Twenty Years of Electricity Market Reform: Where Have We Been and Where Are We Going?

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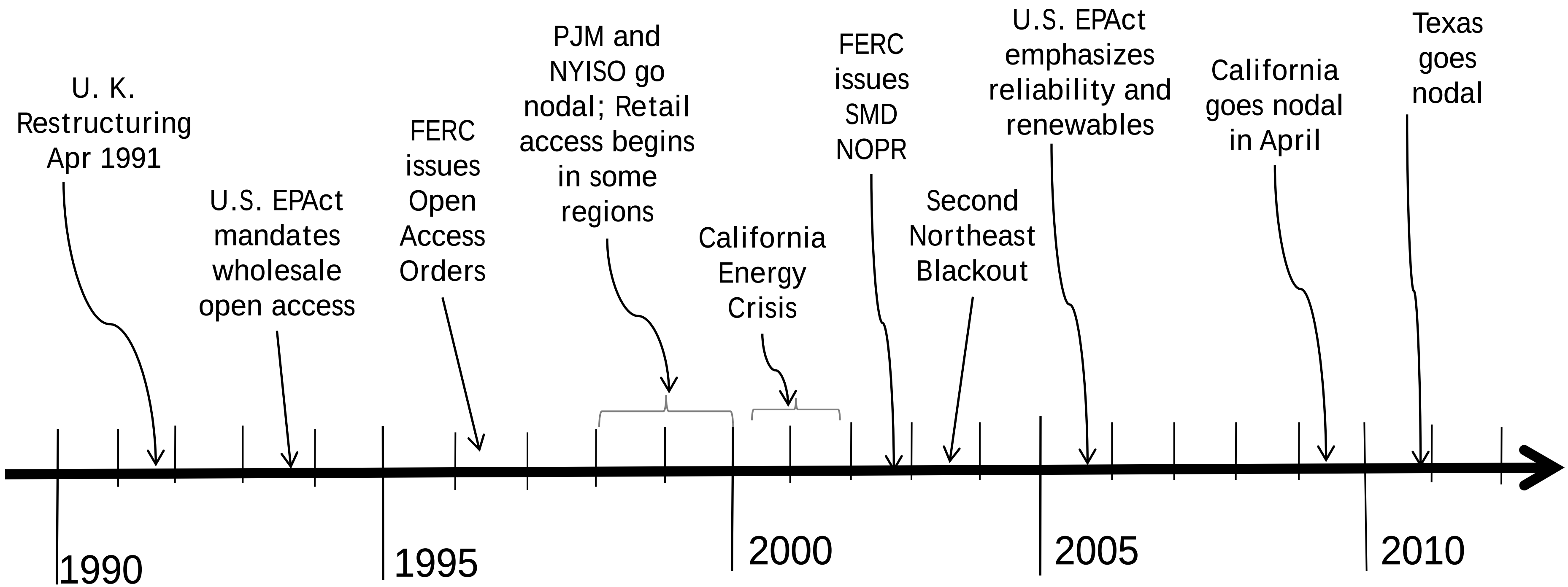
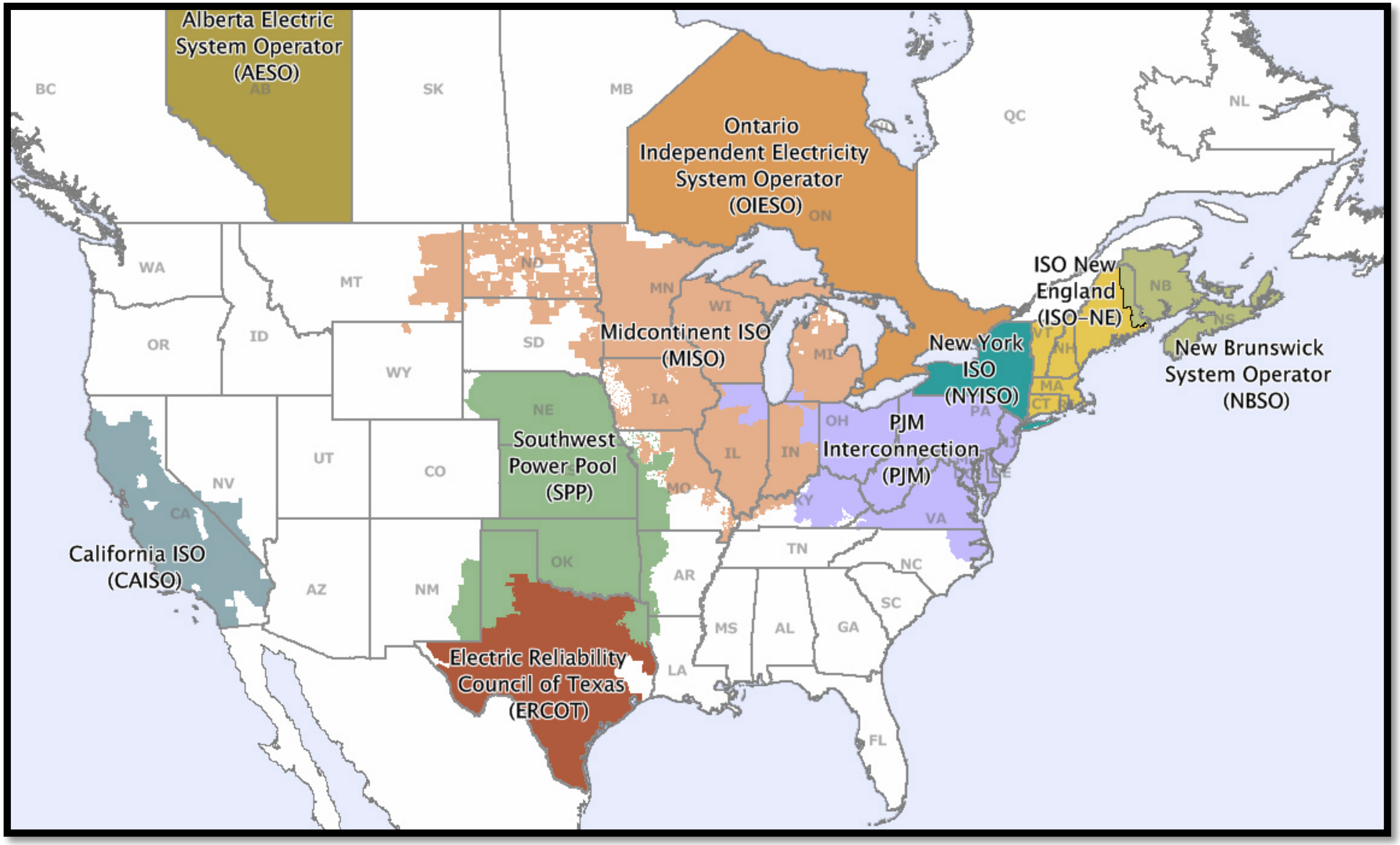
Outline

