



# Gas Buying Strategies – Introduction or Intermediate

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# What Are You More Afraid Of ?

Establishing a fixed energy price now and then watching gas prices fall?

Not establishing a fixed energy price and watching prices rise?

Your answers to these questions will help answer the question: Are You a Conservative or Aggressive Energy Buyer ?

# Building A Winning Energy Strategy Involves Reducing Risk

- “The art of business is managing risk”
  - Always keep in mind... do you want to be Conservative or Aggressive in purchasing energy.
  - Determine how much time to devote to managing energy risk.
    - How much is energy to your companies bottom line?
    - Can your company pass along energy price increases to your customers?
  - How much risk does your company want to take on your energy purchases? Achieve a desired risk profile.
  - Can I accomplish my budget with this hedge? – Don’t lose site of your goals.
- <sup>3</sup>– “ Business is nothing if not a speculative risk”

## Building A Winning Energy Strategy - Who to Turn To

- Energy to Bottom Line – Politics & Importance
- Internal
  - Local - Engineering/Operations, Purchasing, Management
  - Corporate – Energy Manager, Purchasing, CFO, CEO
- External
  - Energy Manager – Post-Enron Lack of Trust Changing?
  - Energy Marketer

# Managing Energy Risk

- Price
- Supply
- Tariff – LDC Balancing
- Weather

# Developing a Price Strategy

- “I want the lowest price...” But, What does that mean?  
The lowest price today could be the highest tomorrow
- Establish Goal
  - Match/Beat Budget
  - Match/Beat Last Year’s Price
  - Establish a Ceiling Price
  - Develop a Portfolio of Options
    - If you “layer in” hedges (25%, 33%, 50%, etc), assuming you are under budget with the first layer(s), you can get more aggressive with the later hedges
- EUSA – Hedge Managed Pool
- Determine Level of Risk Tolerance
- Monitor Market & Act – Change targets if market dictates, but don’t change your buying philosophy

# Price Risk

## – What Are My Price Options?

### BASIC PRICING TOOLS:

- Daily/Monthly Market Pricing – Floating
- Fixed Pricing – NYMEX & Basis (Transport)
  - NYMEX – Last Day or Last 3-Day Settlement
  - NYMEX & Basis - Separately purchased or together
- Peaking/Storage Services

### ADVANCED PRICING TOOLS:

- Ceiling/Floor Pricing - Options
- Guaranteed Savings vs. non-Transport tariff
- Burner-tip Pricing

# Impact of Prices on Profits – Why Buyers/Sellers fix prices

		CHANGE IN PRICES					
		5%	10%	20%	30%	40%	50%
GAS AS % OF EXPENSE	3%	0.002	0.003	0.006	0.009	0.012	0.015
	5%	0.003	0.005	0.010	0.015		0.025
	8%	0.004	0.008	0.016	0.024	0.032	0.040
	10%	0.005	0.010	0.020	0.030	0.040	0.050
	15%		0.015	0.030	0.045	0.060	0.075

# Price: Key Drivers

## FUNDAMENTAL INFLUENCES

- Supply & Demand
- Weather
  - Winter Cold
  - Summer Heat
  - Hurricane Outages
- Interstate Pipeline Capacity
- Storage Levels

## TECHNICAL INFLUENCES

How the market behaves numerically, on charts & graphs.

# Price: Key Drivers

2006

- Jan. NYMEX at \$11.431, Mar. at \$7.112. Storage at 1,695 BCF on 3/30. Peak day at \$25 in Northeast, \$20 in Midwest.
- Warm winter-Cold till mid-Dec
- April NYMEX \$6.65 on 3/6
- Winter 06/07 “strip” at \$9.85
- Rig count at 1,304
- Production still not keeping up with Demand. Fertilizers “on-line” & Ethanol growth. More “general” demand destruction.
- Storage got to 3,440 BCF by 10/31.
- Oil at \$63/barrel

