

The RUDDEN ENERGY STRATEGIES REPORT

Provides valuable strategic insights to the energy industry



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Transmission Business Chicago Style

There are conferences and courses in which every presentation is a commercial or a slide show squeezed of vital juices by the corporate lawyer. Not the Transmission Business School, three and a half days of concentrated work run by George Gross of the University of Illinois. People with in-the-trenches experience discuss the real world and compare notes with the “students.” Since I don’t have plans to run a transmission operation, I like to listen for comments and questions that often reveal the real working of the business or the real thoughts of people unhindered by corporate flacks.

Somebody asked a transmission executive whether every utility — no matter how small — should have to comply with the rules of the Electric Reliability Organization. “Yes, because a small operator can bring down the entire network. If the small operator doesn’t have the staff, it can hire an outside company to do the job. If it can’t afford to, maybe it’s too small to stay in business.” (That’s a Darwinian answer, for sure.)

An RTO executive blithely declared that the RTO’s goal is “to minimize the cost of capacity on the system, not the total bill.” (No point considering what customers pay? That says a lot.)

A transmission executive succinctly summed up the real public relations issue with transmission: “everyone hates it.” (That’s a direct answer.)

A systems and market designer observed, “The U.S. and Europe are moving in opposite directions. Europe is moving to coordination, the U.S. to centralization,” and “We need market design because of scarcity of transmission,” and “A market with plenty of transmission would work better.” That prompted a foreign utility executive to ask, “Wouldn’t it be better, then, to expand the transmission network?” (Duh! You mean that more transmission capacity is superior to locational marginal pricing?)

Federal government staffer on the latest Energy Policy Act: “Reliability, the ability to impose mandatory standards, is the most significant addition to FERC’s authority.”

Somebody asserted that everyone (not just Enron) gamed the California market, and they were doing so as late as 2004.

Listening to various Federal staffers led me to believe that the industry and the states might be entering a new, friendlier era in dealing with Washington, but not necessarily one that would produce anything of significance. The long list of so-called incentives looked like an aggregation of procedures that state regulators had used over several decades, which I guess qualifies as progress in Washington, but barely touches on what incentive regulation means in the rest of the world.



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But whose fault is that? The staffer said that FERC is an “applications-based agency.” That means, I think, that outsiders have to propose innovative ideas to FERC, because FERC won’t do anything on its own. Electric companies, however, rarely proposed anything new, because their lawyers would claim that the idea has not been approved before. The staffer implied that FERC would welcome helpful input. Those of us who have read those stacks of comments that go to FERC know that most of them tear down other people’s proposals rather than offer constructive ideas, though. Of course, some industry people assert that FERC never approves innovations, anyway, so why propose them? But how would they know unless they try?

I suspect, from comments, that the Feds may have doubts about the direction of the merchant sector, which seems intent on putting the risk back on the consumer. Sort of, “Why do you deserve those market-based returns if you don’t take a market risk?”

Here’s my take on transmission derived from a trip to Chicago. First, I think that the atmosphere has become friendlier, meaning expect less bullying, more collegiality, more diversity of methods, at least until the next big blackout. That’s good news. Don’t expect innovative regulation, just adoption of ideas that seem to have worked at the state level. Finally, I get the feeling that a lot of people in the transmission business have concluded that they will have to work within the confines of an anything-but-optimal structure, and just figure out how to do as well as they can under the circumstances.

Water Drips

Obviously, some international giants think that there’s gold in them thar faucets. General Electric’s GE Water & Process Technologies paid a “very high price”¹ for ZENON, a Canadian producer of membrane filters, which, supposedly, puts GE in the municipal water market, in addition to the industrial market which it already served. GE, incidentally, has also announced its intent to enter the infrastructure business. Keep in mind that GE, given its huge size, has to find big markets or ventures. That’s what happens when the firm reaches \$673 billion in asset size. (Admittedly, the number drops to around \$300 billion after subtracting out finance and leasing assets, but it’s still a big number.) Infrastructure projects can soak up billions of dollars per shot.

