



**SRPING 2004 – GRID INFRASTRUCTURE &
INVESTMENT**

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DIALOGUES & INTERACTIONS

1. Background & Questionnaire Results

The 2004 Bordeaux Energy Colloquium was held at the AREVA Summit in Las Vegas. This year's theme was grid infrastructure and investment. The participants consisted of over a hundred senior executives primarily from the transmission sector and ranged from utility and industry executives, financial investors, and energy regulators.

This mini-colloquium was held as a kick-off event for the summit and focused around a ten-question survey (appendix A), the results of which are summarized below:

Old Regime	New Regime
Public Service	Commodity
Government	Free Market
Monopolies	Competition
Regulation	No Rules
Intervention	No Intervention

The group dialogues and survey results were strongly in favor of the **New Regime** of competitive energy markets over the old regime of regulated monopolies.

However, there still remains a high degree of uncertainty at the regulatory level which many participants felt is crippling investments in the sector, particularly large infrastructure projects. This group of industry veterans more readily accepted that a period of volatility is inevitable part of the regime change to competitive markets. The new hot topic of **Corporate Governance** and ensuing rules and regulations were added to the mix of uncertain factors that many felt will hinder progress in the upcoming years.

2. Market forces vs. Regulated Regime

Percentage	Agree/Disagree	Statement
86%	Agree	Market forces do a better job at determining prices for electric commodities.
60%	Disagree	Competition will hurt reliability.
70%	Disagree	Competition encourages companies and firms to focus on adequacy of supply and demand and the security of operations.

3. Investments in the Industry

Percentage	Agree/Disagree	Statement
86%	Agree	Uncertainty about rules and regulations has slowed investments to an alarming level.
50%	Agree	Government has a significant role in focusing investors towards the necessary long-term investments.

4. Pricing Issues

Percentage	Agree/Disagree	Statement
61%	Agree	States should not use retail price caps to shield consumers from pricing volatility.
59%	Agree	Pricing volatility is a necessary part of the transition to a market-based structure that will eventually serve the long term interests of the consumer.

5. Open Access

Percentage	Agree/Disagree	Statement
64%	Agree	Transmission and distribution systems need to be open to any buyer/seller on a non-discriminatory basis.

6. Sarbanes Oxley Act

Percentage	Agree/Disagree	Statement
50%	Agree	Regulation is effective in mitigating the risk of market manipulation and in providing more transparency in the market.

This part of the survey generated a great deal of side comments and discussion.

7. Workforce Issues

Percentage	Agree/Disagree	Statement
54%	Agree	A retiring workforce in the industry could have an impact on the system operations in the next five years.

In conclusion the survey sections summarized previously, it is important to restate that one of the roles of the Bordeaux Energy Colloquium is to identify which actions the industry will embark on given the hypothesis of a move towards a competitive marketplace. The following top ten list is derived from the colloquium discussions but is in great part considered to be personal hypotheses. They are intended to be predictive in nature in order to test their validity. These actions also address some of the most pressing issues captured in real time at the point of the market's evolution. The resolution of key issues in the industry rests in successful implementation. These will be monitored over time to determine their efficacy.

ACTION ITEMS TO WATCH

1. Pricing Volatility

Clearly customers must be able to respond to pricing signals, particularly in times of high demand and scarce supply. Giving customers the choice about an acceptable level of volatility through various pricing plans is a solution that works in both regulated and non-regulated, competitive environments.

2. Phased in Retail Access

Larger industrial and commercial customers have more benefit and thus more incentive to actively engage in a competitive energy market. Phasing in retail competition from larger users to residential users over time allows for market mechanisms to be worked out over a smaller number of users.

3. Intelligent Grids

The real-time nature of electricity makes scheduling access to shared grids a daunting task. The use of real-time metering linked to central control systems allows for more responsive action, particularly in high use times.

4. Demand Reduction Bidding

Allowing demand side management programs to bid reduced or avoided demand the same way generation bids did with the market. Real time metering and smart control systems at customer sites will enable accurate reporting.

5. Less new Transmission, More Upgrades

It is becoming too costly and difficult to build new transmission systems to meet increasing local demand and the intrastate wheeling of power. New technologies will be incorporated into existing grids to enhance the flow of power. The interconnection of central control systems with demand side programs will also open up significant transmission congestion.

6. Fewer peaking plants, more distributed resources

The buildup of gas-fired combined cycle peaking plants will taper off. The few hours per year of critical peaking time and the inability to price that power at 'scarcity' rates will curb investments in central peaking plants. A move towards local control of small scale distributed resources will be combined with the increased control schemes and real-time metering to create pockets of power closer to ends of the grid. Of course, this also has a positive side effect on opening more transmission space.

7. New Financing Vehicles

The investment community will have to change its perspective on 'old regime' financing of plant and infrastructure. Guaranteed 30 year returns are becoming a thing of the past. Like the housing markets

incredible creativity with home financing, the investment community will begin to offer new financing packages that spread around risk and offer variable rates.

8. Renewable Energy Credit Program

The continued support of renewable energy will require incentives within the market. The mandating of percentages by State government is one way to handle the problem. A second more market driven solution is to create a renewable trading program in a similar fashion as the emission trading. Percentages set by the state are then regulated primarily by market mechanisms that are allowed to trade credits as they see necessary.

9. Regional Regulatory Control

The physical reality of the interconnectedness of the power grids will force a shift from State legislative and PUC control to regional centers such as proposed by FERC's RTO's. State legislative and PUC control will focus more on public good programs such as lifeline and economic development programs.

10. More Federally mandated programs

Due to the scale of the recent blackouts, the federal government will once again play a strong role in energy policy. Mandating the construction of transmission lines, nuclear power plants and domestic oil and gas production, will fall under the domain of the feds. Whether FERC continues to be the enforcement agency will greatly depend on the issue of State rights.