



# NARUC

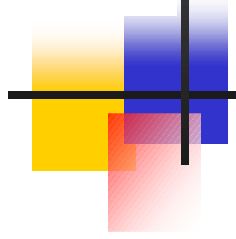
Serving the consumer interest  
by seeking to improve the  
quality and effectiveness  
of public utility regulation  
in America.

# Meeting Default Supply Requirements in Restructured Retail Markets *and* Western Market Update

Presentation to  
Council of European Energy Regulators

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# *Overview*

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- Why default supply?
- Purposes of default supply
- Theories of choice and implications
- Alternative default models
- State examples
- Issues and implementation
- Western update



# Why Default Supply?

- Is energy different from other goods?
  - “Affected with a public interest.”
  - Critical to health, safety, the economy.
  - Limited substitutability of other services.
- Any negative/positive externalities from having all connected? (Universal service benefits)
- Short-term/long-term barriers to supply market entry?
- Part of political restructuring bargain?
  - Reduced access unacceptable.
- How is “default service” provided for health care, food, shelter, transportation, public safety?
  - Government as sole provider?
  - Government as one provider among others?
  - E.g., “Strategic Petroleum Reserve for oil supply.”

# Purposes of Default Supply

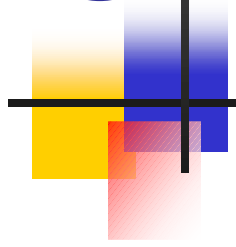
- **Near term - transitional market**
  - Competitive suppliers don't serve certain customers or geographic areas.
- **Short term - transitional customers**
  - After market transitions to choice.
  - Supply contract termination.
  - Supplier exits market (geographic, customer).
  - Non-paying customers.
- **Long term – ongoing service.**
  - After market transitions.
  - Competitive suppliers don't serve certain customers or geographic areas.
    - Low income.
    - Poor credit.
    - Rural.



# Customer expectations

- Reasonable bills and rates.
- Stable and predictable rates.
- Affordable rates.
- Simplicity (low information and transaction costs).
- Customer service protections effective in emerging markets.
  - Unfair and deceptive practices, slamming.
  - Credit and termination policies.
- Service quality equal to present.
  - Reliability.
  - Certification.

See, testimony of NASUCA President Stephen Ward, before the Senate Energy Committee, April 11, 2000, available at <http://www.nasuca.org>



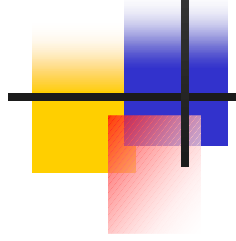
# Goals in tension?

- Does retail market development (with small default role) conflict with meeting customers' expectations for affordability, stability, simplicity, etc?
- Does short term consumer protection conflict with long term static/dynamic efficiency?
- Program design affects -
  - Customers
  - Suppliers – buying on volatile wholesale market, serving at stable/set retail prices.
  - Market development.



# Model 1 – Contestability

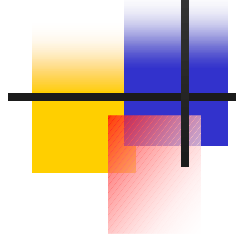
- Allows, does not require, competition
- Threat of entry disciplines incumbent
- Regulators focus on removing barriers to entry and exit
- Long transition as actual competition develops from fringe
- Q: If customers stay with incumbent, were barriers not adequately removed, or is incumbent most efficient provider?
- Incumbent usually the default provider
  - Less concern with market share, ability to leverage, first mover advantage, etc.



## Model 2 – Workable competition

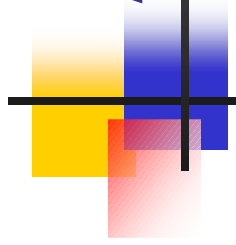
- Consumers benefit when many firms actively compete to supply, none with dominant market share.
- Regulators remove barriers to entry AND
- Seek to reduce incumbent market share, may require incumbent to exit merchant function.
- SCP- Structure/conduct/performance analysis.
- Default service competitively bid.
- Affirmative steps to expand market, de-emphasize need for default supply.





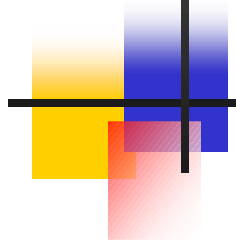
# Alternative Default Models

- Default model related to market model.
- Distribution company as default provider.
  - Typical under contestable market model due to initial large market share.
- Competitive bid
  - Typical under workable competition model.
  - Bid for particular customer blocks.
  - Bid for portion of load.
  - One winning bid or bids combined to form portfolio?
  - Who maintains the customer relationship?
    - Valuable contact, but high transaction costs.



# Alternative Default Models

- Forced choice – method of assigning customers may affect market structure.
  - Default to one provider.
  - Assign based on market share (incentive to sign up customers before assignment).
  - Assign equal shares to all capable of serving.
- **Municipal, nonprofit or cooperative.**
  - Montana had “buyers’ cooperative” model, not implemented.
  - Distinguish default supplier from aggregator.
- Other?



# State Examples



# Texas

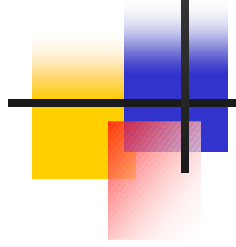
- Workable competition model.
- Retail rates unbundled.
- “Price to beat” - supply price frozen, set to decline 6% on 1-1-02.
- Utilities precluded from providing supply service.
  - Affiliate may provide.
- Utilities commission designates one or more provider of last resort in each service area.
- All customers billed a premium to fund default provider function.



