

ELECTRIC POWER GENERATION



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ELECTRIC POWER GENERATION

The Changing Dimensions

Digambar M. Tagare



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CONTENTS

Foreword	xxi
Preface	xxv
1. Electricity History—A Review of the Road Ahead	1
1.1 History of Growth of the Electricity Business	1
1.1.1 Societal and Organizational Changes	1
1.2 Innovative Technology Developments and Growth of Conglomerates	2
1.3 Economic Growth—GDP and Electricity Consumption	3
1.2.1 Factors Leading to Further Growth of Conglomerates	2
1.4 Monopolies Develop Built-In Defects	4
1.5 Breakup of Bell Systems Leads to Unbundling	5
1.5.1 New Technologies Open Competition to Small-Scale Capital	6
1.5.2 Oil Cartels Deliver a Blow	6
1.5.3 Environmental Concerns Raise Costs	7
1.6 Importance of Renewable Energy Recognized—Wind Energy Becomes a Challenger	7
1.6.1 A System Changeover is Necessary	8
1.7 Structural Changes	8
1.7.1 Working of the Old Model	8
1.8 Cost Breakdown in the Old Model	10
1.9 Step-by-Step Restructuring	11
1.9.1 Generation	11
1.9.2 Distribution	11
1.9.3 Evolution of the Free Market	11
1.9.4 Transmission	12
1.10 The New Decision Authorities	12
1.11 Open Power Marketing Now Rerestructuring Electricity Power System	13
References	13

2. Risks, Operation, and Maintenance of Hydroelectric Generators	15
2.1 The Present Scenario	15
2.2 Types and Sizes of Hydroelectricity Projects	15
2.3 Advantages of Hydroelectricity	18
2.4 Slow progress of Hydroelectricity Projects	19
2.4.1 Land Acquisition, Evacuees, and Resettlement	19
2.4.2 Archeological Problems	20
2.4.3 Environmental Problems	20
2.4.4 Added Features of Hydroelectric Projects	20
2.5 Factors Propelling the Phased Progress of the Hydroelectric Industry	21
2.5.1 Phase 1 (1900–1920)—Technocentric Phase	21
2.5.2 Phase 2 (1920–1980)—Capital-Directed Phase	21
2.5.3 Phase 3 (1980 Onward)—Sociotechnical Phase, Infrastructure Nature	22
2.6 Hydro Projects Fall Short of Attracting Private Investment	22
2.7 Dam Building Progress Over a Century	22
2.7.1 Principal Risks Associated with Development of Hydro Projects	22
2.7.2 India Has a High Proportion of Hydroelectricity	24
2.8 Desirable Configuration for Hydro Projects to Attract Private Investment	24
2.8.1 Challenges	25
2.9 Operation of a Hydroelectric Plant	25
2.9.1 Typical Layout	25
2.9.2 Capability Curve for a Hydrogenerator	26
2.9.3 Efficiency of a Hydro Unit	26
2.10 Unit Allocation within a Large HE Plant	28
2.11 Speed Control of a Water Turbine	28
2.11.1 Governor for Water Turbine Generators (WTGs)	28
2.12 Startup Process for a WTG	29
2.13 Speed Controls are Rigid	30
2.14 Speed Increase Due to Sudden Load Cutoff	30
2.15 Frequency and Harmonic Behavior After a Sudden Load Rejection	30
2.15.1 Voltage Behavior After a Load Cutoff	33
2.16 Effect of Penstock Pressure Pulsations	33
2.17 AC Excitation of Rotor Field	33
2.18 Unit Commitment from Hydroelectric Generators, Including Pumped Storage Systems	34
2.19 ICMMS of Hydroelectric Generating Units	34
2.20 Controls and Communications in hydro Systems	35
2.21 General Maintenance	35
2.22 Limitations of Scheduled and Breakdown Maintenance	36
2.23 Reactive Maintenance—Key Elements	36
2.24 Key Components of an ICMMS—Case of a Hydroelectric System	37