2007

- Jan. NYMEX at \$5.84, Mar. at \$7.55. Storage at 1,500 BCF (?) on 3/30. Peak day at \$60 in Northeast, \$20 in Midwest.
- Warm early winter-Cold after mid-Jan
- April NYMEX \$7.24 on 3/2
- Winter 07/08 “strip” at \$9.01
- Rig count at 1,458
- Production still not keeping up with Demand. TXU only building 3 of 11 coal plants & Ethanol growth. Continued demand destruction.
- Storage should get to 3,300 BCF by 10/31.
- Oil at \$61.64/barrel

# A Fundamental Recap

## A BULLISH POINT OF VIEW

- Cold back-half of the winter “drew-down” storage hard. Created Demand to refill storage.
- We’ve seen the lows for the year?
- LNG not here in great amounts, yet. Not a savior.
- Oil is at \$61/barrel due to production area unrest – keeping “Floor” on Gas prices.
- Fear of hot summer–gas-fired electricity generation & More Hurricanes in summer/fall – La Nina developing?

# A Fundamental Recap - continued

## A BEARISH POINT OF VIEW

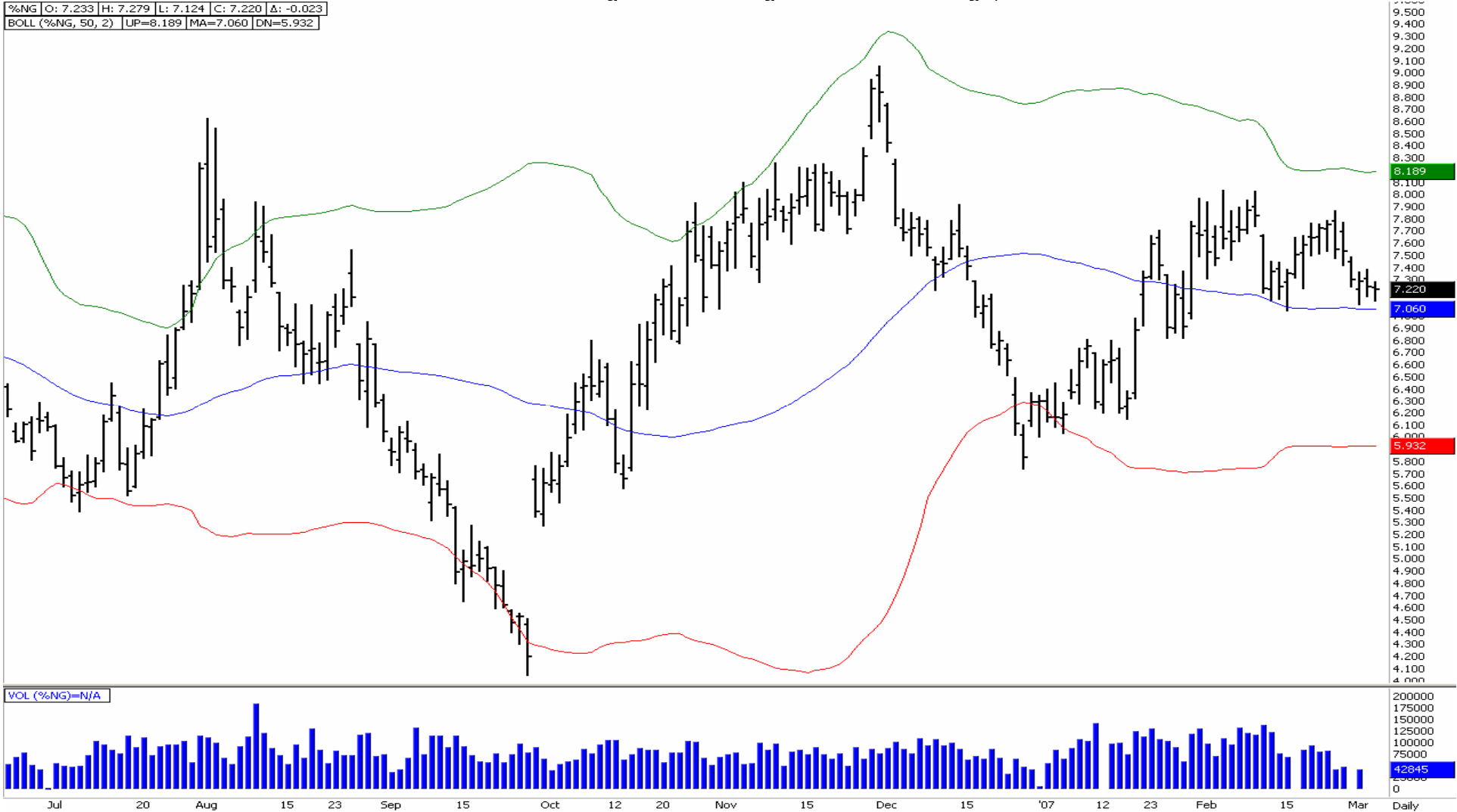
- Strong amount of drilling – 1,450 rigs...but, there has been for months with little price drop to show for it.
- Residential, Commercial & Industrial Demand destruction helping to alleviate the tight fundamentals balance
- Storage coming out of winter at ~1,500 BCF – above 5 yr average.
- Will fear of Global Warming finally lead to conservation and industrial/commercial “paybacks” longer than 1 year?

