



ENERGY MARKETS IN TURMOIL

MAY 17, 2001

PRESENTED TO THE

**INSTITUTE FOR
REGULATORY POLICY
STUDIES**



ENERGY MARKETS IN TURMOIL

May 17, 2001

OUTLINE

- 1 - NATURAL GAS WINTER 2000/2001 REVIEW
- 2 - WHY USE RISK MANAGEMENT
- 3 - HEDGING OBJECTIVES FOR THE ENERGY INDUSTRY



SECTION 1

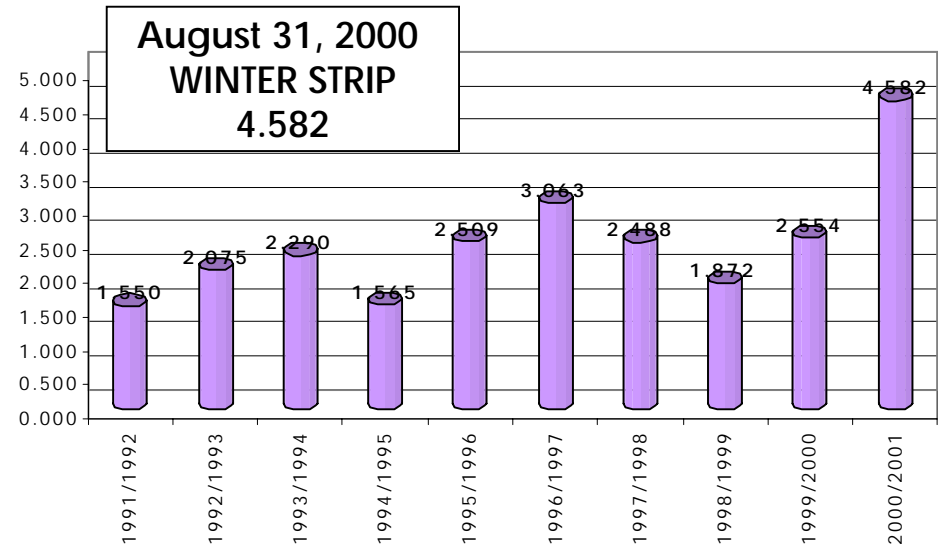
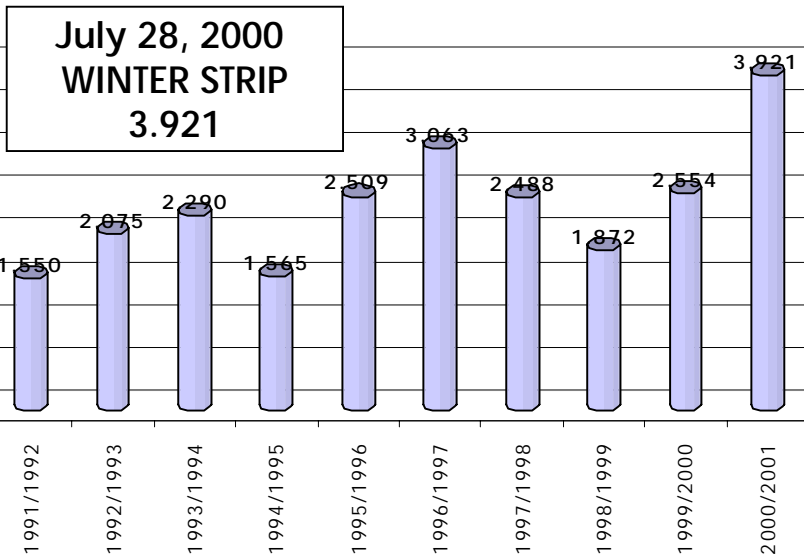
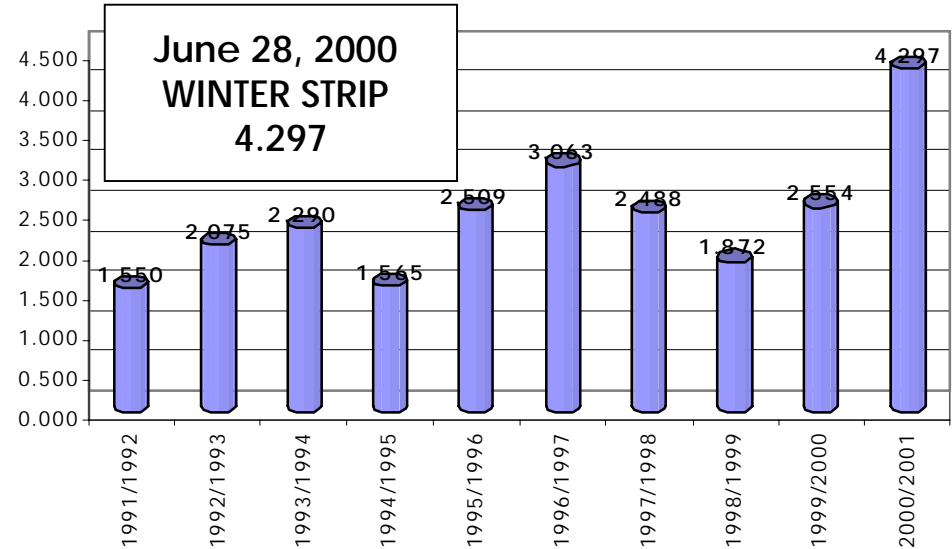
Natural Gas Winter 2000/2001 Review



