

## Appendix 1

### HEDGING STRATEGY

#### CONFIDENTIAL, PROPRIETARY INFORMATION SUBJECT TO PROTECTIVE ORDER

The information provided below is for planning purposes and is based on current market conditions. Accordingly, it is subject to change.

#### Hedging Plan Going Forward from January 2009

The goal of NWE's short term hedging strategy is to dampen natural gas price volatility in an effective, systematic, and efficient manner. NWE currently purchases 100% of its physical gas supply based on an index (market) price. The hedging strategy NWE proposes for this plan involves four main areas:

- 1) Utilizing storage to provide reliability and remove a portion of the expected price volatility;
- 2) When applicable, using storage to capture the difference between winter and summer priced gas and flowing that value back as a reduction to rates. This is referred to as "asset monetization";
- 3) Entering into transactions that convert index priced purchases to fixed or known values; and
- 4) Setting "hard target" price values that supplement other hedging techniques and allow for increased purchases of fixed price gas.

#### Storage

Storage has proven to be an effective and flexible tool to mitigate short-term price impacts. When gas is placed in storage, the index priced gas becomes a known price, and, therefore, becomes a fixed priced hedge. NWE has developed the following storage plan for future injection and withdrawal periods.

Energy Supply is proposing to use roughly \_\_\_ Bcf of the 9 Bcf of storage gas capacity that is available for its use (see Table A1). Of this \_\_\_ Bcf, NWE is proposing to use \_\_\_ Bcf for asset monetization, the value of which will flow to ratepayers. The remainder, or \_\_\_ Bcf, is the amount of storage that will be available for use during heating seasons (see Table A2). Energy Supply can inject another \_\_\_ Bcf of additional storage to reach the total of 9.0 Bcf, and may do so, depending on changing supply and market conditions.

### Asset Monetization

Asset monetization is simply capturing, when available, the price spread between when gas is injected in storage and the price when it is withdrawn and sold. For example: If gas can be purchased for injection in May – July at an average price of \$5.00/Dkt and can simultaneously be sold for withdrawal in the following Jan – Mar for \$7.00/Dkt, there is a \$2.00 spread. The carrying cost at these prices would be approximately \$\_\_\_/Dkt. The incremental transportation cost to deliver this gas to a liquid market (AECO) would be \$\_\_\_\_/Dkt. So, whenever the average injection month’s price is greater than the average withdrawal month’s price by more than \$\_\_\_\_/Dkt it makes sense to optimize or fill storage and flow the residual revenue back to customers through reductions to gas cost. Obviously, NWE will attempt to time these transactions to maximize customer benefit. If the spread is not large enough to recover the cost, asset monetization will not occur, and the total storage inventory target will be reduced by the proposed asset monetization volume of \_\_\_ Bcf.

Table A1. Physical Gas Storage Injection Plan (April - October xxxx)

Est. beginning balance (March 31, xxxx)	___ Bcf
Injection during March-Oct. (flowing gas less load)	___ Bcf
Total	___ Bcf

Table A2. Proposed Gas Storage Usage

Estimated gas withdrawn for winter needs	___ Bcf
Gas available for asset monetization	___ Bcf
Total	___ Bcf

Table A3 below provides an illustration of how storage should refill during the injection season and how it could be used during the withdrawal season. These numbers are only illustrative and are subject to numerous conditions. Weather (heating degree days), for example, is one of the most significant variables that will affect the injections and withdrawals of natural gas in NWE's storage. The \_\_\_ Bcf of asset monetization will only be utilized when the price spread between the injection price and the withdrawal price allow for additional reductions to gas cost after the recovery of all carrying and transport costs.

Table A3. Systematic Gas Storage Usage

Systematic use of gas storage (volumes in 000's cubic feet)														
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total	Nov-Mar
Apr	—	-	-	-	-	-	-	-	-	—	—	—	—	—
May	-	—	-	-	-	-	-	-	-	-	-	-	—	—
Jun	-	-	—	-	-	-	-	-	-	-	-	-	—	—
Jul	-	-	-	—	-	-	-	-	-	-	-	-	—	—
Aug	-	-	-	-	—	-	-	-	-	-	-	-	—	—
Sep	-	-	-	-	-	—	-	-	-	-	-	-	—	—
Oct	-	-	-	-	-	-	—	-	-	-	-	-	—	—
Nov	-	-	-	-	-	-	-	—	-	-	-	-	—	—
Dec	-	-	-	-	-	-	-	-	—	-	-	-	—	—
Jan	-	-	-	-	-	-	-	-	-	—	-	-	—	—
Feb	-	-	-	-	-	-	-	-	-	-	—	-	—	—
Mar	-	-	-	-	-	-	-	-	-	-	-	—	—	—
Starting Bal - > 1000	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cumulative Month End Bal ->	—	—	—	—	—	—	—	—	—	—	—	—	Winter Hedge	—

The amount of available winter storage hedge (\_\_\_ Bcf) is a function of storage available in October (\_\_\_ Bcf) less the \_\_\_ Bcf NWE has proposed to make available for asset monetization.

