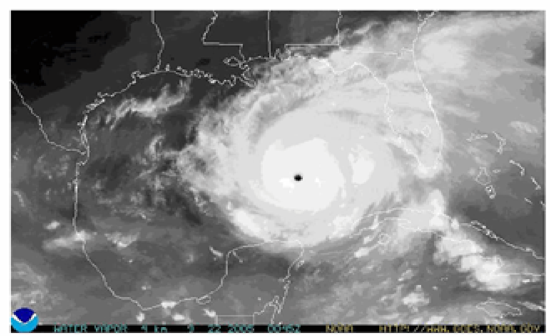
Commodity Hedging Strategy for the Independent Producer

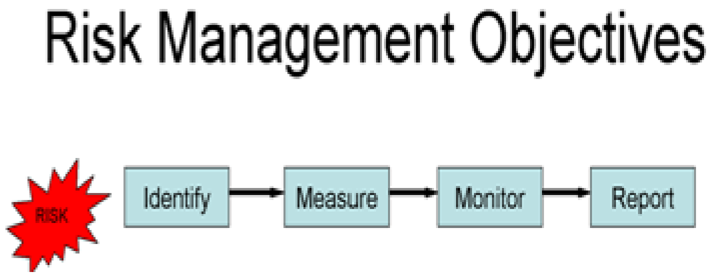
Risk Management Development



Energy MAS

Energy Management Advisory Service: a consulting organization dedicated to improving an organization's bottom line through effective risk management tools and downstream marketing applications. David E. Garcia (405)249-6662

The Hedging Dilemma within the Energy Industry



- Energy volatility is here to stay and in many cases growing at an alarming rate. During the past year alone in Natural Gas, we have seen a movement of over **$21.065.**
- Exposure to commodity and cash flow risk is causing more and more producers to rely on the traditional OTC market to execute hedges with banking and financial counterparties – The Trojan Horse.
- Banks and other financial counterparties have a selfless and profitable motive in structuring OTC instruments with producers. The net back price on the OTC instrument has a 2 – 4% built in margin at the time of execution. Also the **timing of the execution** is not always in line with the seasonal cycles or major cycle trends.
- Banking relationships can change on a dime due to the extreme price movements and changes in an organization's overall working capital situation. Transactions starting out as a no margin requirement can be quickly converted to a full margin posting situation based on your counterparties discretionary credit review rights embedded in the contract credit maintenance language.
- Operating expenses and capital spending grow (usually at faster rate) during boom periods however revenues are locked in with prior hedges thereby placing additional pressure on an organizations cash flow and earnings.
- The exposure to these various factors caused many independent producers to recognize hedge losses this past year while monetizing a cash settlement with their financial counterparties at the beginning of each month.
- As the market moves towards a major cycle up period in the coming years, it will not be prudent for producers to sell forward production values and not manage the position over the entire period. The economic burden of holding on to a hedge while the market experiences a cycle high will be enormous.
- Today's marketplace is providing a great economic benefit to all participants who actively manage their price and basis risks during the calendar year by entering and exiting their overall positions in line with the seasonal cycles and momentum indicators.

Natural Gas a Quick Look:

Energy Volatility is Growing

Historical Natural Gas Volatility Yearly High – Low

Low Date	Low Price	High Date	High Price	Gain Delta	% Gain	Loss Delta	% Loss
08/01/90	1.396	11/26/90	2.650	1.254	89.8%	(1.590)	-60.0%
6/25/91	1.060	11/5/91	2.140	1.080	101.9%	(0.679)	-31.7%
6/24/92	1.461	9/23/92	2.790	1.329	91.0%	(0.950)	-34.1%
6/23/94	1.840	11/4/93	2.468	0.628	34.1%	(1.073)	-43.5%
9/23/94	1.395	10/25/94	2.040	0.645	46.2%	(0.705)	-34.6%
7/24/95	1.335	12/21/95	3.720	2.385	178.7%	(1.960)	-52.7%
9/4/96	1.760	12/17/96	4.600	2.840	161.4%	(2.549)	-55.4%
7/8/97	2.051	10/28/97	3.850	1.799	87.7%	(2.240)	-58.2%
8/27/98	1.610	11/9/98	2.640	1.030	64.0%	(0.540)	-20.5%
7/12/99	2.100	10/28/99	3.275	1.175	56.0%	(1.195)	-36.5%
11/22/99	2.080	6/26/00	4.718	2.638	126.8%	(1.108)	-23.5%
7/26/00	3.610	12/27/00	10.100	6.490	179.8%	(8.340)	-82.6%
9/26/01	1.760	10/31/01	3.440	1.680	95.5%	(0.800)	-23.3%
8/7/02	2.640	12/13/02	5.560	2.920	110.6%	(1.170)	-21.0%
9/22/03	4.390	12/10/03	7.550	3.160	72.0%	(3.030)	-40.1%
9/16/04	4.520	10/28/04	9.200	4.680	103.5%	(2.060)	-22.4%
7/25/05	7.140	12/13/05	15.780	8.640	121.0%	(11.730)	-74.3%
9/27/06	4.050	12/16/06	9.050	5.000	123.5%	(3.310)	-36.6%
1/31/07	5.740	5/17/07	8.230	2.490	43.4%	(3.038)	-36.9%
9/6/07	5.192	11/2/07	8.712	3.520	67.8%	(1.874)	-21.5%
12/27/07	6.838	3/13/08	10.294	3.456	50.5%	(1.630)	-15.8%
3/20/08	8.664	07/02/08	13.649	4.985	57.5%	OVER $5.50 to date	

Three High - Low cycles within a one year period

Over $21.065 in the absolute price movement from the cycle highs and lows.

Variables that impact Commodity pricing:

To successfully hedge in today's marketplace an organization must consistently monitor the many variables that directly impact pricing and momentum swings. The goal is to consolidate this information into a single platform for further analysis. A disciplined evaluation process will provide the solutions necessary to improve your market timing for a successful hedge.

- Fundamental Indicators
  - Inventory Levels
  - Weather - perception
  - Cash Market – Basis
  - Drilling
  - Power Generation Development
  - Fund participation

- Historical information
  - Seasonal cycle periods and %
  - Long term – Major cycles
  - Spread relationships
  - Dollar strength
  - Volatility
  - Economic cycles

- Technical Indicators
  - Momentum Indicators
  - Wave Theory - Funds
  - moving averages - 3
  - Candlestick Charting open-close
  - Fibonacci supports
  - Mean reversions

- Internal Analysis
  - Targeted earnings growth
  - Correlations
  - Working capital projections
  - Notional limits
  - Value at risk limits
  - Stress testing
  - Oversight policy and daily reporting

Successful Hedging in Today's Volatile Marketplace
Proactive vs. Reactive Execution A General Strategy

The EnergyMAS Opinion:

Phase I – Working Capital Planning and Analysis – Project your cash flow targets and hedge accordingly

- Develop a working capital plan that identifies initial margin capital and maintenance requirements during periods of extreme volatility. Establish an overall notional limit based on this outcome.
- Establish a forecast of natural gas prices that includes preliminary market strategy with entry points and exit targets that link overall earning projections with the likely price levels (based on current market variables and anticipated trade range of the seasonal cycle).
- Measure your open basis position and hedge directly with outright fixed price contract length.
- Establish a multiple trade and information platform in order to provide liquidity and improve market access.
- **Establish proper governance and effective oversight through process monitoring and reporting.**

Phase II – Monitoring and Execution – trade within your asset structure.

Downward cycle market

- Monetize all fixed price gains to the bottom line that were established during the earlier upward cycle. During the market retracement look to unwind your hedges once the market establishes a bottoming window (three day MA) with low daily volatility ranges.
- Buy additional fixed price contracts during this time to manage outright basis length over a similar period.
- Study and monitor the BTU relationship with WTI crude to anticipate fund participation wishing to link both commodities into a direct price correlation. The buying by hedge funds alone will generate major support and a market reversal point.

Upward cycle market

- Have the market carry forward your open position freely and monitor the weekly open and closing points.
- During the upswing period monitor the various moving averages to anticipate panic spike episodes that fit into the seasonal peaking time periods– late fall or late spring. The days before major holidays are critical since the markets are closed for an extended period leaving themselves vulnerable for extreme volatility.
- Scale into your position as the market establishes new highs and reaches into the technical target levels.
- Monetize your previously established hedges relating to location basis risk and take gains to the bottom line.