I. Time line of major events
II. Looking Back – What did we get right? What did we get wrong?
III. Looking Ahead – What should we keep? What should we fix?
IV. The role of the HEPG

I. U.S. Electricity Markets – 20 years of evolution

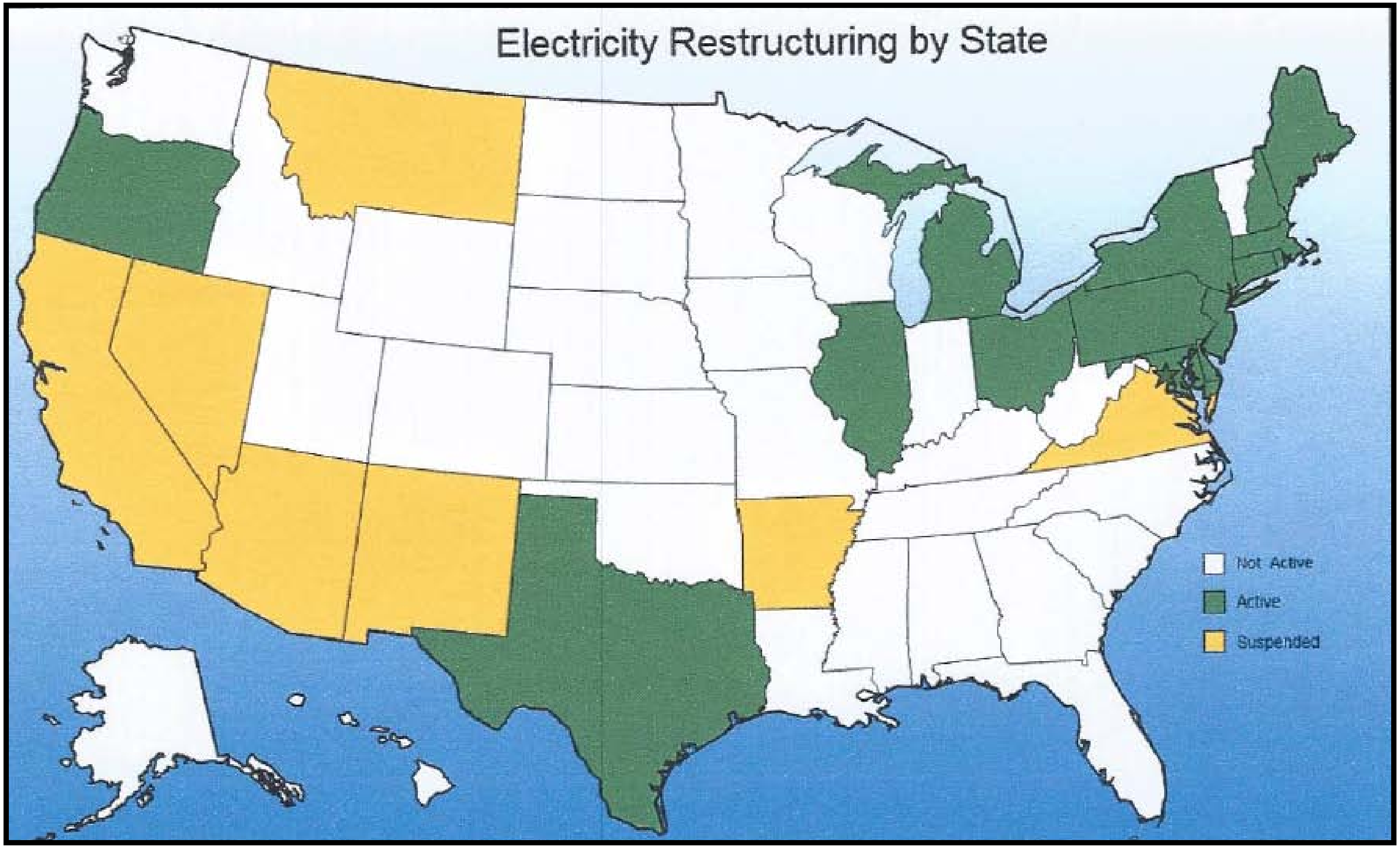


North American Wholesale Electricity Markets (June 2013)



http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-ovr-rto-map.pdf

Retail Electricity Markets by State (as of Sept. 2010)



Source: Energy Information Administration.
http://www.eia.gov/electricity/policies/restructuring/restructure_elect.html

IV. LOOKING BACK: WHAT DID WE GET RIGHT? WHAT DID WE GET WRONG?

Looking Back: What were the goals?

