

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
<b>ALLOCATED RETAIL NETWORK TRANSMISSION PROTOCOL</b>			
1	Communication of changes in ARNT must be reported.	<p><b>Allocated Retail Network Transmission Protocol, §1, Purpose, Protocols Manual Page V-1, August 2, 1999</b></p> <p>“After SCs receive their ARNT, they can then make the necessary arrangements with one another (or through the reservation of ATC) to align the transmission paths they wish to use with the Retail Network Resources they plan to schedule.”</p>	<p><b>Comment</b></p> <p>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. This information must be communicated to CAO and AZ ISA prior to Schedules being verified in accordance with Scheduling Protocol §6.4 (by 1700) otherwise SCs’ Schedules may be rejected due to a lack of ARNT or other transmission capacity.</p> <p><b>Recommendation</b></p> <p>Add a provision to ARNT Protocol §3.5 and §4 that requires SCs to inform CAOs and the AZ ISA of additional quantities of ATC secured and/or ARNT secured from other SCs or other arrangements (i.e., generation swaps). Also, add a similar provision to the Scheduling Protocol that requires such disclosure by a specified time.</p>
2	Means to obtain information is not identified.	<p><b>Allocated Retail Network Transmission Protocol, §3.3, Initial Features, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“On the 15<sup>th</sup> day of each month, each CAO will post ...”</p>	<p><b>Comment</b></p> <p>This section of 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.</p> <p><b>Recommendation</b></p> <p>Specify the party responsible and means (i.e., electronic bulletin board, internet site) and time by which such information will be posted.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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3	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.	<p><b>Allocated Retail Network Transmission Protocol, §3.4, Six Days Ahead, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“Six Days Ahead ...”</p>	<p><b>Comment</b></p> <p>This section assigns ARNT 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.</p> <p><b>Recommendation</b></p> <p>A new section should be added in advance of §3.4 of this Protocol that allows new SCs to request an initial quantity of Retail Network Load or to allow existing SCs to request an increase in the quantity of Retail Network Load to be used in calculating ARNT. A validation process should be adopted by the AZ ISA to ensure that SCs’ initial or increased allocations are reasonable to serve the anticipated load. Lastly, a provision should be added that specifies the timing and notification process required prior to new SCs or those requesting an increase in ARNT to become effective. The process for new SCs could be connected to the execution of an SC agreement and the proper notifications being given to AZ ISA.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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4	Timelines used to allocated ARNT are not precise and means of communication is not defined.	<p><b>Allocated Retail Network Transmission Protocol, §3.4, Six Days Ahead, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“Six Days Ahead ...”</p> <p><b>Allocated Retail Network Transmission Protocol, §3.5, Day Ahead, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“Day Ahead ...”</p> <p><b>Allocated Retail Network Transmission Protocol, §3.4.3, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“The resulting hourly MW quantities for each SC will be provided as ARNT to that SC by the CAO.”</p>	<p><b>Comment</b></p> <p>The procedures for allocating ARNT to each SC does not specify a time certain by which an SC will be informed by the CAO of its ARNT, nor does this section specify that “Six Days Ahead” is six days ahead of the operating day.</p> <p><b>Recommendation</b></p> <p>Change the phrase “Six Days Ahead” to read “Six Days Ahead of the Operating Day at xx:xx {insert appropriate time}” and change the phrase “Day Ahead” to read “One Day Prior to the Operating Day at xx:xx {insert appropriate time}”. The term Operating Day should be added to the Definitions, Section II of the Protocols Manual.</p> <p><b>Comment</b></p> <p>Section 3.4.3 in part states that the resultant ARNT will be provided to SC by the CAO. This section does not specify how the CAO will inform the SC of its ARNT.</p> <p><b>Recommendation</b></p> <p>Add a specific reference as to the means by which SCs will be informed of their ARNT. In the alternative develop a protocol that defines the means of communications used by the CAO to inform SCs and the AZ ISA of any necessary operating, emergency or other information.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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5	Undefined term.	<p><b>Allocated Retail Network Transmission Protocol, §3.4.2, Six Days Ahead, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“The CAO will divide each SC’s previous day Retail Network Load Schedule...by the total Retail Network Load Schedules during that peak hour.”</p>	<p><b>Comment</b></p> <p>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. Taking the separate definitions into account, it remains unclear whether the load included in the meaning of this term includes load served by local generation schedules. This may have an effect on calculation of an SC’s ARNT and Local Generation Requirements.</p> <p><b>Recommendation</b></p> <p>Create a definition for “Retail Network Load Schedule.”</p>