WINTER STRIP VALUES REVIEW

WINTER STRIP VALUES

Winter strip values for the 3 summer months averaged 4.27, 27 cents higher than the previous NYMEX all time high monthly close of 3.998

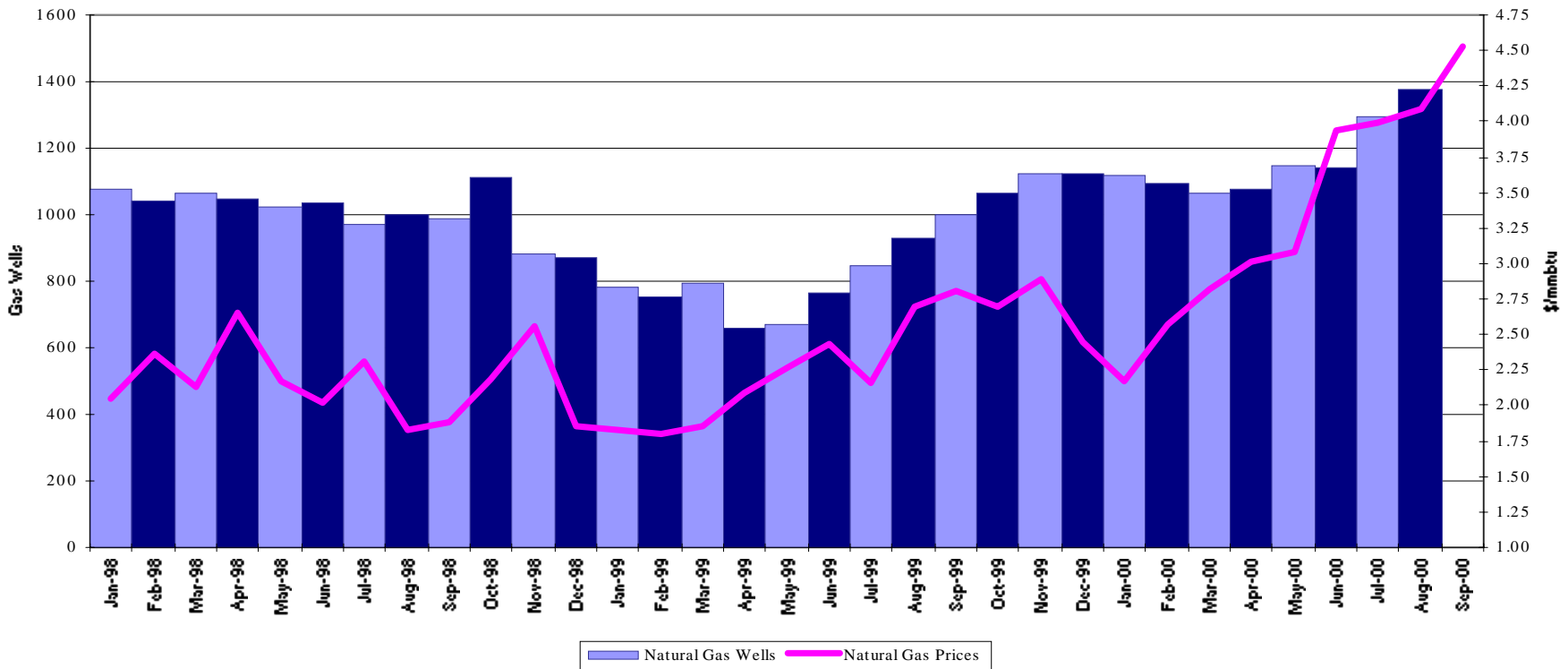


GAS PRODUCTION REVIEW

NATURAL GAS SUPPLY

Natural Gas wells figures reached record level highs as a direct result of skyrocketing prices