## Texas, cont.

***"The overall objective of the Commission's implementation effort is to create an environment in which there are many producers and sellers of electricity, receptive customers, clear commercial rules, and the infrastructure to permit vibrant competition."***

- TPUC Report to the Legislature, January 2001, available at
- <http://www.puc.state.tx.us/electric/reports/index.cfm>



# Pennsylvania

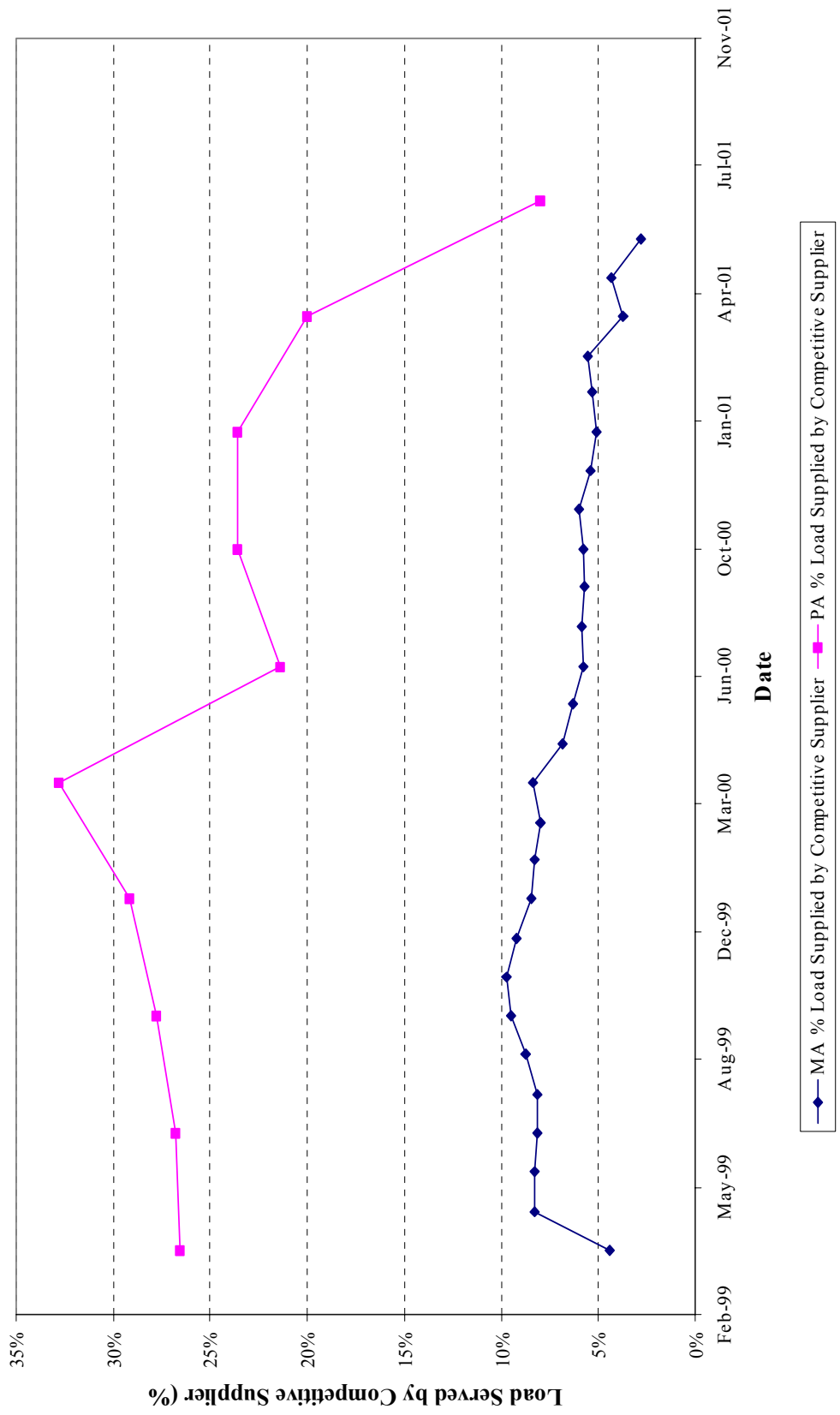
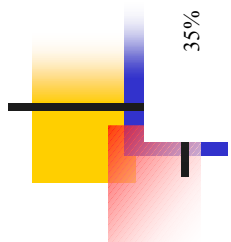
- Workable competition model.
- Retail rate cap for 54 month period.
- 4-year transition to full customer choice.
- Competitive default supply program.
- Aggregated groups of customers auctioned to competitive suppliers.
  - Auction encourages entry.
  - Bids above generation cap rejected.
  - Open to all customer classes.
  - Limited interest in three bids. Good response in Philadelphia Electric Company bid.



# Massachusetts

- Contestable market model.
- Standard offer service.
  - Regulated, 7 year rate.
  - Available to low income, and to others at their 3-1-'98 address (unless they leave that address for over 120 days)
  - Originally set 10%, then 15% below market, with inflation adjustment.
- Market-based default service, originally somewhat higher.
  - Suppliers have exited default market.

# Competitive Penetration in Massachusetts and Pennsylvania



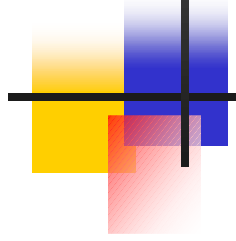




# Connecticut

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- Contestable market model.
- Required divestiture of non-nuke as condition of stranded cost recovery.
- Retail rate cap 7/98-1/00.
- Distribution company default provider.
  - Must go out for bids at equivalent of retail price.
- Default rate 10% below 1996 rate thru 2003
- Beginning 2004 default rate market based.
- No customers have switched to-date.