6	Ambiguous terminology.	<p><b>Allocated Retail Network Transmission Protocol, §3.4.3, Six Days Ahead, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“The CAO will multiply the retail Committed Use reservation...”</p>	<p><b>Comment</b></p> <p>The phrase “retail Committed Use” is ambiguous. It is not clear which Committed Uses are included in the meaning of this phrase. In addition, 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.</p> <p><b>Recommendation</b></p> <p>Replace the phrase with the appropriate committed use types (i.e., CU1, CU2, etc.) that apply to this calculation, less any adjustments to account for over-allocation due to the definition of Committed Uses.</p>
7	Cost of ATC used to serve Retail Network Load.	<p><b>Allocated Retail Network Transmission Protocol, §3.5.1, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“Any ATC posted on the CAO’s OASIS may be acquired by an SC to serve its share of Retail Network Load.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Insert language in this section of the protocol to indicate if and how an SC would be required to purchase/pay for ATC for retail use.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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8	Day-ahead process for the conversion of ARNT to ATC is not entirely correct.	<p><b>Allocated Retail Network Transmission Protocol, §3.5, Day Ahead, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“Any ARNT allocated to an SC which is not scheduled by the SC as of the day ahead Schedule deadline (see the AZ ISA Scheduling Protocol, Sections 6.3 and 6.4) will be posted as ATC on the CAO’s OASIS.”</p> <p><b>Scheduling Protocol, §6.3.5, Day Ahead, Protocols Manual Page VI-3, August 2, 1999</b></p> <p>“By 1400 hours, for each hour of the Schedule implementation:</p> <p>6.3.5.1 Each SC will submit its day ahead Balanced Schedule ...”</p> <p><b>Scheduling Protocol, §6.4.3, Validation, Protocols Manual Page VI-4, August 2, 1999</b></p> <p>“By 1700 hours, the CAO will validate Schedule corrections submitted by each SC at 1630 hours. ... A rejected Schedule shall result in the release of the ARNT associated with the rejected schedule to the CAO in order for the CAO to serve the SC’s Retail Network Load.”</p>	<p><b>Comment</b></p> <p>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).</p> <p><b>Recommendation</b></p> <p>Clarify Allocated Retail Network Transmission Protocol §3.5 by adding the following language to the section: “... will be posted as ATC on the CAO’s OASIS or will be released to the CAO to serve the SC’s Retail Network Load.”</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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9	Consequences of real-time changes to ARNT and Local Generation Requirements are not specified.	<p><b>Allocated Retail Network Transmission Protocol, §3.6, Changes to System Configuration, Protocols Manual Page V-3, August 2, 1999</b></p> <p><b>“Whenever system configurations change such that the Import Limits or Local Generation Requirements change, each SC’s ARNT and share of Local Generation Requirements will also change accordingly. Allocation factors (Section 3.4.2 above) will remain the same.”</b></p>	<p><b>Comment</b></p> <p>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. During real-time operations, the reduction of ARNT increases in Local Generation and increases in Imbalance Energy will result in additional costs to SCs. Notification to SCs of such real-time changes will allow the SC to make informed decisions as to whether some of its retail load can be curtailed or other arrangements can be made, thereby reducing Imbalance Energy charges.</p> <p><b>Recommendations</b></p> <p>Put in place a notification system to inform SCs and AZ ISA of changes in ARNT. This provision should be added to Scheduling Protocol §6.5 that discusses real-time operations.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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10	Process and timing to acquire ATC for use as RNITS is not well developed.	<p><b>Allocated Retail Network Transmission Protocol, Note, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“Certain conditions on some CAOs’ systems may result in ARNT that is insufficient to serve an SC’s share of total Retail Network Load, even when there is no Local Generation Requirement. At such times, the SC will be allowed to acquire, at no additional charge, that amount of ATC, which, when taken in combination with the SC’s ARNT, is sufficient to serve the SC’s share of total Retail Network Load. ATC so acquired will be designated as RNITS. “</p>	<p><b>Comment</b></p> <p>Since ATC posted on a CAO’s OASIS is available to entities on a first come first serve basis, there is no assurance that ATC on specific transmission paths will be available to an SC to serve its retail load.</p> <p><b>Recommendation</b></p> <p>Modify the provision to include the concept that for those times that ATC is unavailable, the CAO will either make must offer generation available or will serve the balance of the load and the SC will be subject to applicable Imbalance Energy charges.</p> <p><b>Comment</b></p> <p>The conditions that can lead to insufficient ARNT being allocated to SCs are not specified (e.g., planned or forced outages, line derations), therefore, it is not possible to ascertain whether these conditions are related to real-time operations, day-ahead Scheduling functions (1700 validation) or specific to the six-day ahead process of allocating ARNT to SCs. The earlier CAOs notify SCs of insufficient ARNT to serve retail load, the greater the chance that the affected SCs will be able to secure needed ATC.</p> <p><b>Recommendation</b></p> <p>Add a provision to the existing Protocol section that states that CAOs shall inform affected SCs as early as possible.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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11	AZ ISA role and responsibility.	<p><b>Allocated Retail Network Transmission Protocol, §1, Purpose, Protocols Manual Page V-1, August 2, 1999</b></p> <p>“Ultimate Features of the Protocol will provide for the trading of ARNT among SCs once the AZ ISA has implemented the necessary procedures and communication tools ...”