

**Case 07-E-0949**  
**Exhibit \_\_\_ (FP-11)**

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## Local Gas Distribution Companies: Update on Revenue Decoupling And Implications for Credit Ratings

### Summary Opinion

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- With natural gas prices expected to remain at high levels, local gas distribution companies (LDCs) face earnings and cash flow pressures as their customers increase conservation efforts. In addition, bad debt expense has increased as more customers face increasing difficulties in paying their bills. Furthermore, LDC volumes remain subject to weather conditions.
- Moody's analyzed its gas LDCs (local distribution companies) and notes that weather normalized winter gas consumption in per customer usage has declined at an increased pace since 2003. This decline coincides with a period of steadily rising natural gas prices for the LDCs and steadily falling heating degree days.
- Had gross margins (gas revenues less cost of gas and associated gas taxes) been fully protected against gas consumption declines on account of customer conservation during the past five winters, they would have been higher by an average of \$5.2 million in 2004 and \$4.6 million in 2005. One company would have increased its profits by \$18.3 and \$11.6 million in those two years (3% and 2% of gas margins, respectively).
- Bad debt expense has shown a steady average increase in each of the past four winters, tracking the increase in natural gas prices during the same period.
- Despite the general increase in working capital and natural gas prices, LDC short-term debt has remained relatively flat from 2003-2005.
- Except for a handful of jurisdictions that employ full revenue decoupling (RD) through a mechanism akin to "balancing accounts" (California, Maryland and North Carolina), most companies prefer to keep the weather normalization clause (WNC) rate design separate from the conservation margin tracker.
- While some jurisdictions permit the application for RD to be requested outside the procedural norms of a full rate case, most would prefer a full rate case or rate review.
- LDCs pursuing a full or partial RD feel that it is an important aspect of their rate design requirements and most companies indicated that they would continue filing for it until their regulators gave final approval.
- Moody's observes that in the face of volatile natural gas prices, volatile weather patterns and other exogenous forces that would prompt gas customers to curtail gas consumption volumes from their utilities, LDC earnings and credit metrics will come under pressure.
- LDCs that have, or soon expect to have, RD stand a better chance than others in being able to maintain their credit ratings or stabilize their credit outlook in face of adversity. This difference between those companies that have RD and those that do not will tend to be further accentuated as the credit demarcation reflected through rating actions becomes more evident.