- **<u>The problem</u>**
  - Electricity prices were outrageously high (in high-cost states)
  - Management and/or regulatory mistakes were perceived to be the problem
- **<u>The hope</u>** – that competition in generation would:
  - Result in cheap electricity
  - Shift the cost of management mistakes and forecast uncertainty from customers to suppliers
  - Lead to all kinds of nifty new value-added services
  - Punish the incumbents
    - Incompetent utility managers
    - Misguided regulators

What were the problems that had to be solved?

- The money issues (stranded costs)
- Technical issues (market design)
- Who's in charge issues (state vs. federal)
- Transitional issues
  - Retail access rules
  - Separation of generation from transmission

Looking Back – What did we get largely right?

- **Stranded Cost Recovery was handled through settlements**
  - Initially thought to be the unsolvable problem
  - It's largely resolved and rarely mentioned
- **Basic principles of workable competitive *energy* markets**
  - Rules need to reflect underlying reality of the grid
  - Core features of workable wholesale markets
    - Independent operation of transmission
    - Voluntary energy spot markets
    - Bid-based, security constrained economic dispatch with nodal prices (Locational marginal pricing)
    - Congestion revenue rights to hedge transmission

Looking Back - What did we get largely wrong?

- Potential for short-term efficiency gains in electricity generation
- Economics of commodity retailing
  - How regulated (default) service would interfere with the development of a competitive retail market
  - Mass market economics in particular
  - Limited potential for "value added" services
  - Measures of competitive success (low prices do not necessarily indicate markets are working well)
- The need to have workable wholesale markets before opening up retail markets for most customers

Key differences: Who decides and who pays?

	Monopoly Model	Competitive Model
Who decides: • How much capacity? • What fuel type? • Where to site?	• Regulated utility develops subject to regulatory approval • G&T Cooperative	• Competitive supplier • Customer • Anyone with the money & inclination
Who builds or acquires?	• Utility under rate-base construction? • G&T Cooperative	• All of the above, plus • Utility (if default provider)

Who pays? Who bears risk?	• Investor-own Utilities:
	  • Customers pay for prudent investment
	  • Investors pay for imprudent investments
	• G&T Coop – customers pay
		• When market prices are low:
		  • Investors absorb costs
		  • Customers benefit
		• When market prices are high:
		  • Investors benefit
		  • Customers pay more

Price Levels	• Based on Average Costs	• Based on Marginal Costs

What should we be worried about?

- **Capacity Markets**: adopted in some markets to solve the "missing money" problem created by wholesale market bid price caps
- **Continuing disconnect between pricing at the retail and wholesale levels**
  - Concerns about retail price impacts have led to problems in the design of wholesale markets
  - Experience in Texas and New York may reduce concerns elsewhere
  - Rate averaging of costs during peak hours is ultimately counter-productive from an efficiency point of view

ROLE OF THE HARVARD ELECTRICITY POLICY GROUP

Role of the HEPG - A 20-year veteran’s perspective

- Restructuring in New York began in a rate case filing
  - Range of issues are limited to what is filed by the parties and process was very inflexible (11 month suspension period)
  - Generic proceedings followed, but were still characterized by parties taking strong positions for bargaining purposes

- HEPG has provided a safe haven for discussing issues that were otherwise too radioactive to have a civilized debate
  - Design of energy markets (LMP vs. flow gates)
  - Stranded cost recovery
  - Identifying problems that weren’t contemplated in the legislation (i.e., municipalization)

- Employed Chatham House Rules – comments off the record and not for attribution

Role of the HEPG - A 20-year veteran's perspective (2)

- Meeting format encouraged wide range of discussion
- Provided access to a range of people and policy makers that would otherwise almost never be available
- Ensured a Broad debate – speakers are recruited to ensure that a full range of views were presented
- Relentless focus on important issues (SMD) and tireless attention to issues as they evolve
- Enormous amount of work and intellectual energy (20 years of 4-6 sessions/year) This is our 106th meeting!