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AZ ISA PROTOCOL MANUAL ISSUES

	Issue	SOURCES (1)			TYPE			Director Recommendation
		S	A	L	Operating	Policy	Both	
	FERC							
1	Potential FERC issue. Energy Imbalance Protocol, §3.1.2, Pursuant to FERC Order 888, wholesale transmission customers must either purchase Energy Imbalance Service from the transmission provider or make alternative comparable arrangements to satisfy its Energy Imbalance Service obligation. This Protocol allows for a requirement that standard Offer SCs are the only entities able to supply this service. Although, this Protocol specifically addresses retail direct access programs, FERC may consider this a deviation from Order 888, since the Protocols Manual is dependent upon the CAOs' Open Access Transmission Tariffs. This provision may be interpreted to be in conflict with the Ancillary Services Protocol §3.3.2 that allows for self-provision of Energy Imbalance service.	X					X	Not an issue this is a misunderstanding by the stakeholder.

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2	<p>Potential FERC issue. Energy Imbalance Protocol, §5.3, The methodology for pricing Energy Imbalance Service provided by the CAO may be interpreted as a riskless profit- making opportunity for the CAO. The definition of System Incremental Cost is computed as “the highest- cost dispatchable generation and/ or third- party purchases made by the real- time operators incurred by the Control Area Operator up to an amount of energy equal to the system net energy imbalance.” The “third- party purchases” referred to in this computation may or may not include the Market Price (as defined). Therefore, the CAO will always recover its costs (SIC) or make a profit (when Market Price is greater than SIC) when supplying imbalance energy and the CAO will always pay the lowest available cost when taking imbalance energy. In addition, to the extent that a CAO’s decremental cost is lower than the SIC or Market Price, the CAO may profit from taking imbalance energy. Since the CAO also has control over the contractual requirements to self provide imbalance energy, this may be a market power issue with the FERC. The term “Trading Entity” is not defined</p>	X				X		To be addressed at the 11/9/99 meeting of the OC.

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3	Potential FERC issue. Energy Imbalance Protocol, §5.3, While this section is intended to illustrate the “basis” upon which charges for Energy Imbalance Service charges were developed, the subsequent actual charges are significantly different than that outlined in Section 8 of the protocol. In particular, Section 8 allows for a minimum 2 MW deadband per SC. This feature renders portions of the table and calculations in Section 8 ineffective until an SC has a minimum of 133 MW of peak Retail Network Load (i. e., 2 MW divided by 1.5%).	X				X		Is a clarification issue will be addressed 11/9/99 OC meeting.
4	CAOs being the sole provider of must-run generation in their respective control areas have market power.	X				X		This statement is correct. The reason for the must-run generation charges to be regulated.
5	The process to allocate transmission capacity annually based on CAO and SCs retail network load forecasts and retail generation resources may be in conflict with the requirements of FERC Order 888 that requires the specific identification of resources or contracts in order for transmission capacity to be reserved for retail use.	X				X		This is a misinterpretation of the protocol, the ARNT Protocol, §4.2 states that the ARNT for individual SCs is not determined at this time.
6	Competitive SCs are exposed to Energy Imbalance charges and penalties whereas Standard Offer SCs serving bundled customers are not since these Standard Offer SCs are “deemed” to have balanced schedules.	X				X		To be addressed at the 11/9/99 meeting.

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7	The concept of CAOs charging Competitive SCs the higher of System Incremental Cost or the Market Price of energy, but only paying Competitive SCs the lower of SIC or Market Price.	X				X		To be addressed by the OC Group 11/9/99.
8	SC's operating reserve obligations will not be reduced by firm purchases identify a point of contention.	X					X	See response to Issue 9.