## Introduction

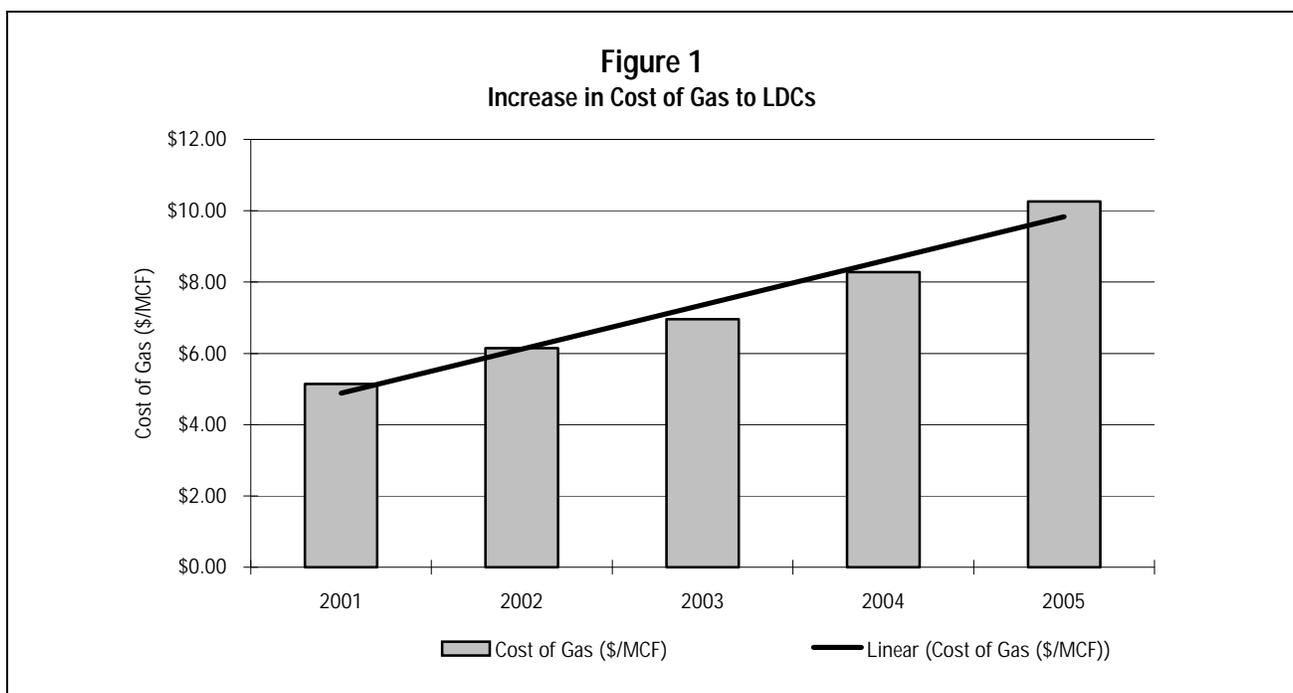
At this time last year, Moody's published its first study dedicated to the question of gas conservation and its impact on gas LDC earnings and credit ratings (see Moody's June 2005 Special Comment titled *Impact of Conservation on Gas Margins and Financial Stability in The Gas LDC Sector*). We found that while many companies were aware of the conservation factor and 18 of the 34 gas LDCs followed by Moody's could quantify the loss in their per customer volume consumption, only a handful of companies had taken the step to incorporate it into their rate design so that their gross margins would be unaffected. Last year we also discussed how three companies were approaching this rate design feature through slightly different decoupling mechanisms. While the approach may be different, the concept and end result are not. Companies in the gas utility business are increasingly interested in not only protecting themselves against gross margin variations caused by customer conservation (partial decoupling), but also by weather variations (full decoupling).

In keeping with the evolving convention, we will refer to these mechanisms as revenue decoupling (RD) in general terms and to "partial decoupling" to mean rate design protection for conservation or "full decoupling" to mean rate design protection for both conservation and weather variations. When a company only has weather normalization clause protection, we refer to the rate design as WNC. Fewer companies have conservation rate design protection without also having WNC as permanent features of their ratemaking.

As with our previous study, we define "conservation" as any technical advancement that improves home heating or gas appliance efficiencies as well as the curtailment of consumption on account of high gas commodity prices. Twenty three of the 34 gas LDCs followed by Moody's responded to various questions posed by Moody's and their results have been tabulated and presented in this paper in aggregate form in order to protect the confidentiality of information submitted.