The other big players in the water arena (with the exception of Siemens) include Danaher, Pentair, ITT Industries that don’t have that sort of financial presence. One of AIG’s offshoots did buy an American water utility in 2005, though, while a German utility is selling its water utilities in the U.S. and the UK.

Each of the players has a different set of motives. But GE, the biggest player, may have two motives: to build up a major presence in water treatment and to use the treatment arm as a wedge to get into the business of owning and operating infrastructure. Maybe it has a similar policy on the energy side of its business.

¹ Steve Maxwell, “Market Outlook,” *AWWA Journal*, May 2006, p.38.



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EEI May Meeting

The Edison Electric Institute paid its regular visit to New York in May. Bond analysts and electric utility executives talked about governance, regulators about regulating, and an energy economist told us when the lights might go out.

Start with ring fencing, that is, how to keep the utility assets safe from the depredations of the holding company, the flip artists, and other potential evil doers. The moderator talked about degrees of separation and whether the ring fencing was anticipative or reactive. The bond rater said that her firm would not rate a subsidiary higher than the parent, except for unique circumstances. She distinguished, too, between “bankruptcy proof” and “bankruptcy remote.” The lawyer who followed also distinguished between proof and remote. Then a utility executive portrayed his firm’s ring fencing as not unduly restrictive, despite the independent director and administrator, and also noted that the utility could lend money to affiliates. Another utility executive provided two reasons to ring fence: to protect the rest of the organization from the entity being ring fenced, and to protect the utility from difficulties at the parent. The greater the separation, the greater the likelihood that regulators would grant the utility an appropriate return. A bond investor said that the independent director concept (the independent director at the utility can veto certain actions) had not been tested, and the repeal of PUHCA could bring some surprises. (After listening to the presentations, I ended up wondering whether there might be more benefit derived from simply divesting the utility from the rest of the stuff.)

The four state regulators varied in degree of certainty. The legislator from the fully regulated state talked about ring fencing, need for base load and deployment of capital. The regulator from a restructured state quoted studies of savings for competitive customers (conveniently forgetting what happened to the absolute price of electricity for consumers) and said there were plenty of competitors. The regulator from the other restructured state whose customers will face a “snap up” when the transition period ends, mused, “What is a reasonable price to snap up to?” (Sounds like the medieval concept of the just price, or FERC’s version, “just and reasonable” rates.) The regulator from another restructured state facing snap up said he was concerned about new capacity (or lack thereof) and didn’t “know where retail competition will go.” (Doubt, self-serving studies, worries about the future and smug certainty seem to characterize the regulatory mix. How should customers feel?)

I think, though, that the meatiest part of the conference came after lunch, when JoneLin Wang of CERA went over the prospects for generation:

1. In most regions, generating surplus gone in 2-6 years. Confusion about market design and CO₂, generators can’t decide what to do.



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2. Natural gas resources in decline in Lower 48. Coal plants won't get more efficient. Will need to rely on LNG whose use will push down natural gas prices.
3. Few new coal units before 2010, after which expect many.
4. Nuclear back in the picture. Need to order early for some equipment. Limited number of suppliers. In the decade necessary to get nukes on line, expect a recession, drop in gas prices, higher inflation and interest rates, so build all that into calculations.
5. ACT NOW because NOT ACTING NOW = ALL GAS FUTURE + POWER SHORTAGE

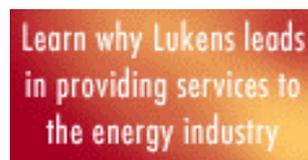
That was a sobering conclusion to the presentations.

Financial Corner: Market Returns

Unhappily, the people who make the stock indices keep changing or discontinuing them, so it is difficult to come up with consistent data over long time periods. Which is why the following analyses cover the years 1993-2005, not because those years gave me the results that I wanted, but because I couldn't work the numbers for a longer period of time.