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9	Firm purchases do not reduce an SC's obligation to provide or pay for Operating Reserves. Ancillary Services Protocol, §3.3.3 The effect of these two provisions is that the SCs must either self- provide or pay the CAO for additional operating reserve. We understand that WSCC operating criteria (for wholesale transactions imported by the CAO to serve retail load) provide that firm imports over firm transmission include the obligation to include the firm export in its calculation of operating reserves by the exporting CAO. In addition, this firm import may reduce the importing CAO's obligations to provide operating reserve (if the CAO's operating reserve is based on 7% of total CAO load and the import does not increase the CAO's single largest contingency). We understand that under direct access, the CAO will no longer be financially responsible for providing operating reserves for loads served by a third party. However, the CAO must physically consider all load within its control area when calculating necessary operating reserves. Therefore, the SC becomes financially responsible for operating reserves.	X				X		Discussion by OC will continue 11/9/99.
10	Protocols allocate capacity across each path or interface based on a SC's load ratio share. This method is inconsistent with the method specified in Order No. 888.			X		X		

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11	The Protocols allocate transmission capacity on the basis of each SCs projection of retail load for the forthcoming year. Reservations of capacity for future retail use based on network load projections may be in conflict with Order No. 888.		X			X		This is a misinterpretation of the protocol, the ARNT Protocol, §4.2 states that the ARNT for individual SCs is not determined at this time.
12	SCs may acquiring Point-to-Point Transmission Service if sufficient ARNT is unavailable violates Order No. 888			X		X		Legal analysis misunderstands protocol.
13	Protocols do not offer enough detail to determine the forum in which issues concerning the pricing and market power associated with Must-Run Generation will be resolved.			X			X	
14	To the extent the Az ISA seeks to recover the costs associated with its establishment and implementation through a FERC imposed charge, it can expect to encounter opposition to efforts to recover such costs from the wholesale customer class.			X		X		
15	FERC is not likely to accept the Emergency Redispatch provision to the extent that the Protocols require that transmission customers taking point-to-point transmission service on those paths subject to redispatch are required to pay a share of those redispatch costs.			X		X		
16	Standard Offer SCs exempt from Energy Imbalance.			X		X		

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17	Reducing Energy Imbalance penalty levels.			X		X		
18	No in-kind payment for Energy Imbalance service when within the deviation bandwidth.			X			X	
19	Incorporation of dispute resolution provisions into the Protocols.			X			X	
20	SC's prorata allocation of network transmission capacity based on the respective Standard Offer SC's (SO SC) generation resource mix (i.e., the transmission which has been set aside as a committed use for Retail Network Integrated Transmission Service) may impair the SC's ability to access competitive generation resources to serve retail customers.		X			X		
21	Increasing the scope of the current Scheduling Protocol by incorporating all deadlines applicable to CAOs and SCs for the scheduling of energy, ancillary services transmission service and local generation requirements.		X				X	
22	The principles do not provide the Protocols Manual users adequate information on how the principles are to be implemented and communicated to affected parties.		X				X	
23	FERC may consider the Protocols Manual's reservation of transmission capacity for retail use (i.e., CU1) for up to one year for SCs based on CAO and SC retail network load projections to be in conflict with Order 888.		X			X		

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24	Energy Imbalance Protocol's method used to calculate Energy Imbalance prices results in charges to Competitive SCs at the higher of System Incremental Cost (SIC) or Market Price for under generation, and payments at the lower of SIC or Market Price for over-providing generation.		X			X		
25	The AZ ISA has no system to collect and analyze electronic data that is transmitted between CAOs and SCs.		X				X	
26	Protocols Manual contains only principles associated with transmission congestion, not specific details on how congestion will be mitigated.		X				X	
27	The AZ ISA develop one statewide SC certification process that would be used by all CAOs.		X				X	
	TIME							
28	Timelines used to allocated ARNT are not precise and means of communication is not defined.	X			X			
29	Process and timing to acquire ATC for use, as RNITS is not well developed.	X			X			

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30	Process and timing is not specified. Scheduling Protocol, §6.4.4, Scheduling Protocol §6.4.3 provides for the validation of SC Schedules by 1700 hour one day prior to the operating day. In addition, §6.4.4 provides for an SC to correct their Balanced Schedules if problems arise during Control Area checkouts. There is no deadline associated with this function.	X			X			
31	Scheduling Protocol does not specify the time associated with CAO notification of changes to SC Local Generation Requirement and ARNT allocations. Must- Run Protocol, §5.1.2, There is no provision in this Protocol or the Scheduling Protocol to inform SCs of changes in ARNT and Local Generation Requirements after Balanced Schedules are validated at 1700 hours one day ahead of the operating day. Protocol §5.2.5.1 allows for the changes in SC ARNT and Local Generation Requirements through real- time operations. These changes can result in SCs being subject to Imbalance Energy charges and/ or additional Must- Run charges.	X			X			