- 2.25 Intelligent Electrohydraulic Servomechanism 37
- 2.26 Online Monitoring and Forecasting 38
 - 2.26.1 Partial Discharges (PDs) in the Stator Coils of Alternators 38
 - 2.26.2 Air Gap Monitoring of Vertical Hydraulic Generators 39
- 2.27 Subsynchronous Resonance (SSR) and Twisting of Rotor Shafts 39
- References 40

3. Hydroelectric Generation—Pumped Storage, Minor Hydroelectric, and Oceanic-Based Systems 45

- 3.1 Water as an Energy Supplier and an Energy Store 45
- 3.2 Pumped Water Storage System for Electricity Generation 46
- 3.3 Operation of a Pumped Storage System 46
- 3.4 Pumped Storage Systems Have Limited Scope 47
- 3.5 Pumped Storage Systems and Wind Energy 48
- 3.6 Small Hydroelectric Plants (SHPs) 49
- 3.7 Types of SHP Projects—Sizes 49
- 3.8 Location-Wise Designations of SHPs 50
- 3.9 Components of an SHP 50
- 3.10 Typical Layouts Of SHPs 51
 - 3.10.1 The Generator 51
 - 3.10.2 Dam-Based SHPs 54
 - 3.10.3 Canal-Based SHPs 54
- 3.11 Project Costs of an SHP 54
- 3.12 Drawing Electricity from the Ocean 55
 - 3.12.1 Nature of Energy Available from the Oceans 55
 - 3.12.2 Le Rance Tidal Power Plant 56
- 3.13 Underwater Turbine and Column-Mounted Generator 57
- 3.14 Wave Energy 58
- Appendix 3-1 World’s Largest Hydro-Electric Projects 60
 - Itaipu Hydro Project 60
 - Signs of the Times in Brazilian Electricity 60
- Appendix 3-2 Remote Control of the Hydroelectric System at Guri 61
 - Remote Terminal Units (RTUs) 65
 - Operation of Generator RTU 65
 - Common Services RTUs 66
 - Switchyard RTUs 66
 - Automatic Generation Control (AGC) and Automatic Voltage Control (AVC) 66
 - Working of the Guri Control System 66
- References 67

4. Thermal Power Generation—Steam Generators 69

- 4.1 Thermal Electricity Generation Has the Largest Share—The Present Scenario 69
- 4.2 Planning of Thermal Stations—Risks and Challenges 70

4.2.1	Project Risks	70
4.2.2	Fuels for Thermal Generation	71
4.3	Cost Breakdown and Consumption Pattern of Electricity	71
4.4	Main Energy Suppliers	71
4.4.1	Coal	71
4.4.2	Natural Gas	73
4.4.3	Mineral Oils	74
4.4.4	Nuclear Power	74
4.5	Workings of a Coal-Fired Steam Generator Unit	74
4.5.1	Coal Flow	74
4.6	Types of Boilers	76
4.6.1	A Modern 100 MW Boiler	77
4.6.2	Vertical Water-Wall Furnace with Rifled Tubes	78
4.6.3	Integrated Coal Gasification Combined Cycle Furnace	78
4.7	Classification of Generating Units	78
4.7.1	Base-Load Generators	78
4.7.2	Peak-Load Generators	79
4.7.3	Intermediate-Load Generators	79
4.8	Combined-Cycle Power Plant (CCPP)	79
4.8.1	A Denitrifying Arrangement	80
4.8.2	Typical Rating Ratios Between Gas and Steam Portions	81
4.8.3	Advances in Synchronous Generators	81
	References	83

5. Thermal Station Power Engineering 87

5.1	Start-Up Process of a CCPP	87
5.2	Short-Term Dynamic Response of a CCPP to Frequency Variation	88
5.3	Cascade Tripping of a CCPP Due to Frequency Excursion	88
5.4	Operation Planning to Meet Load Demands—Flow Diagram	89
5.5	Capacity Curves for Thermal Electricity Generation	90
5.6	Operational Economy Includes Fuel Considerations	92
5.6.1	Costs	92
5.6.2	Reliability of Supply	92
5.6.3	Emission Caps Considerations	92
5.7	Efficiency in Operating Practices	92
5.8	Ancillary Services Compulsorily	93
5.8.1	Reactive Power Supply	93
5.8.2	Load Following	94
5.8.3	Loss Compensation	94
5.8.4	Energy Imbalance	94
5.8.5	Scheduling and Dispatch Services	94
5.9	Changing Performance Requirements for Thermal Plant Operators	94