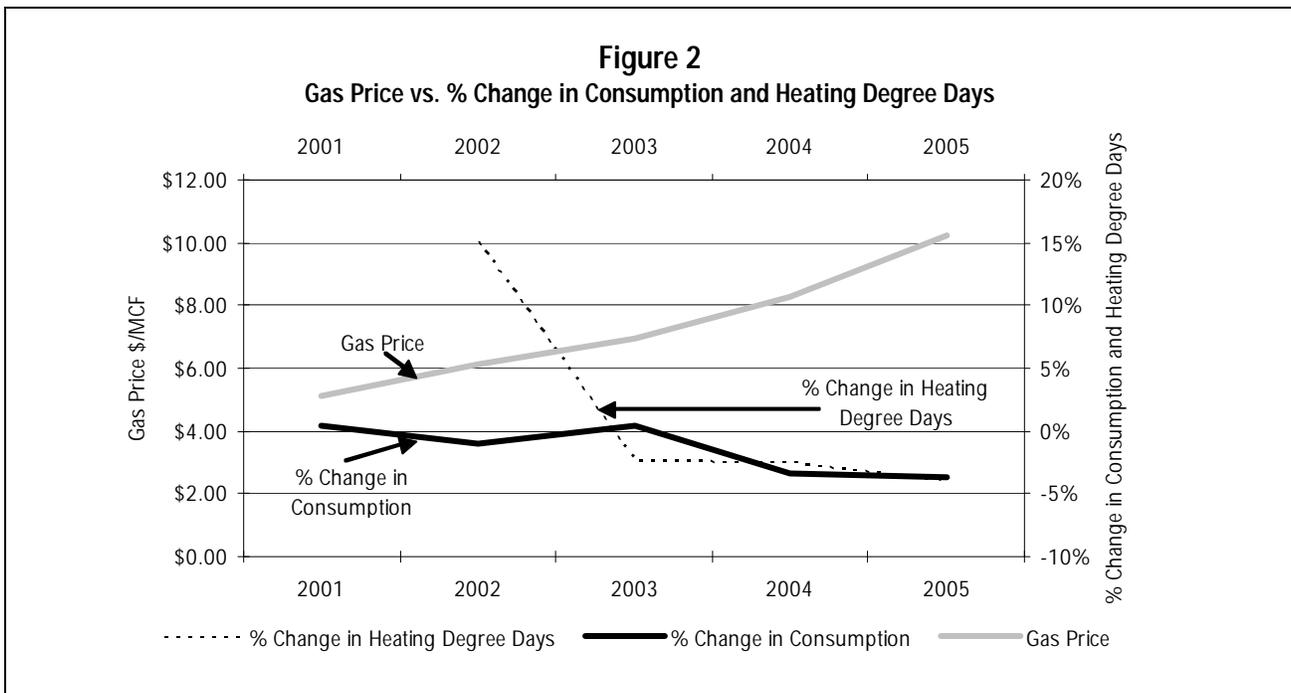
## Nationwide Trend of Rising Gas Prices and Falling Heating Degree Days

Companies overall responded that they were experiencing rising natural gas prices during the past five winter heating seasons, with their average gas purchase prices depicted in the graph below and labeled Increase in Cost of Gas (Fig.1). Natural gas prices rose by a compounded average growth rate of 17% during this period, with the sharpest rise occurring in the winter of 2005 (most recent winter heating season) where it registered an average price increase of 24% over 2004. The highest price recorded by an LDC during this past winter was \$13.31/mcf and lowest \$6.73/mcf with \$10.70 being the median. While only half the respondents provided natural gas price estimates for 2006, those that did resulted in an average price of \$10.71/mcf with \$13.87/mcf being the highest, \$8.61/mcf being the lowest and \$10.59/mcf being the median. Most LDCs expect future natural gas prices to moderate, but the trend is still in an upwards direction and this has been found to be the prime driver for the conservation factor on the part of customers.



The other noticeable trend is that of falling heating degree days since the winter of 2002 among the responding LDCs. On average, the winter of 2002 appears to have been a fairly cold winter, but the number of heating degree days has since fallen by an average of 3-5% in each of the winter heating seasons since that year. LDCs lacking a WNC or full decoupling mechanism would have suffered in their gas consumption and gross margins when faced with the strong combination of warmer than normal winters and declining gas consumption on account of customer conservation.

Finally, except for a period in 2003 when the average customer consumption increased by .5%, the per customer consumption for residential and commercial users has fallen by 3-4% in each of the last two winter heating seasons on a weather normalized basis, representing that portion of loss in gas consumption resulting from conservation. Changes in gas prices are plotted against percentage changes in per customer consumption and heating degree days in Fig. 2. We note that while the change in per customer consumption on account of conservation has been declining since the 2003 winter heating season at a rate of 3-4% p.a., gas prices have continued to rise much more rapidly.



The winter of 2005 saw the most dramatic rise in both natural gas prices and also per customer gas consumption decline on account of conservation (4% average decline). The weather normalized consumption decline for the last winter ranges from 9.1% in the case of one LDC to a gain of 3.1% in another, as it had colder winter weather in 2005 compared with 2004. With the exception of another LDC that had no loss in consumption, all the other respondents had declines in gas consumption. Similarly, except for one LDC which experienced an increase in per customer consumption in 2004 of 1.2%, all others saw declines in per customer consumption from 2003 which ranged from -0.2% to -9.6%.

