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BEFORE THE ARIZONA CORPORATION COMMISSION

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Commissioner

IN THE MATTER OF TUCSON ELECTRIC POWER COMPANY APPLICATION FOR WAIVER OF CERTAIN REQUIREMENTS OF A.A.C. R14-2-1609.	DOCKET NO. RE-00000C-94-0165 **TUCSON ELECTRIC POWER COMPANY'S COMPLIANCE FILING**

Tucson Electric Power Company ("TEP"), through undersigned counsel and pursuant to the requirements of A.A.C. R14-2-1609 (the "Rule"), as modified by Arizona Corporation Commission ("Commission") Decision No. 62446 (April 18, 2000) hereby files: (a) the implementation plan of the Arizona Independent Scheduling Administrator ("AISA"), attached hereto as Exhibit A (the "Implementation Plan"); and (b) the current Protocols Manual for the AISA, attached hereto as Exhibit B.

The Implementation Plan provides for phased compliance with all provisions of the Rule with some of the functions identified in the Commission's Rules to be finalized pursuant to formation of an ISO or RTO as mandated by Federal Energy Regulatory Commission ("FERC").

I. BACKGROUND.

The Rule provides that "Affected Utilities that own or operate Arizona transmission facilities shall form an Arizona Independent Scheduling Administrator which shall file with the Federal Energy Regulatory Commission within 60 days of this Commission's adoption of final rules." After the Rule was adopted, the FERC issued "Order 2000," which requires all utilities

subject to FERC jurisdiction to file, by October 15, 2000, their plans to join an ISO, develop an RTO or explain why they cannot do so ("October 15, 2000 filing deadline").

The Affected Utilities (including TEP) and others have been working towards forming the AISA since 1997. In fact, the AISA has been incorporated, and on April 7, 2000 adopted a Protocol Manual. Also, on June 2, 2000 the AISA approved an Implementation Plan. The Protocol Manual and the Implementation Plan are the subject of this compliance filing.

II. PHASED IMPLEMENTATION PLAN.

The Rule indicates the following five functions that the AISA should perform:

1. Implement and oversee the nondiscriminatory application of operating protocols to ensure statewide consistency for transmission access;
2. Provide dispute resolution processes that enable market participants to expeditiously resolve claims of discriminatory treatment in the reservation, scheduling, use, and curtailment of transmission services;
3. Calculate Available Transmission Capacity for Arizona transmission facilities that belong to the Affected Utilities or other Arizona Independent Scheduling Administrator participants and shall develop and operate an overarching statewide OASIS;
4. Receive all requests (wholesale, Standard Offer retail, and competitive retail) for reservation and scheduling of the use of Arizona transmission facilities that belong to the Affected Utilities or other Arizona Independent Scheduling Administrator participants; and
5. Implement a transmission planning process that includes all Arizona Independent Scheduling Administrator participants and aids in identifying the timing and key

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characteristics of required reinforcements to Arizona transmission facilities to assure that the future load requirements of all participants will be met.

The Implementation Plan provides for phased implementation of functionality to meet these requirements. Items 1 and 2 will be implemented by the AISA as soon as FERC approves the AISA tariff filing. The remaining items will be phased in subsequent to the October 15, 2000 filing deadline. The functions required for the remaining items are costly and time consuming and would ultimately be the responsibility of an ISO or RTO, consequently, the participants in the AISA feel that such a phased approach to the requirements is in their best interest as well as the best interests of their customers. Also, these functions occur within each transmission provider's system and are not critical as long as the AISA has a dispute resolution process in place. TEP believes that once the filings are made in accordance with the October 15, 2000 filing deadline, all AISA participants will be able to make an informed decision relative to functions and costs that should be incurred by the AISA. Accordingly, TEP hereby tenders for filing the AISA Implementation Plan and current Protocols Manual.

RESPECTFULLY SUBMITTED this 15th day of June, 2000.