</p> <p><b>Allocated Retail Network Transmission Protocol, §4, Ultimate Features, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“Ultimate Features will be implemented once the AZ ISA has necessary systems and procedures in place to account for (1) the trading of ARNT, and (2) the exchange of ARNT for ATC, within a given CAO’s transmission system.”</p> <p><b>Must-Run Generation Protocol, Ongoing Through Two Days Ahead, Protocols Manual Page VIII-4, August 2, 1999</b></p> <p>“As ARNT is traded among SCs, each SC’s share of the Local Generation Requirement will change to reflect the SC’s amended ARNT. These changes are tracked by the AZ ISA.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Explicitly state in the Protocols Manual the role and the responsibility of AZ ISA in the trading of ARNT.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
12	Potential FERC issue.	<p><b>Allocated Retail Network Transmission Protocol, §4.2, Ultimate Features, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“The determination of retail Committed Use reservations will be based on the CAO’s forecast for total Retail Network Load and the projections for Retail Network Loads and Retail Network Resources made by Electric Service Providers and SCs.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Language should be added to this section to indicate how CAO’s will be required to account for Retail Network Loads and Resources of Competitive SCs when calculating Committed Use.</p>
<b>SCHEDULING PROTOCOL</b>			
13	Method of communication is unclear.	<p><b>Scheduling Protocol, §1, Purpose, Protocols Manual Page VI-1, August 2, 1999</b></p> <p>“The AZ ISA will be copied by the SCs and CAOs on all communications and decisions on all Schedules and Schedule changes.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>The types, methods, timelines and other pertinent information and requirements for these communications should be defined and developed in a separate communications protocol.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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14	Information necessary for the AZ ISA and SCs function is not contained in Protocols.	<p><b>Scheduling Protocol, §3, Balanced Schedules, Protocols Manual Page VI-2, August 2, 1999</b></p> <p>“SCs must submit a Balanced Schedule for each Load Zone.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>While the Must Run Protocol defines a Load Zone in colloquial terms (e.g., Phoenix, Tucson), a more detailed definition is needed for the AZ ISA to monitor compliance with the requirements that SCs must submit balanced schedule for each Load Zone.</p> <p><b>Comment</b></p> <p>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).</p> <p><b>Recommendation</b></p> <p>The protocol should be explicit in its requirements for a balanced schedule relative to a control area or a Load Zone, or both.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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15	Protocol requires clarification and highlights possible FERC concern.	<p><b>Scheduling Protocol, §4, Must-Run Generation Requirements, Protocols Manual Page VI-2, August 2, 1999</b></p> <p>“If the CAO’s forecasted total Retail Network Load and wholesale load...”</p> <p>“Local generators can schedule outside the Load Zone without committing by the 15th day of the month ahead. However, while this generation may result in increased ATC into the Load Zone, the Must Offer obligation will not change.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>To the extent that “wholesale load” includes load within a Load Zone that is the subject of an existing contract, it should also be included in the calculation of Local Generation Requirements. In the event that “wholesale load” has a specific meaning such as this, it should be a defined term in the Definitions section and should be accounted for in the calculation of Local Generation Requirements in the Must Run Generation Protocol.</p> <p><b>Comment</b></p> <p>The Protocol reference to the “15<sup>th</sup> 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<sup>th</sup> day of the month ahead.</p> <p><b>Recommendation</b></p> <p>Add a reference to the Protocol section that explicitly states that the 15<sup>th</sup> day of the month ahead is in relation to Allocated Retail Network Transmission Protocol §4.3 and Must-Run Generation Protocol §5.2.1.</p> <p><b>Comment</b></p> <p>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<sup>th</sup> day of the month (for the next month) in order to be used in the calculation of ATC and the Must-Run Generation requirement. The effect of this provision is to establish a minimum amount of Must-Run Generation for the subsequent month without regard to the scheduling of additional Local Generation during the subsequent month that would reduce Must-Run Generation requirements.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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			<p>This methodology may artificially increase costs to SCs since Must-Run Generation provided by the CAOs might be more expensive than the SCs’ cost to acquire generation. FERC may view this methodology in setting the quantity of Must-Run Generation far in advance of the operating day as discriminatory since this could result in increased costs to the SC and increased revenues to CAOs for providing generation resources among the parties.</p> <p><b>Recommendation</b></p> <p>In transmitting the Protocols Manual to FERC for its consideration, include in the transmittal letter the rationale for setting the minimum Must-Run Generation quantity far in advance of the operating day.</p>