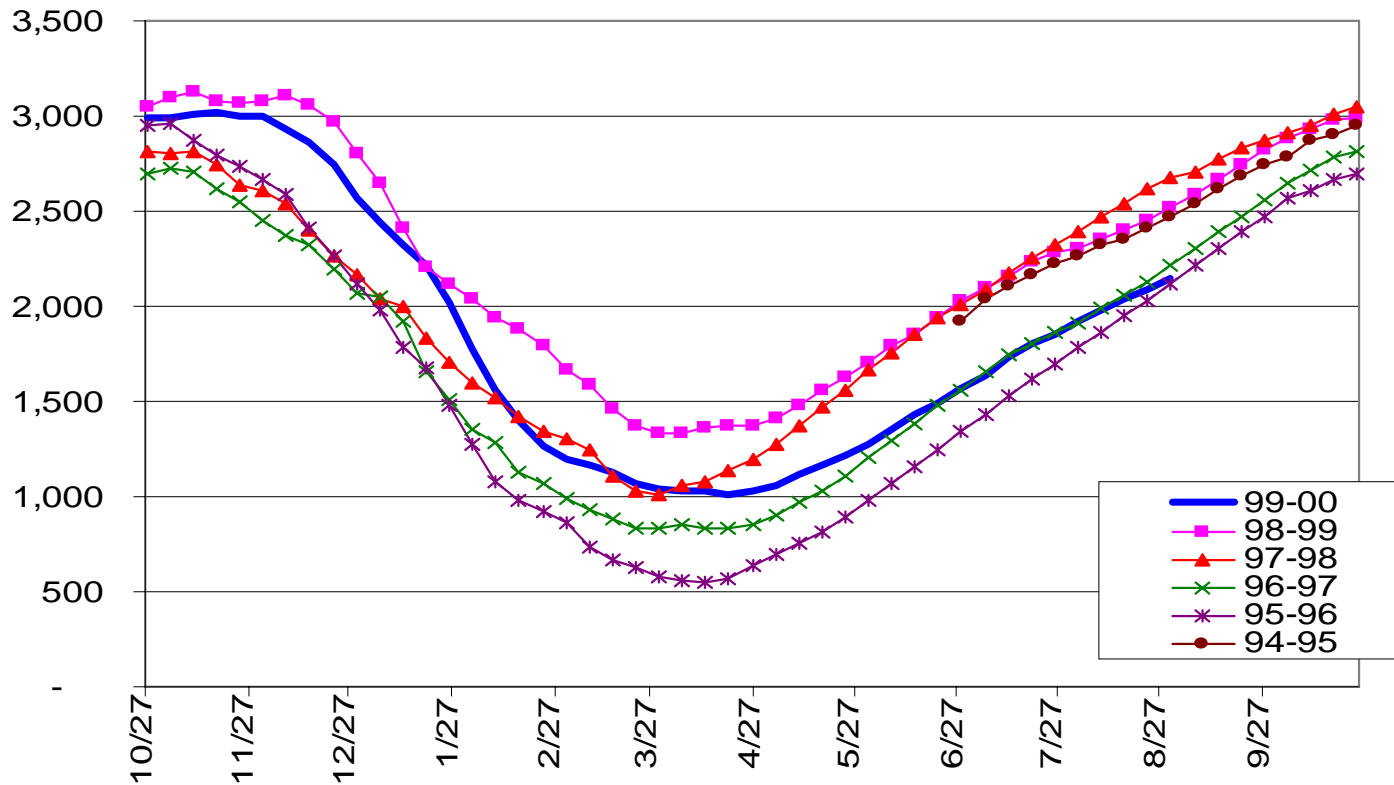
MONTHLY US NATURAL GAS WELLS vs NATURAL GAS 12-MONTH STRIP



GAS STORAGE REVIEW

NATURAL GAS STORAGE

Natural gas storage, while well behind the previous three injection years, was still above mid-1990 injection rates.

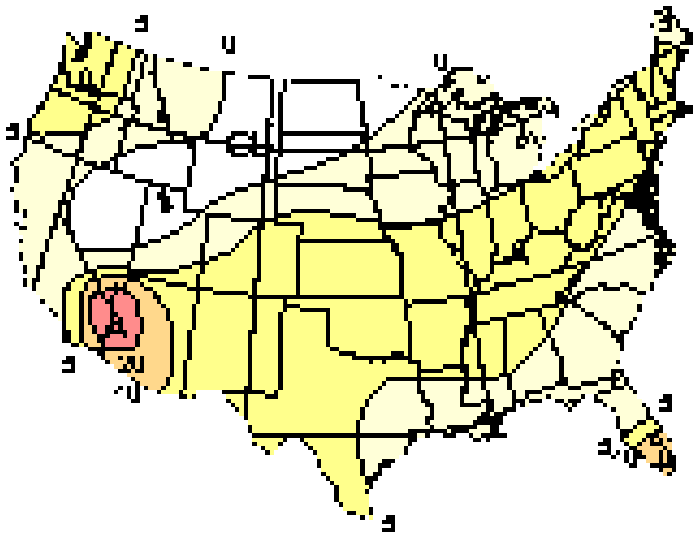


WEATHER REVIEW

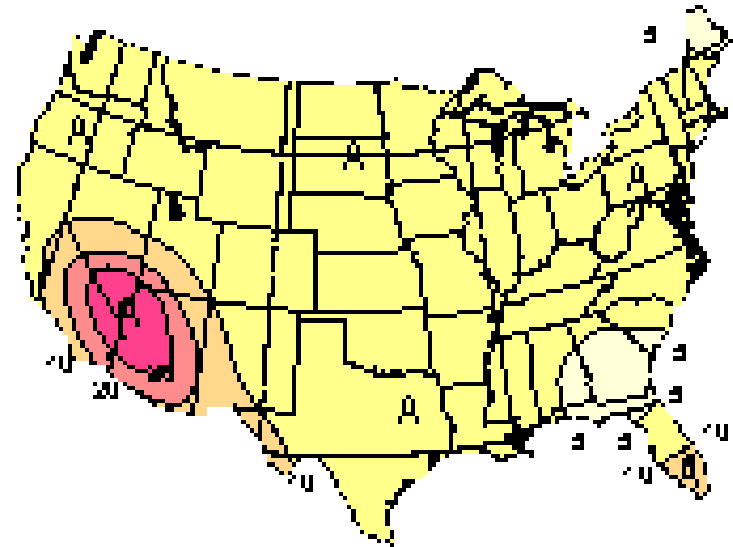
NATURAL GAS DEMAND

In July of 2000, the National Weather Forecast was calling for an above normal winter, indicating demand should remain manageable.