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EXHIBIT A

Proposed
Arizona Independent Scheduling Administrator Association
(Az ISA)

Implementation Plan
June 8, 2000

Az ISA IMPLEMENTATION PLAN
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SECTION 1

EXECUTIVE SUMMARY

Background

The Retail Competition Rules adopted by the Arizona Corporation Commission (Commission or ACC) directed that the Affected Utilities that own or operate transmission facilities form an Arizona Independent Scheduling Administrator (Az ISA). The Rules (R14-2-1609.D) describe five characteristics that the Az ISA would be required to possess. These characteristics or responsibilities are:

- Calculation of Available Transmission Capacity (ATC) for the Arizona transmission utilities of Affected utilities and other Az ISA participants and develop and operate a statewide OASIS

- Implement and oversee nondiscriminatory application of operating protocols to ensure transmission access

- Provide dispute resolution processes to resolve claims of discriminatory treatment in the reservation, scheduling, use and curtailment of transmission services

- Utilize a single standardized procedure for all requests (wholesale, Standard Offer retail, and competitive retail) for reservation and scheduling the use of the Arizona transmission facilities belong to the Affected Utilities and other Az ISA participants

- Implement a transmission planning process to assure that future load requirements will be met.

The Rules (R14-2-1609E) also require that the Affected Utilities file an Az ISA implementation plan that addresses:

- Az ISA governance, incorporation, financing, and staffing

- Acquisition of physical facilities and staff

- Schedule for the phased development of the Az ISA functionality and proposed transition to a regional Independent System Operator (ISO) or Regional Transmission Organization (RTO)

- Contingency plans to ensure that critical functionality is in place no later than 3 months following the adoption of the Competition Rules

- Other significant issues related to the timely and successful implementation of the Az ISA.

Summary of Implementation Plan

Since the ACC adopted the Competition Rules, FERC has issued Order 2000. Under FERC Order 2000, all public utilities that own, operate or control interstate transmission facilities and are not members of an approved ISO must file by October 15, 2000 a plan to participate in an RTO that will be operational by December 15, 2001 or explain why it cannot now join an RTO and its timeline for future efforts. Items that have been identified for implementation by the Az ISA include functionalities that may best be deferred until an RTO is operational. By the latter part of 2000 the Az ISA will be able to review plans filed by the utilities for RTO implementation and make an informed decision on the need for the Az ISA to undertake certain functions prior to an RTO providing the function. The transition from the ISA to an RTO will be dependent on the schedule for completing the development of an RTO such as Desert STAR. RTO formation is currently under development in response to the December 20, 1999, FERC final rule on regional transmission organizations. Docket No. RM99-2-000 (FERC 2000). Currently, Desert STAR anticipates filing its FERC tariff in the third quarter of 2000. The Az ISA Implementation Plan is presented in a staged format to allow for Az ISA functions that could be deferred until an RTO is operational.

The following summarizes each of the required aspects of the Az ISA Implementation Plan (Plan) in accordance with R14-2-1609. Each element is discussed in detail in Sections 2 and 3 of the Plan.

Az ISA governance, incorporation, financing, and staffing

The Az ISA was incorporated in September 1998 as a non-profit Arizona corporation. Governance of the Az ISA was established in its by-laws dated October 29,1998. The by-laws established the duties and responsibilities of the Az ISA and also defined membership classes and participation eligibility.

The initial financing of the Az ISA has been primarily from loans from transmission owners and certain Affected Utilities including Arizona Public Service Company, Tucson Electric Power, Citizens Utilities, Arizona Electric Power Cooperative, and Salt River Project, and to a minor extent from membership dues. The initial capitalization loans, amounting to approximately $1.2 million, will be repaid with interest over a two-year period after FERC acceptance and implementation of the Az ISA tariff.