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32	Scheduling Protocol does not specify the time associated with CAO notification of SC Local Generation Requirement. Must- Run Protocol, §1, The first two provisions indicate that an SC's Local Generation Requirement will be specified at the same time an SC is notified of its allocation of ARNT. Allocated Retail Transmission Network Transmission Protocol §3.4.3 and Must Run Generation Protocol §5.1.2 allocate ARNT six days prior to the operating day for the initial features operation and §4.3.4 on the 15 th of each month for the subsequent month for the ultimate features operation. In the Scheduling Protocol there is no mention of a time associated with the CAO providing to each SC its share of the Local Generation Requirement. Scheduling Protocol §6.3.3 requires each SC to submit to the CAO its initial Local Generation Schedule by 0800 hours one day in advance of the operating day.	X			X			

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	COMMUNICATION							
33	Communication of changes in ARNT must be reported. The Protocols Manual does not describe the process whereby the AZ ISA and CAO are informed of exchanges of ARNT among SCs (which is an Ultimate Feature), the acquisition of ATC by SCs for retail use or other methods of aligning transmission paths to use with Retail Network Resources.	X			X			
34	Means to obtain information is not identified. The Protocol states that loss factors, the estimated hourly total Retail Network Load and Local Generation Requirements and total retail Committed Use reservation will be posted by the CAO. However, the Protocol does not indicate where such information will be posted.	X			X			
35	Communication of changes in scheduling practices must be reported. Scheduling Protocol, §6, If the AZ ISA is to monitor transmission allocation and scheduling practices and perform a dispute resolution process, the AZ ISA should be informed of variations in scheduling requirements.	X			X			

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36	Process to inform AZ ISA of an SC's ability to self- provide Ancillary Services is not specified. Ancillary Services Protocol, §5.0, The Protocols Manual provides no requirement that the CAO and/ or SC provide notice to AZ ISA that the SC has executed an agreement with the CAO and the SC has in place the infrastructure and procedures necessary to support the self-provision of Ancillary Services.	X					X	
37								
	MISCELANOUS							
37	Exchanging generation output among SCs to align generation to available transmission allocations may not be workable.	X					X	
38	Allocation of small percentages of transmission capacity on numerous paths are insufficient to transmit energy from the specific generation resources of the stakeholder to retail loads.	X				X		
39	The AZ ISA develop one statewide SC certification process that would be used by all CAOs.	X				X		
40	Stakeholders not taking on the obligations of a SC that defaults, rather the CAO becoming the party that assumes the functions of a SC that is in default.	X				X		

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	CLARIFICATION							
41	The methodology used to calculate fixed and variable must-run generation charges are not clearly defined for each of the CAOs and that the Protocols Manual allows for these costs to be allocated to both retail and wholesale end-use customers.	X					X	
42	The methodology to determine Committed Uses for the various CAOs is unclear, may adversely affect existing wholesale transmission customers and will lead to disputes.	X			X			
43	The Protocols Manual contains only principles associated with transmission congestion, not specific details on how congestion will be mitigated.	X			X			
44	The application of pro-rata curtailments to many small SC schedules may be operationally complex and unworkable.	X				X		
45	AZ ISA should develop a simple congestion management program that is easy to administer and monitor, leaving the more difficult aspects of transmission congestion to Desert Star.	X					X	