16	Protocol requires clarification.	<p><b>Scheduling Protocol, §5.4, Validation, Protocols Manual Page VI-2, August 2, 1999</b></p> <p><b>“Retail Network Resource Schedules on a given transmission path do not exceed the SC’s ARNT and/or acquired transmission rights on that path.”</b></p>	<p><b>Comment</b></p> <p>The Protocol’s reference to “acquired transmission rights” is not specific and may lead to confusion among SCs.</p> <p><b>Recommendation</b></p> <p>Restate the sentence to explicitly mention that acquired transmission rights include ATC secured for retail access from a CAO’s OASIS and ARNT secured from other SCs.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

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17	Communication of changes in scheduling practices must be reported.	<p><b>Scheduling Protocol, §6, Time Lines, Protocols Manual Page VI-2, August 2, 1999</b></p> <p>“The CAO may implement any temporary variances of timing requirements contained in this Protocol (including the omission of any step) if required for reliability purposes or due to technical difficulties beyond the CAO’s control. The CAO will post information on the timing requirements variance on its OASIS/website as soon as practicable, and will include the following information:</p> <ul style="list-style-type: none"> <li>❑ The exact timing requirements affected;</li> <li>❑ Details of any substituted timing requirements;</li> <li>❑ An estimate of the period for which this waiver will apply; and</li> <li>❑ Reasons for the temporary variance.”</li> </ul>	<p><b>Comments</b></p> <p>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.</p> <p><b>Recommendations</b></p> <p>A provision should be added to this Protocol section requiring CAOs to inform the AZ ISA of any variances in scheduling practices.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
18	Protocol requires clarification.	<p><b>Scheduling Protocol, §6.1, Pre-Scheduling Timeline, Protocols Manual, Page VI-2, August 2, 1999</b></p> <p>“The pre-scheduling period starts at 1800 hours two days ahead of Schedule implementation and ends at 1400 hours on the day ahead of Schedule implementation, at which time the CAO begins the pre-Schedule checkout process. Upon completion of the pre-Schedule checkout process, ATC will be recalculated.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>If such reference to the recalculation of ATC is intended to mean the conversion of unscheduled SC ARNT to ATC as called for in Allocated Retail Network Transmission Protocol §3.5.2, this should be clarified in this Protocol.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
19	Intent is not clear.	<p><b>Scheduling Protocol, §6.3, Day Ahead, Protocols Manual Page VI-3, August 2, 1999</b></p> <p>”6.3.3 By 0800 hours, each SC must submit to the CAO its initial Local Generation Schedule, which must meet or exceed its share of Local Generation Requirements.</p> <p>6.3.4 By 1000 hours, each SC must submit to the CAO any adjustments to its purchase of Must-Offer Generation.”</p> <p><b>Definitions, Protocols Manual Page II-4 &amp; 5, August 2, 1999</b></p> <p>“<b>Local Generation</b> – Generation located within a Load Zone.</p> <p><b>Local Generation Requirements</b> – The amount of Local Generation required to avoid exceeding a Load Zone’s Import Limit.</p> <p><b>Must-Offer Generation</b> – The Must-Run Generation less any previously committed Local Generation.”</p>	<p><b>Comments</b></p> <p>The first Protocol section requires SCs to submit by 0800 hours their initial Local Generation Schedules (which must meet or exceed their share of Local Generation Requirements). The second Protocol section requires SCs to submit adjustments to its purchase of Must-Offer Generation two hours later.</p> <p>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.</p> <p><b>Recommendation</b></p> <p>The intent of these two sections must be clarified to provide specificity as to what is expected of the SCs.</p>

## Appendix A – Detailed Review of AZ ISA Protocols Manual

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
20	Term not defined.	<p><b>Scheduling Protocol, §6.3.5.1, Day Ahead, Protocols Manual Page VI-3, August 2, 1999</b></p> <p>“Each SC will submit its day ahead Balanced Schedule, including the appropriate NERC tags and the required adjustments to Must-Take Generation quantities ...”</p>	<p><b>Comment</b></p> <p>The 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.</p> <p><b>Recommendation</b></p> <p>Either add a definition to the Protocols Manual or change the term to “the purchase of Must-Offer Generation”</p>
21	Protocol does not specify definitive action.	<p><b>Scheduling Protocol, §6.4.3, Validation, Protocols Manual Page VI-4, August 2, 1999</b></p> <p>“By 1700 hours, the CAO will validate Schedule corrections submitted by each SC at 1630 hours. If the SC doesn’t meet all validation criteria, the SC is in a Non-Compliant Condition. This condition may result in rejection of the SC’s Schedule by the CAO, at the CAO’s discretion.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>The CAOs and SCs should develop the criteria that will be used for the rejection of SCs’ Schedules. This criteria should be included in the Protocols Manual so that all parties are aware of the conditions that will lead to schedules being rejected.</p>
22	Process and timing is not specified.	<p><b>Scheduling Protocol, §6.4.4, Validation, Protocols Manual Page VI-5, August 2, 1999</b></p> <p>“If required, the CAO will notify an SC of problems with its Schedule related to net Schedules between Control Areas. The affected SCs will be required to correct their Schedules.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendations</b></p> <p>Although various CAOs may have different Control Area checkout times, a deadline should be specifically stated for each CAO in this section of the Protocol. This will ensure that all affect parties have the information readily available.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