The phased development of Az ISA is based on three phases, as follow:

1. Initial Phase - This phase includes Alternative Dispute Resolution (ADR) and Limited Protocol Manual oversight. This oversight function includes OASIS and Allocated Retail Network Transmission (ARNT). The transmission providers (TPs)/Control Area Operators (CAOs) will implement the protocols except where waivers are specifically granted.

2. Full Compliance Phase - In this phase Az ISA functions will include all responsibilities in Competition Rules. In addition to the Initial Phase function, Az ISA will: a) be responsible for OASIS/ATC calculations, b) utilize standardize procedure for

transmission reservation & scheduling and c) implement a statewide transmission planning process.

3. Expanded Features Phase - Although not a part of the Competition Rules, there are features which can enhance the Az ISA functionality. The functions are ARNT and Energy Imbalance (EI) trading and ARNT auction settlement.

Only the Initial Phase is currently planned to become operational. The Full Compliance and Expanded Features Phases will be reviewed after the FERC Order 2000 filings to determine if and when these phases should be implemented.

Staffing requirements and estimated annual cost for the each phase described about are shown in the following table.

Phase	Staffing	Annual Cost ($000)
1. Initial	5	618
2. Full Compliance	18	2,258
3. Expanded Features	2	2,105
Total	**25**	**4,981**

In addition, there is a Capitalization repayment-funding requirement of $693K/year for two years.

Acquisition of Physical Facilities and Staff

Currently the Az ISA is housed in the offices of Western Area Power Administration (Western). The Western facilities, located on 43rd Avenue in Phoenix, have sufficient space available for the foreseeable future that can be used by the Az ISA. Therefore, it is not anticipated that the Az ISA will need additional space within its anticipated lifespan.

As noted above, the Az ISA will require additional staff to fulfill its functions. It is anticipated that staffing will be acquired through advertisements in trade journals and utilizing staffing specialists as required. One of the major difficulties that the Az ISA will face is the ability to attract qualified staff. The utility business, as a whole, is facing difficulty attracting and retaining qualified staff. The Az ISA's ability to attract staff will be exacerbated because of the fact that, by design, the entity will cease to exist in a relatively short timeframe.

Schedule for Phased Development

The following table lists the key elements in the Az ISA development:

Proposed Az ISA Implementation Plan Timeline

1.	Affected Utilities submit Protocols Manual to ACC	June 15, 2000
2.	Affected Utilities submit Implementation Plan to ACC for review	June 15, 2000
3.	Az ISA draft FERC filing completed and distributed to Az ISA membership for review	June 30, 2000
4.	Az ISA Board considers approval of FERC Filing	July 17, 2000

5.	Az ISA provides ACC with copy of draft FERC Filing	August 2, 2000
6.	ACC Open Meeting	August 22-23, 2000
7.	Az ISA files tariff with FERC	By September 23, 2000
8.	Az ISA implements FERC approved tariff	By November 23, 2000

Other Significant Issues

The Az ISA passed a significant milestone with the conditional approval of the Protocol Manual by the Board of Directors on April 7, 2000. Other significant milestones still must be met including the preparation and filing of a FERC tariff. The membership of the Az ISA consists of organizations with a broad spectrum of interests and structures, which makes for significant debate before consensus can be reached. This has resulted in the inability to meet the initial schedules identified by the Commission in the Retail Electric Competition Rules.

Among the issues that the Az ISA must address before it can successfully move forward with implementation are:

- Funding - R14-2-1609G states "It is the intent of the Commission that prudently-incurred costs incurred by Affected Utilities in the establishment of the Arizona Independent Scheduling Administrator and subsequently the Independent System Operator, should be recovered from customers using the transmission system, including the Affected Utilities' wholesale customers, Standard Offer retail customers, and competitive retail customers on a non-discriminatory basis through Federal Energy Regulatory Commission-regulated rates." The rules also indicate that the Commission may authorize Affected Utilities to recover the Az ISA costs through a distribution surcharge should the FERC not permit recovery of such costs. The Az ISA board of directors is currently addressing the cost recovery issues and has not reached consensus. It should be noted that many of the Az ISA participants are neither Commission nor FERC regulated. Further, some Affected Utilities purchase their power requirements at wholesale from out-of-state suppliers. Although the Commission's Rules indicate that it expects transmission owners to recover costs associated with the Az ISA through regulated rates or distribution surcharges, locally-controlled utilities such as SRP are not rate-regulated by the Commission or FERC. Cost recovery is a significant issue for Az ISA.

