

The Fundamentals of Electricity Law

Table of Contents

Part One

Market Structure

I.	Overview: Types of Market Structures, and the Transition from Monopoly to Competitive Structures	MS-1
A.	Types of market structures	MS-1
1.	Vertically integrated monopoly over retail and wholesale service, subject to no competitive pressures	MS-1
2.	Vertically integrated monopoly over retail service, subject to some competitive pressures	MS-1
3.	Retail service monopoly, with wholesale generation competition.....	MS-2
4.	Retail services competition, with wholesale generation competition..	MS-2
5.	Variations on retail services competition.....	MS-3
B.	The transition from monopoly to competitive market structures.....	MS-3
1.	The retail monopoly model under state law: the seven straws in a utility's rights-and-obligations bundle.....	MS-3
2.	Conversion: from retail monopoly model to competitive models	MS-3
3.	Competition models: wholesale generation competition, retail competition, and franchise competition.....	MS-3
4.	Monitoring the effectiveness of nascent competition: structure and behavior.....	MS-3

II.	The Retail Monopoly Model Under State Law: The Seven Straws in a Utility's Rights-and-Obligations Bundle	MS-4
A.	Overview.....	MS-4
B.	Exclusive service territory.....	MS-4
1.	Statutory exclusivity.....	MS-4
2.	Exception: In states, a commission can authorize competition from another utility	MS-5
3.	Nonutility may compete without commission approval: the "consumer-owned" exception to public utility status.....	MS-6
C.	Obligation to serve all customers.....	MS-8
D.	Consent to regulation	MS-8
E.	Quality of service	MS-9
F.	Power of eminent domain	MS-10
G.	Limit on liability for negligence	MS-12
1.	General rule.....	MS-12
2.	Policy justifications for the limit on liability	MS-14
H.	Right to charge regulated retail rates	MS-15
III.	Conversion: From Retail Monopoly Model to Competitive Models	MS-16
A.	The utility's legal status: modifications to the seven straws in the utility's rights-and-obligations bundle.....	MS-16
1.	Overview.....	MS-16
2.	Exclusive franchise	MS-17
3.	Obligation to serve all customers.....	MS-22
4.	Consent to regulation	MS-23
5.	Quality of service	MS-23
6.	Power of eminent domain	MS-23

7.	Limit on liability for negligence	MS-24
8.	Just and reasonable rates	MS-24
B.	The utility's asset structure: modifications to the vertically integrated utility's control of strategic assets	MS-24
1.	Modifications to the utility's asset structure take three general forms	MS-24
2.	"Unbundling" of costs	MS-24
3.	Nondiscriminatory access to "bottleneck facilities"	MS-25
4.	Disposition of generation assets.....	MS-30
IV.	Competition Models: Wholesale Generation Competition	MS-35
A.	Overview	MS-35
B.	Generation entry.....	MS-35
1.	Wholesale generation markets before 1978	MS-35
2.	Public Utility Regulatory Policies Act of 1978 and the 2005 Amendments: "Qualifying Facilities"	MS-36
3.	Energy Policy Act of 1992: "Exempt Wholesale Generators"	MS-40
4.	2005: Summary of entities in wholesale generation markets.....	MS-41
C.	Transmission access.....	MS-41
1.	Order 888: Access to utility-owned transmission systems on a company-by-company basis	MS-41
2.	Order 2000: Regional Transmission Organizations	MS-41
D.	Bulk power reliability	MS-41
1.	Background	MS-41
2.	Summary of statute	MS-43
3.	Questions.....	MS-44
4.	Possible state actions.....	MS-46

V.	Competition Model: Retail Competition	MS-48
VI.	Competition Model: Franchise Competition.....	MS-49
VII.	Monitoring Market Structure and Seller Behavior in Immature Competitive Markets	MS-50
	A. Introduction: The meaning of market power	MS-50
	1. Market power formulation.	MS-50
	2. Degrees of market power and short- and long-term implications	MS-50
	B. Regulated monopoly is subject to antitrust laws.....	MS-50
	C. Entry barriers in retail markets.....	MS-53
	1. Introduction.....	MS-53
	2. Product promotion	MS-54
	3. Brand loyalty and consumer preferences	MS-55
	4. Customer Information.....	MS-55
	5. Long Term Contracts	MS-55
	6. Expert sales force.....	MS-55
	D. Pricing behaviors	MS-56
	1. Price squeeze.....	MS-56
	2. Predatory pricing.....	MS-57
	3. Tying	MS-58
VIII.	Summary of Market Structure	MS-60
	A. Historical forces and legal events	MS-60
	1. 1935: Federal Power Act and Public Utility Holding Company Act	MS-60
	2. 1978: Public Utility Regulatory Policies Act.....	MS-61
	3. 1992: Energy Policy Act of 1992.....	MS-61
	4. 1996: FERC Orders 888 and 889.....	MS-61
	5. 1996-2000: State legislation enacting retail competition.....	MS-62
	6. 2000: FERC "Order" 2000.....	MS-62