# Georgia – Natural gas

- Workable competition model.
- All customers entitled to choice 10/98.
- Customers required to choose or else be assigned by 4/99.
- Assigned in proportion to market share.
- Default service for customers unable to find an alternative supplier, initially incumbent.
- Utilities commission designated non-utility as default provider.
- Short transition.
- Strong incentive to providers to enter market.
- Strong incentive to customers to choose.



# Maine

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- Workable competition model.
- Bid process to serve default customers.
- Multi-year rate.
- Short term customers (those who leave default before six months) are billed or credited at a month-to-month rate.



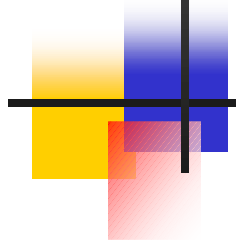
# Montana

- Contestable market model.
- '97 restructuring legislation
  - Montana prices low, but not very lowest.
  - Large customers have choice immediately/
  - Small customer supply rate moratorium through 7-'02, all customers to transition to choice by then.
  - Multiple default options in law, including "cooperative."
  - Default considered a short-term issue affecting few customers.



# Montana

- '01 legislation
  - Almost no small customers had choice, western market prices high, low-cost generators sold (at company's choice, not required).
  - "Transition to choice" extended to '07.
  - Supply price moratorium not extended (and generators already sold).
  - Distribution utility acts as default provider.
  - Default provider procures supply portfolio from market.
  - Default supply now long-term, involving most customers.



# Issues/implementation

- Effect on monopoly/transition.
  - Structure of default service can affect transition/development of competition.
    - Short or long transition.
    - Sole or multiple default providers.
    - Assignment method.
    - May discourage retail competition if price too low.
    - May undercut demand for value added risk management services.



# Issues/implementation

- Rate caps.
  - Can affect need for and duration of default service
    - depending on how rate cap compares to wholesale prices.
      - Cap may discourage shopping.
      - “Credit” may encourage.
      - Changing relationship of capped price and market price may affect direction of competition.
  - May reduce price-responsive demand reduction.



# Issues/implementation

- Generation/supply investment.
- Capital intensive, long-term, risky.
- No “obligation to serve.”
  - No assurance of recovery.
  - May reinforce tendency to boom/bust supply cycles.
- Default design and pricing may exacerbate cycle.
  - Diminish price responsiveness and incentive.
  - Create unintended opportunities to arbitrage regulated and market prices.





# Issues/implementation

## Auctions.

- Bids may include non-comparable terms.
- Default auctions may not be attractive at low prices.
- Bidding for customers/customer blocks v. bidding to supply power.
  - Who maintains the customer relationship?
    - Valuable, but costly to maintain.
  - Sole source/all requirements v. building portfolio.
- Any gas/electric differences?
  - Storage.
  - Switching.
  - Number of customers?



# Issues/implementation

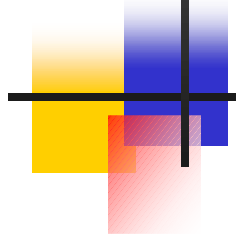
- Risk management
  - Current market models expose choice customers to short-term markets and high volatility.
  - Customers prefer rate stability and predictability.
  - If competition doesn't develop, default service becomes permanent/primary service.
  - Generation divestiture more attractive/less risky if default is short-term or marginal issue, and if default not assigned to disco.
  - Does provider charge fixed rate but face all wholesale risk, can it realize any opportunities?



# Issues/implementation

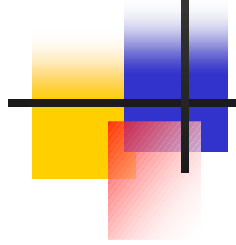
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- Default supply portfolio management.
  - Risk minimizing strategy.
  - Relevant IRP principles.
    - Diversity.
    - Hedging, possibly with renewables.
    - Energy efficiency investments to manage risk.
  - Constrain stranded cost-like risk to portfolio manager.
    - Conditioning ability to leave default.
  - How is the manager regulated?
    - Cost recovery only or incentive?
    - Prudence review or a higher standard?

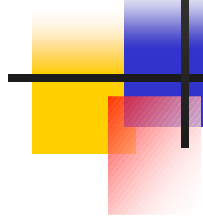


# Resources on default supply

- Jerrold Oppenheim, Assuring Electricity Service for all Residential Customers After Electricity Industry Restructuring (11-10-01) -available from the author at [HerroldOpp@tgic.net](mailto:HerroldOpp@tgic.net)
- Center for the Advancement of Energy Markets, “Disco of the Future Forum.” (Ongoing) - <http://www.caem.org>
- Regulatory Assistance Project – [www.rapmain.org](http://www.rapmain.org)
- Graves and Wharton, Provider of Last Resort and Retail Market Development (11-10-01), Brattle Group.



# Western update



# Western market drivers

- **Utilities did not built generation** because of uncertainty over long-term cost recovery.
- **Competitive generators** did not built generation because market rules were not known, prices were low.
  - Some now question whether markets will support large, capital intensive plants *without* regulatory assurances.
- **Drought** conditions in NW reduced supply available from hydroelectric generators
- Rising **natural gas prices** increased the cost of producing electricity with gas fired generators.



# Western market drivers

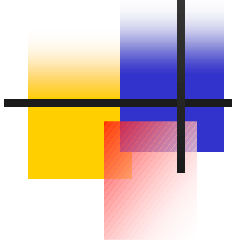
- Wholesale markets were **not workably competitive**, generators could influence prices.
  - FERC ALJ identifies overcharges.
- **California**
  - **Retail prices decoupled** from wholesale markets, didn't reflect demand supply imbalance.
  - Utilities required to buy from **Power Exchange** for 5 years.
  - **Generators** required to be **divested**, despite large non-choosing load.
  - **Lack of forward trading** to manage risk.
  - All power priced at **highest priced** transaction.