Climate Outlook Temperature November - January 2001



Climate Outlook Temperature January - March 2001



SECTION 2

Why Use Risk Management



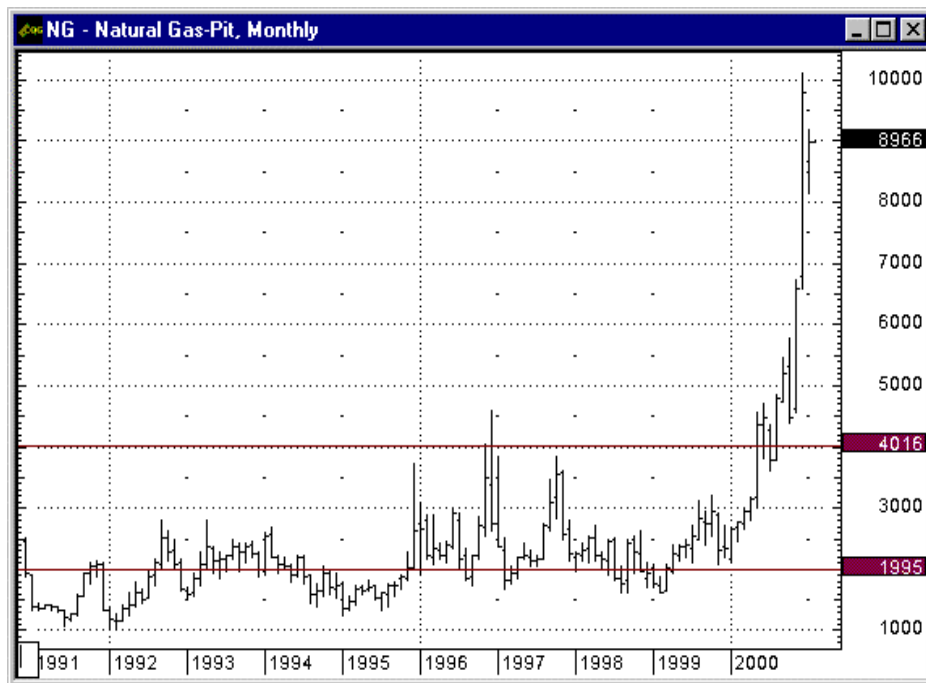
RISK MANAGEMENT

WHAT IS RISK MANAGEMENT?

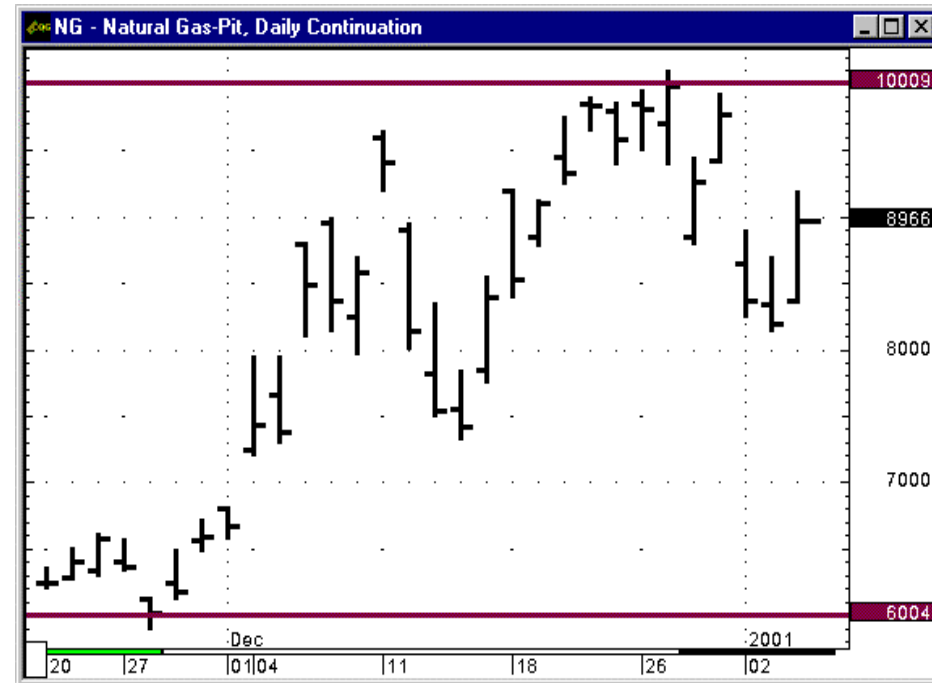
- ◆ Identifying, controlling, and minimizing exposure to adverse energy commodity price movement through utilization of financial instruments.