7.	2003: FERC Order 2003	MS-62
8.	2005: Energy Policy Act of 2005	MS-62
9.	2006: State legislation revisiting retail competition	MS-62
10.	1900-present: Consolidation, Break-up and Reconsolidation	MS-62
B.	Players.....	MS-63
1.	Load-serving entity	MS-63
2.	Seller of generation	MS-63
3.	Seller of transmission service	MS-63
C.	Products.....	MS-64
1.	Power products.....	MS-64
2.	Transmission products	MS-64
D.	Pricing.....	MS-64

Part Two Pricing

I.	Two Categories of Sales: Wholesale and Retail	SPOW-1
A.	Retail sale of electricity (state jurisdiction)	SPOW-1
B.	Wholesale sale (sale for resale) of electricity (FERC jurisdiction).....	SPOW-1
1.	Federal Power Act Section 205.....	SPOW-1
2.	Types of wholesale arrangements	SPOW-1
II.	Cost-Based Pricing Under Federal and State Law	SPOW-2
A.	The annual revenue requirement and its conversion to rates	SPOW-2
B.	The "just and reasonable" standard	SPOW-3
1.	The goal of efficiency	SPOW-3
2.	Basis for disallowance: imprudence	SPOW-4

3.	Basis for disallowance: prudent actions but suboptimal result	SPOW-15
4.	Constitutional limits on disallowance: the Takings Clause	SPOW-22
C.	Undue discrimination.....	SPOW-29
1.	In general.....	SPOW-29
2.	Due discrimination: price differences due to customer differences	SPOW-29
3.	Due discrimination: price difference due to product difference	SPOW-30
4.	Due discrimination: state-approved discounts to deter competing sources.....	SPOW-30
5.	Undue discrimination: anticompetitive effect.....	SPOW-31
6.	Undue discrimination: favoritism to affiliate.....	SPOW-31
7.	Relationship between discrimination and ratemaking	SPOW-32
D.	Filed rate doctrine	SPOW-32
1.	Overview.....	SPOW-32
2.	Protection of the rate-setting power from usurpation	SPOW-33
3.	Limitations on the rate-setting agency itself	SPOW-35
E.	Retroactive ratemaking	SPOW-37
1.	<i>Narragansett Elec. Co. v. Burke</i>	SPOW-37
2.	General rule.....	SPOW-37
3.	Five exceptions	SPOW-38
III.	Market-Based Pricing Under Federal Law	SPOW-42
A.	The courts allow deviations from embedded cost pricing	SPOW-42
1.	Early cases: cost-based rates preferred.....	SPOW-42
2.	Deviations from cost-based rates permitted, with caution	SPOW-42

B.	Early FERC justifications for deviations from embedded cost pricing	SPOW-43
1.	Improved coordination of existing facilities	SPOW-43
2.	Incentives for construction of new facilities	SPOW-44
C.	FERC's methodologies for determining the appropriateness of market-based pricing.....	SPOW-45
1.	How FERC defines market power in the context of permitting market-based rates (MBR).....	SPOW-45
2.	Substantive and procedural fundamentals.....	SPOW-45
3.	FERC grants MBR only after determining that market power does not exist or that market power has been mitigated.	SPOW-46
4.	FERC measures market power with screening tests and monitors market power through reporting requirements	SPOW-47

IV. Legal Principles Unique to the Federal Power Act.....SPOW-61

A.	Overview.....	SPOW-61
1.	Sale of electricity at wholesale in interstate commerce	SPOW-61
2.	Transmission of electricity in interstate commerce	SPOW-61
3.	Dispositions and acquisitions of certain assets and stock.....	SPOW-61
4.	Financings	SPOW-61
5.	Bulk power reliability	SPOW-61
6.	Transmission siting.....	SPOW-61
B.	"Interstate Commerce"	SPOW-61
C.	The <i>Mobile-Sierra</i> doctrine: Parties must live with their contracts	SPOW-63
1.	Background.....	SPOW-63
2.	<i>Mobile-Sierra</i> : The judicial rule against regulatory intervention into private contracts.....	SPOW-64
3.	The "public interest" exception warranting regulatory intervention	SPOW-65