<b>ANCILLARY SERVICES PROTOCOL</b>			
23	The quantity of Ancillary Services required to be purchased or self-provided by SCs is not specified.	<p><b>Ancillary Services Protocol, §3, FERC Ancillary Services, Protocols Manual Page VII-1, August 2, 1999</b></p> <p>“Charges for these services will be pursuant to the CAO’s OATT.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Modify the referenced sentence to read “Charges for and quantities required (including self-provided) of Ancillary Services provided by a CAO to an SC shall be in accordance with the CAO’s OATT.” This will provide clarity to readers that the AZ ISA is not responsible for determining the charges or quantities of Ancillary Services.</p>
24	Party responsible for the billing and collection of penalties is not clearly stated.	<p><b>Ancillary Services Protocol, §3.3.3, Operating Reserve – Spinning Reserve Service, Protocols Manual Page VII-2, August 2, 1999</b></p> <p>“Any SRS, NERC or WSCC penalties imposed upon the CAO due to an SC not meeting its Spinning Reserves obligations will be passed on to the SC.”</p> <p><b>Ancillary Services Protocol, §3.3.4, Operating Reserve –Supplemental Reserve Service, Protocols Manual Page VII-2, August 2, 1999</b></p> <p>“Any SRS, NERC or WSCC penalties imposed upon the CAO due to an SC not meeting its obligations will be passed on to the SC.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Clearly state in the Protocol that the CAO is the party responsible for passing any applicable penalties assessed against it to the applicable SC. If the AZ ISA develops a <i>pro forma</i> Scheduling Coordinator Agreement, it should contain a provision that allows the CAO to collect such penalties directly from the Scheduling Coordinator. In the alternative, delete this language and address penalties in each CAO’s OATT and the associated network integrated transmission service agreement executed between the generator and the CAO.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
25	Process to dispatch self-provided or third party provided Ancillary Services is not defined.	<p><b>Ancillary Services Protocol, §3.3.3, Operating Reserve – Spinning Reserve Service, Protocols Manual Page VII-2, August 2, 1999</b></p> <p>“When self- providing or purchasing this service from a third party, the SC will allow the CAO to call upon the Spinning Reserves when required.”</p> <p><b>Ancillary Services Protocol, §3.3.4, Operating Reserve – Supplemental Reserve Service, Protocols Manual Page VII-2, August 2, 1999</b></p> <p>“When self-providing or purchasing this service from a third party, the SC will allow the CAO to call upon the Supplemental Reserves when required.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>If the AZ ISA is responsible for the monitoring of SC compliance with CAO dispatch orders for Ancillary Services, the detailed, stepwise process (operating procedure) used to issue dispatch orders for the dispatch of energy from Ancillary Service capacity for each CAO must be made available to the AZ ISA and SCs.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
26	Firm purchases do not reduce an SC's obligation to provide or pay for Operating Reserves.	<p><b>Ancillary Services Protocol, §3.3.3 &amp; 3.3.4, FERC Ancillary Services, Protocols Manual Page VII-2 August 2, 1999</b></p> <p>These two sections state that the "... SC's Spinning Reserve obligations" and "... Supplemental Reserve obligations" "...will not be reduced by any firm purchases."</p>	<p><b>Comment</b></p> <p>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).</p> <p>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.</p> <p><b>Recommendation</b></p> <p>The issue of whether operating reserves associated with firm energy imports should be treated differently under direct access versus a wholesale transaction should be described in the AZ ISA's tariff filing. This should include the rationale for requiring SCs to purchase operating reserves according to the CAO's OATT (i.e., at a fixed percentage amount) when the requirements for such reserves for reliability purposes (as defined and described by the WSCC) will vary between zero and one hundred percent, dependent upon the CAO's total demand level and its Most Severe Single Contingency.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
27	Methodology to allocate transmission capacity for the self-provision of Ancillary Services by Scheduling Coordinators is unclear.	<p><b>Ancillary Services Protocol, §4.0, Transmission Requirements for Self-Provision, Protocols Manual Page VII-2, August 2, 1999</b></p> <p>“If the CAO is able to reduce its reservation of transmission capacity for Ancillary Services when an SC self-provides these services, the SC will be afforded an opportunity to apply this freed-up transmission capacity toward meeting its transmission requirement for its self-provided Ancillary Services.”</p> <p>“As an SC modifies the resources associated with its self-provision of Ancillary Service, it will modify its required transmission reservations accordingly.”</p> <p><b>Scheduling Protocol, §6.3.5.3, Day Ahead, Protocols Manual Page VI-4, August 2, 1999</b></p> <p>“Each SC will submit its Schedules {by 1400} for self-provided Ancillary Services, if any, to the CAO and AZ ISA via e-mail or some other electronic means agreed to by the CAO and SC.”</p>	<p><b>Comment</b></p> <p>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. The lack of a detailed procedure to re-allocate transmission capacity from the CAO to the SC for ancillary services use may lead to the SC securing more transmission capacity than necessary. Lastly, if the CAO does not re-allocate the transmission capacity it may be perceived as discriminatory by FERC.</p> <p>If a responsibility of the AZ ISA is to monitor and resolve disputes regarding the re-allocation of transmission capacity to SCs for their use in self-providing Ancillary Services, the process of re-allocation must be well defined.</p> <p><b>Recommendation</b></p> <p>Incorporate into the Scheduling Protocol a step-by-step procedure for re-allocating transmission capacity for self-provided Ancillary Services.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