### Impact of Conservation on Losses in Gross Margin

When LDCs were asked how much higher would their gross margins (gas revenues less cost of gas purchased and associated gas taxes) have been had they been fully protected against declines in gas consumption resulting from conservation, all indicated higher gross margins for the last two winter heating seasons. The average gross margins would have increased from a low of \$2.4 million in 2003 to a high of \$5.2 million in 2004, with one company indicating that they would have gained \$18.3 million in 2004 alone and \$11.6 million in 2005, where the average company stood to gain an additional \$4.6 million in gross margin.

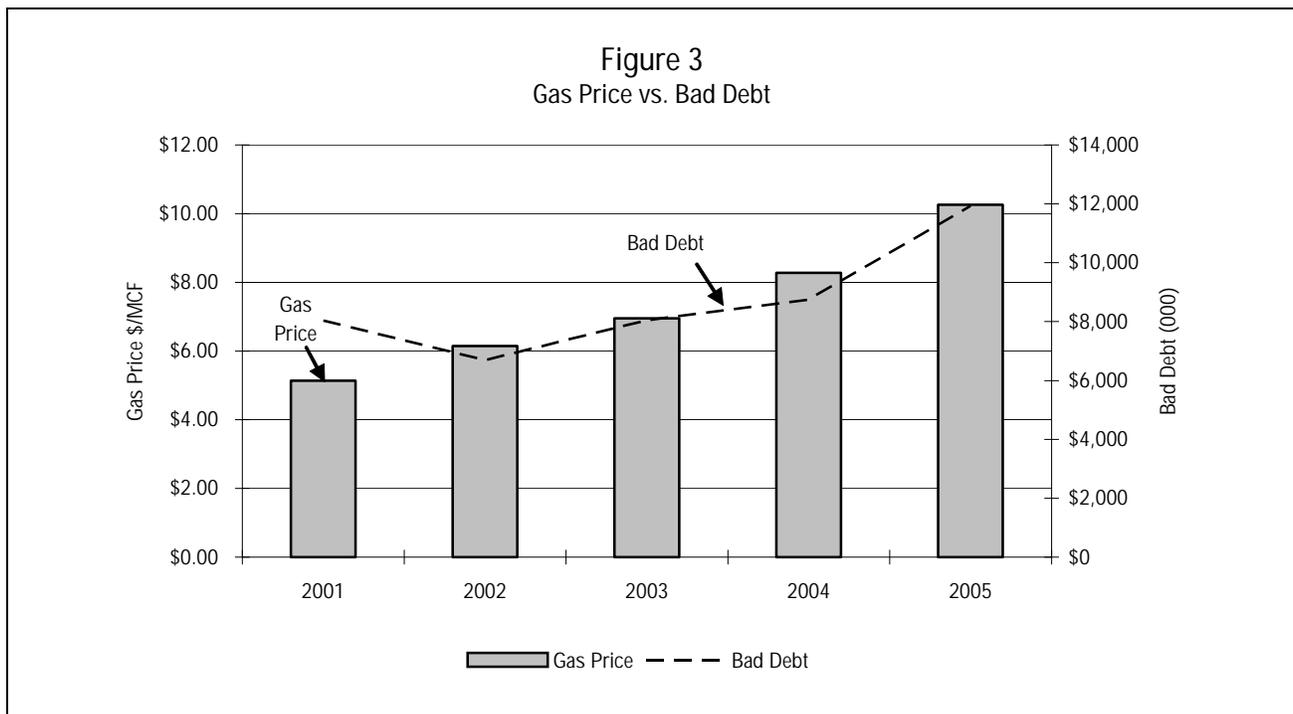
The problem of declining gross margins on account of per customer conservation is explained by the various rate filings and testimonies being offered by consultants on the subject. Symptomatic of the LDC conservation problem is