5.10	Expanding Grids Demand Tight Frequency Tolerances	95
5.11	Reserves are Important in Frequency Control	95
5.12	Reserves Based on Droop Characteristic	96
5.13	Primary Frequency Control	96
5.14	Secondary Frequency Control (SFC)	98
5.15	Tertiary Frequency Control	100
5.16	Rigid Frequency Controls are Bringing in Changes	100
5.17	Voltage Control Services	100
5.18	Voltage Measurement at POD into the Transmission System	101
5.19	Attractive Market Prices Lead to Reserves Over and Above the Compulsory Limits	101
5.20	Importance of Operating Frequency Limits for a Thermal Generator	101
5.21	System Protection	103
5.22	Maintenance Practices	104
5.22.1	Corrective Maintenance	104
5.22.2	Preventive Maintenance	104
5.22.3	Predictive Maintenance	104
5.23	Challenges in Meeting Environmental Obligations	105
5.24	MHD Generators	105
Appendix 5-1	Energy Efficiency Program [36]	106
	Generation Project Types	106
Appendix 5-2	Capability Curves of a 210 MW Generator	106
Appendix 5-3	Design of an MHD Generator System and its Output Conversion	107
	Extracting Electricity from the MHD Generator	110
References		111
6.	Environmental Constraints in Thermal Power Generation— Acid Rain	115
6.1	Introduction to Acid Rain and Carbon Emissions	115
6.2	World Concern Over Environmental Pollution and Agreements to Control It	116
6.3	U.S. Clean Air Act and Amendments	116
6.4	Complying with Constraints on the SO ₂ Emission Rate	117
6.4.1	Options Available	117
6.4.2	Costs Involved in Reduction of SO ₂ Emissions	119
6.5	Surcharges on Emissions	120
6.6	Complying with Constraints on Denitrifying	122
6.6.1	Burners Out of Service (BOOS)	123
6.6.2	NO _x Variation with Load	124
6.7	Continuous-Emission Monitoring Systems (CEMS)	126
6.8	The European Systems: Helsinki Protocol on SO ₂ and Sofia Protocol on NO _x	126

6.9	The Japanese Example—City-Wise and Comprehensive	127
6.10	A Plant Running Out of Emission Allowances	128
6.11	NO _x Permits are Projected as Important Players in Price Fixing of Power in a Free Market	128
6.12	Air Pollution by Carbon Dioxide—CO ₂	129
	Appendix 6-1 Ambient Air Quality Standards for Residential Areas	129
	Appendix 6-2 Ambient Air Quality Standards for Industrial Areas	130
	Appendix 6-3 Details on Desulphurization Plants in the United States	131
	References	132
7.	Environmental Constraints in Thermal Power Generation—Carbon and the Kyoto Proposals	135
7.1	Continuing Growth of CO ₂ in the Air	135
7.2	CO ₂ from Different Fuels	135
7.3	CO ₂ Emission by Fuel Type	136
7.4	Coal has the Highest Rate of Growth Among Energy Suppliers	136
7.5	Earth's Oceans and Seas Absorb CO ₂	137
7.6	Developments on the Front of Reduction in Greenhouse Gas Emissions	138
7.7	Kyoto Proposals	138
7.8	Clause 1 of Kyoto Protocol of 1998	139
7.9	Original Kyoto Proposals	139
7.10	Proposals for Parties to the 2007 Protocol	140
	7.10.1 Emission Trading with ERUs and LULUCF	141
	7.10.2 Joint Implementation	141
	7.10.3 Clean Development Mechanism (CDM)	141
	7.10.4 Certified Emission Reductions (CERs)	141
	7.10.5 CER to the Rescue of Protocol Parties	141
	7.10.6 Passage of the CDM Proposal	142
7.11	Project Report Needs	142
	7.11.1 Eligibility Criteria	142
	7.11.2 Additionality Factor	143
7.12	An Illustrative Validation Report	143
7.13	A Workout for Emission Factors and Emissions for a Hydro and for a Wind Energy Installation	144
7.14	Open Skies Divided in Tons of CO ₂ Per Nation	145
7.15	An example of Baseline and Emission Reductions	145
7.16	Methodological Tools to Calculate the Baseline and Emission Factor	147
7.17	Tool to Calculate the Emission Factor for an Electricity System	147
7.18	Simple Operating Margins	147
7.19	Incentives for Emission Reduction	148
	Appendix 7-1 Default Efficiency Factors for Power Plants	151
	References	151

