

*Standard Market Design: Maybe?  
Good Market Design: Yes !*

*by*

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<http://www.state.vt.us/psb/site/mhd.stm>

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# *Standard Market Design Needs PUC Support*

- ❖ SMD # 1: INTRODUCE A DEMAND CURVE
  - > Only PUCs can set retail rates
  
- ❖ SMD #2: REAL LOCATIONAL MARGINAL PRICING
  - > Requires FERC/PUC collaboration
  
- ❖ SMD #3: INDEPENDENT TRANSMISSION CONTROL
  - > Asset transfers require PUC approvals
  
- ❖ SMD #4: EFFICIENT INTRODUCTION OF RESOURCES
  - > Siting requires PUC approval or support



# *Role of RTO/ISO*

- ❖ RTO/ISO performs two functions:
  - Operational management of transmission grid and supply dispatch
  - Management of wholesale market, as substitute for 'just and reasonable' rates
- ❖ This is a regulatory role, thus, fiduciary duty **MUST** be to the public good



# *Fiduciary Duty of an RTO*

- ❖ General Public Good (as substitute for ‘just and reasonable’ rates) particularly
  1. Responsibility to the long-term good not just short-term
  2. System reliability and operational efficiency
  3. Efficiently functioning markets (balance bargaining power of buyers and sellers, not just low transaction costs)



# *Vital Premise for SMD*

- ❖ *The Governance Structure of an RTO or ISO must not be determined by market participants*
  - Market participants provide advisory input only
  - Funding not beholden to participants
  - Participants must not have any decisional authority over the market rules
  - Market monitoring must be arm's length



# *Promote Infrastructure Investment*

- ❖ What do investors want?
  - **Theory #1** -
    - ◆ High probability of moderate returns
    - ◆ Barriers to competition
    - ◆ Strict enforcement of uniform system of accounts
  - **Theory #2**
    - ◆ Moderate probability of high returns for demonstrated above-average performance
    - ◆ Easy entry
    - ◆ Whatever accounting safeguards the SEC and FERC tolerate in practice
- ❖ Which cluster is more likely to encourage capital investment in vital infrastructure?



# *Core Issue*

- ❖ Is transmission an extrinsic “highway” or an alternative to generation and load management resource options?
- ❖ “Highway” Treatment
  - May result in future stranded costs
  - Will distort future resource allocation
  - Will hamper development of alternative energy resources
  - Will distort accurate price signals



# *Transmission Pricing: Cowart's Efficient Reliability Test*

- ❖ Cost Causation is the starting principle
  - Otherwise LMP signal is thwarted, siting will be distorted, and resource choice will be unbalanced
- ❖ Socialization (uplift) should be disfavored
- ❖ Before socializing through tariff uplift
  - ◆ Market must be open to demand side as well as supply side resources
  - ◆ Proposed investment or standard must be lowest cost (including environmental costs) reasonably available means to correct remaining market failures
  - ◆ Benefits from the investment or standard will be widespread and thus appropriate for support through broad-based mandatory payments



# *Transmission Pricing: Investor Incentives*

- ❖ Provide long-term incentives for ALL solutions to congestion problems
  - Provide revenue stream for problem-solvers
    - ◆ Transmission upgrades eligible for tradable property rights (financial congestion rights) so that investors can capture the value of transmission investments
    - ◆ Generation incentive captured in LMP
    - ◆ Load response incentive must be comparable
- ❖ Build in incentives for performance
  - Standardization of rates
  - Elimination of congestion



# *New Resource Planning* <sup>1</sup>

- ❖ What Regional Functions are Needed
  - Expert evidence for state siting decisions
  - Verify eligibility for regional uplift charges
  - ?? Provider of last resort for essential regional infrastructure needs
- ❖ Structural questions:
  - In or out of RTO
  - Participant involvement? State involvement?



# *New Resource Planning* <sup>2</sup>

- ❖ Must be free of influence from all market participants including Transmission Owners
  - Otherwise solutions will have no “legitimacy”
- ❖ Significant problem with multiple planning horizons
  - Generation faster, transmission slower
  - Needs weighting for unpriced environmental costs
  - Load response is an emerging arena and must be promoted and bolstered until market is fully transformed
- ❖ Can we distinguish market-viable “economic upgrades” from “reliability upgrades” seeking uplift support?
- ❖ Are capital markets deterred by competition and uncertainty?



# *Market Monitoring*

- ❖ Market monitoring is *vital* but insufficient
- ❖ Good structural incentives are even more important than case-by-case cures:
  - Markets need Rules, but
  - Rules need Enforcers



# New York, et. al. v. FERC

## ❖ FERC Jurisdiction

- FERC jurisdiction over transmission not limited to wholesale market
- FERC jurisdiction over sales is limited to the wholesale market

## ❖ State Jurisdiction

- FERC does not have jurisdiction over local distribution facilities
- States control where FERC does not assert jurisdiction
  - ◆ Because federal authority was asserted only over unbundled transmission, states retain jurisdiction of the ultimate sale of the energy
  - ◆ Because FERC chose not to assert jurisdiction over bundled retail transmission, states are left with control over the transmission component of bundled retail sales



# *State Retail Responses*

- ❖ New England Demand Response Initiative
- ❖ Load response without retail competition:  
Vermont's Load Response Programs
  - All Vermont utilities: fast-track
  - IOUs, Munis , & Coops
  - Board has approved them
  - Some based on ISO program; others utility-designed (OMYA - flag)
- ❖ For small loads, aggregation is key



# *VT PSB: Rate Design Basics*

## *Seasonal Rates vs. Year-Round Rates*

	Energy Cost	+ T&D Cost	= Retail Rate
<b>OLD (1978-98)</b>	Higher at VT Peak (Winter)	Driven By VT Peak (Winter)	Higher In Winter
<b>NEW (Since '99)</b>	<i>Higher at NE Peak (Summer)</i>	Driven By VT Peak (Winter)	<i>Near Level Year-Round</i>



# *Rate Design Challenge*

- ❖ Can we design retail rates that are:
  - easy to understand
  - predictable with low customer attention
  - stable
- ❖ Yet accurately and 'adequately' reflect wholesale markets that are:
  - complex
  - volatile



# *Unified Field Theory*

- ❖ Link between consumer preference and the wholesale market is vital
- ❖ Consumer response must be timely –
  - So that the market effect from consumer preference is perceived *before* generation and investment decisions are made
- ❖ Will end users get a price signal?
  - More importantly – will end-users' price preferences be fed back to resource providers (directly or through Load Serving Entities)?