the argument for incorporating a conservation protection design. For example, Questar Gas Company believes that earning its authorized return has been very difficult due to the combination of declining average consumption over time, the use of a historical test year in general rate cases, and the fact that most of its fixed-non-fuel costs are recovered through a volumetric charge. The upshot has been revenues that in normal weather years have fallen short of their own non-gas costs---because average-customer sales in the rate-effective years fell short of the (historical) test-year figures that were used to set rates. Questar would like to decouple its non-gas revenues from year-to-year movements in the per-customer average consumption levels. The mechanics of the decoupling would employ a balancing account to recover non-gas related revenues lost/gained when average consumption drops/rises above the projected average.<sup>1</sup>

In attempting to grapple with the conservation issue, LDCs are in fact, having to dispel the notion that their fixed charges should be recovered from volumetric sales of gas. As the fixed charges appear year in and year out regardless of gas usage, the volumetric approach to cost recovery for operating a gas distribution system is a faulty equation which needs to be rectified in ratemaking. It would appear therefore, that unless and until this anomaly is corrected, the LDC would lack the necessary tools with which to earn its allowed rate of return.

### Bad Debt Expense and Increases in Working Capital

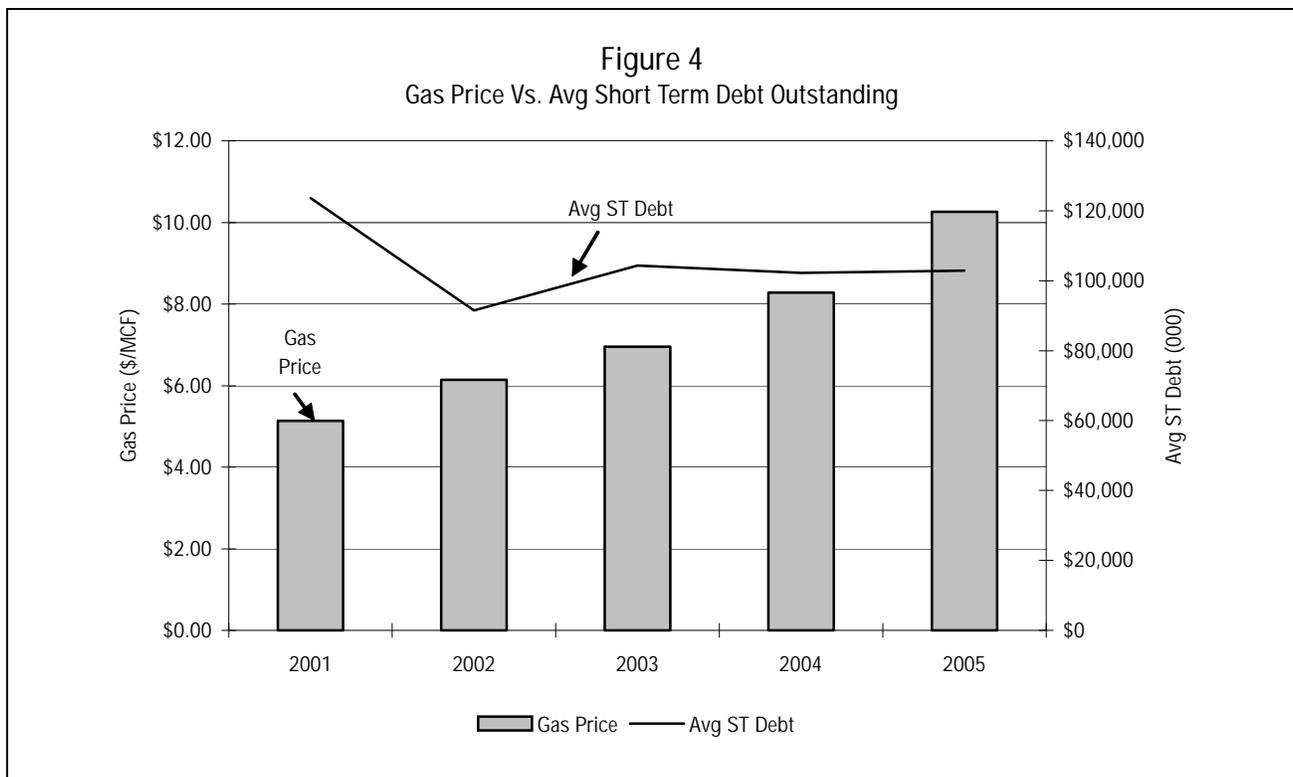
One consequence of rising natural gas prices purchased by LDCs and passed onto their customers is the higher level of bad debt expense and increases in working capital that these companies must now contend with. In the winter of 2005 for example, one LDC reported a doubling of their bad debt expense which increased by an average of 17% for all respondents. LDCs in some states such as those located in North Carolina, had the good fortune of being able to recover the gas component of bad debt expense through their purchase gas adjustment (PGA) mechanism, thereby reducing the level of bad debt expense that the company had to absorb on their own. Fig. 3 depicts the close correlation between rising average bad debt expenses and rising gas prices.