8. Nuclear Power Generation	153
8.1 Nuclear Power Generation Process in Brief	153
8.1.1 Risks Involved	153
8.1.2 Scattered Designs and Systems	154
8.2 Rise, Fall, and Renaissance of Nuclear Power Plants	154
8.3 Power Uprates	155
8.4 Advantages of Nuclear Plants	156
8.5 Some Types of Nuclear Power Reactors	156
8.6 Other Types from Different Countries	157
8.7 Planning of NP Plants	157
8.7.1 U.S. Plant Planning Process for an NPP—Stages 1 to 3	157
8.7.2 Periods Involved at Each Stage	158
8.8 Financial Risks in Planning	158
8.9 Operation of NP Plants	158
8.9.1 Personnel	159
8.9.2 Technical	160
8.10 Safety Measures to Prevent Explosion in a Reactor Vessel	160
8.11 Prevention of Accidents	160
8.11.1 Lightning Strikes	160
8.11.2 Utility Bus Voltage Dips	161
8.11.3 The Generator Output Trips	162
8.11.4 Off-Site Supply Trips	162
8.12 Class IE Equipment and Distribution Systems—Ungrounded Earthing Systems	163
8.13 Environmental Considerations—Radiation Hazard	164
8.14 Waste Management	164
8.14.1 Reprocessing	164
8.14.2 Underground Storage Tanks	165
8.15 Environmental Benefits	165
8.16 Challenges for Research	166
8.17 Rapid Increase in Population Expected	166
8.18 Fast Breeder Reactors	166
Appendix 8-1 Nuclear Reactor Accident at Three Mile Island	167
Appendix 8-2 Chernobyl Accident	168
Appendix 8-3 Worldwide Capacity and Generation of Nuclear Energy	169
References	170
9 Wind Power Generation	173
9.1 Introduction to Wind	173
9.1.1 Technology Growth in Wind Turbine Generators	174
9.1.2 Nature of Wind	174
9.1.3 Components of a Wind Turbine Generator	174
9.2 Operation of Wind Turbine Generators	175
9.2.1 Output of a WTG	175

9.2.2	Performance Improvement through Blade Pitch Control	176
9.2.3	Efficiency of a WTG	176
9.2.3	Losses in a WTG	177
9.2.4	Flickers in the Output of a WTG	177
9.3	Connection of Wind Energy Plants to the Grid—The Grid Code	179
9.3.1	Low-Voltage Ride-through	179
9.4	American Grid Code	180
9.5	A Resistive Braking of a WTG	181
9.6	Power and PF Control	182
9.7	Modeling of a Wind Turbine Generator	182
9.7.1	Objectives	183
9.7.2	Method	183
9.7.3	Present Problem Areas in Modeling	183
9.7.4	Model Validations	184
9.8	Economics of Wind Energy	184
9.8.1	How Does a Modern Power System Operate on the Marketing Side?	184
9.8.2	Unit Commitment and Scheduling	185
9.9	Capacity Factor of a WTG	186
9.10	Capacity Credit Considerations	186
9.11	Capacity Factor for WECs in a Hybrid System	187
9.12	Wind Penetration Limit	187
9.13	Wind Power Proportion	187
9.14	Wind Integration Cost in United States	188
9.15	Wind Energy Farms	188
9.16	Promoting Growth of Wind Electricity	188
9.17	Maintenance of WTG	190
9.18	UNFCCC and Wind Energy	190
	References	190
10.	Photovoltaic Energy—Solar Cells and Solar Power Systems	195
10.1	Photovoltaic Energy—How it Works	195
10.2	Advantages of Photovoltaic Energy	195
10.3	Disadvantages of PV Energy	196
10.4	Solar Thermal Density—Insolation	196
10.5	Output of a PV Cell	197
10.6	Variation with Ambient Temperature	197
10.7	Voltage-Versus-Current Characteristics of a Solar Cell	198
10.8	Matching the PV with the Load	199
10.8.1	Maximum Power Point Tracker (MPPT)	199
10.8.2	VMPPT and CMPPT	200
10.9	Old Working Model of an MPPT	201
10.10	Maximizing the Output of a Solar Panel	201
10.10.1	By Orienting the Solar Panel	201
10.10.2	By Water Cooling the Solar Panel Backs	202

