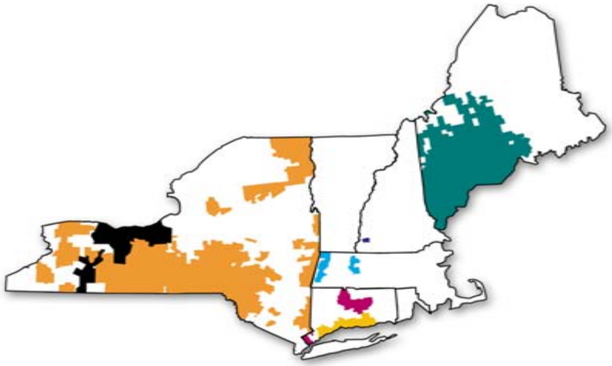

Presentation to The Harvard Electricity Policy Group

TO HEDGE OR NOT TO HEDGE

September 21, 2006

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Questions Raised

- Do risks associated with hedging exceed the apparent benefits?
- Do Companies seek prior approval of hedging plans to avoid prudence disallowances?
- Is there any upside benefit for risks assumed by hedging?
- Are regulators more likely to scrutinize hedging transactions than to question the prudence of not hedging at all?
- Does pre-approval remove a necessary element of management responsibility?
- How do you distinguish between hedging to protect customers, and speculation?

Questions Raised *(continued)*

- Who should make the decision whether to hedge or not to hedge?

    In answering these questions one has to look at what regulators have done in the past. Since the vast majority of gas companies report that they engage in financial hedging, decisions in the gas industry also provide a useful guide.

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Hedging vs. Speculation

- Hedging is described by regulators as trying to achieve price stability to protect customers from sharp run-ups in price.

  > "Hedging is a rational device to deter price spiking, like insurance against major catastrophic losses. It is a risk management device applied to assure steady pricing and the availability of supply at reasonable prices". *Washington Gas Light, Formal Case No. 874, Order No. 13221 (D.C. PSC 2004).*

- Taking a hedging position without a corresponding market to serve or trying to beat the market is called speculation.
- Losses in the unregulated merchant business from hedging strategies that failed: Louisville Gas & Electric, and Aquila.

Speculation

Aquila

• Our systems and procedures for monitoring and controlling risk are recognized as among the best in the business. (Aquila Annual Report, 2/28/02)	Versus	• Our commitments under long-term gas and power delivery contracts will generate significant losses and negative cash flows for their term. (3rd Q ’03 10Q)
• Our fundamental strategy is to manage our risk and transfer it to the capital markets. (AnRep)	Versus	• We are exposed to market risk on open positions on trading contracts, which may cause us to realize gains or losses. (10Q)

- The ultimate loss was in the neighborhood of $700 million.

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Speculation

Louisville Gas and Electric

- The Company discontinued its merchant function based on the impact that volatility in the power market had on its portfolio of energy marketing contracts. The Company recorded a loss of $225 million in 1998.
- In 1999, the Company increased its loss by $175 million.
- In 2000, the Company increased its loss by an additional $155 million.

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Speculation

Amaranth

Last week, the 32-year old hedge funds chief energy trader, misjudged when to take his chips off the table losing roughly $5 Billion in a week for a hedge fund that boasted world-class risk-management systems

WSJ 9/20/2006, C1

Overview of Regulatory Decisions

- Some jurisdictions have disallowed recovery of gas costs for failure to hedge while others have declined to disallow recovery of gas costs but required implementation of hedging plans.
- At least one Commission has disallowed imprudent hedges.
- Many Commissions have specific regulatory/statutory hedging requirements
- States that provide for retail competition may have specific requirements for the acquisition of power for POLR Service.
- Not unexpectedly, a few Commissions give no guidance on whether to hedge or not to hedge.