		<p><b>Scheduling Protocol, §9.0, Scheduling Ancillary Services Resources, Protocols Manual Pages VI-5, August 2, 1999</b></p> <p>This section generally describes the methodology by which Scheduling Coordinators can self-provide Ancillary Services.</p>	
28	<p>Process to inform AZ ISA of an SC's ability to self-provide Ancillary Services is not specified.</p>	<p><b>Ancillary Services Protocol, §5.0, Interface Requirements for Self-Provision, Protocols Manual Page VII-3, August 2, 1999</b></p> <p>“An SC desiring to self-provide Ancillary Services must have in place a separate agreement between itself, the CAO and the resource provider for the provision of these services. Additionally, the SC must have in place necessary infrastructure and procedures specified under such an agreement before the SC will be allowed to self-provide.”</p>	<p><b>Comments</b></p> <p>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.</p> <p><b>Recommendations</b></p> <p>Add a provision to this Protocol that requires the CAO to provide written notice to the AZ ISA in advance of the effective date that the SC will be able to self-provide Ancillary Services. This will afford the AZ ISA the time necessary for it to change its processes to account for and monitor such self-provision by an SC.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
<b>MUST-RUN GENERATION PROTOCOL</b>			
29	Scheduling Protocol does not specify the time associated with CAO notification of SC Local Generation Requirement.	<p><b>Must-Run Protocol, §1, Purpose, Protocols Manual Page VIII-1, August 2, 1999</b></p> <p>“The specification of the SC’s share of the Local Generation Requirement will occur concurrently with the steps taken in the administration of Ultimate Features or Initial Features of the ARNT Protocol, whichever is in effect.”</p> <p><b>Must-Run Protocol, §4.3, Must-Run Generation Framework, Protocols Manual Page VIII-2, August 2, 1999</b></p> <p>“Each SC’s Local Generation Requirement will be specified in advance, concurrent with the specification of its ARNT.”</p> <p><b>Must-Run Protocol, §5.1.2, Must-Run Generation Protocol Sequence, Protocols Manual Page VIII-3, August 2, 1999</b></p> <p>For Initial Features:</p> <p>“SCs’ ARNT and shares of the Local Generation Requirement are specified and communicated to the SCs by the CAO six (6) days ahead of the Schedule day.”</p>	<p><b>Comment</b></p> <p>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<sup>th</sup> 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.</p> <p><b>Recommendation</b></p> <p>For clarity, the Scheduling Protocol should be modified to include a specific reference as to when SCs will be notified of their individual Local Generation Requirement. Also, if the deadlines are different from those mentioned above, this Protocol must be modified to reflect the actual times.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
		<p><b>Must-Run Protocol, §5.2.1, Must-Run Generation Protocol Sequence, Protocols Manual Page VIII-3, August 2, 1999</b></p> <p>For Ultimate Features:</p> <p>“Pursuant to Section 4.3 of the ARNT Protocol, the initial monthly allocation of ARNT and share of Local Generation Requirement for each SC shall be completed by the 15<sup>th</sup> day of the month ahead.”</p>	
30	Protocol requires clarification.	<p><b>Must-Run Protocol, §3.4, Local Generation Management Options for Must-Run Generation Requirements, Protocols Manual Page VIII-2, August 2, 1999</b></p> <p>“Implementing dispatchable direct retail load-tripping within the Load Zone (which reduces Retail Network Load within the Load Zone, and thus reduces the SC’s share of Local Generation Requirement); or ...”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>A provision should be added to the Protocol (or alternatively, the SC agreement) that requires SCs that have dispatchable retail load under their control to identify the types, quantities and characteristics of dispatchable loads under their control. This will provide the transparency necessary to AZ ISA to monitor the allocation of Local Generation Requirements.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
31	Scheduling Protocol does not specify the time associated with CAO notification of changes to SC Local Generation Requirement and ARNT allocations.	<p><b>Must-Run Protocol, §5.1.2, Must-Run Generation Protocol Sequence, Initial Features, Protocols Manual Page VIII-4, August 2, 1999</b></p> <p>“If there are changes in system conditions, the Local Generation Requirement may be modified subject to the provisions of Section 5.2.5 of this Protocol.”</p> <p><b>Must-Run Protocol, §5.2.5.1, Must-Run Generation Protocol Sequence, Ultimate Features, Ongoing up to the Schedule hour, Protocols Manual Page VIII-5, August 2, 1999</b></p> <p>“Changes in System Conditions</p> <p>Whenever system conditions change such that the Import Limit or total Local Generation Requirements change, the SC’s ARNT and share of the Local Generation Requirement change in accordance with the system changes.”</p> <p><b>Scheduling Protocol, §6.5.2, Current Day/Real-time Scheduling, Protocols Manual Page VI-5, August 2, 1999</b></p> <p>“By 45 minutes prior to the Schedule hour, each SC may submit Schedule changes to the CAO. For Schedule increases, the SC must acquire ATC to designate as RNITS. Such ATC will be made available on a first-come-first-served-basis.”</p>	<p><b>Comments</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Since Scheduling Protocol §6.5.2 allows SCs to modify their Schedules 45 minutes in advance of the operating hour, a provision should be added to the Scheduling Protocol that requires CAOs to inform SCs prior to 45 minutes in advance of the operating hour of changes to ARNT allocations and Local Generation Requirements.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