# Technical Review – “Front Month” Activity

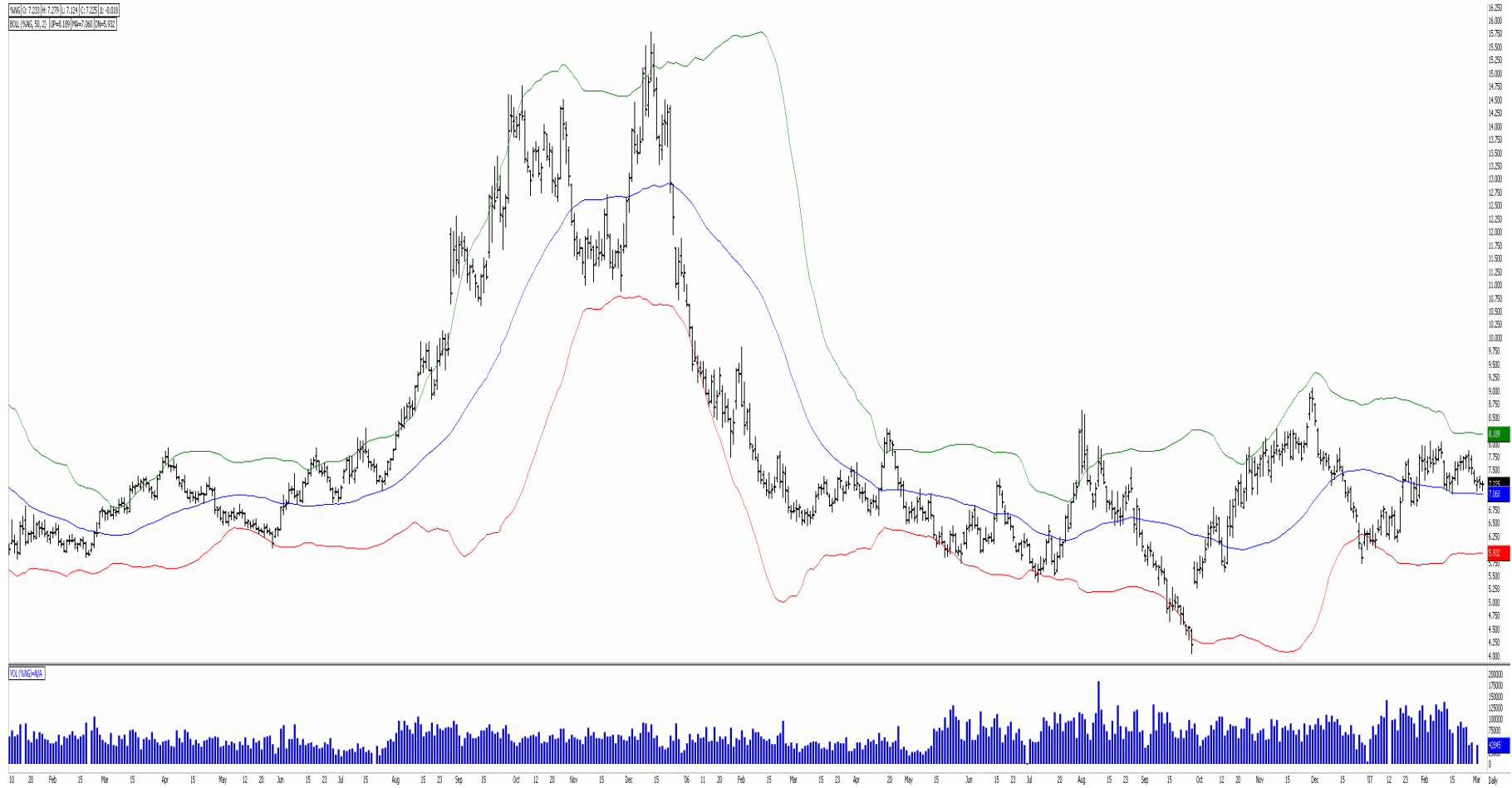


# Technical Look – Monthly activity since July, '06 on 03/02/07

%NG O: 7.233 | H: 7.279 | L: 7.124 | C: 7.220 | Δ: -0.023  