Neutral Market Period

Monitor daily price movements in respect to historical time frames in order to anticipate the length and magnitude of current major move.

Expected Results of a Proactive Hedging Strategy

Proactive Hedging Management Program

EnergyMAS August of 2008

YOU DO NOT TRADE THE VALUE YOU CAPTURE THE VALUE

CASH REQUIREMENTS

Earnings

	Cash Requirements	Capturing 50% of Movement	Capturing 25% of Movement	Capturing 10% of Movement
100,000 mmbtu/d		Revenues	Revenues	Revenues
Total revenues @ $ 9.00 market clearing		328,500,000	328,500,000	328,500,000
3650 Nymex Contracts Max Notional Limit		9.00	9.00	9.00
Fixed Price Hedging		**$ 4.00 per mmbtu**	**$2.00 per mmbtu**	**$.80 per mmbtu**
Initial Margin - Direct execution	43,800,000	9,855,000	9,855,000	9,855,000
Maintenance 25% 1-3 months	82,125,000	146,000,000	73,000,000	29,200,000
Total capital needs	125,925,000	155,855,000	82,855,000	39,055,000
Basis Hedging				
Initial margin	4,380,000	985,500	985,500	985,500
Maintenance 25% 1-3 months	8,212,500	18,250,000	9,125,000	3,650,000
Total capital needs	12,592,500	19,235,500	10,110,500	4,635,500
Total Cash requirements 1-3 months	138,517,500	175,090,500	92,965,500	43,690,500
ROIC projection		126%	67%	32%
Total Revenues		**503,590,500**	**421,465,500**	**372,190,500**
Effective Hedge Price		**13.80**	**11.55**	**10.20**

Forecast Natural Gas Prices for 2008 - 2009

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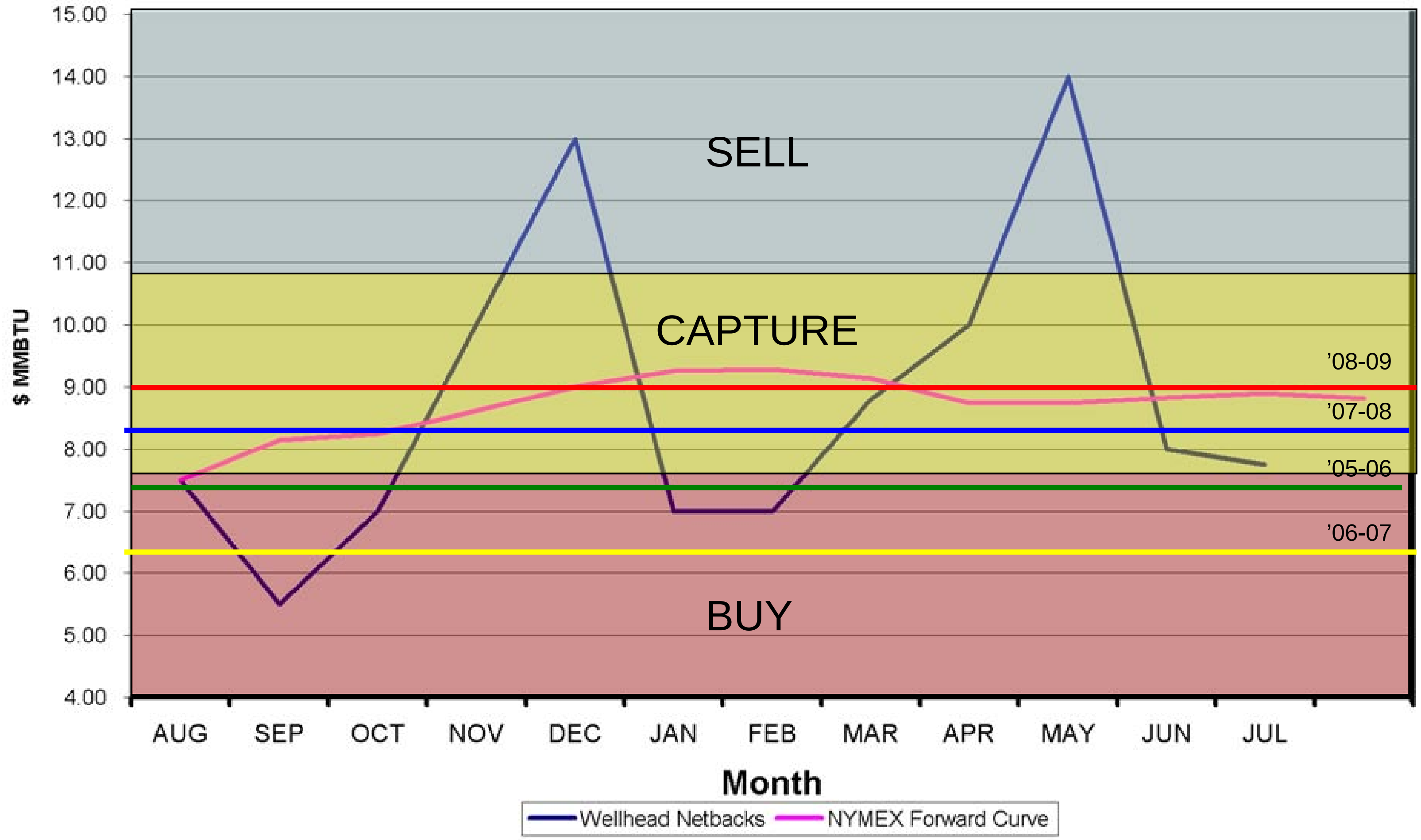