32	Inconsistent provision between protocols.	<p><b>Must-Run Protocol, §5.1.3, Must-Run Generation Protocol Sequence, Initial Features, Protocols Manual Page VIII-4, August 2, 1999</b></p> <p>“Each SC’s hourly share of the Local Generation Requirement will be determined as follows: For hours for which a non-zero Local Generation Requirement is anticipated, the CAO will divide each SC’s previous day total Retail Network Load Schedule for the Load Zone for each hour by the total Retail Network Load in the Load Zone for that hour. The resulting percentage will be used to determine the SC’s share of the Local Generation Requirement for the corresponding day and hour of the subsequent week.”</p> <p><b>Allocated Retail Network Transmission Protocol, §3.4.2, Initial Features, Protocols Manual Page V-2, August 2, 1999</b></p> <p>“The CAO will divide each SC’s previous day Retail Network Load Schedule for the Control Area’s peak hour by the total Retail Network Load Schedules during that peak hour. The resulting percentage is then used to determine the SC’s ARNT for the corresponding day of the subsequent week.”</p>	<p><b>Comment</b></p> <p>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.</p> <p>It is not clear as to why the total Retail Network Load (as opposed to total Retail Network Load <i>in the Load Zone</i>) is used in the calculation of Local Generation Requirements in the Ultimate Features.</p> <p><b>Recommendation</b></p> <p>The intent of the exception in Must Run Protocol §5.1.3 should be specified.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
		<p><b>Allocated Retail Network Transmission Protocol, §4.3.4, Ultimate Features, Protocols Manual Page V-4, August 2, 1999</b></p> <p>“The AZ ISA will calculate each SC's share of total Local Generation Requirements for each hour of the following month and each SC's ARNT for each transmission path for each hour of the following month, using the allocation factor method outlined in Section 3.4 of this Protocol.”</p>	

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
33	Protocol requires clarification.	<p><b>Must-Run Protocol, §5.2.5.1, Must-Run Generation Protocol Sequence, Ultimate Features, Ongoing up to the Schedule hour, Protocols Manual Page VIII-5, August 2, 1999</b></p> <p>“Changes in System Conditions</p> <p>Whenever system conditions change such that the Import Limit or total Local Generation Requirement changes, the SC’s ARNT and share of the Local Generation Requirement change in accordance with the system changes. Allocation factors (calculated pursuant to Section 4.3.4 of the ARNT Protocol) will remain the same. Changes in system conditions may cause Must-Offer Generation obligations to be increased, but not reduced.”</p> <p><b>Allocated Retail Network Transmission Protocol, §3.6, Changes to System Configuration, Initial Features, Protocols Manual Page V-3, August 2, 1999</b></p> <p>“Whenever system configurations change such that the Import Limits or Local Generation Requirements change, each SC’s ARNT and share of Local Generation Requirements will also change accordingly. Allocation factors (Section 3.4.2 above) will remain the same.”</p>	<p><b>Comment</b></p> <p>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<sup>th</sup> of the month for the subsequent month).</p> <p>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).</p> <p><b>Recommendation</b></p> <p>The Protocols Manual should include a provision that addresses the disposition of any additional ARNT that becomes available after the 6<sup>th</sup> day (Initial Feature) or the 15<sup>th</sup> of the month (Ultimate Feature) and the availability of such transmission capacity to be scheduled after the initial allocation of ARNT has been completed.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
		<p><b>Allocated Retail Network Transmission Protocol, §4.6, Changes to system configuration, Ultimate Features, Protocols Manual Page V-5, August 2, 1999</b></p> <p>“Whenever system configurations change such that the Import Limits or Local Generation Requirements change, each SC’s ARNT and share of Local Generation Requirements will also change accordingly. Allocation factors (Section 4.3.4) will remain the same.”</p>	
<b>ENERGY IMBALANCE PROTOCOL</b>			
34	Potential FERC issue.	<p><b>Energy Imbalance Protocol, §3.1.2, Principles, Protocols Manual Page IX-1, August 2, 1999</b></p> <p>“Standard Offer SCs will have the burden of responsibility as “providers of last resort” or as the only providers of Energy Imbalance Services required for the CAOs to comply with WSCC reliability requirements.”</p>	<p><b>Comments</b></p> <p>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.</p> <p>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.</p> <p><b>Recommendation</b></p> <p>To clarify this section and remove the possibility of misinterpretation, remove the phrase “or as the only providers.”</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
35	Protocol clarification.	<p><b>Energy Imbalance Protocol, §3, Principles, Protocols Manual Page IX-1, August 2, 1999</b></p> <p>“Standard Offer SCs (SCs for bundled retail loads) will be treated somewhat differently than Competitive SCs during the transition period to 100% retail direct access in Arizona. It is intended that the Standard Offer SCs’ unique benefits and burdens will neither advantage nor disadvantage them in the competitive marketplace during the transition period.”</p>	<p><b>Comments</b></p> <p>The term “unique benefits and burdens” is undefined. It is unclear what is meant by this phrase.</p> <p><b>Recommendations</b></p> <p>The Protocols Manual should describe the identified benefits and burdens that are applicable to Standard Offer SCs so that all parties operating under the Protocols Manual fully understand any economic consequences of these benefits or burdens.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