First, the numbers for industrial stocks confirm the observation of other observers, that firms earn higher returns on equity than their stockholders earn on investment in those firms. Next look at utilities. The utilities earn lower returns on equity than regulators allow, and shareholders earn less than the return on book equity. But, bondholders earn less than shareholders, which one should expect, given the lower risk of bonds. Note, too, that dividends account for a larger portion of total return for utilities than for industrials. Also, the real return calculated for the period, is not far from the 6.5 percent real return on stock investment that has prevailed for at least a century over much of the world.





**Average Annual Returns
1993-2005 Inclusive
(Percent)**

					<u>Rate Case ROE Allowed</u>	
	<u>S&P 500</u>	<u>S&P Electric</u>	<u>S&P Gas</u>	<u>Bonds</u>	<u>Electric</u>	<u>Gas</u>
ROE earned (allowed)	14.0	10.8	10.5	--	11.1	11.1
Dividend (interest) yield	1.7	4.9	3.6	7.2	--	--
Total return	10.5	7.7	9.6	7.4	--	--
Dividend (interest) percent of total return	16.2	63.6	37.5	97.3	--	--
Real annual total return*	8.5	5.7	7.6	5.4	--	--

* 2.0 percent rate of inflation for GDP used.

The numbers give an idea of what shareholders should expect. But, do not confuse those numbers with cost of equity as calculated in rate cases. Shareholders calculate their returns based on market value of their investments, not on book value.

EPRI Upbeat

When I was on the Electric Power Research Institute (EPRI) advisory board, I didn't feel upbeat. The industry spent less and less on research. Executives couldn't bother, considering all the other uses they had for the money (such as investments in China, Argentina, telecommunications, broad band trading, energy trading, etc.). I could not figure out how an industry that spent 0.3 percent of revenue on research could expect to have a future. The nuclear people used EPRI more than anyone else. They worried about assets and performance and could not afford to miss out on technical improvements or the latest word on operations.

The current president of EPRI (out of GE) made a presentation at the Wall Street Utility group. EPRI's budget is rising (although now it equals less than 0.2 percent of industry revenue). Biggest sector is nuclear. International firms contribute 15 percent of budget.

The presentation did what EPRI does best. It nailed down a lot of numbers, what different types of power stations might cost, different scenarios, improvements in technologies, timeframes for improvements and even which countries do not have the geology necessary to sequester CO₂ (Japan and Korea). Look for all the information on the EPRI Web site.

When I hear all that confident, detailed presentation, full of hard data, though, I wonder if I might not be getting the best conventional analysis available, with the possibility that dramatic (as opposed to incremental or expected) solutions will come out of left field, that is not from the stuff discussed in the analysis. How many industry gurus



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expected gas turbines to take over the market, cell phones to replace conventional land lines, the internet, Japanese cars as models of quality, Velcro to supplant shoelaces, or FedEx to survive the fax machine and PDF downloads?

I think that the industry should support EPRI more than it does, because knowing more is better than knowing less. I'd be surprised to see major innovations come out of EPRI, but EPRI can help the industry to size up and figure out how to use the innovations and keep the industry abreast of the technology that it already has. However, the problem EPRI cannot solve is how to get the industry to embrace technology as opposed to waiting for the government to do something.

Random Thoughts on Nuclear, Coal and Glaciers

For awhile, I figured that there was no point writing about global warming because the energy industry had decided to ignore it and so did our government, so what was the purpose of writing about strategies for global climate change to an industry convinced that it didn't need any strategy other than to lay low, plant some trees in the tropics, and support the right politicians?

I think that the picture changed when Christian evangelicals decided that we had an obligation to do something about the environment, the nuclear industry finally figured out that global warming worries might kick start nuclear power, if concern about foreign fuel sources did not, nuclear lobbyists got in bed with prominent old-time environmentalists, and GE went green. Now, the UK government drops hints that it wants to revive nuclear power and the Ontario government has announced its plans to do so, both in spite of terrible past experiences. A bunch of U.S. utilities have begun to maneuver to collect a federal subsidy for building nukes, too.

Somebody has launched a high-powered campaign to position nuclear as the environmentalist's friend, and the obvious answer to global warming and high fossil fuel prices and dependence on foreign fuel. A new "coalition" (that seems to mean lobbying group) has emerged, headed by a former EPA chief, and two Senators have introduced a bill that "would ... have Congress declare that the nation has confidence that sufficient capacity for used nuclear fuel disposal will be available in a timely manner."² (That certainly should give us comfort!)