1996 - 2000
4-Year Range \$2.00

December 2000
1-Month Range \$4.00



CQG ©1998



CQG ©1998



PRICING ALTERNATIVES

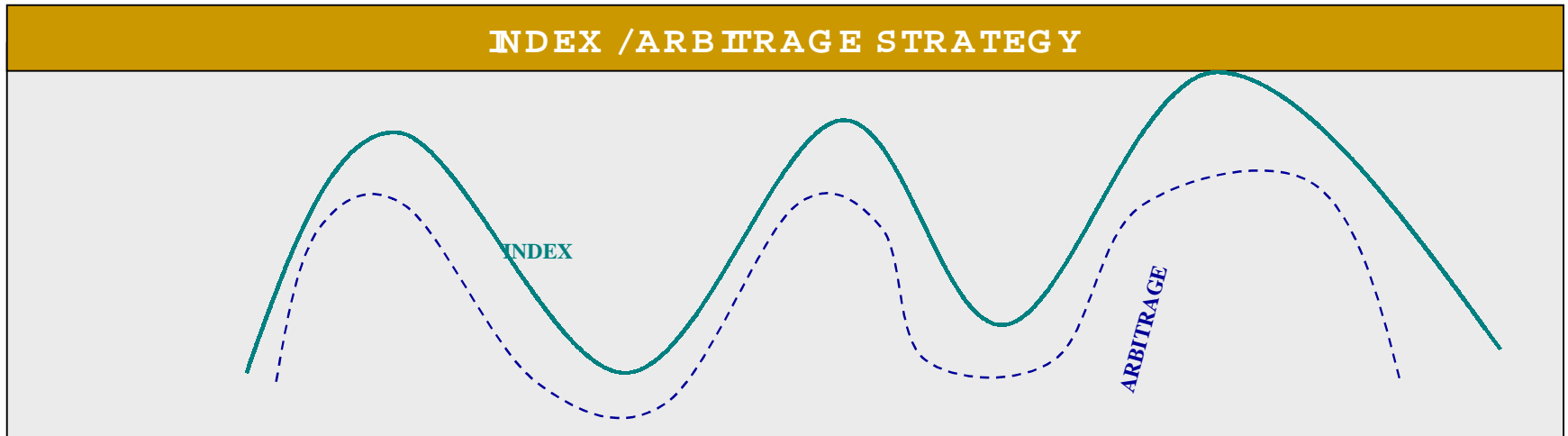
If we could guarantee price below index **AND** guarantee a reasonable cap, guess where we'd be now ...



FIX PRICE OR FLOAT INDEX ?

INDEX PRICING

- ❖ The buyer or seller will fix the price at a monthly/daily index based on a posted cash price or Nymex price
- ❖ Currently the commonly used pricing mechanism for many regulated energy providers
- ❖ A viable pricing tool for energy purchases when prices are at extremely high levels or energy sales when prices are at extremely low levels
- ❖ Rationale behind index pricing is to avoid fixed pricing that results in a loss

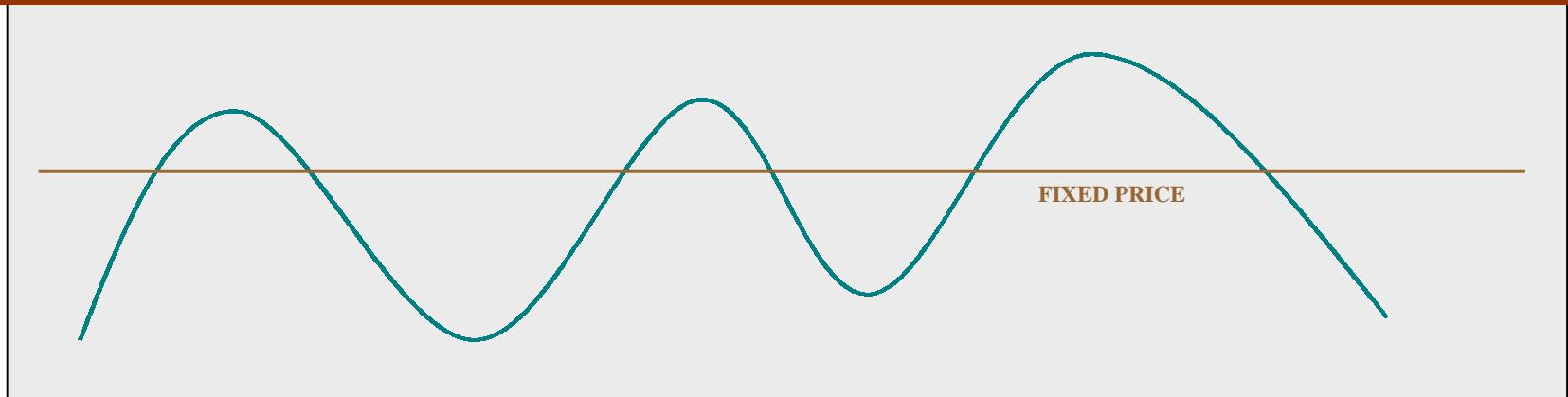


FIX PRICE OR FLOAT INDEX ?

FIXED PRICING

- ❖ A company will fix prices for multiple months or seasons up to several years.
- ❖ Short-term fixed-price contracts are attractive when a company wants to lock in prices during volatile price periods such as winter or shoulder months.
- ❖ The price of the contract may be structured so the cost is the same each year so there is a base price with a yearly escalator.
- ❖ A long-term fixed price contract is attractive when prices are at extremely low levels that are not expected to hold for a long period of time.

