INDEX

| Arti | icle/Sect | tion Nur | mber | Sheet No. | |
|------|-----------|--------------------------------|--|-----------|--|
| | ARTIC | ARTICLE 1 – GENERAL PROVISIONS | | | |
| | 1 | DEFIN | ITIONS AND INTERPRETATION. | 1 | |
| | | 1.1 | The general provisions of this Article I shall apply to this ISO Tariff. | 1 | |
| | | 1.2 | Definitions. | 1 | |
| | | 1.3 | Rules of Interpretation. | 1 | |
| | 2 | ACCES | SS TO THE ISO CONTROLLED GRID. | 2 | |
| | | 2.1 | Open Access. | 2 | |
| | | 2.2 | Eligibility of Customers for Direct Access or Wholesale Sales. | 3 | |
| | 3 | FACILI BONDS | TIES FINANCED BY LOCAL FURNISHING BONDS OR OTHER TAX-EXEMPT S. | 3 | |
| | 4 | ROLES | S AND RESPONSIBILITIES. | 4 | |
| | | 4.1 | [Not Used] | 4 | |
| | | 4.2 | Market Participant Responsibilities. | 4 | |
| | | 4.3 | Relationship Between ISO and Participating TOs. | 5 | |
| | | 4.4 | Relationship Between ISO and UDCS. | 6 | |
| | | 4.5 | Responsibilities of a Scheduling Coordinator. | 10 | |
| | | 4.6 | Relationship Between ISO and Generators. | 23 | |
| | | 4.7 | Relationship Between ISO and Participating Loads. | 27A | |
| | | 4.8 | Relationship Between ISO and Eligible Intermittent Resources and Between the ISO and Participating Intermittent Resources. | 28 | |
| | | 4.9 | Metered Subsystems. | 28 | |
| | 5 | RELAT | TONSHIP BETWEEN ISO AND SUDCS | 40 | |
| | | 5.1 | General Nature of Relationship Between ISO and SUDCs | 40 | |
| | | 5.2 | Coordinating Maintenance Outages of SUDC Facilities | 41 | |
| | | 5.3 | SUDC Responsibilities | 41 | |
| | | 5.4 | System Emergencies | 41 | |
| | | 5.5 | Load Reduction | 42 | |
| | | 5.6 | System Emergency Reports: SUDC Obligations | 42 | |
| | | 5.7 | Coordination of Expansion or Modifications to SUDC Facilities | 42 | |
| | | 5.8 | Information Sharing | 42 | |
| | | 5.9 | Installation of Equipment on and Rights of Access to SUDC Facilities | 43 | |

| 6 | COM | MUNICATIONS. | 44 |
|---|------|--|-----|
| | 6.1 | Methods of Communications. | 44 |
| | 6.2 | Communications. | 45 |
| | 6.3 | Communication Protocols. | 46 |
| | 6.4 | Transmission System Information and Communications. | 47 |
| | 6.5 | Information to be Provided By Connected Entities to the ISO. | 51 |
| | 6.6 | Failure or Corruption of the WEnet. | 51 |
| | 6.7 | Confidentiality. | 51 |
| | 6.8 | Standards of Conduct. | 51 |
| | 6.9 | ISO Postings. | 52 |
| 7 | | EM OPERATIONS UNDER NORMAL AND EMERGENCY RATING CONDITIONS. | 53 |
| | 7.1 | ISO Control Center Operations. | 53 |
| | 7.2 | Operating Reliability Criteria. | 55 |
| | 7.3 | Normal System Operations. | 59 |
| | 7.4 | Management of System Emergencies. | 60 |
| | 7.5 | Management of Overgeneration Conditions. | 72 |
| 8 | ANCI | LLARY SERVICES. | 73 |
| | 8.1 | Scope. | 73 |
| | 8.2 | Ancillary Services Standards. | 74 |
| | 8.3 | Procurement of Ancillary Services, Certification and Testing Requirements for Providers of Ancillary Services, and Time-frame For Contracting for Ancillary Services | 82 |
| | 8.4 | Technical Requirements for Providing Ancillary Services. | 84 |
| | 8.5 | The Bidding Process. | 92 |
| | 8.6 | Obligations for and Self-Provision of Ancillary Services. | 113 |
| | 8.7 | Scheduling of Units to Provide Ancillary Services. | 117 |
| | 8.8 | Black Start. | 118 |
| | 8.9 | [Not Used] | 118 |
| | 8.10 | Verification, Compliance Testing, and Audit of Ancillary Services. | 118 |
| | 8.11 | Settlements For Contracted Ancillary Services. | 131 |
| | 8.12 | Settlement for User Charges for Ancillary Services. | 139 |
| | 8.13 | Temporary Changes To Ancillary Services Penalties. | 149 |
| | 8.14 | Temporary Rule Limiting Adjustment Bids Applicable To Dispatchable Loads And Exports. | 150 |