1. *Prefiled Direct Testimony of George R. Compton, Ph.D., for the Division of Public Utilities of the Utah Department of Commerce, Before the Public Service Commission of Utah, January 23, 2006, Docket No. 05-057-T01*

As one would expect, with the higher level of gas commodity prices that customers had to pay and the rise in bad debt expense experienced during the past three winter heating seasons, most LDCs incurred higher levels of working capital. The winter of 2005 witnessed one of the sharpest increases in seasonal working capital on account of accounts receivables and inventory build-ups related to higher natural gas prices, rising 136% over 2004 levels among those LDCs responding to affirmative increases in working capital levels. One large LDC reported a 185% increase in their 2005 working capital level over the prior year. Some companies however, were able to match their increases in accounts receivables and inventory with accounts payable by structuring their gas purchase transactions to more closely match their gas payments for inventory and timing these closer to the anticipated cash receipts from customers, so that they had less working capital to finance.

It is also interesting to note, as depicted in Fig. 4, that on average, LDC short term debt remained relatively flat after 2003 despite the continuing rise in the cost of natural gas prices. Some companies indicated that they were deliberately refinancing short-term debt through medium term notes or through other means of long-term debt by locking in the cost of financing under favorable interest rates, while others were able to contain the increases in their 2005 working capital levels and did not need to borrow as much for their seasonal needs. In fact, approximately half the LDCs indicating having higher levels of working capital in 2005 compared with prior years were able to reduce their short-term debt levels by refinancing via long-term debt or issuance of new equity.



### LDCs Take Varied Approaches in Integrating WNC with RD

It appears that LDCs that already have full RD similar to the “balancing accounts” including revenue normalization adjustments or customer utilization trackers being employed in certain jurisdictions such as California, Maryland and North Carolina, prefer to keep their rate designs intact as they are easily administered and allow for full recovery of their authorized margins. Most other companies that currently have WNC in some of their jurisdictions however, prefer to keep the conservation margin tracker or tariff separate, for the reason that their current WNC provide real time cash flow and earnings adjustments whereas the conservation trackers typically provide after-the-fact cash flow adjustments through deferral accounts that are collected over a subsequent 12-month period.

While some public utility commissions would permit the filing of RD outside the procedural norm of a full rate case, most would clearly prefer a full rate case to be filed in connection with a rate design alteration or at least to review a general rate case after-the-fact in short order. It also appears that the great majority of respondents experiencing customer gas consumption declines on account of conservation would be inclined to file and re-file for some form of RD if denied the first time by their regulators. For many, this is a long but necessary trek to take as a means of curing a rate design deficiency that appears to be increasingly untenable.