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46	Means to assign initial ARNT allocations or increases in ARNT allocations to new SCs or for increases in Retail Network Load for existing SCs are not defined. ARNT is assigned to SCs six day's prior to the operating day based on the prior day's: (1) energy scheduled by the SC; (2) Control Area peak load; and (3) total Retail Network Load Schedules. The process by which ARNT is initially allocated to new SCs or ARNT is increased for SCs that increase their retail loads is not defined.	X			X			
47	Although the terms "Retail Network Load" and "Schedule" are separately defined, the term "Retail Network Load Schedule" is not defined in the Definitions section of the Manual.	X			X			
48	The phrase "retail Committed Use" is ambiguous. It is not clear which Committed Uses are included in the meaning of this phrase.	X			X			
49	The definition of CU1 in the report entitled "Determination of Available Transfer Capability within the Western Interconnection" (which is included in the definition of Committed Uses in the Definitions section) includes reservations for Native Load forecasts and growth, ancillary services and other reservations beyond reliability- based needs. This could result in an SC's total ARNT share being larger than its Retail Network Load.	X			X			

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50	The cost to secure ATC to serve Retail Network Load is not defined. It is unclear whether an SC would be required to purchase the ATC according to the CAO's OATT or whether the SC would be subsequently credited for ATC used for retail purposes.	X					X	
51	Day-ahead process for the conversion of ARNT to ATC is not entirely correct. ARNT Protocol §3.5 references §6.3 and §6.4 of the Scheduling Protocol for the establishment of deadline for the re-classification of ARNT to ATC if an SC does not submit an energy Schedule. However, the reference to Scheduling Protocol §6.4 does not re-classify ARNT as ATC, but instead re-assigns the ARNT to the CAO if an SC's Schedule is not validated (i. e., Balanced Schedule).	X					X	
52	Consequences of real-time changes to ARNT and Local Generation Requirements are not specified. The real-time consequences to SCs of energy Schedules being modified by CAOs are not defined and there is no provision to communicate such changes to SCs.	X					X	

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53	ARNT Protocol §1 and §4 set forth the goal of the parties to develop an ARNT trading mechanism and Must- Run Generation Protocol §5.2.2 sets forth the parties' intent to have AZ ISA track ARNT and Local Generation Requirements. The process and party responsible for the trading of ARNT has not been specified. It is unclear as to whether AZ ISA is responsible for developing and implementing the trading systems, or simply monitoring the actions of a third party that is responsible for ARNT trading.	X			X			
54	It is unclear how the CAO will take into account "projections for Retail Network Loads and Retail Network Resources made by Electric Service Providers and SCs." FERC requirements set forth that available capacity reserved for native load be posted on OASIS and be available to others "except when actually needed to serve native load." This has been interpreted to mean that an actual contract exists and is designated to serve retail load.	X					X	
55	Method of communication is unclear. The amount and types of data which could be included includes emails, NERC tags, recorded telephone logs, etc. This represents an enormous amount of data for the AZ ISA to receive.	X					X	

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56	Information necessary for the AZ ISA and SCs function is not contained in Protocols. The Manual does not specify the geographic or electrical areas that are Load Zones for each CAO. It is not clear whether a Load Zone is a subset of a control area.	X			X			
57	Information necessary for the AZ ISA and SCs function is not contained in Protocols In the event that Load Zones are not coincident with control areas, SC's may submit schedules that are balanced within the control area but not balanced within a Load Zone (i. e., the SC has load within the control area but not in the Load Zone).	X			X			
58	Protocol requires clarification and highlights possible FERC concern. Scheduling Protocol, §4, It is not clear as to why "wholesale load" is included in this paragraph. The Must Run Generation Protocol does not include any reference to wholesale load in the calculation of Local Generation Requirements.	X			X			
59	Protocol requires clarification and highlights possible FERC concern. Scheduling Protocol The Protocol reference to the "15 th day" does not explicitly state the significance of this limiting factor. This reference is associated with the implementation of one of the Manual's ultimate features that allocates ARNT and the Local Generation Requirement to SCs by the 15 th day of the month ahead.	X			X			

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60	Protocol requires clarification and highlights possible FERC concern. Scheduling Protocol There is no rationale provided in the Manual as to why Local Generation that is scheduled outside of the Load Zone must be scheduled by the 15 th day of the month (for the next month) in order to be used in the calculation of ATC and the Must- Run Generation requirement.	X					X	
61	Protocol requires clarification. Scheduling Protocol, §5.4, The Protocol's reference to "acquired transmission rights" is not specific and may lead to confusion among SCs.	X			X			
62								
63	Protocol requires clarification. Scheduling Protocol, §6.1 As stated in §6 of this Protocol, pre- scheduling activities end at 1400 hours one day ahead of the operating day and ATC is recalculated. There is no reference to the recalculation of ATC in this Protocol after 1400 hours (beginning with §6.3.5) one day in advance of the operating day.	X			X			