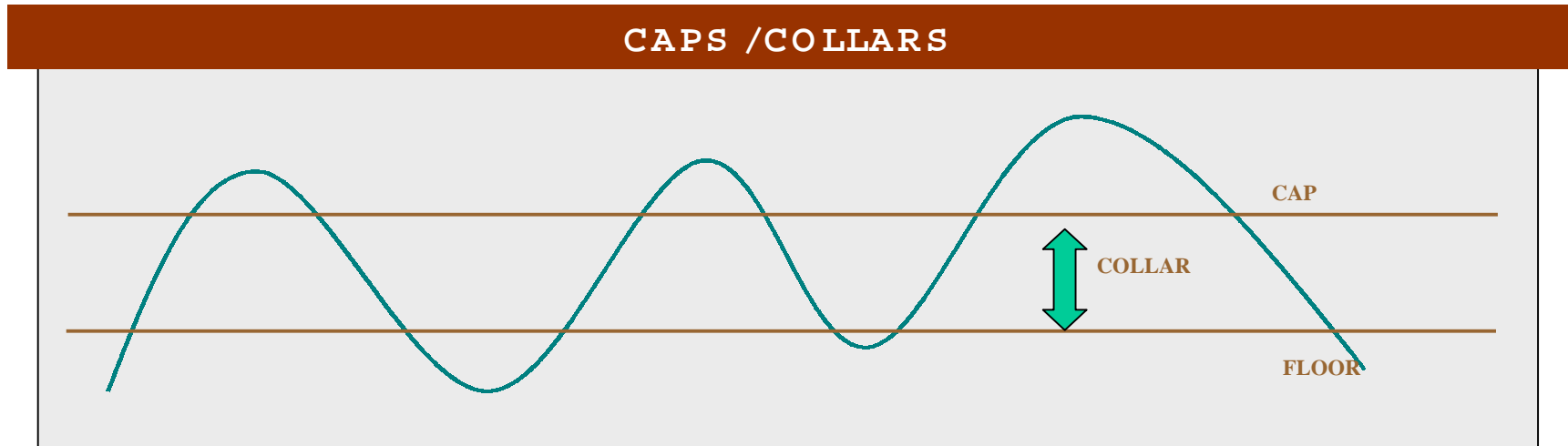
FIXED PRICING /RATE FREEZE



FIX PRICE OR FLOAT INDEX ?

OPTIONS - CAPS / COLLARS / FLOORS

- ❖ A cap gives a buyer the option of purchasing energy at a predetermined strike level without the obligation of buying at that level. For this protection, the buyer pays a premium similar to an insurance payment.
- ❖ A collar gives the buyer an obligation and an option at the outer range of two prices. If market prices rise above the high price strike, the buyer is protected at that price. If prices fall through the low price, the buyer accepts the lower price. The high and low price are sometimes referred to as a cap and floor. If prices fall between the high and low price so that neither party exercises its options, the buyer purchases energy at the market price.



NATURAL GAS HEDGING OBJECTIVES

<u>GOALS</u>	<u>PRICING STRATEGY</u>
<i>Market Sensitive Price</i>	Index Pricing
<i>Guaranteed Price</i>	Fixed Pricing
<i>Price Stability</i>	Cap Pricing