Annual Revenue Projections

100,000 mmbtu/d

$ 511 M

$ 474 M

$ 438 M

$ 402 M

$ 365 M

$ 329 M

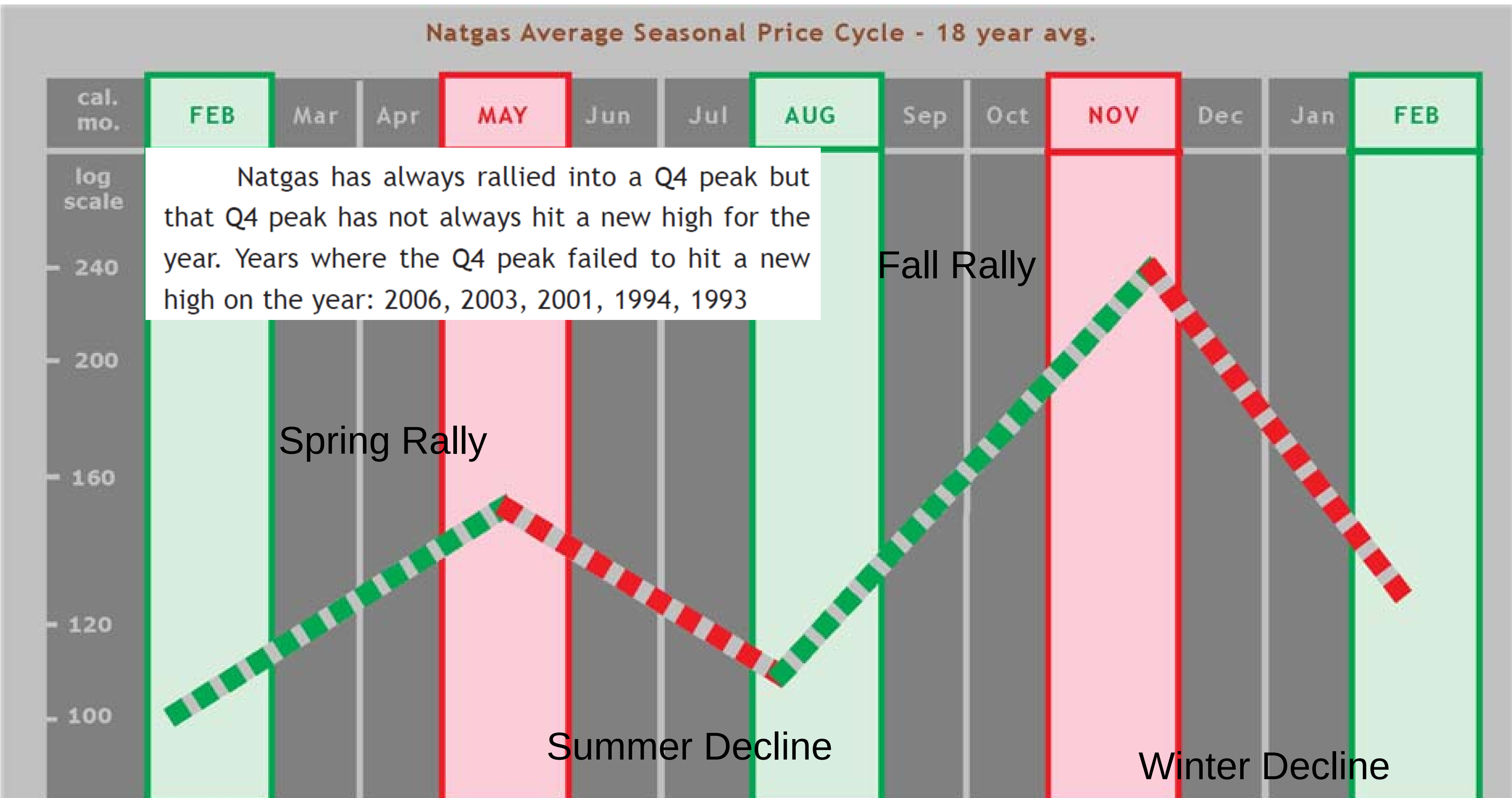
$ 292 M

$ 256 M

$ 219 M

$ 184 M

Natural Gas has a defined seasonal cycle that operates within the longer term cycle swings.



Natural Gas Cycle Highs - Lows

WTI Crude a Quick Look:

The crude rally from $49.00 to $145.85 caught many companies by surprise when crude broke out of its three year trading range of $60-$75 and within six months completed all time major highs. Look for old resistance to become major support