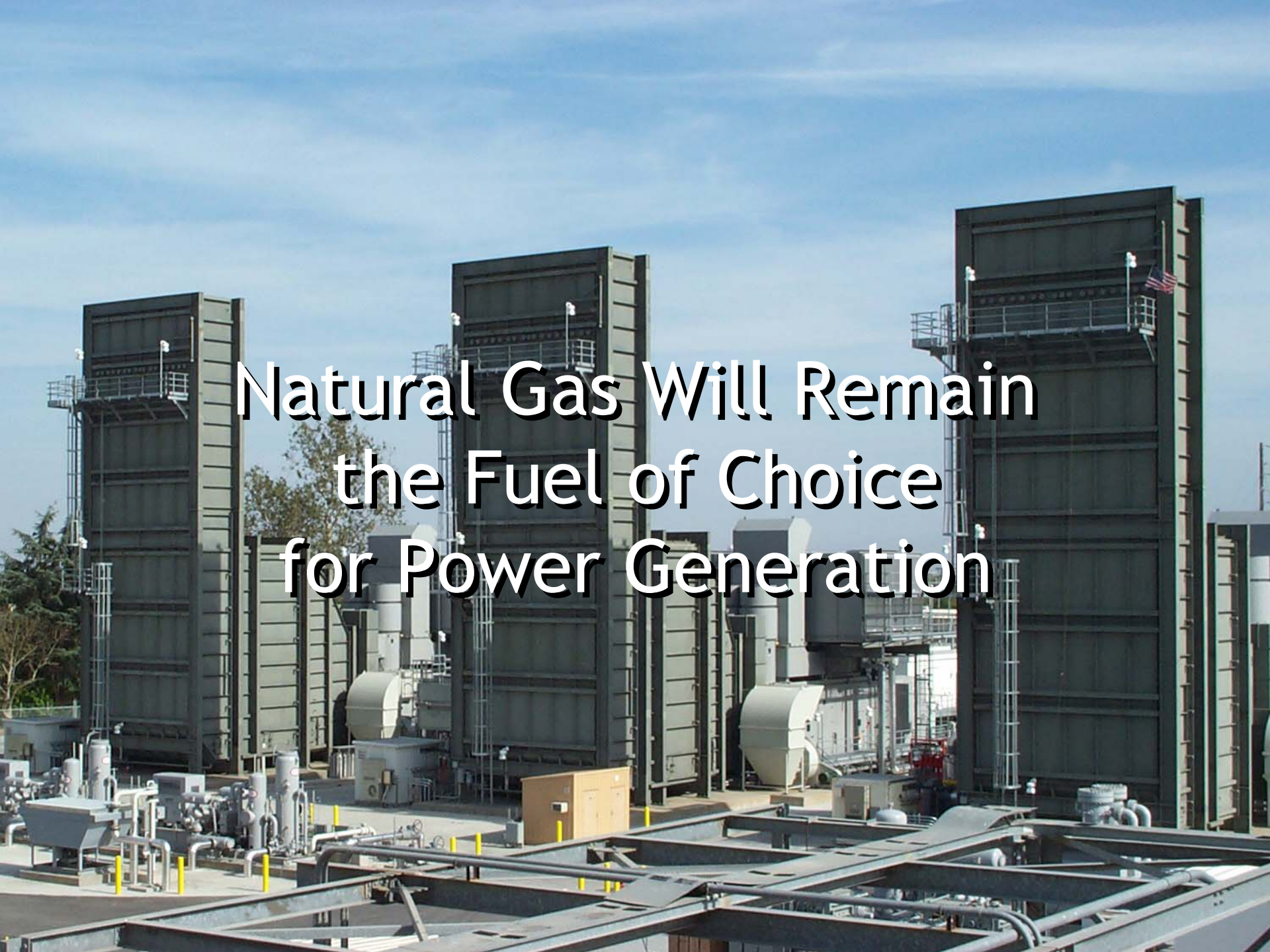


(1) Regulated    (2) Non-Regulated

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





# NATURAL GAS CONSUMPTION FOR POWER GENERATION GROWING MODESTLY

- 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 NO<sub>x</sub> Than Coal
  - 99.9% Less SO<sub>2</sub>
  - 65% Less CO<sub>2</sub>
  - 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