# Northwest Wholesale Prices

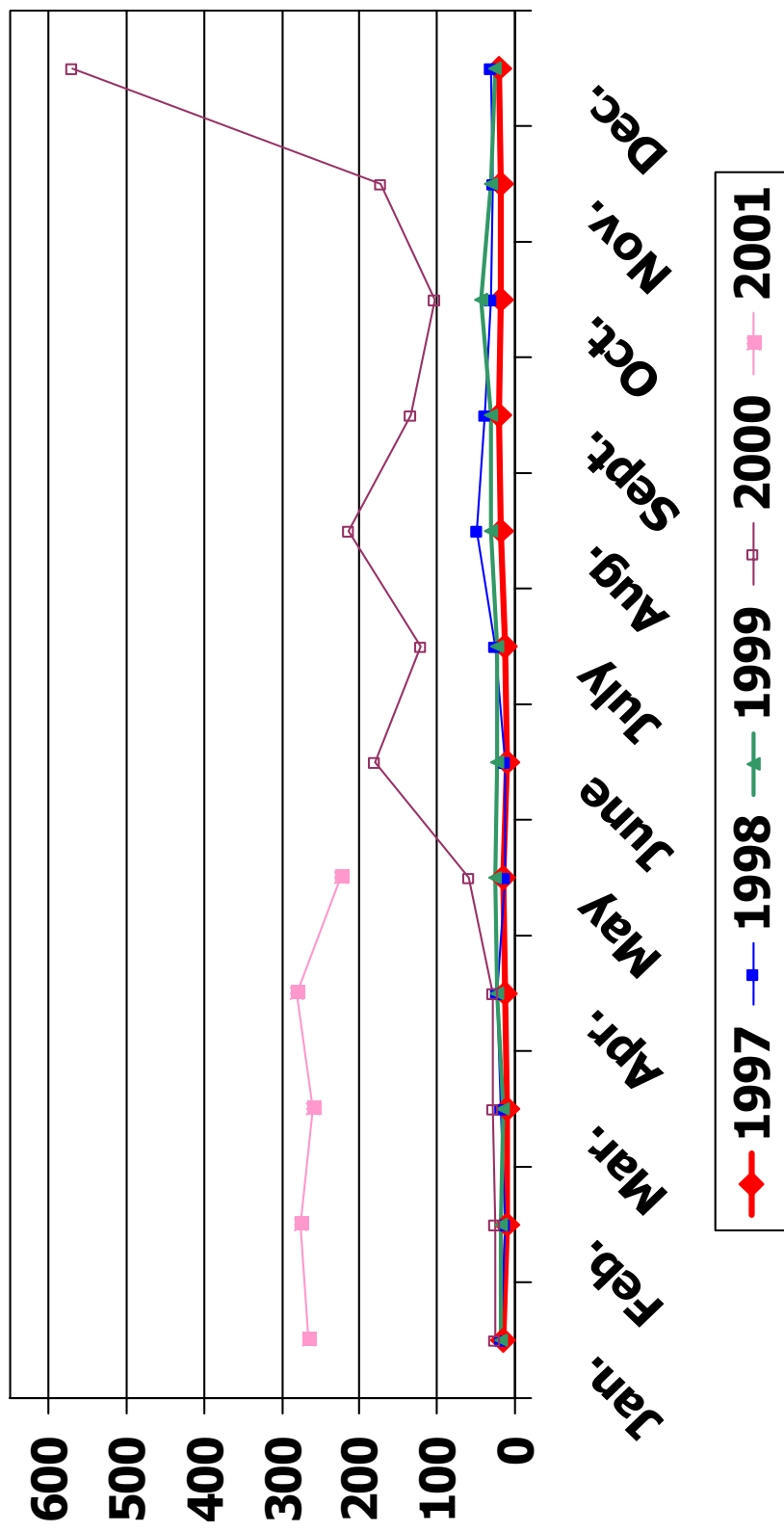
Monthly average Mid-C prices weighted by on-peak and off-peak hours