Damned if You Do--Damned if You Don't

- Without protection from after-the-fact second guessing by regulators, LDCs could be caught in a "catch 22" dilemma: being punished for hedging when they shouldn't have (*i.e.*, having costs disallowed), or alternatively, being punished for not hedging when they could have. *Re Hedging Commodity Cost by Natural Gas Local Distribution Companies, Docket No. G-100, sub 84 (N.C.U.C. 2002)*

Damned if You Don't

Rhode Island

- Valley Gas and Providence Gas Companies in 2000 acted like the grasshopper in the fable of 'The Grasshopper and the Ant.' Like the grasshopper, the Companies frolicked during the spring and summer and did not prepare or plan ahead for the winter. When winter came, the grasshopper perished. Unless a company wants to share the fate of the grasshopper, it should plan ahead and be proactive.

  Re Providence Gas Co., Order No. 16745 (R.I.P.U.C. 2001)

Damned if You Don't

Nevada

- Southwest failed to analyze the costs of any mitigation strategies, including the use of financial hedging mechanisms to protect its customers from dramatic price increases.
- Southwest could have mitigated its risk for a very small premium. Had Southwest done so, Nevada ratepayers would have been partially protected from the dramatic increases in gas prices.

Re Southwest Gas Corp., Docket Nos. 97-6004 et al. (N.V.P.U.C. 1997)

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Damned if You Don’t

Indiana

- Gas market fundamentals have experienced unprecedented and fitful change, resulting in periods of extreme price volatility. This requires increased flexibility in gas procurement rather than “unwavering fealty” to procedures that no longer meet the need of customers.
- Customers are entitled to a certain degree of price stability during periods of extreme price volatility and price fly-ups.

Northern Indiana Public Service Co., Case No. 41338-GCA (I.U.R.C. 2003)

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Damned if You Don’t

Indiana *(continued)*

- IGC should have been more concerned about price risk mitigation for its customers, and a more sophisticated process should be in place to ensure a thorough consideration and analysis of possible volatility mitigation measures. Company failed to demonstrate that it was prudent to deviate from past diversification practices that incorporated a level of hedged gas purchases.

  Re Indiana Gas IGC, Inc., Case No. 37394-GCA68 (I.U.R.C. 2001)

Damned if You Don't

New Mexico

- Public Service Company of New Mexico ("PSNM") has been "playing Russian roulette with its portfolio strategy," pointing the gun at its customers rather than itself. The Commission rejected PSNM's argument that its reliance on the spot market had "saved consumers millions of dollars" in the past. "Simple common sense and accepted business standards of business conduct" should have led the company to pursue methods such as price hedging to limit the risks to ratepayers.

  Re PSNM Gas Services, Case No. 2752 (N.M.P.S.C. 1997)

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Escaped Damnation

New Jersey

- Board cannot, in hindsight, find the decisions made in 2000 to have been unreasonable given the “extraordinary circumstances” existing at the time.
- Directed each utility to submit its plans for a hedging program to address the volatile market.

Re Levelized Gas Adjustment Clause Proceedings, Docket Nos. GR 99100778, et al., (NJ B.P.U. 2002)

Illinois

- Mitigating price volatility is just one aspect of gas supply planning, not “an end in itself.”

North Shore Gas Co., Docket 97-0023 (I.C.C. 1997)

Escaped Damnation

Georgia

- Staff presented evidence demonstrating that Savannah Electric had information available to it that the upcoming situation for supply and demand for natural gas for generation was analogous to a "train wreck" or a "rocket flying to the moon."
- Although there was substantial discussion concerning Savannah Electric's failure to pursue hedging diligence, no witness testified that the Company's conduct was "clearly imprudent."

Re Savannah Electric and Power Co., Docket No. 13605-U (GA P.S.C. 2001)

Damned If They Did

Nevada

- In 2002, the NPUC allowed Nevada Power recovery of $575 million even though those costs were caused by "colossal management mistakes". But denied recovery of an additional $347 million because of imprudence.
- The decision to purchase power at an average price of $513 per megawatt hour, when they knew that it would have excess supplies, was "beyond explanation." Purchases were made with only a minimal investigation and planning and were basically done on the spur of the moment.

Re Nevada Power Co., Docket No. 01-11029 (NV P.U.C. 2002)

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Damned If They Did

Nevada *(continued)*

- In July 2006, the Nevada Supreme Court reversed the disallowance in part ($180 million) but affirmed the remaining disallowance of $167 million.