 BOLL (%NG, 50, 2) | UP=8.189 | MA=7.060 | DN=5.932



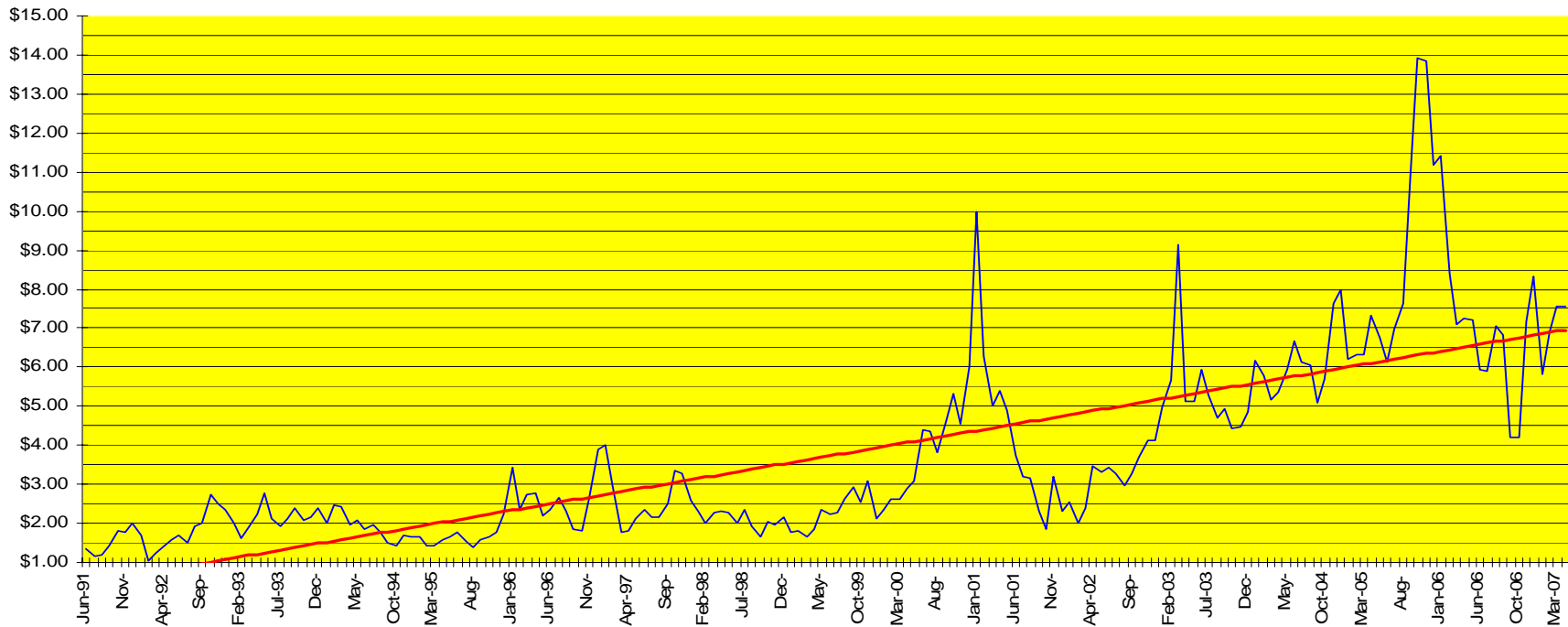
# Technical Look – Monthly activity since Jan ‘05 on 03/02/07