| 9 | OUTA | GES. | 150 |
|----|--------|--|-----|
| | 9.1 | Coordination and Approval for Outages. | 150 |
| | 9.2 | Responsibility for Authorized Work on Facilities. | 151 |
| | 9.3 | Coordination of Outages and Maintenance. | 151 |
| | 9.4 | Outage Coordination For New Facilities. | 165 |
| | 9.5 | Records. | 167 |
| | 9.6 | Facility Owner. | 168 |
| 10 | METE | RING. | 168 |
| | 10.1 | Applicability. | 168 |
| | 10.2.1 | Responsibilities of ISO Metered Entities. | 170 |
| | 10.3 | Metering for Scheduling Coordinator Metered Entities. | 187 |
| 11 | ISO SE | ETTLEMENTS AND BILLING. | 203 |
| | 11.2 | Calculations of Settlements. | 204 |
| | 11.3 | Billing and Payment Process. | 232 |
| | 11.4 | General Principles for Production of Settlement Statements. | 236 |
| | 11.5 | Calculation in the Event of Lack of Meter Data for the Balancing of Market Accounts. | 237 |
| | 11.6 | Settlements Cycle. | 237 |
| | 11.7 | Confirmation and Validation. | 240 |
| | 11.8 | Payment Procedures. | 245 |
| | 11.9 | Invoices. | 250 |
| | 11.10 | Instructions for Payment. | 251 |
| | 11.11 | ISO's Responsibilities. | 251 |
| | 11.12 | Non-payment by a Scheduling Coordinator. | 253 |
| | 11.13 | [NOT USED] | 255 |
| | 11.14 | [NOT USED] | 255 |
| | 11.15 | Prohibition on Transfers | 255 |
| | 11.16 | Alternative Payment Procedures. | 255 |
| | 11.17 | [DELETED] | 256 |
| | 11.18 | Payment Errors. | 256 |
| | 11.19 | Defaults. | 259 |
| | 11.20 | Proceedings to Recover Overdue Amounts. | 259 |
| | 11.21 | Data Gathering and Storage. | 260 |
| | 11.23 | Communications. | 261 |
| | 11.24 | ISO Payments Calendar. | 261 |
| | | | |

| 12 | CRED | OITWORTHINESS. | 264 |
|----|----------------|---|------|
| | 12.1 | Credit Requirements. | 264 |
| | 12.2 | Review of Creditworthiness. | 265 |
| | 12.3 | Post and Releases of Financial Security | 266 |
| | 12.4 | Calculation of Ongoing Financial Security Requirements | 267 |
| | 12.5 | ISO Enforcement Actions Regarding Under-Secured Market Participants | 267A |
| 13 | DISP | JTE RESOLUTION. | 268 |
| | 13.1 | Applicability. | 268 |
| | 13.2 | Negotiation and Mediation. | 269 |
| | 13.3 | Arbitration. | 271 |
| | 13.4 | Appeal of Award. | 277 |
| | 13.5 | Allocation of Awards Payable by or to the ISO. | 279 |
| 14 | FORC | E MAJEURE INDEMNIFICATION AND LIMITATIONS ON LIABILITY. | 280 |
| | 14.1 | Uncontrollable Forces. | 280 |
| | 14.2 | Market Participant's Indemnity. | 281 |
| | 14.3 | Limitation on Liability. | 281 |
| | 14.4 | Potomac Economics, Ltd. Limitation Of Liability. | 281 |
| 15 | REGU | JLATORY FILINGS. | 282 |
| 16 | EXIST | TING CONTRACTS. | 282 |
| | 16.1 | Existing Contracts for Transmission Service. | 282 |
| | 16.2 Servic | ISO Administration of Existing Contracts for Transmission e. | 283 |
| 17 | [Not l | Jsed] | 301 |
| 18 | [Not l | Jsed] | 301 |
| 19 | DEMA | AND FORECASTS. | 301 |
| | 19.1 | Scheduling Coordinator Demand Forecast Responsibilities. | 301 |
| | 19.2 | UDC Responsibilities. | 302 |
| | 19.3 | ISO Responsibilities. | 304 |
| 20 | CONF | FIDENTIALITY. | 305 |
| | 20.1 | ISO. | 305 |
| | 20.2 | Confidential Information. | 305 |
| | 20.3 | Other Parties. | 306 |
| | 20.4 | Disclosure. | 306A |
| | 20.5 | Confidentiality. | 308 |