  Pub. Utils. Comm'n of Nevada et al. v. Nevada Power Co., 138 P.3d 486 (Nev. Sup. Ct. 2006)

Damned If They Did

Nevada *(continued)*

- Westpac's purchase of all of its fuel from floating contracts within a 22-day period amounted to "putting all of its eggs in one basket." Such a highly speculative product cannot be considered the type of decision that a reasonable person would have made.
- Companies must have some strategy in place for mitigating risk and keeping gas costs at a reasonable level.

Westpac Utilities, Docket Nos. 02-7003 and 02-7004 (NV P.U.C. 2002)

To Hedge or Not to Hedge – No Regulatory Guidance

Vermont

- Whether or not to hedge is a matter of management discretion. PSB was not prepared to give Vermont Gas management's action a special status by granting pre-approval of hedging proposal.

  Re Vermont Gas Systems, Inc., Docket No. 6495 (VT P.S.B. 2001)

District of Columbia

- Majority was disinclined to guarantee recovery by granting pre-approval which would presume the prudence of costs before they were incurred.

  Re The District of Columbia Natural Gas Division of the Washington Gas Light Co., Formal Case No. 874., Order No. 73221 (D.C. P.S.C. 2004)

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Authorization to Hedge – Specific Programs

Massachusetts -- Opt-In Approach Gas

- Voluntary customer participation
- Maintain objective of volatility mitigation and price stability rather then the objective of procuring prices below
- Ensure fair competition
- Allocate cost to participants only
- Demonstrate effect of plan on reliability and transparency of commodity price
- No incentives allowed

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Authorization to Hedge – Specific Programs

New Hampshire - Opt-in

- Fixed Price Option Program for KeySpan customers seeking price certainty
- In 2005, KeySpan changed the FPO rate at $0.02 per therm above the cost of gas per therm rate and increased the volumes of gas available to 35% of winter supplies
- KeySpan hedges up to 67.5% of supplies purchased between November and April in accordance with certain targets, and hedges the cost of storage
- Revenues generated by the $0.02 premium are used to offset gas costs

Re Energy North Natural Gas, Inc., Order No. 24,515 (N.H.P.U.C. 2005)

Authorization to Hedge

New York (Gas)

- The "almost exclusive reliance on spot or monthly pricing does not manage price volatility."
- "While we are not directing any particular mix of portfolio options, volatility of customer bills is one of the criteria, along with other factors such as cost and reliability, that LDCs should consider in their gas supply purchasing strategies."

  Case 97-G-0600, Statement of Policy Regarding Gas Purchasing Practices (1998)

Retail Choice States

New York (Electric)

- In its Competition Policy Statement setting forth its goal of retail Competition the Commission addressed hedging:
  - Until "forward energy markets mature, residential customers and possibly some small commercial customers may continue to need some regulatory protection against market volatility, whatever its causes."
  - The Commission recommended portfolio-theory-based hedging. "Portfolio theory suggests that neither 100% hedging (i.e., fixed rates regardless of the market) nor 100% exposure to the spot market, with no hedging at all, would be prudent." This recommendation parallels the recommendation established in the Gas Purchasing Statement.

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Retail Choice States

- There could be instances where a long term commodity contract might be judiciously used in support of public policy goals, (system reliability, environmental considerations, fuel diversity, or market power mitigation). Those instances will be examined on a case-by-case basis as required.
- However, if it is determined that a utility has entered into a long-term contract to retain market share or to otherwise impede the development of a competitive market, the cost of those contracts may not be recoverable for -----
- In future rate proceedings, utilities should not propose fixed rate commodity tariffs or tariffs creating a profit center for commodity sales. It found that elimination of the utility profit incentive will "better align the utilities' interests with the goal of fostering competitive markets."