Don't expect the anti-nukes to go away, though. They will hammer away at the government's inability to put the waste somewhere, an issue that may stop some utilities from building. (For instance, John Rowe, the CEO of

² "Bill Seeks to Facilitate Licensing, Construction of Repository," *Nuclear Energy Insight*, May 2006, p.5.



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Exelon, “does not want to build another nuclear plant until the nation’s spent-fuel disposal problem is solved.”³) They will criticize the industry’s poor past performance. Most of all, they will argue that cutting down on wasteful energy consumption will cost less than building nukes.

Renewables instead? “Well,” say the exponents of nukes, “they are okay, but they do not amount to much and they cost too much.” That is based on the assumption that the nukes will cost what the estimates claim, of course. And the argument does not take into account the value to society of a resource whose availability and price do not depend on international events. (Did you see the report on what might happen if Hugo Chavez got really nasty?)

The big coal interests have not gotten the message. Anything that reduces CO₂ output from coal plants either raises coal costs (sequestration) or reduces coal consumption (more efficient combustion of coal). Old coal plants may not have room on site for CO₂ scrubbers, and, as for the integrated gasification combined cycle units, “We don’t have enough experience with it.” (I said that to the executive of a company that runs an IGCC. He bristled. “That’s our most reliable unit. We dispatch it first.” I then asked about carbon sequestration and he said that the company had a possible site in mind.)

An engineering professor noted that the most elegant solution was to use energy more efficiently. But that would require some certainty about policy (so that investment to bring about efficient usage made sense as opposed to paying high prices for energy) which seems unlikely as long as politicians keep screaming about the injustice of the high energy prices that would make efficiency investments worth making.

Just to confuse matters more, what about the possibility that the nukes go on line around 2016, just when the Arctic gas starts to flow to the market and LNG comes in from all over the place? Do we have a market structure that can handle the possibility? Remember, we pick power plants for operation based on tomorrow’s prices. That’s about as long term as we get, nowadays.

The Speech That Wasn’t

They cut my session out of the conference, so I didn’t go to Toronto, and I have a spare speech to peddle. You can get the full text from Diana Peterson via e-mail at petersondl@bv.com if you want. Just ask for “Wires as a Business or If the Network is the Answer, What is the Question?” For those of you who don’t like summaries, here is the gist, what wires companies need in order to run as businesses, in seven bullet points.

³ Cora Daniels, “Meet Mr. Nuke,” *Fortune*, May 15, 2006, p.144.



1. A customer service fixation – Run the business to provide customer satisfaction. Do what they want, not what you want.
2. Business-like structure – Markets and firms should organize to serve the customer efficiently. Don't attempt to set structure in concrete ahead of time.
3. Incentives that send the right signals – Needed, a pricing system that encourages market participants to find the best solutions for consumers. Follow the money carefully. Remember Willie Sutton.
4. Sensible risk allocation – Risks don't go away because one ignores them. Risks have costs to someone. Don't dump risks back on customers without considering the costs and the allocation of profits.
5. Capital raising ability – Attempts to raise long-term capital based on short-term signals seem not to work. There is plenty of capital round, though. Give investors a reason to invest.
6. Avoidance of operation as a residual – Pricing that values transmission as a residual of other price decisions should not attract long-term investment. Get paid for furnishing access and infrastructure.
7. Economic assessment of decisions – Every product and service, including reliability, has value. Figure out what customers want, which means, what they will pay for, and then sell it to them.

So that's the check list. How many checks did you get?

The CDO Game: An Interview with Ed Grebeck

New financial instruments seem to turn up once a week. One credit expert recently wrote. "Structured credit is proliferating ... Financial engineering is displacing credit analysis."⁴ Meaning, I guess, that portfolio managers have decided to let somebody else do the thinking for them. Having worked with bankers and financial engineers, I could never figure out whether they had something of value or just snake oil dolled up with equations, sold to those who didn't understand the product and were too embarrassed to say so.

