

# Atmos Energy Marketing Storage Overview

April 2009



# Atmos Energy Marketing



- AEM provides a variety of natural gas management services to municipal, utility and industrial customers.
- These services include storing gas using both proprietary and customer-owned transportation and storage assets.
- Storage activities generate margins from trading around AEM's owned and managed storage and transportation assets to capture time and location price differentials.

# Risk Management



- AEM maintains a “flat” trading book and avoids mismatches between the volume of gas in storage and the number of associated financial hedges.
- AEM uses financial hedges to lock in an economic gross profit margin at the time it enters into a storage transaction.

# MTM Accounting



- The relevant accounting rules require us to:
  - Mark our physical gas in storage to market, to reflect current cash prices at the end of the month and
  - Mark the related hedges to market, using futures prices that correspond with the term of our customer contracts.
- To determine current cash prices, we use an industry publication called Gas Daily and for our hedges, we use futures prices as quoted on the New York Mercantile Exchange (NYMEX).
- GAAP rules essentially cause us to measure the “liquidation” value of our gas in storage and the associated hedges as of the balance sheet date.

# MTM Accounting (cont'd)



- Movements between these two indices create unrealized (i.e. “non-cash”) gains and losses at the end of each reporting period until the underlying transaction is executed (i.e., when gas is withdrawn from storage and delivered and the hedges are settled).
- These unrealized gains and losses are recorded in AEM’s gross profit.
- When the underlying transaction is executed, these unrealized gains and losses reverse themselves and the economic gross profit that AEM had captured in the original transaction is realized.

# Conclusion



- Mark-to-market accounting treatment has introduced temporary yet significant earnings volatility to our business.
- Higher levels of gas in storage and wider spreads between cash and futures prices serve to magnify unrealized (non-cash) gains and losses.
- Because of the significance of these accounting adjustments, we report the economic gross profit associated with the transactions that we have entered into.

## “Plain Vanilla” Storage Deal

# June 2008 Storage



## Commercial Transactions

- Buy 10,000 dth of natural gas in cash market for \$4.00 / dth from supplier.
- Hedge physical purchase by selling September 2008 NYMEX Future contracts at \$5.00 / dth.
- Transport gas and inject into AEM's leased physical storage facility.

	<u>(\$ / Dth)</u>
Futures Contracts sales price	\$ 5.00
Physical gas purchase costs	<u>(4.00)</u>
	<u>\$ 1.00</u>
	X 10,000 Dth

**Economic Value of Gas margins: \$10,000 \***

\* Excludes \$0.40 / dth of storage and transport fees that are captured in Gross margins.

## Accounting Entries – June 2008

Debit: Gas Inventory (B/S)      \$40,000  
Credit: A/P (B/S)                \$(40,000)  
(To record purchase of gas  
for injection into storage inventory)

**Reported GAAP P&L Results: \$0**

# July 2008 Storage



## Market Price Changes

- September 2008 NYMEX Futures price Increase by \$0.50 / dth (From \$5.00 / dth to \$5.50 / dth).
- Cash (Gas Daily) price Increase by \$1.00 / dth (From \$4.00 / dth to \$5.00 dth)

## Commercial Transactions

- None

**Economic Results: No Change - \$10,000**

## Accounting Entries – July 2008

Debit: Unrealized MTM Loss –  
Storage Futures (I/S)           \$5,000  
Credit: Risk Management  
Liabilities (B/S)               \$(5,000)  
(To record MTM loss of  
futures hedges)

Debit: Fair Value - Storage  
Inventory (B/S)               \$10,000  
Credit: Unrealized Fair Value  
Gain - Gas Inventory (I/S)   \$(10,000)  
(To record Unrealized Fair  
Value Gain of Gas Inventory)

**Reported GAAP P&L Results: \$5,000**

# August 2008 Storage



## Market Price Changes

- September 2008 NYMEX Futures price decrease by \$0.50 / dth (From \$5.50 / dth to \$5.00 / dth).
- Cash (Gas Daily) price decrease by \$0.50 / dth (From \$5.00 / dth to \$4.50 dth)

## Commercial Transactions

- Roll September financial position to October.
- Reverse hedge physical purchase by buying September 2008 NYMEX Future contracts at \$5.00 / dth.
- Hedge physical position by selling October 2008 NYMEX Future contracts at \$6.00 / dth.