| 21 | SCHE | DULE VALIDATION TOLERANCES. | 308A |
|------|----------|---|------|
| | 21.1 | Temporary Simplification of Schedule Validation Tolerances. | 308A |
| | 21.2 | Application. | 309 |
| | 21.3 | Notices of Full-Scale Operations. | 309 |
| 22 | MISCE | ELLANEOUS. | 309 |
| | 22.1 | Audits. | 309 |
| | 22.2 | Assignment. | 311 |
| | 22.3 | Term and Termination. | 312 |
| | 22.4 | Notice. | 312 |
| | 22.5 | Waiver. | 313 |
| | 22.6 | Staffing and Training To Meet Obligations. | 313 |
| | 22.7 | Accounts and Reports. | 313 |
| | 22.8 | Applicable Law and Forum. | 313 |
| | 22.9 | Consistency with Federal Laws and Regulations. | 314 |
| | 22.10 | ISO Grid Operations Committee; Changes To ISO Protocols. | 315 |
| | 22.11 | ISO Protocol Amendment Process. | 315 |
| | 22.13 | Scheduling Responsibilities and Obligations. | 315 |
| ARTI | CLE II – | TRANSMISSION SERVICE | 315 |
| 23 | CATE | GORIES OF TRANSMISSION CAPACITY. | 315 |
| 24 | TRAN | SMISSION EXPANSION. | 316 |
| | 24.1 | Determination of Need. | 317 |
| | 24.2 | Transmission Planning and Coordination. | 319 |
| | 24.3 | Studies to Determine Facilities to be Constructed. | 320 |
| | 24.4 | Operational Review. | 321 |
| | 24.5 | State and Local Approval and Property Rights. | 321 |
| | 24.6 | WECC and Regional Coordination. | 322 |
| | 24.7 | Cost Responsibility for Transmission Additions or Upgrades. | 322 |
| | 24.8 | Ownership of and Charges for Expansion Facilities. | 324 |
| | 24.9 | Expansion by "Local Furnishing" Participating TOs | 324 |
| 25 | | CONNECTION OF GENERATING UNITS AND GENERATING ITIES TO THE ISO CONTROLLED GRID. | 324 |
| | 25.1 | Applicability. | 324 |
| | 25.2 | Interconnections to the Distribution System. | 326 |
| | 25.3 | Maintenance of Encumbrances. | 326 |
| 26 | TRAN | SMISSION RATES AND CHARGES. | 326 |

| neet | |
|------|--|
| | |
| | |

| | 26.1 | Access Charges. | 326 |
|-------|------------|--|-----|
| | 26.2 | Tracking Account. | 333 |
| | 26.3 | Addition of New Facilities After ISO Implementation. | 334 |
| | 26.4 | Effect on Tax-Exempt Status. | 334 |
| | 26.5 | Transition Mechanism. | 334 |
| ARTIC | LE III – I | MARKET OPERATIONS | 335 |
| 27 | OVER | VIEW OF MARKETS. | 335 |
| | 27.1 | Congestion Management. | 335 |
| 28 | TRADE | ES BETWEEN SCHEDULING COORDINATORS. | 357 |
| 29 | [Not U | sed] | 357 |
| 30 | BIDS A | AND BID SUBMISSION. | 357 |
| | 30.1 | ISO Operations. | 357 |
| | 30.2 | Information to Be Submitted by Scheduling Coordinators to the ISO. | 358 |
| | 30.3 | The Scheduling Process. | 367 |
| | 30.4 | Verification of Information. | 371 |
| | 30.5 | [Not Used] | 379 |
| | 30.6 | RMR. | 379 |
| 31 | DAY-A | HEAD MARKET. | 388 |
| | 31.1 | Timing of Day-Ahead Scheduling. | 388 |
| 32 | [Not U | sed] | 396 |
| 33 | HOUR | AHEAD. | 396 |
| | 33.1 | Timing of Hour-Ahead Scheduling. | 396 |
| 34 | REAL- | TIME. | 398 |
| | 34.1 | Energy Bids. | 398 |
| | 34.2 | Supplemental Energy Bids. | 401 |
| | 34.3 | Real-Time Dispatch. | 405 |
| | 34.4 | Notification of Non-Compliance With A Dispatch Instruction. | 421 |
| | 34.5 | Dispatch Instructions for Generating Units and Curtailable Demand. | 421 |
| | 34.6 | Response Required by Generators to ISO Dispatch Instructions. | 422 |
| | 34.7 | Qualifying Facilities. | 422 |
| | 34.8 | Failure to Conform to Dispatch Instructions. | 423 |
| | 34.9 | Pricing Imbalance Energy. | 424 |
| 35 | [Not U | sed] | 426 |