4.	The new FERC rule: clarifying the standard for regulatory intervention	SPOW-66
D.	The boundaries of FERC's subject matter authority: What does the "public interest" entail?.....	SPOW-72
1.	Statutory background: Section 204(a) of the Federal Power Act.....	SPOW-72
2.	The "public interest" includes consider antitrust policy.....	SPOW-72
3.	Limits on "public interest" analysis	SPOW-72

Part Three Transmission

I.	Transmission Access Before 1992.....	STRANS-1
A.	Federal court orders applying antitrust law.....	STRANS-1
B.	Operating licenses for nuclear plants	STRANS-1
C.	Transmission as a condition of FERC approval of other utility proposals	STRANS-1
1.	Mergers proposed under Section 203 of the Federal Power Act.....	STRANS-1
2.	Market-based pricing proposed under Section 205 or 206 of the Federal Power Act	STRANS-1
II.	Transmission Access Under the Energy Policy Act of 1992.....	STRANS-2
A.	Amendment to Sections 211 and 212 of the Federal Power Act	STRANS-2

B.	Complaint cases	STRANS-2
1.	Network Service Obligation	STRANS-2
2.	Comparability Principle	STRANS-2
III.	Transmission Access Under FERC Order No. 888 (1996)	STRANS-3
A.	Statutory Authority for Order 888.....	STRANS-3
B.	Obligation of Transmission Owner to Transmit Wholesale Power	STRANS-4
1.	Purpose.....	STRANS-4
2.	Each owner of transmission facilities must file a tariff	STRANS-4
3.	Service must be comparable to the use made by the transmission owner	STRANS-5
4.	Transmission owner may reserve existing transmission capacity needed for native load growth	STRANS-6
5.	Regional variations are allowed.....	STRANS-6
C.	Obligation of transmission owner to unbundle transmission from generation service.....	STRANS-6
1.	Requirements contracts	STRANS-6
2.	Coordination contracts	STRANS-6
D.	Obligation of transmission owner to provide unbundled "ancillary" services.....	STRANS-6
E.	Obligation of power pools to offer unbundled transmission tariff.....	STRANS-6
F.	Information availability (OASIS) (Order 889)	STRANS-6
G.	Added in EPAct 2005: Application of FPA's access and pricing provisions to government-owned transmission owners.	STRANS-7

IV.	Interconnection Service: Order 2003	STRANS-8
A.	Background on interconnection	STRANS-8
B.	Funding new interconnection and transmission upgrades	STRANS-8
C.	Questions and comments: generator interconnection	STRANS-9
V.	Regional Transmission Organizations: Order 2000	STRANS-10
A.	Rationales for regionalization of transmission policy	STRANS-10
B.	Each transmission owner must make a filing	STRANS-11
C.	Minimum characteristics of an RTO	STRANS-12
	1. Independence from any market participant	STRANS-12
	2. Scope and regional configuration	STRANS-12
	3. Operational authority	STRANS-12
	4. Exclusive authority to maintain short-term reliability	STRANS-12
D.	Required functions of an RTO	STRANS-13
VI.	Siting of Transmission Facilities	STRANS-16
A.	Background on transmission siting issues	STRANS-16
B.	Summary of statute	STRANS-16
C.	Questions and comments	STRANS-18
VII.	Pricing of Transmission Service: "Incentives"	STRANS-19
A.	Transmission Infrastructure Investment. New Section 219.	STRANS-19
B.	FERC's Notice of Proposed Rulemaking on transmission incentives	STRANS-19
C.	Comments and questions on transmission incentives	STRANS-21
D.	Jurisdictional implications of FERC-granted transmission incentives	STRANS-24
	1. State orders to join RTO	STRANS-24
	2. Where a utility transmission owner has joined an RTO	STRANS-25
	3. Where a utility seeks a FERC "incentive"	STRANS-25

VIII. "Native Load" ObligationSTRANS-27

IX. FERC’s Order 1000: Transmission Planning and Cost Allocation by
Transmission-Owning and -Operating Utilities

Part One – Proposed Reforms: Transmission Planning

I. Regional transmission planning process1

II. Nonincumbent transmission providers: Elimination of incumbent’s
right of first refusal to construct new transmission facilities; selection
for regional cost allocation 14