36	Potential FERC issue.	<p><b>Energy Imbalance Protocol, §5.3, Basis for Energy Imbalance Charges, Protocols Manual Page IX-3, August 2, 1999</b></p> <p>“If a Competitive SC undersupplies and its Energy Imbalance is within the aggregate 1.5% deadband, the CAO will charge the Trading Entity (see Section 6 of this Protocol), which will in turn charge the Competitive SC, the higher of the CAO’s SIC or the Market Price.”</p> <p>“If a Competitive SC oversupplies and its Energy Imbalance is within the aggregate 1.5% deadband, the CAO will pay the Trading Entity, which will in turn pay the Competitive SC, the lower of the CAO’s SIC or the Market Price.”</p>	<p><b>Comment</b></p> <p>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.</p> <p>The term “Trading Entity” is not defined.</p> <p><b>Recommendation</b></p> <p>Remove the reference to “third party purchases” in the calculation of SIC.</p> <p>Define the term “Trading Entity in the Definitions section.</p> <p><b>Comment</b></p> <p>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%).</p> <p><b>Recommendation</b></p> <p>Modify the language in this section and in Section 8 to account for the 2 MW minimum deadband.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
37	Inconsistent provision within the same protocol.	<p><b>Energy Imbalance Protocol, §6.1, Trading of Energy Imbalance Accounts, Initial Features, Protocols Manual Page IX-3, August 2, 1999</b></p> <p>“The CAO shall calculate hourly Energy Imbalances for individual Competitive SCs in accordance with its OATT and shall charge the Competitive SCs for Energy Imbalance Service pursuant to the table in Section 8 of this Protocol</p> <p><b>Energy Imbalance Protocol, §5.1, Basis for Energy Imbalance Charges, Protocols Manual Page IX-2, August 2, 1999</b></p> <p>“Each Competitive SC’s hourly Energy Imbalance will be calculated as the SC’s <math>[R_{Actual} - L_{Actual}] \dots</math>”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>The Protocol should be changed to specify a single methodology to be used to calculate Energy Imbalance Service.</p>
38	Term not defined.	<p><b>Energy Imbalance Protocol, §8, Energy Imbalance Settlement under the Initial Features or for Stand-Alone Competitive SCs under the Ultimate Features, Protocols Manual Page IX-7, August 2, 1999</b></p> <p>See table in Section 8 and use of the phrase “hourly Energy Imbalance percentage.”</p>	<p><b>Comment</b></p> <p>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 <math>R_{Actual}</math> or <math>L_{Actual}</math>.</p> <p><b>Recommendation</b></p> <p>Define the calculation methodology for hourly Energy Imbalance percentage and include the term in the Definitions section of the Manual.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
39	Clarification required.	<p><b>Energy Imbalance Protocol, §10, Unaccounted-For Energy (UFE), Protocols Manual Page IX-10, August 2, 1999</b></p> <p>Entire section.</p>	<p><b>Comment</b></p> <p>It is unclear how a CAO will calculate hourly UFE and how adjustments are made to Competitive SC’s Energy Imbalance accounts.</p> <p><b>Recommendation</b></p> <p>The methodology for calculating UFE for each CAO should be defined and the procedures for adjusting a competitive SC’s Energy Imbalance account should be included in this section.</p>
<b>EMERGENCY OPERATIONS PROTOCOL</b>			
40	Clarification required.	<p><b>Emergency Operations Protocol, §5.1.1, Emergency Conditions and Curtailments, Protocols Manual Page XI-2, August 2, 1999</b></p> <p>“WSCC-mandated circumstances such as the WSCC Unscheduled Flow Reduction Procedure. The CAO will curtail Schedules based upon a WSCC predefined matrix.”</p>	<p><b>Comment</b></p> <p>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.</p> <p><b>Recommendation</b></p> <p>Either provide a specific reference to the matrix or include the matrix and any other necessary information as an addendum to this Protocol. The availability of such information will reduce the probability of SCs filing Curtailment disputes with the CAO and AZ ISA and will help ensure that SCs curtail their schedules when requested to do so by the CAO.</p>
41	Curtailments may be applied differently to Committed Use (CU1) customers and wholesale customers.	<p><b>Emergency Operations Protocol, §5.4, Emergency Conditions and Curtailments, Protocols Manual Page XI-2, August 2, 1999</b></p> <p>“After curtailing all non-firm Schedules, the CAO will share Curtailments in proportion to the then-current load ratio shares of parties scheduling into the constrained area, to the extent practical and consistent with good utility practice.”</p>	<p><b>Comment</b></p> <p>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 Curtailments may not be compatible with these contracts.</p> <p><b>Recommendation</b></p> <p>Each CAO should ensure that procedures to curtail schedules for Emergency Operations comply with existing contract curtailment procedures.</p>

**Appendix A – Detailed Review of AZ ISA Protocols Manual**

No.	Issue	Protocol Reference(s)	Comments/ Recommendation
42	Incorrect section reference.	<p><b>Emergency Operations Protocol, §5.5 Emergency Conditions and Curtailments, Protocols Manual Page XI-2, August 2, 1999</b></p> <p>“When Schedules have been curtailed in accordance with Section 5.1 above, affected SCs will provide modified Schedules pursuant to Section 7.5 of the Scheduling Protocol beginning the next real time Scheduling period.”</p>	<p><b>Comment</b></p> <p>Reference to Section 7.5 is incorrect.</p> <p><b>Recommendation</b></p> <p>Change section reference to Section 6.5 of the Scheduling Protocol.</p>