CDO funds have amassed assets of close to \$300 billion (vs. \$5 billion in 1995). I decided to learn more about them by speaking to Edward J. Grebeck, a Regional Director of the Stamford, CT chapter Professional Risk Managers' International Association (PRMIA) and CEO of Tempus Advisors, and author of a recent article about CDOs.⁵

For those too embarrassed to ask, let me explain the CDO, otherwise known as a collateralized debt obligation. Here is how they work. An investment bank puts together a portfolio of debt obligations. It raises the money to pay for the portfolio from investors who can choose from different classes of ownership. The senior tranche gets paid first, so if something goes wrong with the underlying securities in the portfolio, the senior owners should collect their money anyway. The senior tranche usually earns a high credit rating, even if the underlying portfolio is of less than sterling quality. Then comes a junior tranche, which is next in line after the seniors, and has a lower credit rating. Next comes the mezzanine slice, which might barely qualify for an investment grade rating. Finally comes the "equity," unrated and almost certain to lose out if a few bonds in the portfolio go sour. The banker who does the deal collects about 1.5 percent of assets for doing the deal, and a manager might collect 0.5 percent per year, as well.

⁴ "Structured Complacency," *Grant's Interest Rate Observer*, June 2, 2006, p.4.

⁵ Edward J. Grebeck, "Why Should Institutions Invest in CDOs At All?," *The Euromoney Structured Credit Products Handbook*, 2006/2007, p.63.



In theory, the financial engineers can achieve a higher bond rating for the senior securities than justified by the underlying assets because of the diversification of the portfolio and the risk sharing mechanism. The senior tranche might make up to 70 percent of the total package, and it would earn a high quality debt return, which is less than the underlying low quality debt assets pay. At the other extreme, the equity holder should collect a high return (the difference between what the portfolio earns and what it has to pay to senior holders) unless the portfolio runs into trouble.

LSH: Did I get that explanation right?

EJG: Think of the debt portfolio's performance as being allocated like the risk of loss in your corporate insurance policy. The "equity" piece, almost certain to incur and pay out some losses, is akin to insurance "working layer" coverage. After this, come all the XOL ("excess of loss") covers in order, i. e., mezzanine, junior and senior, which pay only to the extent that losses exceed cover under the "working layer" and lower ranking XOL layers.

LSH: Why should energy or utility executives care about CDOs?

EJG: Two reasons. First, their pension funds may invest in CDOs. That means that they are paying a management fee to the fund manager, and, indirectly, another fee to the manager of the CDO (who is doing what the pension fund manager has been paid to do) plus a fee to the banker. That's a lot of fees on an investment with a limited potential for return. Second, energy and utility companies borrow from lenders who might sell the loan to a CDO. The energy business is volatile. If something goes wrong, you might like to be able to talk to the creditor, lean on your relationships, to adjust the loan to new circumstances. You can do that when you know the lender. You might not do as well negotiating with a computer program.

LSH: The quote from *Grant's* implies that research is too expensive. I guess, it's cheaper to hand to job over to the CDO managers?

EJG: A billion dollars of CDO shares costs the investor \$15 million up front and maybe several million more a year in fees. You can fund a good in-house team with that money. It would do research, originate and structure opportunities in the debt markets, monitor individual credits and manage portfolio performance – all for your own pension fund's benefit. It is important, today, to address the conflicts and agency costs in today's debt market.

LSH: Are CDOs liquid investments?

EJG: Probably less liquid than an ordinary debt portfolio. A buyer would have to evaluate a complicated package of securities, and the issuing investment banker may be the only obvious buyer, as a result of knowing the characteristics of the portfolio. That limits the number of buyers, and the banker could take advantage of that situation and offer a low bid.

LSH: Can't the seller get a better price elsewhere?

EJG: Maybe, but other potential buyers will figure out that the seller already went to the natural buyer, the originating banker, so they might not see a need to bid up.

LSH: If I bought a debt portfolio for the long haul, what would prompt me to sell, anyway?