10.11	Interface with a Power System	202
10.12	Power Conditioning Systems	202
10.12.1	Quality Requirements of a PCS	203
10.12.2	Converting DC into AC	204
10.13	Super Capacitors and Storage Batteries	204
10.14	NERC Guidelines for Connecting a PV System to a Grid	204
10.15	Problems of Interfacing PV Systems with the Grid	205
10.16	Penetration Percentage by a PV Energy System into a Utility Grid	206
10.17	Progress in Application of PV Energy	206
10.17.1	PV Cells and Agricultural Pumps	206
	References	213
11.	Direct Conversion into Electricity—Fuel Cells	217
11.1	Fuel Cells Bypass Intermediate Steps in the Production of Electrical Energy	217
11.2	Working of a Fuel Cell	217
11.3	A Reformer for Getting Hydrogen From Methane	218
11.4	Fuels for a Fuel Cell	219
11.5	Fuel Cells on the Forefront of Development	220
11.5.1	Advantages of the PEM Fuel Cells	220
11.5.2	Disadvantages of PEM Fuel Cells	220
11.6	Comparison between Fuel Cells	221
11.7	Typical Characteristics of Various Fuel Cells	221
11.8	Developments in Fuel Cells	223
11.8.1	Molten Carbonate Fuel Cell	222
11.8.2	CO ₂ Recycling under Pressure Swing Absorption	224
11.9	Applications of Fuel Cells	224
11.9.1	Automobile Propulsion	224
11.9.2	Residential Applications	225
11.9.3	Electricity Utilities	225
11.10	An SOFC–Gas Turbine System	225
11.10.1	Special Advantages	226
11.11	Efficiencies of Various Systems in Thermal Power Generation Technologies	227
	References	228
12.	Hybrid Systems	231
12.1	Coupling of Energy Sources	231
12.2	What Exactly are Hybrids?	231
12.2.1	Where Hybrids Can be Effective	232
12.3	Stand-Alone Hybrid Power Systems	232
12.3.1	Options for A Rural Electric Supply—Case of a Remote Mexican Village	232
12.3.2	Six Alternatives with Advantages and Disadvantages in a Mexican Case Study	233