## Conclusion

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In our comment last year, we mentioned several LDCs that had the ability to correct for margin losses on account of conservation or weather variables through their rate design mechanisms, or had RD filing plans or extension plans. Among these, Alabama Gas Corporation (Alagasco) advises that their "rate stabilization and equalization" mechanism will continue through at least 2008 and Southern California Gas Company (SoCal Gas) appears to be satisfied with how their "balancing accounts" have been implemented previously and have requested that the regulatory commission continue with them going forward. Following the completion of an independent study to measure the effectiveness of its conservation mechanism, Northwest Natural Gas Company was able to obtain approval of the Oregon Public Utility Commission in 2005 to continue its conservation tariff for an additional four years through September 30, 2009, and increase the mechanism's coverage from a partial decoupling of 90% of residential and commercial gas usage to a full decoupling of 100%. It also maintains a separate weather normalization mechanism that was extended through September 2008.

In April of 2006, Cascade Natural Gas Corporation in Washington State obtained approval from the Oregon Public Utility Commission to implement a decoupling mechanism to track changes in margin due to conservation (variations in weather-normalized usage) and to track changes in margin due to weather variations from normal for residential and commercial customers. Cascade's RD application for Washington State is still pending.

Piedmont Natural Gas in North Carolina obtained approval for a full RD mechanism for a three-year trial period, with the state's Attorney General appealing the decision in the courts. The appeal has been initiated and the court has taken no action. In the meantime, the company has implemented the mechanism effective November 1 of 2005.

Washington Gas Light Company obtained a full RD (Revenue Normalization Adjustment) in its Maryland jurisdiction which went into effect on October 1, 2005. It has previously attempted to introduce at least partial RD in its Virginia and Washington D.C. jurisdictions.

Southwest Gas Corporation did not fare as well in its Arizona RD application where it generates 54% of its gross margin. The company's credit metrics were already weaker than its Baa utility peers and it badly needed an effective RD mechanism across all its jurisdictions to protect its gross margins. While the Arizona Corporation Commission finally granted it a partial rate increase after over one-year in the application process and brought current recent cost and customer usage factors in Arizona, it denied the company its request for RD through "balancing accounts" as it has in California. The company also lacks RD in its Nevada jurisdiction (37% of gross margins) and the company lost gross margins in 2005 when it experienced one of the 10 warmest years on record, which followed a warm 2003, one of the warmest years in over 100 years. The cumulative effects of this warmer than normal weather continued into the company's quarter ending March 31, 2006 which was mostly responsible for the company's loss of \$9 million in operating margin. Moody's took action in May 2006 to downgrade the company's senior unsecured debt to Baa3 from Baa2 where it is currently under stable outlook.

In the meantime, the list of LDCs applying for RD continues to expand with Atmos Energy Corporation attempting to add conservation riders in key jurisdictions where it already has WNC, Indiana Gas Company and Southern Indiana Gas and Electric Company (utility subsidiaries of Vectren Utility Holdings) both applying for conservation margin protection in Indiana to supplement their recently approved WNC, and Questar Gas Corporation seeking a conservation tariff in Utah. New Jersey Natural Gas and South Jersey Gas Company filed for a joint RD application in New Jersey, requesting a full decoupling mechanism. Both of these New Jersey utilities already have WNC.

Moody's believes that the LDCs successful in their RD initiatives will stand a better chance than others in protecting their gross margins and overall credit metrics from the negative impacts of increasing volatility of natural gas prices and climatic changes. Stronger margins and earnings would also serve to cushion the blows inflicted by increases in bad debt expense that tend to accompany rising gas prices. As gas customers step up their conservation efforts in response to these rising commodity prices, it will become increasingly important for LDCs to switch from a gas volumetric cost recovery methodology to one of RD. While RD may have originally begun as a regional concept in certain jurisdictions, it has quickly become a nationwide phenomenon that will challenge regulators and gas utilities alike, as they seek to correct a structural imbalance in their rate design that has become increasingly difficult to ignore.

## Related Research

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### **Special Comments:**

[Impact of Conservation on Gas Margins and Financial Stability in the Gas LDC Sector, June 2005 \(92798\)](#)

[Comparative ROE Attributes of US Local Gas Distribution Companies, July 2004 \(87301\)](#)

[Negative Rating Trend for Local Gas Distribution Companies: Impact of Diversifications and Warm Weather, October 2002 \(76344\)](#)

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