— 50 Day Moving Average  
 — Upper Level Implied Volatility  
 — Lower Level Implied Volatility

# Technical Review – “Long Term” Activity 03/2007

**NATURAL GAS FUTURES FINAL SETTLEMENT**





# EnergyUSA Pricing Forecasts

EnergyUSA Target Pricing for 03.02.07				
	<b>NYMEX Settle</b>	<b>Conservative</b>	<b>Moderate</b>	<b>Aggressive</b>
<b>Apr-07</b>	\$7.243	\$7.00 - \$7.25	\$6.75 - \$7.00	\$6.25 - \$6.75
<b>Apr'07 – Oct'07</b>	\$7.573	\$7.15 - \$7.40	\$6.95 - \$7.15	\$6.60 - \$6.85
<b>Nov'07 – Mar'08</b>	\$9.015	\$8.35 - \$8.75	\$8.05 - \$8.35	\$7.85 - \$8.10
<b>Apr'08 – Oct'08</b>	\$7.747	\$7.10 - \$7.75	\$6.95 - \$7.25	\$6.75 - \$7.05
<b>Nov'08 – Mar'09</b>	\$8.844	\$8.30 - \$8.75	\$7.90 - \$8.40	\$7.65 - \$8.15
<b>Apr'09-Oct'09</b>	\$7.511	\$6.85 - \$7.40	\$6.65 - \$7.15	\$6.50 - \$7.05

# Hedging Alternatives: The Futures Market

- Features of The Futures Market –
  - A Standardized Product with a Standardized Quantity and Delivery Point
  - Monthly Contracts with Monthly Expirations
- Uses of the Futures Market
  - Eliminate Price Risk
  - Speculate