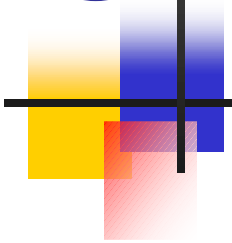




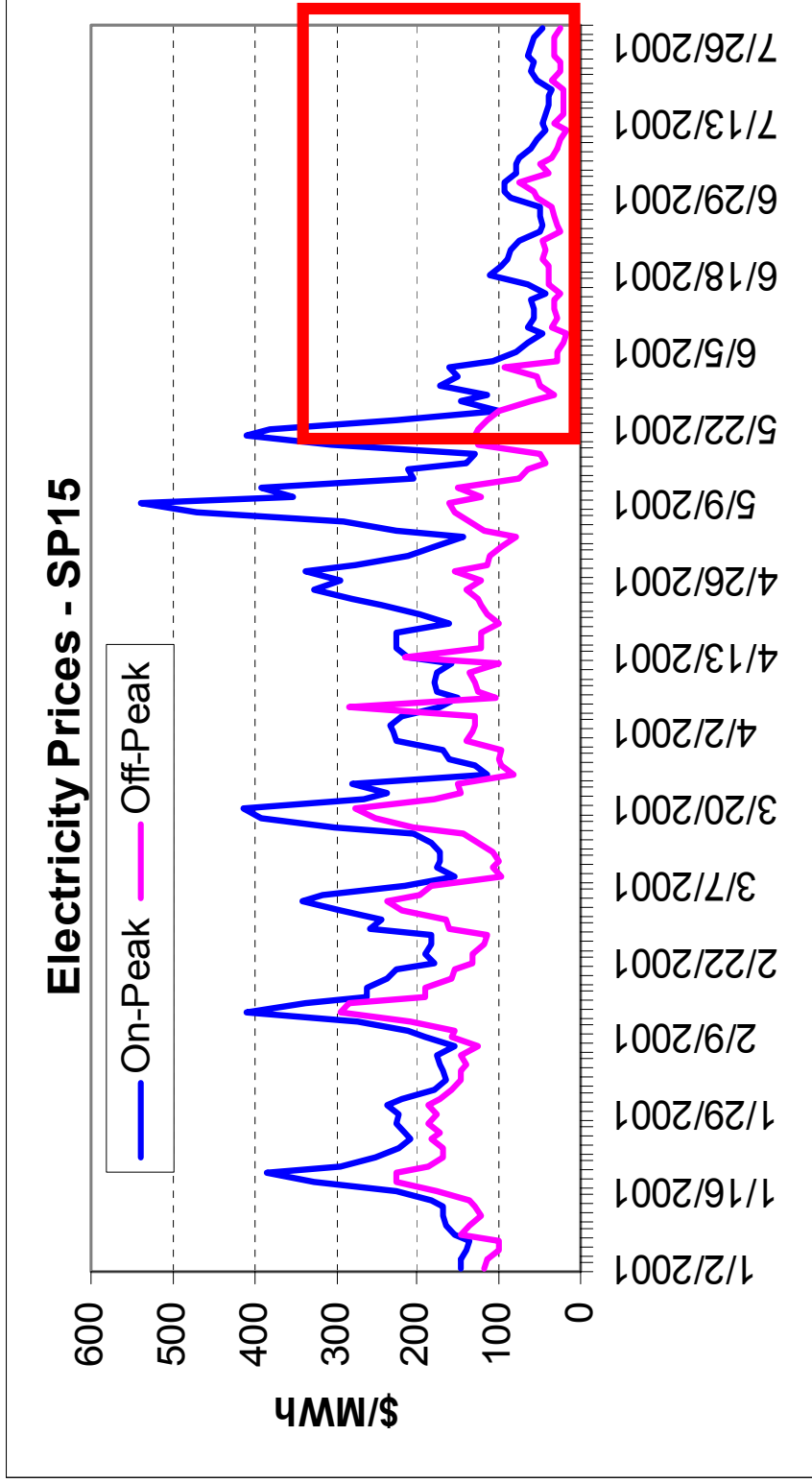


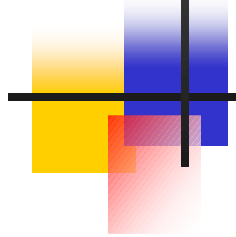
# Mid-Columbia On-Peak Prices



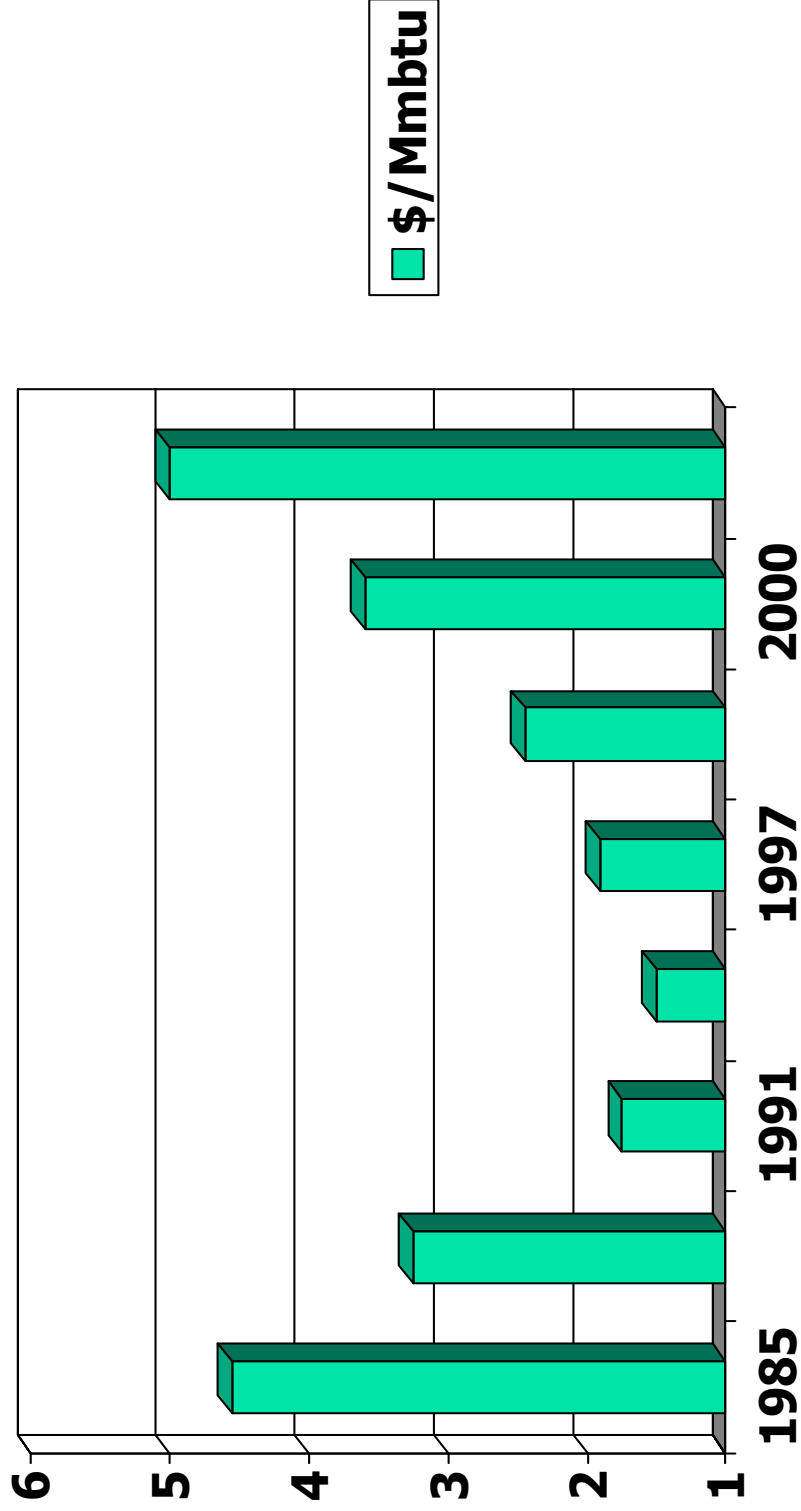


# California Electric Prices

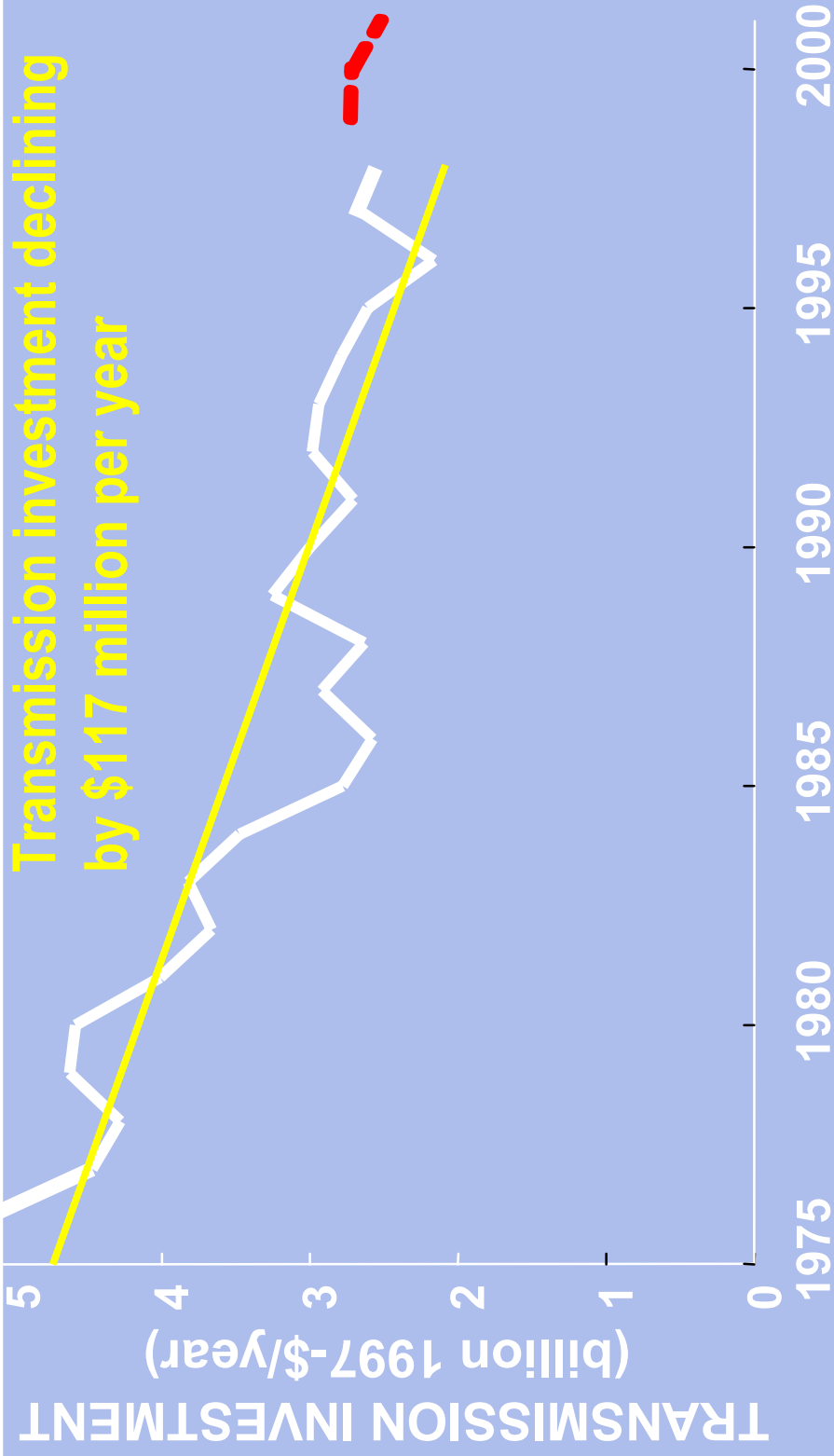




# NATURAL GAS PRICES

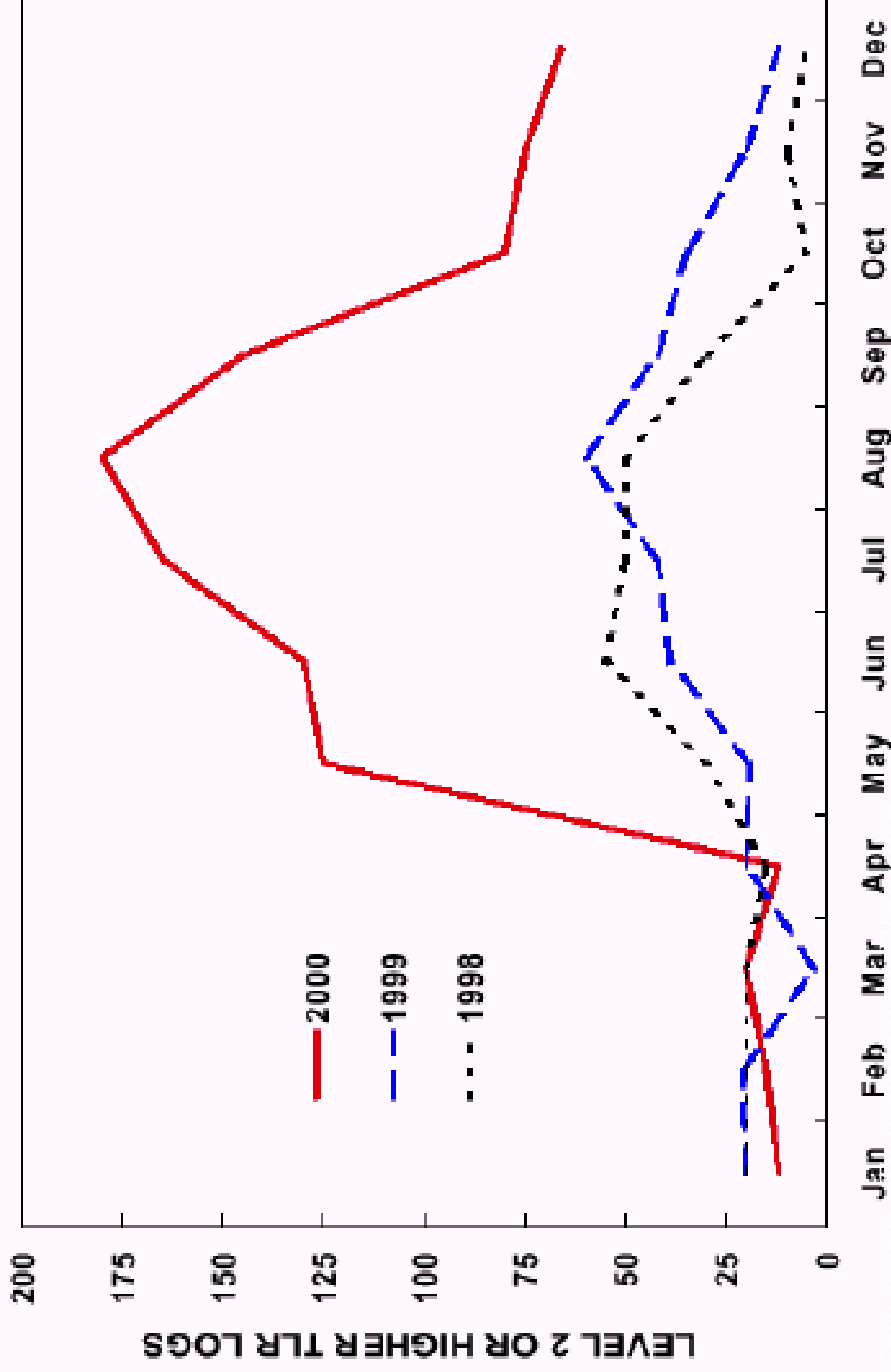
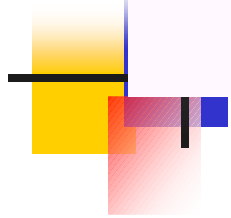


# Transmission Investment Declined for ~ 20 Years



Dr. Eric Hirst, *Transmission Planning for a Restructured US Electric Industry*, EEI, 2001

# Transmission Congestion





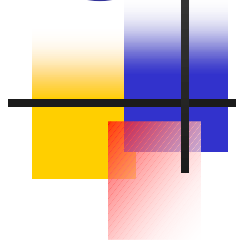
# Western market

- Is it mainly a supply problem?
  - Until this year Western System Coordinating Council load grew faster than supply.
  - But - transmission applications to Bonneville Power Administration for 25,000+ new MW,
  - And NERC says WSCC reserve margins still at 22%.



# Western market

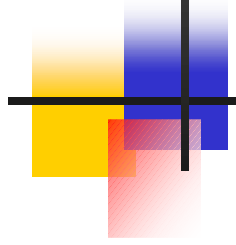
- Is it mainly a transmission problem?
  - Operating near capacity - volumes up 400% over 4 years (nationally).
  - Constrained transmission paths.
  - Increasing possibility of failure.
  - Open transmission policies not fully implemented.
  - System not designed to be an electric superhighway.
- Is it mainly a market structure problem?
  - Too little available power and/or too few suppliers in the relevant geographical and product market.
  - Too high transaction costs.