12.4	Use of Renewable Sources of Energy in Mexico—San Antonio Aqua Bendita	234
12.5	Some Definitions	235
12.5.1	Loss Probability of Supply Power (LPSP)	235
12.5.2	Battery Capacity	235
12.5.3	Inverter Rating	235
12.5.4	Functions of a Battery Controller	235
12.5.5	Storage Batteries are Important in PV/Wind and Storage Battery Stand-alone Hybrid Systems	235
12.6	Cost Balance Between PV Cells and Storage Batteries	236
12.6.1	Other Hybrid Illustrations	236
12.7	Hybrids Incorporating Fuel Cells	237
12.7.1	PV–Fuel Cell Hybrids for a Spaceship	237
12.7.2	Diesel Generator–Wind Energy Hybrids	238
12.8	Midsea Hybrids	238
12.9	Workings of a WTG and Diesel Generator	238
12.9.1	Starting of WTGs	238
12.9.2	A Case of Low Wind	239
12.9.3	A Case of Wind Gust	239
12.9.4	In a Hybrid System, Can We Draw Energy Wholly from WG?	239
12.9.5	An Irish Rule on Permissible Wind Penetration	240
12.10	Wind Energy Penetration Limit	240
12.11	Wind Power–Fuel Cell Hybrids	240
12.12	Interfacing Nonconventional Energy Sources with Utility Systems—Static Power Controllers (SPCs)	241
12.13	Protective Controls Between a Utility and a Newcomer	241
12.13.1	Routine Controls	241
12.13.2	Specific Controls	242
	References	243
13.	Combined Generation—Cogeneration	247
13.1	Definition and Scope	247
13.2	Rise of Cogeneration	248
13.3	Basic Purpose of Cogeneration	248
13.4	Three Types of Cogenerators	248
13.4.1	Primary Product—Steam	248
13.4.2	Primary Product—Electricity	249
13.4.3	Equal Production—Steam and Electricity	249
13.5	Advantages Offered by Cogeneration	249
13.6	Planning of Cogeneration	250
13.6.1	Planning by Old Established Cogenerating Units	250
13.6.2	New High-Tech Industries	251
13.6.3	Small Establishments	251

13.7	Economic Objectives for a Cogenerator	253
13.7.1	Optimization of Fuel Input	254
13.7.1	Profit Maximization Under TOU Rates—An Illustration	254
13.8	Operation of Cogenerators	254
13.8.1	Within Its Own Complex	254
13.8.2	As a Tie-Up Between a Cogenerator and a Utility	256
13.9	Working Together with Cogeneration	256
13.9.1	Excitation Control of Cogenerators	257
13.9.2	Short-Circuit Faults and Overcurrent	258
13.9.3	Clearing Times for an Out-of-Step Relay Control	259
13.9.4	Loss of Excitation Relay—Maloperations	259
13.9.5	A Series Inductance in the Tie Line Works as a Stabilizer	260
13.10	Islanding of Cogeneration Section	260
13.10.1	Sudden Overloads	260
13.10.2	Sudden Load Cut-offs	260
13.11	Environmental Considerations	262
13.12	Cogeneration in Brazil	263
Appendix B-1	A Typical Cogenerating System for a High-Tech, Science-Based Industrial Park in Taiwan	264
	A Load Shedding Scheme	265
Appendix 13-2	NERC Directive	266
Appendix 13-3	Combined Power Generation and Captive Power Plants—A Typical Example	268
	Background	268
	Problems in Cogeneration and Grid Interconnections	268
	Grid Discipline for the CPP	269
Appendix 13-4	Cogeneration in Sugar Mills in India	269
References		270
14.	Distributed Generation (DG) and Distributed Resources (DR)	275
14.1	Definition and Scope	275
14.1.1	Definitions	275
14.1.2	Scope	275
14.2	Who are the Players in Distribution Generation?	276
14.3	Prominent Features of DRs	276
14.4	Types of DGs	276
14.4.1	Background	278
14.5	Push Factors, Stay-Put Costs, and Investment Prospects for Electricity	278
14.6	Investment Options	278
14.6.1	Load Growth, Including Time Factor	279
14.6.2	Costs of Available Alternatives—DG versus Substations	279
14.6.3	Costs of Overloading Existing Assets	280

