## INDEX

Art	Article/Section Number S			
ARTICLE 1 – GENERAL PROVISIONS				
	1	DEFINITIONS AND INTERPRETATION.		
		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 BOND	ITIES 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.	27
		4.8	Relationship Between ISO and Eligible Intermittent Resources and Between the ISO and Participating Intermittent Resources.	28
		4.9	Metered Subsystems.	28
	5	<b>RELA</b> 1	TIONSHIP 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	COMMUNICATIONS.		
	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		M OPERATIONS UNDER NORMAL AND EMERGENCY ATING 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	ANCIL	LARY 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

## 6

9	OUTA	OUTAGES.		
	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	NTWORTHINESS.	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	DISPU	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	DEMAND FORECASTS.					
	19.1	Scheduling Coordinator Demand Forecast Responsibilities.	301			
	19.2	UDC Responsibilities.	302			
	19.3	ISO Responsibilities.	304			
20	CONF	CONFIDENTIALITY.				
	20.1	ISO.	305			
	20.2	Confidential Information.	305			
	20.3	Other Parties.	306			
	20.4	Disclosure.	306A			
	20.5	Confidentiality.	308			

21	SCHE	SCHEDULE VALIDATION TOLERANCES.		
	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	TICLE II – TRANSMISSION SERVICE			
23	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		INTERCONNECTION OF GENERATING UNITS AND GENERATING FACILITIES TO THE ISO CONTROLLED GRID.		
	25.1	Applicability.	324	
	25.2	Interconnections to the Distribution System.	326	
	25.3	Maintenance of Encumbrances.	326	

26	TRANSMISSION RATES AND CHARGES.				
	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 AND BID SUBMISSION.				
	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.				
	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 Used]				
36	FIRM TRANSMISSION RIGHTS.				
	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 Distribution of Auction Revenues Received by the ISO for Firm Transmission Rights.				
	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	ENFOF	RCEMENT 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 les.	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		
ARTIC	LE IV –	MARKET MONITORING AND MARKET POWER MITIGATION	458		
38	MARK	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	S 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		

ART		RESOURCE ADEQUACY	463
40	RESO	URCE ADEQUACY.	463
	40.1	Must-Offer Obligations.	463
	40.2	Submission of Annual and Monthly Resource Adequacy Plan.	463B
	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.	463R
	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	477D
	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	477D
43	Reliab	ility Capacity Services Tariff	479
	43.1	Designation	479
	43.2	Local RCST Designations	479
	43.3	System RCST Designations	479B
	43.4	RCST Designations for Significant Events	479C
	43.5	Obligations of a Resource Designated under the RCST	479D
	43.6	RCST Report	479E
	43.7	Payments to Resource under the RCST	479E
	43.8	Allocation of RCST Capacity Payment Costs	479G

APPENDIX A	MASTER DEFINITIONS SUPPLEMENT	480
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