# California update

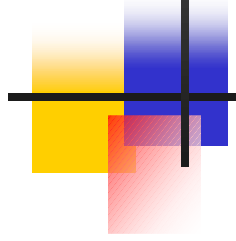
- Power purchases – dampened market, some now don't want to pay.
- Bankruptcies.
- PUC
  - Rate increases
  - Cancel retail choice, reinstate obligation to serve.
  - California chronology available at <http://www.eei.org/future/california/01.pdf>





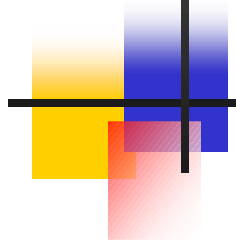
# FERC addresses Western Market

- Dec 2000 Order on CA market
- Flawed market structure and rules for wholesale sales
- Demand/supply imbalance
- Unjust and unreasonable prices at times
- Eliminated PX mandatory buy-sell rule
- Penalties for under scheduling
- Benchmark price for bilateral contracts



# FERC addresses Western Market

- April 2001 Order, prospective price mitigation
- Market monitoring plan for CA
- CA ISO to file regional RTO proposal
- Increased ISO ability to coordinate/control generator outages
- ISO to report outage information to FERC
- Price mitigation during reserve deficiency
- Public utilities must develop demand response mechanisms



# FERC addresses Western Market

- June 2001 Order, Price mitigation in WSCC
- Continues price mitigation during reserve deficiency periods
- Prices in other spot markets in West capped at 85% of highest hourly clearing price in CA ISO market during most recent Stage 1 reserve deficiency period



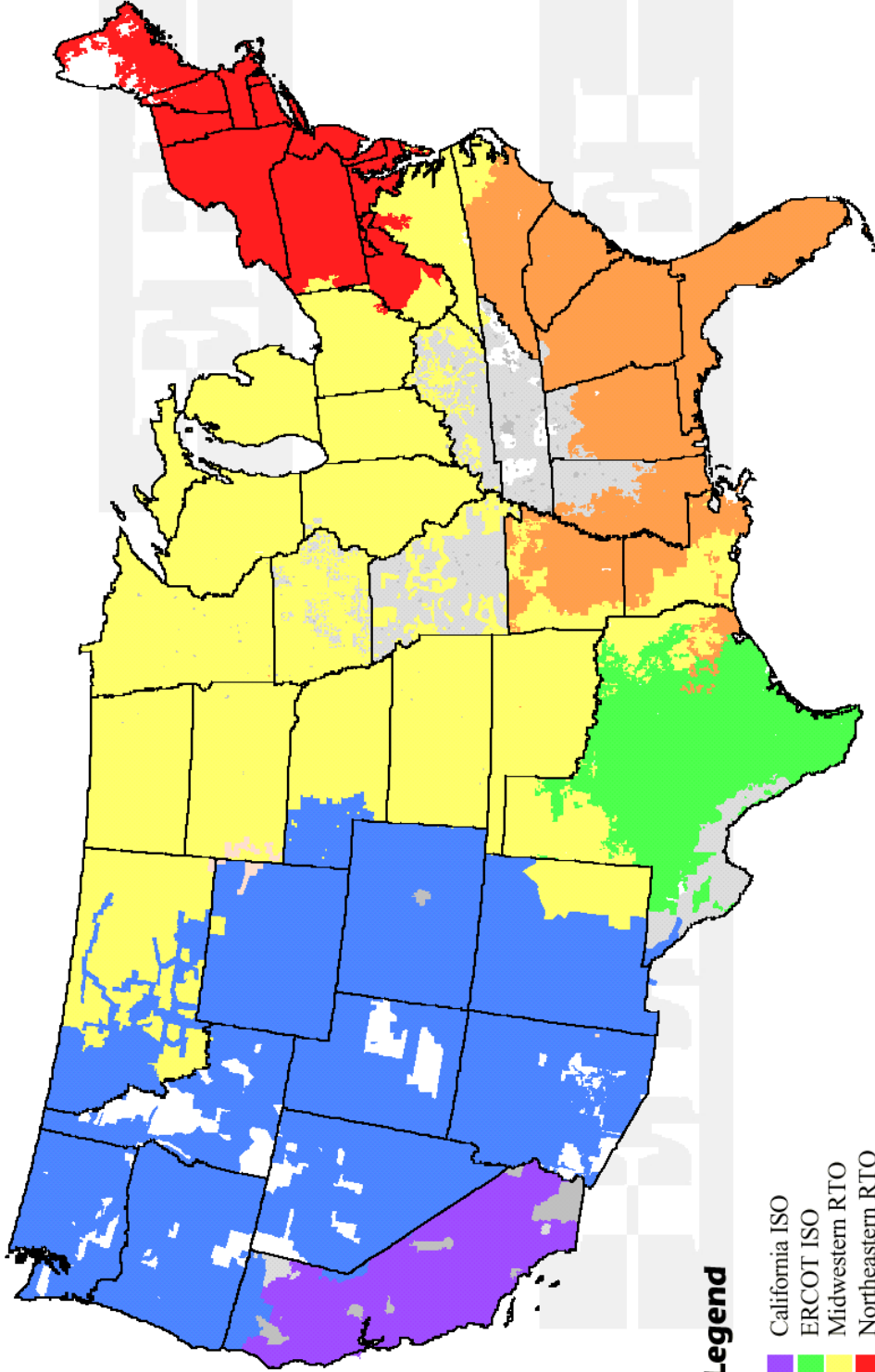
# Regional Transmission Organizations

- Major issues
  - Degree of FERC oversight and authority
  - Role of regions and Electric Reliability Organization (ERO)
  - Independent governance-ERO and regions
  - Interconnection-wide standards
  - Standards-setting process
  - Antitrust concerns



# Regional Transmission Organizations

FERC September 26, 2001 Restated RTO Vision



## Legend

- California ISO
- ERCOT ISO
- Midwestern RTO
- Northeastern RTO
- Southeastern RTO
- Western RTO
- Non-participating IOUs
- Non-participating cooperatives
- Non-participating public power
- Non-utility/no electric service area

Note: Map reflects transmission-owning and TDU-customer membership participation. For Canadian participation, see Crescent Moon RTO, East Coast Transmission Organization, Midwest ISO, and RTO West maps for details. Nation-wide IOU service territories overlap non-IOU service territories. Copyright 2001 Edison Electric Institute. Service territory data: POWERmap, 2nd quarter 2000 release, copyright Financial Times Energy.