

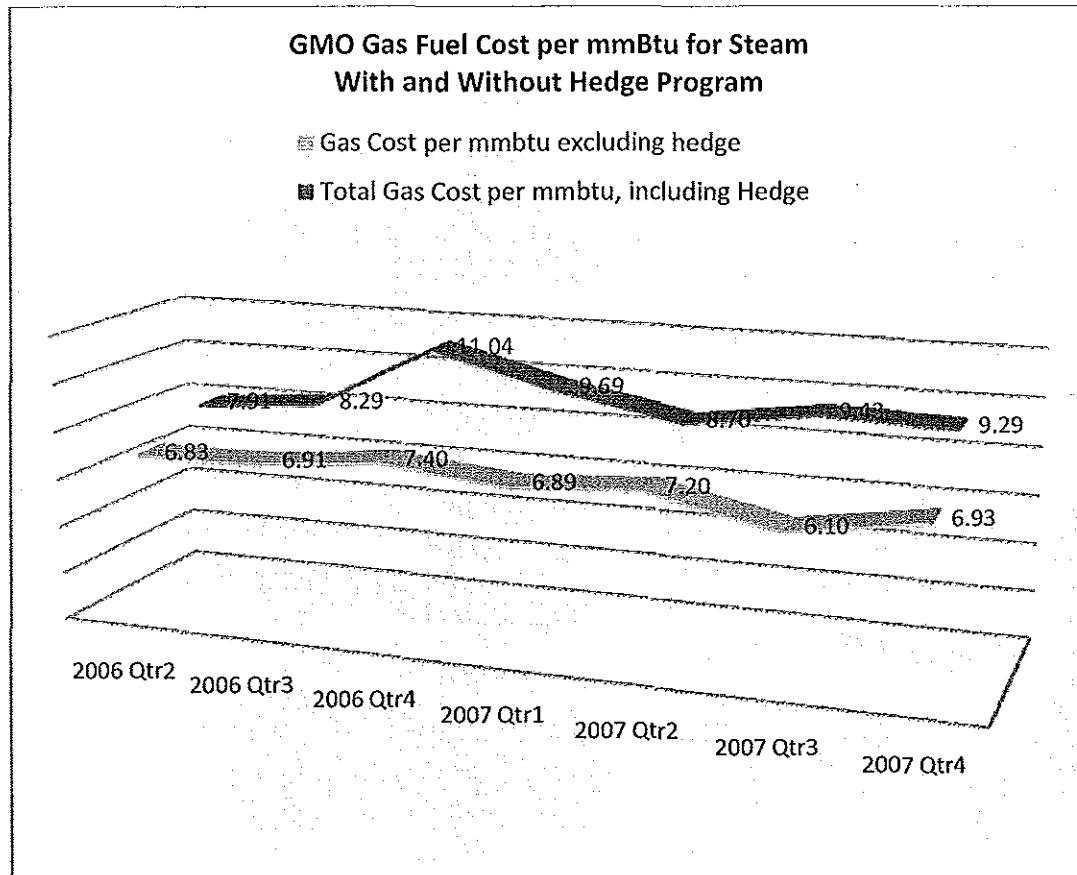
1 of swap contracts for the futures component, call contracts and put contracts. There
2 were no further purchases or trades for 2006 except to close out the contract positions
3 at or about the time of expiration for each month. The 2007 hedge positions were
4 entered over the months of February 2006 through October 2006.

5 The results of the program were to substantially increase fuel cost and rate
6 volatility. Some cost is to be expected, but there was a fundamental flaw in the
7 hedge program volumes that amplified the cost. The problem was manifest
8 immediately in April 2006, the first month of the program, and continued through the
9 remainder of 2006 and 2007.

10 I was the technical advisor to AGP during the 2005 negotiations that led to the
11 stipulated quarterly fuel cost adjustment ("QCA") mechanism approved by the
12 Commission in HR-2005-0450 on February 28, 2006. The mechanism became effective
13 March 6, 2006. The QCA design substantially protects customers from the underlying
14 volatility in fuel costs and protects Aquila from 80% of cost variations. The need for a
15 hedging program that focuses on volatility mitigation was largely eliminated.

16 The purported intent of Aquila's hedge program was to reduce volatility, but in
17 fact, it resulted in quite the opposite effect. The statistical standard deviation of the
18 hedged quarterly gas costs during 2006 and 2007 was 1.03 (revised), approximately 2.5
19 (revised) times the standard deviation without the hedge program, which was .41.
20 Chart 1 illustrates the effect graphically. The costs are substantially lower and less
21 volatile without the hedge program.

Chart 1 (revised). Aquila/GMO Natural Gas Fuel Cost for Steam, per mmBtu



1 The chart illustrates that the natural gas hedge program substantially increased the
2 cost level and the volatility in the cost of fuel for the steam system. The issue is
3 whether or not the 2006 and 2007 costs of the Aquila hedge program were prudent and
4 should be recovered from customers.