EJG: First, your pension plan provisions might force you to sell if the tranche were downgraded. Second, many institutions today actively manage their debt portfolios (i.e., sell credits, or hedge them through the credit derivatives markets) in the hope of creating “alpha.” Efficient portfolio management is more difficult if funds are invested in illiquid, specially structured instruments.

LSH: It seems, then, that a lot of the value of the structure depends on the rating agencies. First, they rate the underlying securities. Then, they rate the tranches, affirming that the portfolio and segmentation of ownership produce a certain level of risk. If they are wrong, the investor suffers twice. How good are the rating agencies?

EJG: The track record is not that good. The rating agencies say “an A is an A is an A,” meaning that their ratings methodology is consistent across all borrowers: “real corporations and municipalities, and “synthetic” borrowers: pools of credit cards, mortgages, auto loans and now pools of “structured credit,” e.g., CDOs. However, half of CDOs were downgraded in 2002-2003.

LSH: Is there any public comparison, showing what a portfolio manager could do with a similar portfolio?

EJG: Financial guarantors with dedicated staffs, such as AMBAC, accumulate and manage diversified portfolios, and, in fact, “wrap” many senior structured credit? CDO transactions. Some say the financial guarantors are “giant CDOs” in their own right. AMBAC managed to earn a 15 percent return on equity for some time, though its ROE has slipped, as a result of narrow credit market spreads, in the last few years. Of course, you have to compare AMBAC’s risk adjusted performance to that of your own portfolio. However, comparing to it is a start, especially when negotiating “hurdle rates” for external fund managers or for your own teams.

LSH: Are CDOs really a new asset class?

EJG: I think that they are more like a repackaging of credit risks that portfolio managers can acquire on their own in the markets. The CDOs do not provide more diversification and they suffer from added fees and less liquidity.

LSH: Could you summarize your argument about how a large institutional investor should view the CDO market?

EJG: Today’s global market for debt and related derivatives totals some \$17 trillion, compared to around \$4 trillion in 2000. “Structured credit” products are among Wall Street’s biggest profit generators. Collateralized debt obligations (CDOs) are pools of bonds, bank loans, mortgages, trade credits, credit derivatives, etc. – and even include other CDOs. Some claim that CDOs are themselves a “new set class” that pension funds, life insurance companies and other fiduciaries simply “must have” to efficiently diversify credit risk in their debt portfolios.

I would argue that COOs simply change the form and repackage credit risks already held in large institutional portfolios and, therefore, are not “new assets.” Moreover, CDO investors must come to terms with Complexity, Conflicts and agency Costs (credit’s new “three Cs”) imposed by bank CDO originators, asset managers and, yes, rating agencies. Up-front fees alone total 1.5 percent or more of notional asset value. Rather than passively buying CDOs “on ratings,” fiduciaries may be better served by considering alternative investments or setting up their own CDO groups to sell into the market.



Bottom line: Prospective institutional CDO investors must ask, on behalf of their stakeholders, “why pay \$1,015,000,000 or more for assets worth \$1,000,000,000 – especially when we already own the assets worth \$1,000,000,000?”

Thus, the questions are: does the CDO provide something that you could not do on your own, does it cost more or less than doing it on your own, and have you figured out all the risks and conflicts inherent in the product? Or will you answer those questions after the big scandal?

Movie Review: An Inconvenient Truth

Al Gore’s lecture on global warming has made it to the movies. If Al Gore had shown as much passion and humanity when running for president as he shows when discussing global warming, he might have made it into the White House. Okay, you didn’t like Al Gore then, you don’t like lectures, you don’t believe in global warming, you’d rather play golf, etc. Well, let me put it this way, Gore has put together the most thorough and easily comprehended discussion of the topic that I have seen in the mass media. You go to briefings, you attend conferences and you pay a lot more to get a lot less. If you are in the energy business, you should not only know the facts but also what people are saying. Incidentally, Gore did leave out what some people might consider two other inconvenient truths when he summed up, but I’ll leave you to figure them out.