New York *(continued)*

- In the recent (August 23rd) NYSEG rate case the Commission found that NYSEG should employ a portfolio based hedging approach to obtaining wholesale energy supplies, designed to limit electricity price volatility. This represents a 'happy medium' between the current fixed rate option, where price is absolutely fixed, and a full pass through of market prices, where customers are exposed to unhedged spot-market prices. On the same day the Commission opened a generic investigation into hedging for electric companies.
- The Commission also allowed NYSEG to continue to offer a fixed Price Option (FPO) as a transitional measure means and for a limited period of time although on much different terms than it had allowed previously.

Case 05-E-1222 New York State Electric & Gas Corp. (issued August 23, 2006)

Retail Choice States

Massachusetts Opt-In approach – Electric

- Since the inception of retail competition, the MDTE has made several changes to its default (basic) service policies
- In 2003, utilities were ordered to solicit bids for residential and small C&I customers in two segments (each for 50% of the load) on a semi-annual basis for a twelve-month term. Electric supply for large C&I customers is procured quarterly
- Residential and small C&I customers are automatically placed on fixed price option ("FPO") unless they choose the variable option ("VPO")
- Medium and large customers are automatically placed on the VPO, unless they elect the FPO

Re Provision of Default Service, DTE 02-40-C (M.D.T.E. 2003)

Retail Choice States

New Jersey

- In 2002, BPU approved the wholesale auction process
- For large C&I customers, IOU's procure capacity and supply energy at hourly prices
- For residential and small C&I customers, IOU's solicit fixed price contracts, such that 1/3 is served under 1-year contracts, 1/3 under 2-year contracts and 1/3 under 3-year contracts
- In March 2006, the BPU opened a proceeding to investigate modifying the process

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Retail Choice States

Illinois

- Bidding for 50 MW traunches, no single bidder to supply more than 35% of load
- In first year, for residential/small C&I customers, 1/3 of SOS load served under 3-year contracts, 1/3 served under 2-year contracts, 1/3 served under 1-year contracts. Thereafter 1/3 up for bid each year under 3 year contracts
- Auction results subject to review by ICC for prudence
- Residential/small C&I customers subject to “staff mitigation policy”
- The ICC order has been appealed

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Retail Choice States

Delaware

- After 5/31/06, the conclusion of transition period, Delaware Power & Light was ordered to continue as POLR and meet SOS demand through competitive wholesale bidding
- 1/3 of residential/small business load met through 1-year, 2-year and 3-year contracts, with 1/3 bid out under 3-year contracts
- SOS for large C&I procured under 1-year contract with hourly pricing

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Retail Choice States

District of Columbia

- In 2004, PSC adopted rules for PEPCO to provide standard offer services (“SOS”) and procure supplies through competitive bidding process
- For residential customers, PEPCO solicits fixed price offers for 1-year, 2-year and 3-year contracts, such that 40% of load supplied by contracts with terms of 3+ years
- For non-residential, PEPCO offers fixed price SOS procured under contracts with 1-year and 2-year terms, such that 40% of load is supplied by 2-year contracts
- Non-residential customers are required to stay on fixed price for 12 months. If they decline, they are served under Market-Price Service (based on locational marginal price set by PJM RTO)

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Retail Choice States

Connecticut

- Beginning 1/1/2007, utilities to provide "standard service" to residential and small/medium C&I and "last resort" service to large C&I
- Utilities collect procurement fee (0.05 kwh) for providing transition and standard service to small customers
- DPUC required to establish incentive plan for procurement of long-term contracts

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Retail Choice States

Maryland

- In 2003, Commission extended IOU’s obligation to retain POLR obligations beyond transition period and to provide SOS
- Power for SOS procured through competitive bid under 1, 2 and 3 year contracts (1-year contract for 50% of load, 2-year contract for 25% and 3-year for remainder)

Non-Retail Choice States

Florida

- Risk Management Plan to be submitted to Commission
- Utility is allowed to recover its non-speculative, prudently-incurred gains and losses associated with financial and/or physical hedging transactions for gas, oil and purchased power
- Utility may also recover prudently-incurred incremental operating and maintenance expenses incurred from initiating new or expanded non-speculative financial and/or physical hedging programs

In Re Review of Investor-Owned Electric Utilities' Risk Management Policies and Procedures, Order No. PSC-02-1484-FOF-EI (FL P.S.C. 2002)