| 36 | FIRM T | RANSMISSION RIGHTS. | 426 |
|--------|----------------|--|-----|
| | 36.1 | General. | 426 |
| | 36.2 | Characteristics of Firm Transmission Rights. | 426 |
| | 36.3 | Maximum Number of Firm Transmission Rights. | 428 |
| | 36.4 | Issuance of Firm Transmission Rights by the ISO. | 428 |
| | 36.5 Transm | Distribution of Auction Revenues Received by the ISO for Firm ission Rights. | 433 |
| | 36.6 | Distribution of Usage Charges to FTR Holders. | 434 |
| | 36.7 | Scheduling Priority of FTR Holders. | 435 |
| | 36.8 | Assignment of Firm Transmission Rights. | 437 |
| 37 | ENFOR | CEMENT PROTOCOL. | 438 |
| | 37.1 | Objectives, Definitions, and Scope. | 438 |
| | 37.2 | Comply with Operating Orders. | 439 |
| | 37.3 Schedu | Submit Feasible Energy and Ancillary Service Bids and lles. | 442 |
| | 37.4 | Comply with Availability Reporting Requirements. | 442 |
| | 37.5 | Provide Factually Accurate Information. | 444 |
| | 37.6 | Provide Information Required by ISO Tariff. | 445 |
| | 37.7 | No Market Manipulation. | 447 |
| | 37.8 | Process for Investigation and Enforcement. | 449 |
| | 37.9 | Administration of Sanctions | 451 |
| | 37.10 | Miscellaneous. | 455 |
| ARTICI | LE IV – I | MARKET MONITORING AND MARKET POWER MITIGATION | 458 |
| 38 | MARKI | ET MONITORING. | 458 |
| | 38.1 | Objectives and Scope. | 458 |
| | 38.2 | Practices Subject to Scrutiny – General. | 459 |
| | 38.3 | Scrutiny of Participant Changes Potentially Affecting Market Structure. | 460 |
| | 38.4 | Response Action by ISO. | 460 |
| 39 | RULES | LIMITING CERTAIN ENERGY AND ANCILLARY SERVICE BIDS. | 462 |
| | 39.1 | Damage Control Bid Cap. | 462 |
| | 39.2 | Maximum Bid Level. | 462 |
| | 39.3 | Negative Decremental Energy Bids. | 463 |

| 40 | RESO | URCE ADEQUACY. | 463 |
|----|----------------|---|--------------|
| | 40.1 | Must-Offer Obligations. | 463 |
| | 40.2 | Submission of Annual and Monthly Resource Adequacy Plan. | 463E |
| | 40.3 40.4 | Demand Forecasts. Planning Reserve Margin. | 463E 463F |
| | 40.5 | Determination of Resource Adequacy Capacity. | 463F |
| | 40.6 | Submission of Supply Plans. | 463J |
| | 40.7 | FERC Must-Offer Obligations. | 463F |
| | 40.8 | Recovery of Minimum Load Cost by FERC Must-Offer Generators. | 466 |
| | 40.9 | Criteria for Issuing Must-Offer Waivers. | 470A |
| | 40.10 40.11 | Requirement of FERC Must-Offer Generators to File Heat Rate and Emissions Rate Data. Emissions Costs. | 471 471 |
| | 40.12 | Start-Up Costs. | 474 |
| | 40.13 | ISO Default Qualifying Capacity Criteria. | 477 |
| | 40.14 | Capacity Payments under the FERC Must Offer Obligation | 4770 |
| | 40.15 | Must Offer Reporting Requirement | 477E |
| 41 | Procu | rement of RMR | 477F |
| 42 | | ance of Adequate Generation and Transmission to meet Applicable ting and Planning Reserve | 477F |
| | 42.1 | Generation Planning Reserve Criteria | 477F |
| 43 | Reliab | ility Capacity Services Tariff | 479 |
| | 43.1 | Designation | 479 |
| | 43.2 | Local RCST Designations | 479 |
| | 43.3 | System RCST Designations | 479E |
| | 43.4 | RCST Designations for Significant Events | 4790 |
| | 43.5 | Obligations of a Resource Designated under the RCST | 479E |
| | 43.6 | RCST Report | 479E |
| | 43.7 | Payments to Resource under the RCST | 479E |
| | 43.8 | Allocation of RCST Capacity Payment Costs | 4790 |
| | | | |