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64	Intent is not clear. Scheduling Protocol, §6.3, The Protocol requires SCs to submit by 0800 hours their initial Local Generation Schedules (which must meet or exceed their share of Local Generation Requirements). The Protocol then requires SCs to submit adjustments to its purchase of Must- Offer Generation two hours later. Since an SC's initial submittal at 0800 would satisfy its Local Generation Requirement, it is unclear as to what is required of the SC by 1000 hours.	X			X			
65	Term not defined. Scheduling Protocol, §6.3.5.1The term "Must- Take Generation" is not defined in the Protocol or the Definition section of the Protocols Manual. This may lead to confusion as to what an SC must submit to the CAO.	X			X			
66	Protocol does not specify definitive action. Scheduling Protocol, §6.4.3, This Protocol allows CAOs to accept or reject SCs' schedules that are not submitted as Balanced Schedules. This type of discretion will most likely lead to SCs filing disputes. Also, without a clear set of criteria by which a schedule will be accepted or rejected by the CAO, it will be difficult for the AZ ISA to monitor and determine whether transmission access was granted on a non- discriminatory basis.	X					X	

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67	The quantity of Ancillary Services required to be purchased or self- provided by SCs is not specified. Ancillary Services Protocol, §3, This Protocol states that the charges associated with the CAO's provision of Ancillary Services to SCs will be levied in accordance with the respective CAO's OATT. The Protocols Manual, however, does not specify the required quantities of each Ancillary Service that an SC must either purchase from the CAO or self-provide	X			X			
68	Party responsible for the billing and collection of penalties is not clearly stated. Ancillary Services Protocol, §3.3.3, These Protocol sections do not specify the party responsible for passing on penalties to SCs; nor does the Manual specify any contractual method among the affected parties for the billing, payment, collection or dispute resolution process associated with such penalties	X				X		

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69	Process to dispatch self-provided or third party provided Ancillary Services is not defined. Ancillary Services Protocol, §3.3.3, The process used by the CAOs for the dispatch of energy from Ancillary Service capacity self-provided or provided by a third party on behalf of an SC is not set forth in the Protocol. Such dispatch of Ancillary Service capacity is a real-time function of each CAO.	X					X	
70	Methodology to allocate transmission capacity for the self- provision of Ancillary Services by Scheduling Coordinators is unclear. Ancillary Services Protocol, §4.0, The Scheduling Protocol sections referenced do not provide any details on how an SC can access transmission capacity “freed- up” by the CAO in accordance with the Ancillary Services Protocol.	X					X	
71	Protocol requires clarification. Must- Run Protocol, §3.4, The term “dispatchable direct retail load- tripping” is not defined. Types of load that could be shed include retail loads being served under interruptible rates and loads curtailable by direct control signals.	X			X			

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72	Inconsistent provision between protocols. Must- Run Protocol, §5.1.3 The Initial Features methodology and the Ultimate Features methodology employed to calculate each SC's share of the Local Generation Requirement and allocated ARNT are different. The Initial Features methodology bases the allocation of ARNT on a percentage of the control area load, whereas the Local Generation Requirement is based on load within the Load Zones. The Ultimate Features methodology uses the control area load as the basis from which to allocate ARNT and calculate Local Generation Requirements to SCs. It is not clear as to why the total Retail Network Load (as opposed to total Retail Network Load in the Load Zone) is used in the calculation of Local Generation Requirements in the Ultimate Features.	X					X	