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Non-Retail Choice States

Iowa

- IPL requested permission to use hedging tools in procuring: (i) natural gas for electric generation, and (ii) power in electricity markets, and to include the associated costs in the EAC
- Board allowed recovery of hedging costs on the condition that hedges comply with corporate governance rules, which prohibits speculative transactions and allows hedging only for purposes of reducing risk

Re Interstate Power and Light Company, Docket No. WRU-05-17-150 (I.U.B. 2005)

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Non-Retail Choice States

Oklahoma

- Each electric utility must submit a proposed integrated resource plan, which must include a risk management plan
- "Risk management plan" is defined as "…a systematic method used by the utility to… (A) Identify risks inherent in procuring and obtaining a supply portfolio; [and] (B) Establish the means by which the utility plans to address and balance or hedge the identified risks related to cost, price volatility and reliability…." (OAC 165:35-1-2)
- Commission will evaluate procurement processes and costs in prudence reviews conducted every 2 or 3 years (depending on the utility's size) pursuant to OAC 165:35-35-1.

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Non-Retail Choice States

Washington

- Electric utility is required to file an Integrated Resource Plan (IRP) describing the mix of energy supply and conservation that will meet current and future needs at the lowest reasonable cost to the utility and its ratepayers
  - "Lowest reasonable cost" means the lowest cost mix of resources determined through a detailed analysis that considers a variety of factors, including market-volatility risks. *WAC 480-100-238*
- Pacificorp's 2004 IRP identifies volatility in natural gas and wholesale electric supply markets and the steps it will take to mitigate risk.
  - Executive Secretary of Washington Utilities and Transportation Commission responded that Pacificorp's 2004 IRP complies with applicable regulatory requirements, but that this finding "…does not pre-approve for ratemaking any expenditures for resources or actions identified in the IRP."

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Non-Retail Choice States

Wisconsin

- Madison Gas and Electric Corporation and Wisconsin Power and Light Company
  - Commission approved electric procurement risk management program allowing ratepayers to pay costs associated with non-speculative hedges

Re Madison Gas and Electric Company, 3270-GF-101 (2003), and Wisconsin Power and Light Company's 6680-GF-112

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Non-Retail Choice States

Georgia

- 75%/25% customer/shareholder sharing of net positive financial gain from price risk management

Re Savannah Electric Power Company, Docket No. 13196-U (GA P.S.C. 2001)

- Commission modified or eliminated a number of restrictions
- Substituted a menu of approved and prohibited financial transactions for the dollar lost limit in original order
- Suspended profit-sharing framework until a new framework is accepted by the parties

Re Georgia Power Company's and Savannah Electric Power Company's, Docket No. 22403-U (GA P.S.C. 2006)

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Non-Retail Choice States

California - Electric

- Section 454.5 requires electric corporations to file Procurement Plans for approval by the Commission
  - The Procurement Plan must include the electric corporations' risk management policies, strategy and practices, including specific measures addressing price stability
- There is no after-the-fact review of procurement decisions made under an approved Procurement Plan

Order Instituting Rulemaking to Establish Policies and Cost Recovery Mechanisms for Generation Procurement and Renewable Resource Development (Rulemaking 01-10-024), Decision 02-10-062 (10/4/2002) and Decision 03-12-062 (12/18/2003)

To Hedge or Not to Hedge

Lessons Learned –

- Hedging of fuel and purchased power is a useful risk mitigation tool that regulators generally either require or encourage. Failure to hedge may be viewed as a "hedge" itself.
- Many states do not pre-approve particular hedging strategies or the implementation of those strategies. The risk of being found imprudent for following a hedging strategy appears to be minimal and no more than what one could expect from other business decisions made by the utility. In those instances where there have been disallowances, there was no defined strategy that was adhered to.

To Hedge or Not to Hedge

Lessons Learned –

- In states where there is retail choice and the LSE has the obligation to acquire supply for default service the acquisition of power for POLR Service, including hedging, may be dictated by the Regulators. The utility is put at great risk if it acquires long term contracts (NY).

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