# The Fixed Pricing Equation

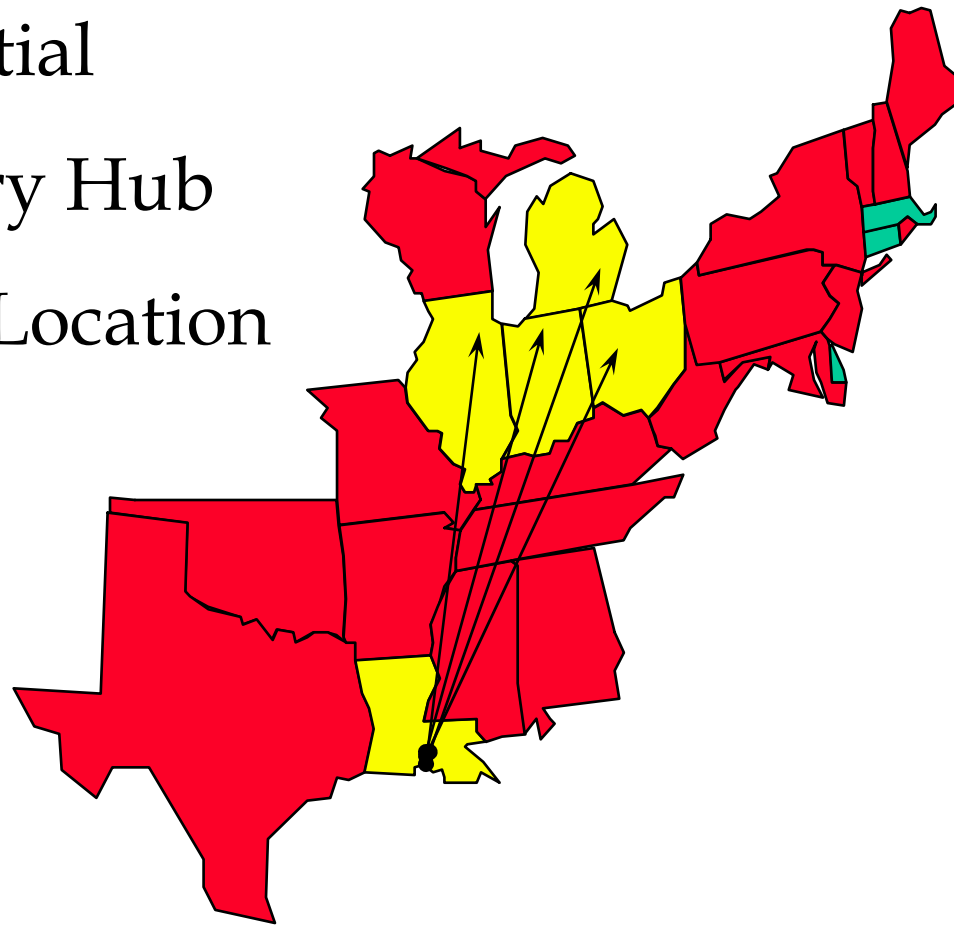
- NYMEX = Commodity
  - New York Mercantile Exchange – Price at the Henry Hub, LA
- Basis = Financial Transportation
  - Difference in value between Henry Hub and Delivery Point
- NYMEX + Basis = Locational Pricing
  - Can be purchased separately or together

## *Tools of the Trade - Basis*

Price Differential

Between Henry Hub

& Your Plant Location



# Hedging Alternatives

## – Options on Futures

- Features of the Options Market
  - Options are based on the underlying futures contract
  - Options are priced and expire on a monthly basis
- Uses of the Options Market
  - Insurance
  - Speculation

## Advanced Pricing - Options

- Ceilings, Floors – “Costless” or Low Cost Collars
- Fix a price with the option to participate if the market falls.
- Mix ceilings and floors to create the product you want.

# Advanced Pricing - Options

Date: 3/5/07

Winter '07/'08-NYMEX or Option Cost

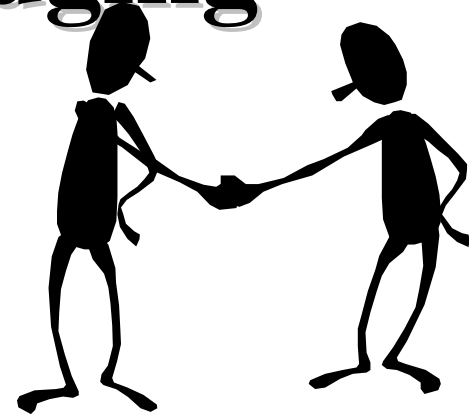
• Current Market cost	\$9.01	
• \$7.00 floor/put	-\$0.43	
• \$8.00 floor/put	-\$0.82	
• \$11.00 ceiling/call	\$0.82	
• \$12.00 ceiling/call	\$0.65	
• \$13.00 ceiling/call	\$0.52	
• \$15.00 ceiling/call	\$0.34	
• “Bull Call Spread”	\$13/\$11	+\$0.30
• “Bull Call Spread”	\$15/\$11	+\$0.48
• “Bull Call Spread” w/ floor	\$15/\$11/\$7	+\$0.05
• Costless Collar sample	\$11/8	