14.6.4	Costs of Unserved Energy	281
14.6.5	Interruption Costs	281
14.6.6	Line Losses Will Keep on Increasing with the Load	281
14.7	Planning Sites for a DG	282
14.7.1	Voltage Support for a Rural Line with Active and Reactive Power under Different Load Conditions	284
14.8	Operation of DGs in an Electric Power System	284
14.8.1	A Ride Through a Voltage Dip	285
14.8.2	Small-Disturbance Stability of a DG	286
14.8.3	Working of a Protective Fuse and a Backup Recloser Affected by the Presence of a DG	287
14.8.4	Correlation between a Fuse and a Trip Relay	288
14.8.5	Boost-up of Fault Current by an Inverter and its Effect on Reclosing	289
14.8.6	An Inductance Generator with a D-Statcom	289
14.9	Islanding of an EPS Section from the Main Body	289
14.9.1	Disconnect on Islanding	289
14.9.2	Vector Surge Relay (Out of Step)	290
14.9.3	Rate of Change of Frequency Relay	291
14.9.4	Built-in Protection for Inverter Systems	291
14.10	Allowable Penetration Levels by DRs	291
14.11	Synchronous Generator as a DG with Excitation Controls	292
14.12	How Can a DG Earn Profits?	293
14.12.1	Peak Load Servicing	293
14.12.2	Selling Contingency Security Reserves to a Utility	293
14.13	Scope for Gas-Based DGs	293
14.14	Diesel Generators	293
14.15	Evaluation of Service Rendered by Stand-by DGs	294
14.16	Reliability Cost for a DG Set	294
14.17	Maintenance and Protection of Diesel Generators	295
14.17.1	Noise Limit for Diesel Generator Sets (up to 100 KVA)	295
14.17.2	Emission Limits for New Diesel Engines (up to 800 kW) for Generator Set Applications	295
14.17.3	Poona Pattern of Energy Supply from Stand-by Sets to a Utility	295
14.18	UK Policy on Generation of Low-Carbon Electricity	296
	References	297
15.	Interconnecting Distributed Resources with Electric Power Systems	301
15.1	Scope	301
15.2	Definitions per IEEE Std 1547-2003	302
15.3	DR Ceases to Energize the Area EPS	302
15.4	Protective Devices	302

15.5	Schematic of an Interconnection Between a DR and an Area EPS	302
15.6	Restraints on a DR Operator	302
15.7	Responsibilities and Liabilities of EPS Area Operators	303
15.8	Power Quality Windows	304
15.8.1	Frequency	305
15.8.2	Harmonics	305
15.8.3	Allowable Voltage Distortion Limits for Power Generating Equipment	305
15.8.4	Maximum Harmonic Voltage Distortions at PCC at Voltages up to 69 kV	306
15.9	Limitation of DC Injection	306
15.10	Islanding of a Local-Area EPS that Includes a DR	306
15.11	Reconnection	308
15.12	Safety Aspects	309
15.13	Testing of Interconnecting Equipment	309
15.14	Interconnections Will be Important in Tomorrow's Scenario	309
Appendix 15-1	CBIP Standard Recommendation, Extracts from Publication 2517, July 1996 [4]	310
Recommendations		310
Target Compatibility Levels		310
References		311
16.	Energy Storage—Power Storage Super Capacitors	315
16.1	Energy Storage and the Future for Renewable Energy Sources	315
16.2	Advantages of Energy Storage	315
16.3	Factors for Choosing Type and Rating of a Storage System	316
16.3.1	Network Parameters	316
16.3.2	Connection and Cycling Costs	316
16.4	Nature of Support by Electricity Storage Systems	317
16.5	Load Density, Short-Circuit Capacity, and Storage of Energy	318
16.6	Photovoltaic Energy—PV Energy in Residential Applications	318
16.7	Maximum PV Penetration and Maximum Allowable Storage go Hand in Hand	319
16.8	Planning the Size of a Store for PV Inclusion in a Distribution System	319
16.9	Types of Storage Devices for PV Systems	321
16.10	Wind Energy	322
16.11	Storage Technologies	323
16.12	Determining the Size Storage for Wind Power	323
16.13	Control Modes for Stores and WTG	323
16.14	Energy Rating of Stores	328
16.15	Categories of Energy Storages	329
Appendix 16-1	A Supercapacitor	330
References		334