MARKET SENSITIVE PRICE + PRICE STABILITY

REQUIRES

INDEX PRICING, FIXED PRICING, CAPS & COLLARS

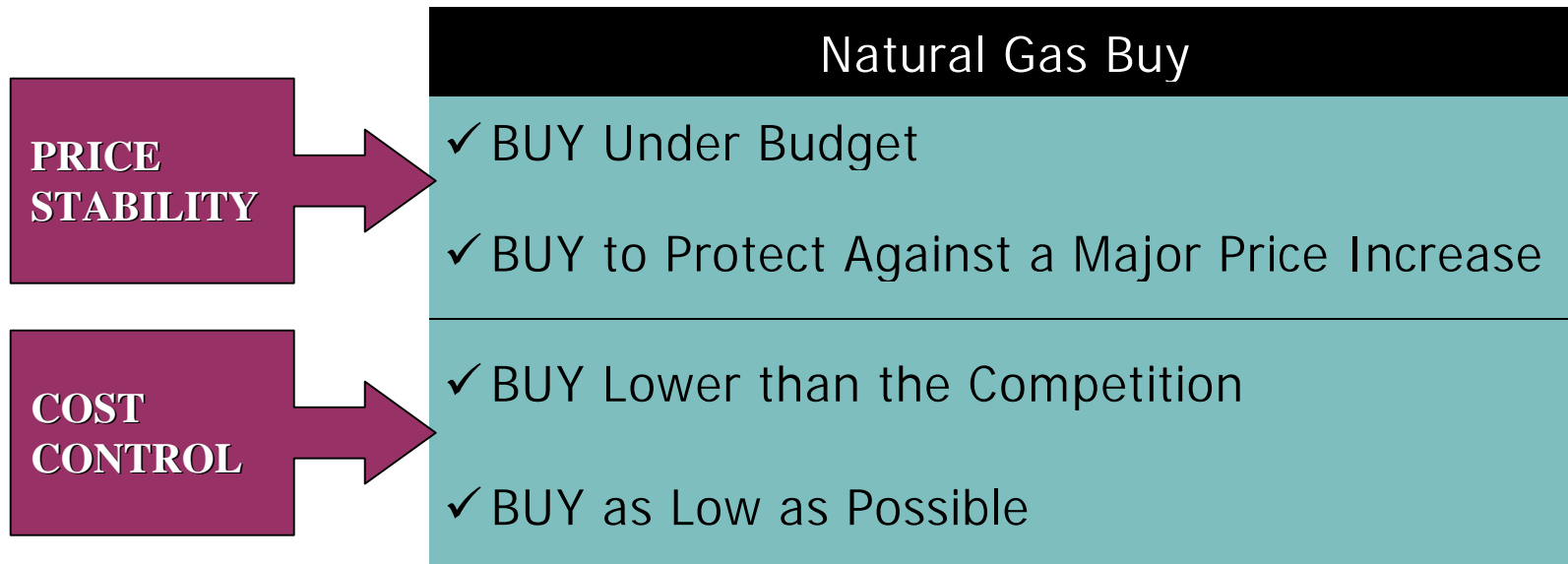


SECTION 3

Hedging Objectives For The Energy Industry



RISK MANAGEMENT PROGRAM OBJECTIVES



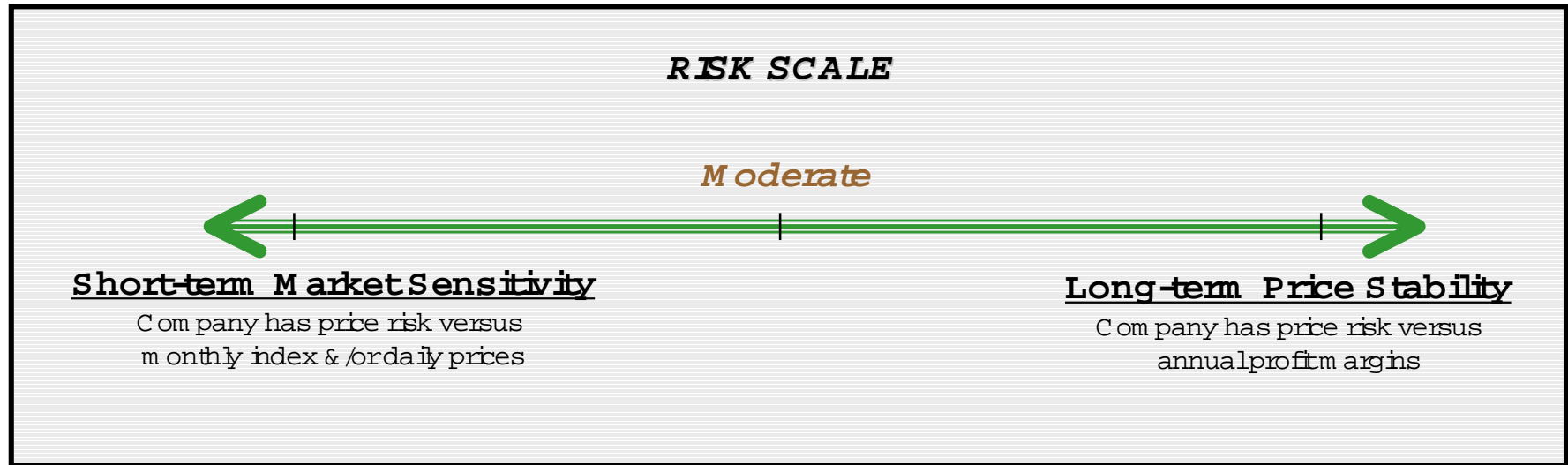
How These Objectives Can Be Achieved:

- ✓ Utilize Market Tools to take Advantage of Market Opportunities
- ✓ Develop a Pricing Plan and Think Ahead