### Layering in Fixed Price Purchases

Fixing the forward price of flowing gas for both the injection and heating seasons also reduces price volatility. Energy Supply will execute fixed price forward contracts in addition to storage activities. Decisions regarding the execution of fixed price forward contracts will be periodically reviewed, as market conditions evolve, up until the contractual date for physical delivery. In addition to the planned purchases, additional actions may be taken if prices begin to trend up or down to remove additional portions of price exposure, or the decision to put hedges in place may be accelerated or delayed.

NWE is proposing the following fixed price forward purchases for the future “injection” and “withdrawal” periods (applicable to the physical flowing gas that is purchased at index prices).

- a. NWE may Purchase fixed price contracts on daily volumes (example \_\_\_\_\_ Dkt/day) during April-Sept. for deliveries during April-October for a total of \_ up to \_\_\_ Bcf. These transactions serve to fix or “lock-in” the price of gas purchased during the injection season, which is April – October. NWE will only enter into these types of fixed price contracts when market dynamics indicate there is a likelihood prices will rise throughout the injection season. Note: The number of theses transactions entered into has gone down dramatically because of the annual hedges that have been put in place to hedge gas price on a year around basis.
  
- b. Purchase fixed price contracts on daily volumes (example \_\_\_\_\_ Dkt/day) during April-Oct. for deliveries during November-March for a total of \_\_\_ Bcf (Note: These volumes are reduced from the previous plan to account for the annual hedges that are now in place).

These transactions serve to fix or “lock-in” the price of gas purchased during the winter heating season, which is November – March.

As noted above, the timing of these fixed price transactions may change in response to market conditions. Variations from the plan will be documented and explained.

The resulting winter season hedges, (not considering annual hedges), are \_\_\_ Bcf out of a total \_\_\_ Bcf heating season load (\_\_\_% of heating season load). The \_\_\_ Bcf is a result of the \_\_\_ Bcf in storage plus the \_\_\_ Bcf of fixed price contracts from (b) above.

#### Hard Targets

In addition to the storage and fixed price hedging strategies discussed above, an overlying "hard target" mechanism will be utilized that will trigger additional fixed price purchases for forward delivery. These targets will be set at levels deemed to be "favorable" prices to the customer. This reflects the fact that at some "low" price there may be no desire to have exposure to floating prices. In other words, knowledgeable customers and regulators would likely be relatively pleased to have more of the portfolio procured at this "hard target" price. (See Table A4.) At some defined "low" price, the benefit of hard target purchases may exceed the value of a systematic, layered approach to fixing prices. The hard targets in this plan are \$0.50 lower than the 2006 Plan, due in part because the two-year forward AECO strip is \$0.50 lower than it was in 2006.

Table A4. Long-Term Hard Targets

Long Term Hard Targets	
(Nov 09 / Oct 12)	% of Supply
\$ ___	___%
\$ ___	___%
\$ ___	___%
\$ ___	___%

Longer-Term Hedging

The primary vehicle for longer term hedging will be fixed price swaps (agreements that allow for settlement between an agreed upon fixed price and an agreed upon index). NWE proposes (see Table A5) the following longer-term or multi-year hedging strategy:

- a. Purchase \_\_\_ Bcf of “layered” fixed forward contracts during the period (June – December) of 2009, 2010 and 2011, for delivery in each November through October of the years 2010/2011, 2011/2012 and 2012/2013;
- b. Result is \_ Bcf of fixed price contracts for all future years;
- c. Continue similar purchases annually thereafter so a minimum of \_ Bcf is available at fixed prices from these hedges in each year;
- d. Now that the long-term fixed price hedges are fully implemented to the \_ Bcf level, the seasonal, short-term hedging activity will be reviewed to ensure that the total volume of gas being fixed price hedged is appropriate. Currently, the total target is \_\_\_% - \_\_\_% of the winter supplies.

Table A5. Multi-Year Hedging Strategy

Purchasing	Year	07/08	08/09	09/10	10/11	11/12	12/13
Jun-Dec (Bcf)	2007						
Jun-Dec (Bcf)	2008						
Jun-Dec (Bcf)	2009						
Jun-Dec (Bcf)	2010						
Jun-Dec (Bcf)	2011						
Jun-Dec (Bcf)	2012						
Total Volume (Bcf)							