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73	Protocol requires clarification. Must- Run Protocol, §5.2.5.1, In accordance with Must-Run Protocol §5.2.5.1 if system conditions change the amounts of ARNT and Local Generation Requirements for all SCs, such changes in these amounts shall be allocated to each SC based on the same percentage that was calculated to initially allocate ARNT (either 6 days or by the 15 th of the month for the subsequent month). The Manual does not address what becomes of the additional quantity or ARNT if ARNT is increased (e. g., a planned transmission service outage is place in service earlier than expected) after Balanced Schedules are submitted (day ahead).	X			X			
74	Protocol clarification. Energy Imbalance Protocol, §3, The term “unique benefits and burdens” is undefined. It is unclear what is meant by this phrase.	X			X			
75	Inconsistent provision within the same protocol. Energy Imbalance Protocol, §6.1, Energy Imbalance Protocol §6. 1 indicates that a competitive SC’s Energy Imbalance Service quantity will be calculated in accordance with the CAO’s OATT. This appears to be in conflict with Energy Imbalance Protocol §5.1 that sets forth a methodology.	X			X			

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76	Term not defined. Energy Imbalance Protocol, §8, The table in this section does not define how the percentages contained in the first row are calculated. It is unclear whether the percentages are calculated outside of the 2 MW deadband or as a simple percentage of R _{Actual} or L _{Actual} .	X			X			
77	Clarification required. Energy Imbalance Protocol, §10, It is unclear how a CAO will calculate hourly UFE and how adjustments are made to Competitive SC's Energy Imbalance accounts.	X			X			
78	Clarification required. Emergency Operations Protocol, §5.1.1, The Protocol's reference to "WSCC predefined matrix" is not specific and may lead to confusion among SCs during times that instructions are issued for Schedules to be curtailed.	X			X			
79	Curtailements may be applied differently to Committed Use (CU1) customers and wholesale customers. Emergency Operations Protocol, §5.4, Wholesale transmission contracts that are used to serve end- use load within a "constrained area" may have different Curtailment priorities than those applied to serve Committed Uses (CU1). The across-the- board application of pro- rata Curtailements may not be compatible with these contracts.	X				X		

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80	Incorrect section reference. Emergency Operations Protocol, §5.5 Reference to Section 7.5 is incorrect.	X			X			
81	Removal of historical data from the Protocol Manual		X			X		
82	Eliminate Ultimate Features from the Protocols Manual		X			X		
83	Develop strategic planning document and staging plan that incorporates Ultimate Features concept.		X				X	
84	Additional Protocols needed.		X				X	
85	Procedures for communications of changes and distribution of Protocols Manual.		X		X			
86	How will AZ ISA accomplish its duties and responsibilities to monitor and assess comparability in the determination of TTC.		X		X			
87	SC's prorata allocation of network transmission capacity based on the respective Standard Offer SC's (SO SC) generation resource mix (i.e., the transmission which has been set aside as a committed use for Retail Network Integrated Transmission Service) may impair the SC's ability to access competitive generation resources to serve retail customers.		X			X		
88	Increasing the scope of the current Scheduling Protocol by incorporating all deadlines applicable to CAOs and SCs for the scheduling of energy, ancillary services transmission service and local generation requirements.		X				X	

- (1) S = Stakeholder's Audit Comments
A = Audit Price Waterhouse Coopers
L = Legal Review

DRAFT WORK PAPER

AZ ISA PROTOCOL MANUAL ISSUES

	Issue	SOURCES (1)			TYPE			Director Recommendation
		S	A	L	Operating	Policy	Both	
89	The principles do not provide the Protocols Manual users adequate information on how the principles are to be implemented and communicated to affected parties.		X				X	
90	FERC may consider the Protocols Manual's reservation of transmission capacity for retail use (i.e., CU1) for up to one year for SCs based on CAO and SC retail network load projections to be in conflict with Order 888.		X			X		
91	Energy Imbalance Protocol's method used to calculate Energy Imbalance prices results in charges to Competitive SCs at the higher of System Incremental Cost (SIC) or Market Price for under generation, and payments at the lower of SIC or Market Price for over-providing generation.		X			X		
92	The AZ ISA has no system to collect and analyze electronic data that is transmitted between CAOs and SCs.		X				X	
93	Protocols Manual contains only principles associated with transmission congestion, not specific details on how congestion will be mitigated.		X				X	
94	The AZ ISA develop one statewide SC certification process that would be used by all CAOs.		X				X	

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