- Staffing – As previously noted, the Az ISA may have difficulty attracting qualified staff members. It may become necessary to staff the Az ISA through contract employees or by utilizing consultants. This will add to the costs of the Az ISA operations.

SECTION 2

IMPLEMENTATION PLAN OVERVIEW

Background

The Az ISA was formed in September 1998 as a non-profit Arizona corporation to support the provision of comparable, non-discriminatory retail access to the Arizona transmission system to facilitate a robust and efficient competitive electric market in Arizona. The Az ISA is intended to serve as an interim electric transmission scheduling administrator to facilitate the operation of Arizona's competitive electric retail market until the implementation of an RTO that supercedes the Az ISA. As of April 25, 2000, the Az ISA had 62 members. A membership list is included in the Plan Appendix.

Governance

The Az ISA is governed by a Board of Directors chosen from Az ISA member representatives. The current Board of Directors roster is included in the Plan Appendix. There are five member classes: transmission facilities providers; local load servicing entities; aggregators; independent generators and wholesale power marketers; and end-users. The Az ISA Board consists of eleven voting members, including two representatives from each member class, plus the Az ISA Acting Director. All votes of the Board require a two-thirds majority, and no business shall be conducted without two-thirds of the Board present.

Alternate Dispute Resolution

The Az ISA By-laws also provide for three alternative dispute resolution forums, including a fast-track arbitration that provides a decision within 24 hours, an expedited arbitration that is completed within two weeks, and, by mutual agreement of the disputing parties, mediation. For complicated disputes, the By-laws provide that parties to the dispute may initiate peer review or a mediation process in accordance with the By-laws or the Director of the Az ISA shall cause an arbitration procedure to be initiated unless the parties to the dispute choose to take the dispute directly to FERC or the courts, whichever is appropriate.

Funding

The Az ISA issued promissory notes to each utility contributing to the Az ISA start-up costs. Total amount for start-up loans is $1,200,000. Repayment of these start-up loans will begin 60 days after the FERC tariff is approved. Repayment period is 24 months.

Still to be determined is the tariff structure the Az ISA will use to fund repayment of start-up loans as well as annual operation and maintenance costs. The type(s) and amounts will be included in the draft tariff document scheduled for distribution to the Az ISA membership for review June 30, 2000.

Operating Protocols

During the development of the plan for the Az ISA, the stakeholders determined the need for a set of operational and administrative protocols to govern operations of the Az ISA. The protocols have been developed through a participatory process open to all stakeholders. The protocols define the duties to be performed and the procedures to be followed by the Az ISA, control area operators (CAO), and transmission providers (TP) that become members of the Az ISA, and scheduling coordinators (SC). It is intended that the protocols will result in the CAOs and TPs employment of uniform and non-discriminatory standards and procedures for the use of the interconnected transmission system in Arizona for retail electric service.

The protocols address the following subjects as they affect transmission for retail electric competition: total transmission capability determination; retail transmission allocation; retail transmission reservations and OASIS; congestion management; emergency operations; must-run generation; ancillary services; energy imbalance for retail transmission; scheduling; and after-the-fact checkout/settlement for retail transmission.

On April 7, 2000, the Az ISA Board of Directors approved the operational and administrative protocols that will be used by most entities serving retail load in Arizona. The Az ISA is now preparing the FERC and ACC filings requesting authority to implement the Protocols. A copy of the resolution of the Board of Directors that approved the Protocols Manual is included in the Appendix.