| APPENDIX B | PRO FORMA AGREEMENTS | 539 |
|------------|---|------|
| B.1 | Scheduling Coordinator Agreement | 540 |
| B.2 | Participating Generator Agreement | 545 |
| B.3 | Qualifying Facility Participating Generator Agreement | 561 |
| B.4 | Participating Load Agreement | 578 |
| B.5 | Dynamic Scheduling Agreement for Scheduling Coordinators | 593 |
| B.6 | Meter Service Agreement for ISO Metered Entities | 606 |
| B.7 | Meter Service Agreement for Scheduling Coordinators | 623 |
| B.8 | Utility Distribution Company Operating Agreement | 643 |
| B.9 | Dynamic Scheduling Host Control Area Operating Agreement | 676 |
| B.10 | Small Utility Distribution Company Operating Agreement | 692 |
| APPENDIX C | ISO SCHEDULING PROCESS | 716 |
| APPENDIX D | BLACK START UNITS | 720 |
| APPENDIX E | VERIFICATION OF SUBMITTED DATA FOR ANCILLARY SERVICES | 722 |
| APPENDIX F | RATE SCHEDULES | 725 |
| APPENDIX G | MUST-RUN AGREEMENTS | 756 |
| APPENDIX H | METHODOLOGY FOR DEVELOPING THE WEIGHTED AVERAGE RATE FOR WHEELING SERVICE | 757 |
| APPENDIX I | ISO CONGESTION MANAGEMENT ZONES | 759 |
| APPENDIX J | END-USE METER STANDARDS & CAPABILITIES | 761 |
| APPENDIX K | ANCILLARY SERVICES REQUIREMENTS PROTOCOL | 764 |
| APPENDIX L | [NOT USED] | 785 |
| APPENDIX M | TRANSMISSION RIGHTS/CURTAILMENT INSTRUCTIONS TEMPLATE | 786 |
| APPENDIX N | SETTLEMENTS AND BILLING | 788 |
| APPENDIX O | METERING | 867 |
| APPENDIX P | ISO DEPARTMENT OF MARKET ANALYSIS AND MARKET SURVEILLANCE COMMITTEE | 957 |
| APPENDIX Q | ELIGIBLE INTERMITTENT RESOURCES PROTOCOL | 973 |
| APPENDIX R | UDP AGGREGATION PROTOCOL (UDPAP) | 980 |
| APPENDIX S | STATION POWER PROTOCOL (SPP) | 985 |
| APPENDIX T | SCHEDULING COORDINATOR APPLICATION | 986 |
| APPENDIX U | STANDARD LARGE GENERATOR INTERCONNECTION PROCEDURES (LGIP) | 993 |
| APPENDIX V | STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT (LGIA) | 1065 |

| APPENDIX W | INTERCONNECTION PROCEDURES IN EFFECT PRIOR TO JULY 1, 1995 ("AMENDMENT 39 PROCEDURES") | 1139 |
|-------------|--|------|
| APPENDIX X | DYNAMIC SCHEDULING PROTOCOL (DSP) | 1149 |
| APPENDIX Y | SCHEDULING PROTOCOL (SP) | 1157 |
| APPENDIX Z | CREDIT POLICY AND PROCEDURES GUIDE | 1171 |
| APPENDIX AA | SMALL GENERATOR INTERCONNECTION PROCEDURES (SGIP) | 1207 |