III. Interregional transmission coordination.....21

Part Two – Proposed Reforms: Cost Allocation

IV. In general.....27

V. Legal authority29

VI. Transmission necessary to fulfill “public policy requirements”31

VII. Effects on state jurisdiction31

VIII. Cost allocation method for regional transmission facilities.....31

IX. Cost allocation method for interregional transmission facilities33

X. Principles for regional and interregional cost allocation34

XI. Participant funding.....41

XII. Other issues42

Part Three – Compliance.....43

Part Four – Non-public Utilities: Reciprocity.....44

Part Four Corporate Structure

I.	Two Views of Corporate Structure: Static and Dynamic	CORP-1
A.	Static view: forms of corporate structure.....	CORP-1
1.	Types of corporations.....	CORP-1
2.	Intercorporate ownership arrangements	CORP-1
B.	Dynamic view: changes in corporate structure	CORP-2
1.	Reorganizations of an existing corporate family	CORP-2
2.	Mergers and acquisitions involving two or more corporate families.....	CORP-2
II.	Overview: The Role and Repeal of the Public Utility Holding Company Act of 1935	CORP-3
III.	The Federal Regulatory Infrastructure Eliminated by PUHCA Repeal (via Energy Policy Act of 2005).....	CORP-4
A.	PUHCA's statutory principles	CORP-4
B.	PUHCA's application of the principles to four areas of utility corporate structure.....	CORP-5
1.	Mergers and acquisitions	CORP-5
2.	Mixing of utility and non-utility businesses, through the holding company form	CORP-6
3.	Issuances of debt or equity	CORP-6
4.	Interaffiliate transactions.....	CORP-7
C.	EPAct 2005 repealed PUHCA effective February 2006.....	CORP-7

IV.	Surviving and New Features of the Federal Regulatory Infrastructure (via Energy Policy Act of 2005).....	CORP-8
A.	Section 203 of FPA, 16 U.S.C. sec. 824b.....	CORP-8
1.	Statutory basics	CORP-8
2.	"Facilities subject to the jurisdiction of the Commission"	CORP-9
3.	Mergers of holding companies.....	CORP-9
4.	FERC's 1996 Merger Rule	CORP-10
B.	Additions from the Public Utility Holding Company Act of 2005	CORP-10
1.	Federal, state access to affiliate books and records.	CORP-10
2.	Preservation of state and federal authority to review interaffiliate transactions.	CORP-10
3.	FERC allocation of service company costs among the utility subsidiaries..	CORP-10
4.	No statutory intent to preempt state enactment of PUHCA statutes	CORP-10
V.	State Options for Replacing the Regulatory Infrastructure after PUHCA Repeal	CORP-11
A.	Expansion of utility business	CORP-11
B.	Divestiture or spin-off.....	CORP-14
C.	Mixing of utility and nonutility businesses.....	CORP-15
D.	Use of utility assets for non-utility business	CORP-16
E.	Interaffiliate transactions.....	CORP-17
F.	Issuance of debt or equity	CORP-19
VI.	Choosing Among the Options: Multidisciplinary Analysis	CORP-21
A.	The regulatory purpose	CORP-21

B.	The multidisciplinary nature of the problem and the solutions	CORP-22
1.	Economics.....	CORP-22
2.	Engineering.....	CORP-22
3.	Business Management	CORP-23
4.	Finance and Accounting	CORP-23
5.	Law.....	CORP-24

VII. One Further Complication: Are States the Correct Fora for Regulating Corporate Structure Events? CORP-27

**Part Five
Climate Change**

I. Renewable Energy Tariffs: Can States “Set” Wholesale Rates?

II. Smart Grid: The New Bottleneck Monopoly?

III. Table: Market Structures for Demand Response: Six State Options

Table of Figures

Regulatory Complexity: The Electric Industry Example.....	T-1
Who Regulates the Bulk Power System Now?.....	T-3
Corporate Restructuring by Public Utilities: How Should Regulators Prepare and Respond?	T-4
FPA § 203 (a)(1)(A) Public Utility Disposes of Jurisdictional Facilities.....	T-5
FPA § 203 (a)(1)(B) Public Utility Merges or Consolidates its Jurisdictional Facilities with Those of Any Other Public Utility.....	T-6
FPA § 203 (a)(1)(C) Public Utility Acquires the Stock of Any Other Public Utility.....	T-7
FPA § 203 (a)(1)(D) Public Utility Acquires Existing Generation Facility.....	T-8
FPA § 203 (a)(2) Holding Company-Level Merger.....	T-9
Mergers and Acquisitions That Do Not Trigger FPA Section 203 Type A: Utility Acquires Non-Utility.....	T-10
Mergers and Acquisitions That Do Not Trigger FPA Section 203 Type B: Non-Utility Acquires Utility.....	T-11
Permissible Corporate Structure after February 2006.....	T-12
Utility’s PURPA Obligations after EPOA 2005	T-13