# Taking Action - Hedging

## PLACING AN ORDER

– Clearly Describe Your Plan

- Limit - “No Higher Than “x” ”
  - Hardest to execute, especially with “odd lots”.
- Market - “Execute at Current Price “Now” “
- Market-if-Touched - Execute at Current Price if...  
...“My Target Price is Touched”



# Taking Action - Hedging

## PLACING AN ORDER - Continued

- Place Lower target price “just below” “support point”.
- Place Upper target price “just above” “resistance point”.
- Don’t put a “bottom feeding” order in without putting in a “stop the bleeding” order, unless you can handle the “upside pain”.
- Hi/Low Range - Set Upper and Lower target price of “x/y”
  - Upper and Lower Limit should be near equidistant from current market
    - For Example... If \$8.50 market... \$8 lower, and \$9 upper
  - Can move Upper and Lower target down if market is moving down and Lower target price isn’t hit. But, this takes more monitoring.
    - “Stops”, “Trailing Stops”, “One-Cancels-the-Other”, “Activation Points”.

# Taking Action - Hedging

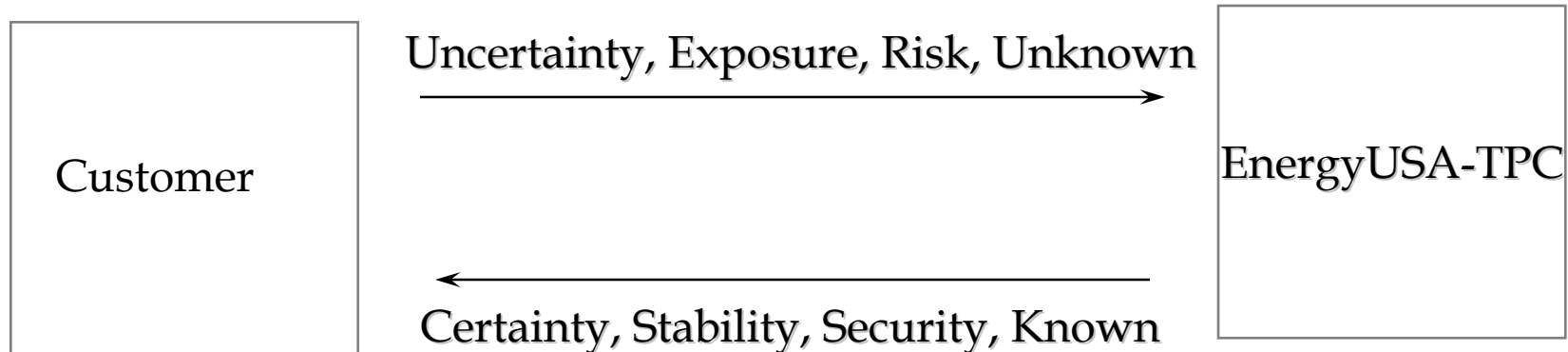
## EVALUATING PROGRAM SUCCESS

- Were Objectives Met?
  - Did We Beat Budget ?
  - Did We Beat Tariff ?
  - Costs Trending Lower ?
  - Did Vendor Deliver High Quality Service ?
- Success does not equal “beating the market”



# Summary - Hedging Benefits

- Reduces Uncertainty
- Adds Flexibility and Control



# Summary

- Risk is Unavoidable
- Risk Can be Managed
  - Like other Business Risks
  - Without being a Trading/Supply/Tariff Expert
  - If Objectives are Clearly Defined
- Establish Plan, Budget, Price Forecast
- Determine Level of Risk Tolerance
- Monitor Market & Act
  - Change Plan or Hedge !
  - Once you act, Don't Look Back!