on its retracement. The magnitude and speed of the retracement will determine if an opportunity really does exists for a fall period rally.

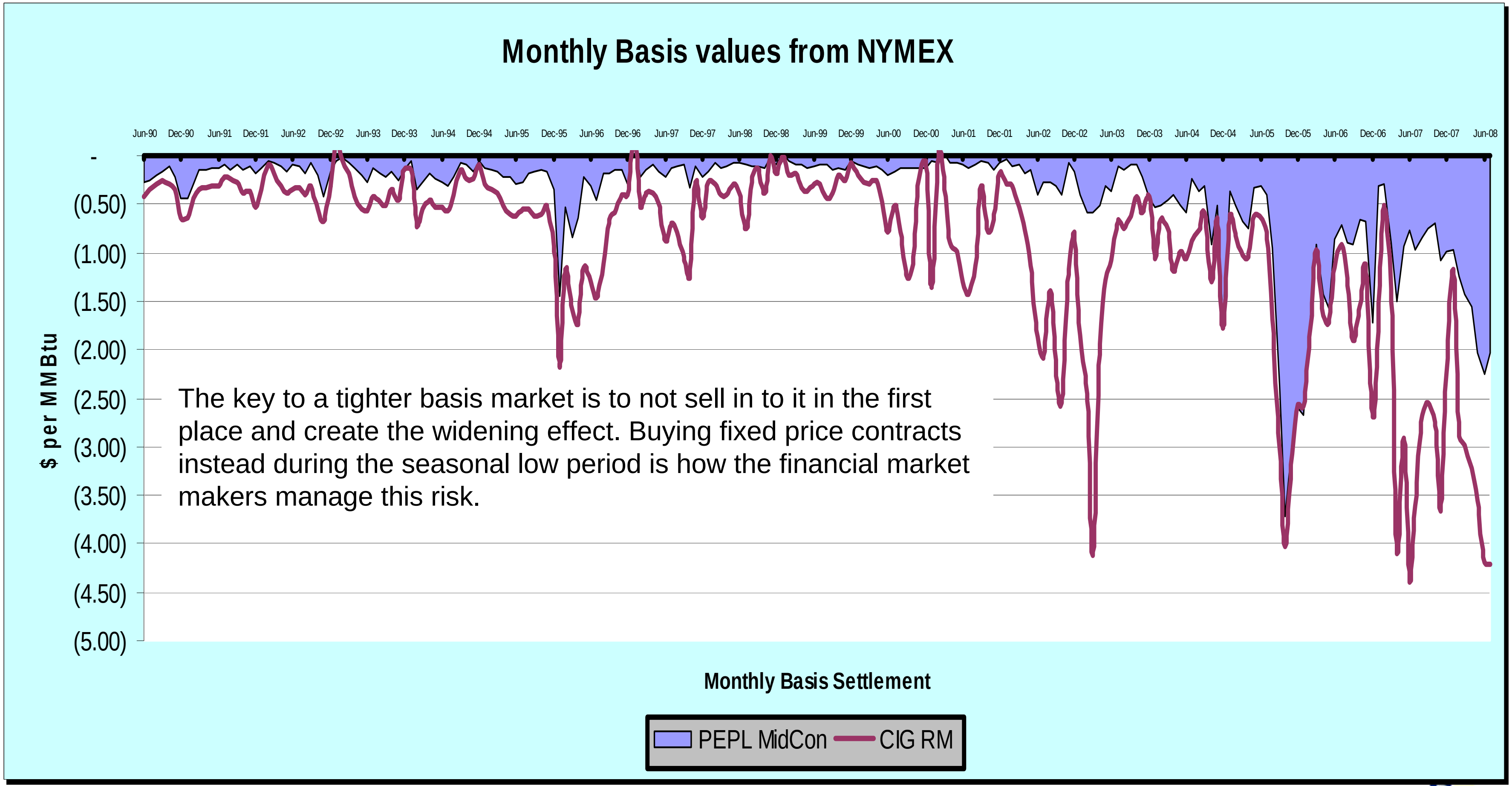
The level of the WTI retracement should be absolute and test several support levels through the end of summer. The potential fall rally will be driven by the market demand for heating oil. Look for a late fall – early winter bounce which has occurred 24 of the last 25 years. The spring rally will be driven by inventory levels associated with the world wide gasoline and diesel demand.