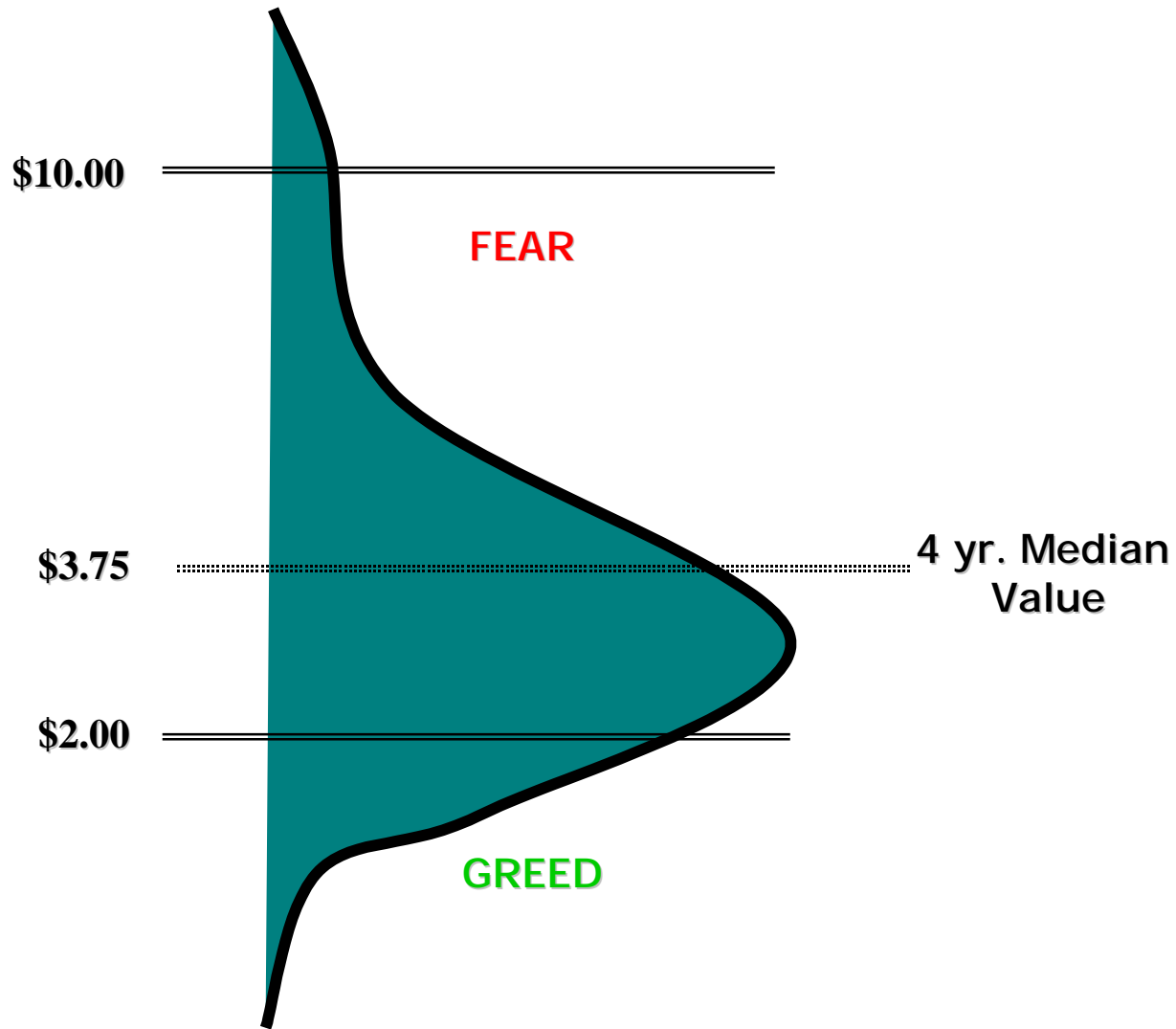
RISK APPETITE FOR ENERGY BUYERS

- ❖ Companies are not homogeneous when it comes to risk tolerances and risk profiles.
- ❖ Many utilities still need to be tied to month-to-month prices, while other corporations or municipalities want and need the security of stable pricing, regardless of current values.
- ❖ The overall company risk strategy will influence how aggressive the organization will be when it comes time to set budget objectives for raw commodity prices.

REGULATED VERSUS INDUSTRIAL

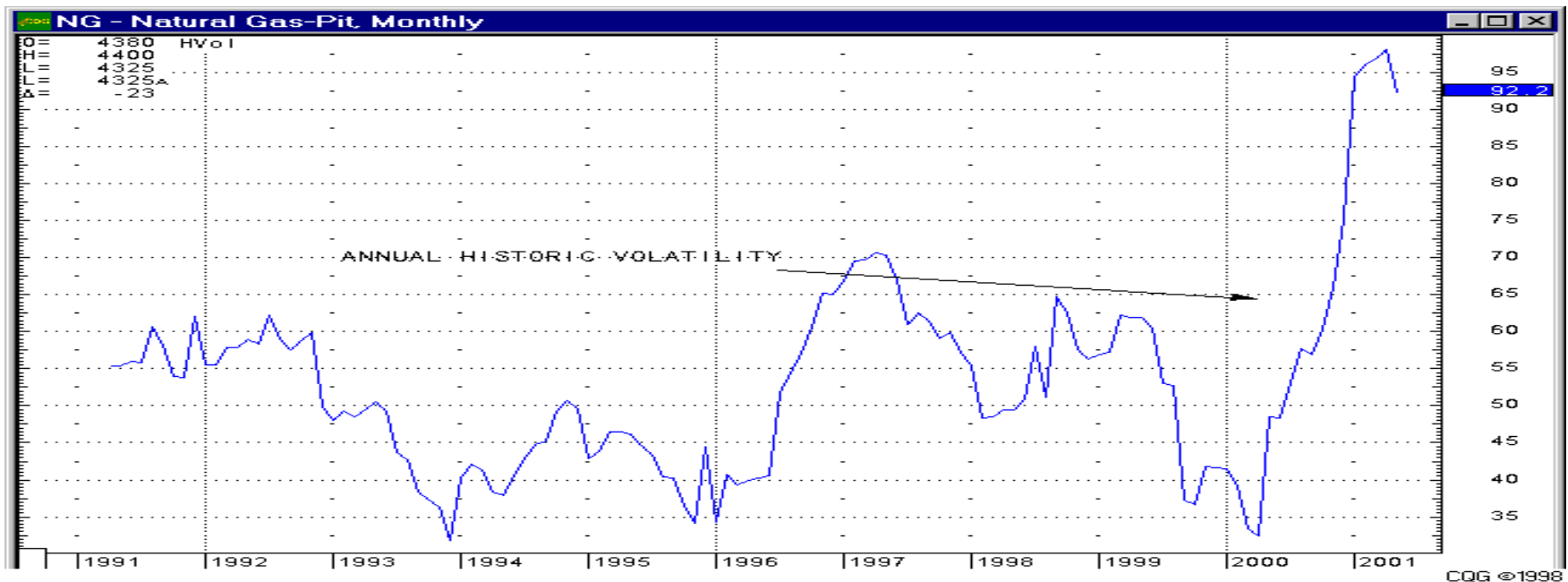


RISK APPETITE FOR ENERGY BUYERS



OPTION VOLATILITY ANALYSIS

- ◆ Historical Volatility measures the market's past volatility.
- ◆ It is defined as the standard deviation of a series of price changes measured at regular intervals.
- ◆ It can be used in conjunction with Implied Volatility to gauge how the market's current expectations differ from history
-
- ◆ Annual historic volatility is tuming down for the first time since early last year



KEYS TO SUCCESSFUL HEDGING

- ◆ Recognize the Importance of the Hedging Program to the Bottom Line
- ◆ Define Specific Program Objectives
- ◆ Develop a Hedging Strategy
- ◆ Maintain Structure and Discipline
- ◆ Formulate a Continuing Education Program
- ◆ Practice Proper Interpretation of Hedge Results