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In a report titled “The Winds of Change - Will EPAct 2005 and International Competition for Energy Supplies Shift Market Outlooks?,” senior analysts from Black & Veatch’s management consulting division, Enterprise Management Solutions (EMS), review the potential impacts of growing international economies on domestic energy markets and examine ways in which EPAct 2005 may be a catalyst for change. According to Stephen A. Stolze, Managing Director in EMS, the report reviews recent performance of local, regional and diversified regulated utility sectors versus diversified competitive and competitive merchant sectors. It summarizes future energy price outlooks, and compares the revenue potential of natural gas-fired generation versus coal and nuclear. The paper also reviews growth strategies for



utilities and examines the future viability of the independent power producer business model. A complete copy of the report can be obtained by emailing a request to petersondl@bv.com.

Strategic Value at Risk ... Quantifying the Impact of Risk on Utility Stakeholders

Strategic Value at Risk (SVARsm) is a new approach to the regulatory process that provides a utility with a clear and concise plan to ensure that adequate rates of return are achieved following the approval of a rate order. It is a proprietary solution developed by R.J. Rudden Associates, a Unit of Enterprise Management Solutions, a Black & Veatch Company (Rudden), which examines and quantifies the impact of regulatory policy and other exogenous risks on utilities' earnings. A complete report can be obtained by e-mailing your request to petersondl@bv.com.

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LEONARD HYMAN PRESENTATIONS

A list of Mr. Hyman's most recent presentations are cited below. To obtain a copy, please direct your request via e-mail to petersondl@bv.com.

- "Back to Basics or Forward to Basics" -- Presented to the EPRI Power Delivery and Markets Council; March 6, 2003.
- "Financial Crisis in the Electric Power Industry or What Else is New?" -- Presented to the Northeast Energy and Commerce Association; March 6, 2003.
- "Let's Talk About What's Important or Where the Electricity Industry May or May Not be Heading" -- Presented to the Energy Bar Association; March 13, 2003.
- "Risk Management" -- Presented to Global Power 2003 Conference; New Orleans, Louisiana; March 31, 2003.
- "May Day in Houston or How the Energy Industry Has Changed" -- Presented to Acquiring Distressed Energy Assets Conference; May 1, 2003.
- "The Next Big Crunch Is Not The Latest Export From Hershey, PA" -- Presented at the Energy Association of Pennsylvania Annual Conference; May 30, 2003.
- "Finance, Commerce and Reliability" -- Presented to Northeast Power Conference; June 24, 2003.
- "Would a Sane Person Invest in Electric Technology in the U.S.A.?" -- Presented at NARUC Winter Meeting; March 9, 2004.
- "T&D Redux" -- Presented to the Committee on Power Delivery, Association of Edison Illuminating Companies; March 25, 2004.
- "Just the Facts, Ma'am" -- Presented to the Conference on Understanding and Managing Business Risk in the Electric Sector (UMBRES); April 15, 2004.
- "Building the Transmission Network: Past, Present, Future or Maybe Never" -- Presented to the T&D World Expo; May 27, 2003.
- "The Heart of the Matter or Foundation Flaws Fell Feeble Fixes" -- Presented to the ELCON Member Meetings in the Big Easy; June 21, 2005.