WTI Crude's Soft Landing Point or Major Bounce:

Monitoring the WTI price level is extremely important to the ultimate price range of Natural Gas. The heat related BTU relationship seems to keep both commodities in link even though the traditional gap at widens at various periods . I attribute the Natural Gas extra spring rally directly to this relationship and the break out of WTI.

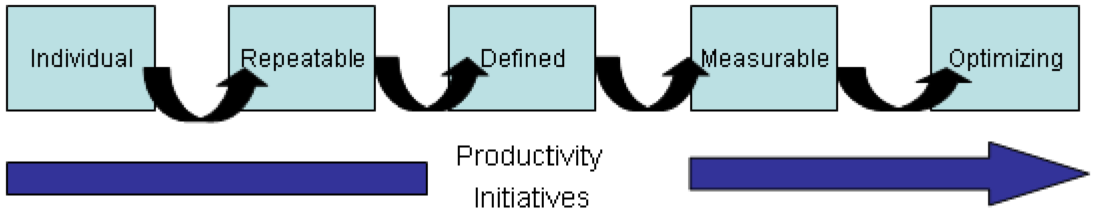
Natural Gas Basis Market:

During the past five years, increasing Natural Gas volatility has impacted the basis differential market and reduced the traditional basis net back at the wellhead. As prices rise basis widens and as prices fall basis tighten in the region.
Banks and other market makers use this seasonal correlation to create a basis swap market with producers and balance out their portfolio by selling or buying fixed priced related contracts.



Executive Summary page

EnergyMAS provides value by



- Improving your risk management capabilities with a formal review and validation of current policies and procedures.
- When needed make recommendations to commodity monitoring, reporting, and improve corporate oversight.
- Cutting through the clutter of information that exists in the marketplace. Most of the information being sent out for free is disinformation driven by outside interest.
- Improving the timing of the actual hedge execution and thereby locking in the highest potential range that can be reasonably available for your future revenue stream.
- Increasing your netbacks with better execution and timing by going directly to the floor.
- Eliminating your credit exposure by utilizing the NYMEX clearing system.
- Improving your monitoring and reporting capabilities by implementing a daily discipline monitoring approach and working directly with you as a fee based consultant under a term retainer basis.
- Implementing ongoing process improvements and training of staff with the latest commodity monitoring systems and evaluation techniques.

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ENERGYMANAGEMENT ADVISORY

Service LLC