**Economic Results: \$20,000 (Increased by \$10,000)**

## Accounting Entries – August 2008

Debit: Risk Management Liabilities (B/S)	\$5,000
Credit: Unrealized MTM Loss - Storage Futures (I/S)	\$(5,000)
(To record reversal of MTM loss of futures hedges)	

Debit: Unrealized Fair Value Gain - Gas Inventory (I/S)	\$5,000
Credit: Fair Value - Storage Inventory (B/S)	\$(5,000)
(To record Unrealized Fair Value Loss of Gas Inventory)	

**Reported GAAP P&L Results: \$0**

# September 2008 Storage



## Market Price Changes

- October 2008 NYMEX Futures price decrease by \$0.50 / dth (From \$6.00 / dth to \$5.50 / dth).
- Cash (Gas Daily) price Increase by \$0.50 / dth (From \$4.50 / dth to \$5.00 dth)

## Commercial Transactions

- None

**Economic Results: \$20,000**

## Accounting Entries – September 2008

Debit: Risk Management  
Assets (B/S) \$5,000  
Credit: Unrealized MTM Gain  
- Storage Futures (I/S) \$(5,000)  
(To record MTM gain of  
futures hedges)

Debit: Fair Value - Storage  
Inventory (B/S) \$5,000  
Credit: Unrealized Fair Value  
Gain - Gas Inventory (I/S) \$(5,000)  
(To record Unrealized Fair  
Value Gain of Gas Inventory)

**Reported GAAP P&L Results: \$10,000**

# October 2008 Storage



## Market Price Changes

- October 2008 NYMEX Futures price settle at \$5.50 / dth.
- Cash (Gas Daily) prices settle at \$5.50 / dth.

## Commercial Transactions

- Withdrawal, sell and deliver 10,000 dth of natural gas for \$5.50 / dth to customer.
- Buy October 2008 NYMEX Future contracts \$5.50 / dth to close / settle hedged position.

Economic Results: No Change: \$20,000

## Accounting Entries – October 2008

Debit: Unrealized MTM Gain – Storage Futures (I/S)	\$5,000
Credit: Risk Management Assets (B/S)	\$(5,000)
(To record reversal of MTM gain)	
Debit: Cash in Margin Account (B/S)	\$5,000
Credit: Realized Gain – Storage Futures (I/S)	\$(5,000)
(To record realized gain on futures)	
Debit: Unrealized Fair Value Gain - Gas Inventory (I/S)	\$10,000
Credit: Fair Value – Storage Inventory (B/S)	\$(10,000)
(To reverse unrealized fair value gain)	
Debit: A/R (B/S)	\$ 55,000
Credit: Storage Gas Inventory (B/S)	\$(40,000)
Credit: Realized Gain from Sale of Inventory (I/S)	\$(15,000)
(To record sale of gas)	

Reported GAAP P&L Results: \$5,000

# Summary



## Economic Value

	<u>(\$ / Dth)</u>
Futures Contracts Sales price	\$ 6.00
<u>Less</u>	
Physical gas costs	<u>(4.00)</u>
Unit Gas Margin (Phys/Fin.)	\$2.00
	x <u>10,000 Dth</u>
<b>Economic Value of Gas margins</b>	<b>\$20,000</b>

## Commercial Results

Unit Gas Margins	\$ 2.00
Transport / Storage fees	<u>0.40</u>
	\$ 1.60
	x <u>10,000 Dth</u>
Net Commercial margin	\$16,000

## GAAP Results

<u>June 2008:</u>	\$ 0
<u>July 2008:</u>	5,000
<u>August 2008:</u>	0
<u>September 2008:</u>	10,000
<u>October 2008:</u>	5,000

**GAAP Value of Gas Margins \$ 20,000**

## Accounting Results

Gas Margins	\$ 2.00
Transport / Storage fees	<u>0.40</u>
	\$ 1.60
	x <u>10,000 Dth</u>
Net GAAP margin	\$16,000

# Storage Illustration

## (Physical / Financial - Gas Margins \*)



\* Excludes storage and transport fees

Month	Inject Dth	Withdraw Dth	Gas Cost / Dth	Prompt Month Gas Daily Index / Dth	Hedge	Volume Dth	Hedge Price	Sept. 2008 Futures	Oct. 2008 Futures	Spread	P&L \$ MM	Economic Value \$ MM
June	10,000	0	\$4.00	\$4.00	Sell Futures	10,000	\$5.00	\$5.00	N/A	\$1.00	\$0	\$10,000
July	0	0	\$4.00	\$5.00	N/A	10,000	-	\$5.50	N/A	\$1.00	\$5,000	\$10,000
Aug	0	0	\$4.00	\$4.50	Buy/Sell Futures	10,000	\$6.00	\$5.00	\$6.00	\$1.00	\$0	\$10,000
Sept	0	0	\$4.00	\$5.00	N/A	10,000	-	\$5.00	\$5.50	\$2.00	\$10,000	\$20,000
Oct	0	10,000	\$4.00	\$5.50	Buy Futures	10,000	-	N/A	\$5.50	\$2.00	\$5,000	\$20,000
										<b>Total</b>	<b>\$20,000</b>	<b>\$20,000</b>

## Commercial Optimization Strategy

# Storage Optimization



## Factors impacting optimization value

- Relationships of prices among forward months
- Time Value of Money
- Storage Cycling Costs
- Operational or contractual Space, injection, and withdrawal limitations

## Strategies

- Roll forward buys to lower price months or forward sells to higher priced months, to the extent operational or contractual constraints are adhered to.
- Buy or sell in the cash market, against the forward market.

Note: AEM's market view also is a factor in determining the timing of spread executions.