LEONARD HYMAN ARTICLES

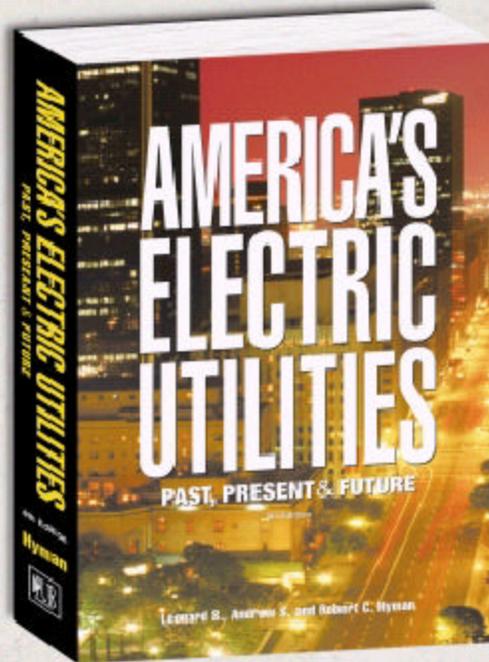
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- "The Return of Plain Vanilla or Maybe the Worm Turns"
- "The Next Big Crunch: T&D Capital Expenditures"
- "T&D Spending: What's Missing From This Picture?"
- "T&D Economies of Scale and the Mysteriously Fitted Curve"
- "Ten Years of Electricity Restructuring: A Financial Postmortem"
- "The Consequences of the Northeast Blackout of 2003"
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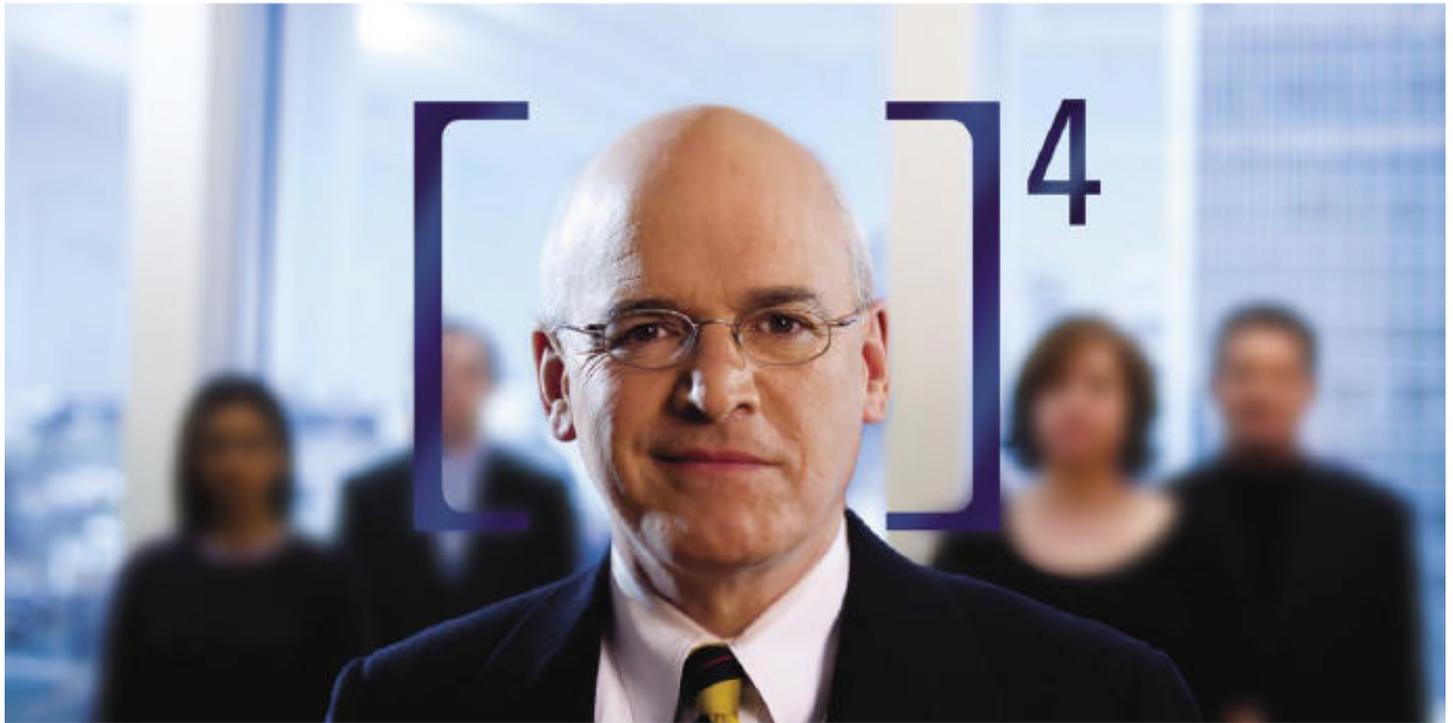
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