

FSR 4th Conference on the Regulation
of Infrastructures
The Democratization of Energy
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June 12, 2015

Key Dates

- 1970 – National Environmental Policy Act/Clean Air Act Amendments
- 1973 – Arab Oil Embargo
- 1978 – National Energy Act
 - Public Utilities Regulatory Polices Act

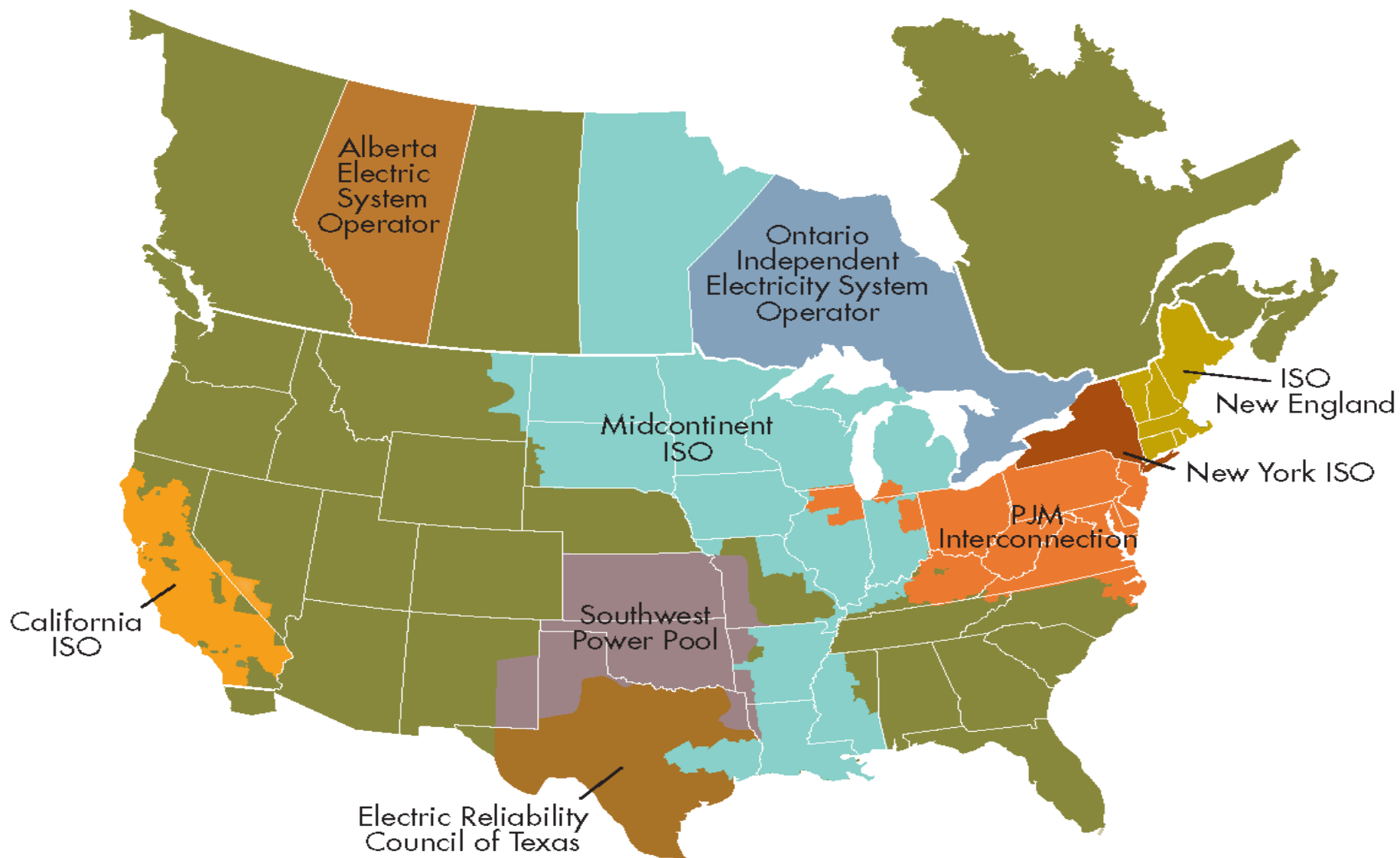
Pre-1978

- Industry = IOUs and some government-owned power providers
- Regulators = Federal Power Commission & State Public Utility Commissions

Post-1978 – The Industry Today

Industry Actors = Regulated IOUs, Unregulated IOUs, QFs, NUGs, EWGs, Merchant Generation, Virtual Power Plants, Third-Party Power Providers, Aggregators, IPPs, Power Marketers, and EGUs.

Post-1978 – Regulators Today



Previous Challenges

Post-WWII = Predictable Demand Growth

- 1965-1975 – Capacity Plateau
- 1975-1985 – Nuclear Collapse
- 1985-2000 – “Restructuring”
- 2000-Present – More Restructuring and Clean Power Plan

Clean Power Plan Targets

- CO2 reduced 26% from 2005 by 2020
- CO2 reduced 30% from 2005 by 2030
- Benefits = \$55 billion to \$93 billion
- Annual Costs = \$7.3 billion to \$8.8 billion

Clean Power Plan Building Blocks

- Heat Rate Improvements
- Cleaner Dispatch Practices
- Increased Renewable Resource Usage
- Increased Energy Efficiency/Demand Side

Objections and Responses I

- Insufficient Replacement for Fossil Plant Retirements
 - 16 GW to be retired; 20GW expected replacement
- Heat Rate Estimated too High
 - State & Fleet-wide not per plant
- Transmission Planning and Investment Needed
 - Merchant Transmission; gas storage; Historic use of IPM
- Renewable Penetration Insufficient
 - RPS uneven while several state targets exceed CPP

Objections and Responses II

- Distributed Penetration Insufficient
 - DER penetration expanding and a utility asset
- Energy Efficiency Cannot Meet Demand Growth
 - EE cheaper and a growth market
- Reliability Services Threatened
 - State RPS programs exceed CPP with no reliability issues
- Timing & Compliance
 - States already meeting targets; industry changes; and no evidence of inability to comply

The Democratization of Energy

- Production and Delivery
- Consumption and Control
- Regulation and Enforcement
- Governance and Legal Institutions