

**Harvard Electricity Policy Group
Sixteenth Plenary Session
May 21, 1998**

**Reliability and Inter-Regional Transfers
Jose Delgado - Outline of Comments**

I. Brief Status Report

A. *Reminder: electric reliability has two components, system security and system adequacy. The system can be secure even when it is inadequate, but it cannot be adequate if it is not secure.*

1. System security is maintained by implementation of operating practices developed by NERC and the regional reliability councils. These include:
 - Close monitoring of the equipment by system operators
 - Fast action to address actual or predicted contingencies which includes dropping firm load when necessary to do so.
 - Close cooperation between system operators across large regions
 - Open information flow between operators, security monitors, regional reliability council staff and system users.
 - Reliability rules have been implemented voluntarily and most often enforced by peer pressure.
2. Adequacy is the result of sufficient generation capacity and reserves to meet actual load under historical and projected equipment failure rates, and sufficient transmission to move generation reserves to the load under all reasonable circumstances.

B. *Adequacy failures: Review of this week's experience*

1. On Tuesday, May 19th several major systems in the eastern interface declared control area emergencies: Provoked by:
 - a) *hot weather pattern unusual for May*
 - b) *major nuclear generation outages for regulatory reasons*
 - c) *normal generation maintenance outages*

2. **Was this the result of an unfortunate coincidence or a trend that threatens system adequacy?**

- I believe it is an ominous trend. For economic or regulatory reasons, major nuclear generation is being shut down..
- Likewise, there is an expectation that environmental legislation aimed at global warming will force the shut down of older coal burning plants.

3. **I believe it is a fast moving trend with immediate and long term impacts:**

- Most of the older nuclear and coal burning plants being shut down or projected to be shut down are very close to load centers.
- The transmission systems were designed to back up the random loss of any of these plants, but not the simultaneous, long term shut down of many of them.
- Construction of new generation at or near the original sites may be not be possible due to local siting restrictions or to environmental quality problems.
- Even where plants can be built, it may take years to do so due to uncertainty about cost recovery and market power pending deregulation activities and reluctance to enter into long term contracts with third party independent producers under these conditions.

C. Operating conditions

- Since EPAct 1992, the number of transactions across the network has grown enormously in number, size of transactions and distance between sending and receiving points.
- There is a growing reluctance to share information even among system operators.
- There is a growing reluctance to take actions that carry significant costs without compensation.
- The separation of marketing from system operations (required by 888 and 889) has created significant impediments to communication and coordination within control areas as well as among control areas.
- The legitimacy of the reliability rules is being challenged at FERC. The threat of anti-trust action is growing.

D. Growing barriers to transmission construction

- Organized public opposition to construction of facilities
- Under present bundled service tariffs, local customers must pay for most of the costs of new transmission facilities, even if the facilities are justified for regional use. State regulators are very reluctant to approve construction unless local need is proven.

- Retail competition initiatives in the states often include rate freezes. Under these conditions, transmission owners cannot recover the bulk of their investments in new transmission assets.

Conclusion: The picture for continued electric system reliability is not good.

II. There is a need for federal legislation.

A. What legislation should not do.

1. Reliability cannot be legislated. Complex problems cannot be met with simple solutions.
2. Reliability is a regional and international issue. Neither Congress nor the States should set individual reliability criteria or rules.

B. Legislation needed.

1. **Congress should act to establish federal authority for the establishment and enforcement of reliability rules. FERC must be given that authority for all reliability activities in the US.**
 - FERC should empower a Self Regulating Reliability Organization to evolve from the existing voluntary organizations (NERC and the regional reliability councils).
 - The rules must apply to ALL participants in the electric network.
 - There must be significant penalties for failures to comply
 - The SRRO must be the developer of the rules for the international network, with broad participation of all users.
2. **Congress should empower FERC to:**
 - a) **Unbundle all transmission services.**
 - b) **Establish, enforce and monitor regional independent system operators.**
 - Only if the rules are applied by an independent operator will the suspicion of partiality and abuse be overcome.
 - The ISOs should:
 - Be large
 - Allow for pooled and non pooled areas of the interconnection.
 - Establish tariffs that internalize loop flows and eliminate contract paths.

- Direct the development of regional transmission plans that include the need of all user.
 - Assure transmission owners an opportunity to recover their revenue requirements from unbundled, ISO (FERC approved) transmission tariffs.
- c) *Become the ultimate authority over transmission planning and siting.*
- d) *Delegate siting authority to Regional Regulatory Agencies composed of state regulators who would participate in the ISO planing activities.*