17. Hydrogen Era	337
17.1 Fossil-Based Fuels	337
17.2 Hydrogen Properties	337
17.3 Hydrogen Advantages	338
17.4 Production of Hydrogen	340
17.4.1 Presently Developed Processes for Production of H ₂	340
17.4.2 Processes under Development for Bulk Production of H ₂ —Coal Gasification	340
17.4.3 Processes under Laboratory/Scientific Exploration—Thermochemical Water Splitting	341
17.5 Potential Market Segments for Hydrogen	342
17.6 Present Roadblocks to use of Hydrogen	342
17.6.1 Costs of H ₂ are High	342
17.6.2 Basic Infrastructure Does Not Exist	342
17.6.3 Petroleum Products are Well Established	342
17.7 Governments Envision a Hydrogen Era	343
17.8 An Example to Consider	343
Appendix 17-1 Proceedings of the National Hydrogen Energy Road Map, Workshop Arranged by U.S. DOE	343
Appendix 17-2 HTGR Knowledge Base	347
IAEA-TECDOC—1085: Hydrogen as an Energy Carrier and its Production by Nuclear Power	347
References	347
18. Basic Structure of Power Marketing	351
18.1 Reconstruction of the Electricity Business	351
18.2 Unbundling of Old Monopoly	352
18.3 Open Access to Critical Facilities	352
18.4 How Does the New System Work?	353
18.5 Market Participants And Their Functions	353
18.6 New Key Personnel	354
18.6.1 Role of a Systems Operator (Technical)	354
18.6.2 Role of a System Operator (Financial)	355
18.7 Role of a Regulator or Regulatory Commission	355
18.8 Tools for the System Operator	355
18.9 Secondary Markets	365
18.10 Free Market Objectives	356
18.10.1 Objectives for the Transmission Systems	356
18.10.2 Objectives for the Wholesale Market: A Standard Market Design (SMD)	357
18.11 Success of the Free Market	357
18.12 How Do Electricity Markets Operate?	358
18.13 Flow of Operating Funds	358
18.14 Effect of Reconstruction on Electricity Business—Capital Investment Prospects	358

18.14.1	Generation	358
18.14.2	Peak-load Generators and Base-load Generators	359
18.14.3	Investment and Costs of Compliance with Emission Control Measures	359
18.14.4	BACT Favored by Regulators	359
18.14.5	Output Limitations	360
18.14.6	Cap and Trade	360
18.14.7	Effect on Transmission Systems: Investment Incentives and Responsibilities	360
18.15	National Grid Transmission System	361
Appendix 18-1	A Vast Array of Tools to Support Tomorrow's Market Participants	361
References		363
19.	Looking into the Future	365
Index		367
IEEE Press Series on Power Engineering		

FOREWORD

It is with pleasure that I write this foreword to *Electricity Power Generation: The Changing Dimensions*, written by my esteemed friend, Mr. D. M. Tagare. Mr. Tagare and I have worked in the field of power generation and power management over the last 50 years. Mr. Tagare is known in India for his outstanding work in the field of power capacitors and filters. He was the chairman of capacitor division of Indian Electrical and Electronics Manufacturers Association and piloted growth and development of the industry for a number of years. He has published books on capacitors and reactive management that have received worldwide acclaim. This book is the result of decades of experience. It will enhance the knowledge of persons working in the power sector, both young and old. The book provides the latest knowledge on issues of electricity generation.

The electricity sector structure has changed rapidly, especially during the last 20 years. From a monopoly line-function structure, power generation and power trading have been transformed into a competitive industry. This has attracted the attention of planners, economists, managers, industrial engineers, and civil servants. Thus, there is a migration of other sector experts to the electricity sector. These experts require education and knowledge of electricity generation, not only basic, but most up-to-date, covering the latest and upcoming technologies, such as fuel cells and hydrogen. All these areas together with new and renewable energy generation are well covered in the book. Besides meeting the needs of working engineers in the sector, this book will also meet the needs of students working in the field of energy management, energy consultants, auditors, civil servants, industrial managers, economists, and planners. The book will serve as handbook and will be a useful addition to technical libraries.

Every technology over the years seeks to improve efficiencies; electricity power generation is no exception. Constant endeavor is made to achieve higher efficiencies through higher pressures and temperatures and so on. The development of power electronics, computer engineering, and information technology (IT) has added new dimensions to the electricity generation sector. Complete automation in working is achieved. Thus, the electricity engineer is required to acquire knowledge in these fields as applicable to his or her sector. The book includes updates on these subjects associated with electrical engineering. This enhances the value of the book by directly covering these