Next Steps

The Plan accounts for Az ISA functions that may be deferred until an RTO is operational. RTO formation is currently under development in response to the December 20, 1999, FERC final rule on regional transmission organizations. Docket No. RM99-2-000.

Under this Order, all public utilities that own, operate or control interstate transmission facilities and are not members of an approved ISO must file by October 15, 2000 a plan to participate in an RTO that will be operational by December 15, 2001, or explain why it cannot now join an RTO and its timeline for future efforts. Items that have been identified for implementation by the Az ISA include functionalities that may best be deferred until an RTO is operational. By the latter part of 2000 the Az ISA will be able to review plans filed by the utilities for RTO implementation and make an informed decision on the need for the AISA to undertake certain functions prior to an RTO providing the function.

The following table "Az ISA Action or Document and Equivalent ACC Rule R14-2-1609 Requirement" presents the association between ACC Rule 1609 and the Az ISA documentation that meets the ACC requirements. Note that implementation of many functions (items 1,2,5,6 and 8) will be considered by the Board after the public utilities that own, operate or control interstate transmission facilities and are not members of an approved ISO file with the FERC a plan to participate in an RTO that will be operational by December 15, 2001. Other future implementation dates will require Az ISA Board approval of the FERC tariff filing and a Monitoring Plan that is included in the April 7, 2000 Board resolution.

Az ISA Action or Document
and Equivalent ACC Rule R14-2-1609 Requirement

Item	R14-2 1609	Requirement	Az ISA Document or Action
1	D.1	The Az ISA shall calculate Available Transmission Capacity (ATC) for Arizona transmission facilities that belong to the Affected Utilities or other Arizona Independent Scheduling Administrator participants.	Operating Protocols Section IV Transmission Reservation and OASIS Management Principles
2	D.1	Az ISA shall develop and operate an overarching statewide OASIS	Operating Protocols Section IV Transmission Reservation and OASIS Management Principles
3	D.2	The Az ISA shall implement and oversee the nondiscriminatory application of operating protocols to ensure statewide consistency for transmission access.	• Az ISA Approval of Operating Protocols • FERC Approval of Az ISA Tariff
4	D.3	The Az ISA shall provide dispute resolution processes that enable market participants to expeditiously resolve claims of discriminatory treatment in the reservation, scheduling, use, and curtailment of transmission services.	Az ISA Bylaws
5	D.4	All requests (wholesale, Standard Offer retail and competitive retail) for reservation and scheduling of the use of Arizona transmission facilities that belong to the Affected Utilities or other Az ISA participants shall be made to, or through, Az ISA using a single, standardized procedure.	Operating Protocols Oversight only
6	D.5	The Az ISA shall implement a transmission planning process.	Operating Protocols Section III Total Transmission Capability Determination Principles
7	E	Implementation Plan	1. Articles of Incorporation 2. By-laws 3. Governance 4. Protocols 5. Tariff 6. File Tariff 7. Implement Tariff
8	I	Under auspices of the Az ISA, the Affected Utilities and other stakeholders shall develop statewide protocols for pricing and availability of services from Must-Run Generating Units.	Operating Protocols Section VIII Must-Run Generation Protocol
9	J	The Affected Utilities and other stakeholders, under the auspices of the Az ISA, shall identify statewide services to be settled on and developed fair and reasonable pricing mechanisms to assure a consistent and fair settlement process.	• Az ISA Approval of Operating Protocols

Assumptions:

1.Tariff filing approved by the Board prior to August 2,2000
2.FERC filing by September 23,2000

The Plan is intended to provide the Az ISA Board of Directors, the Arizona Corporation Commission (Commission), and other interested parties with information on Az ISA organizational structures, costs, and implementation timelines that would be required to meet the intended purpose of the organization.

An Az ISA work group was formed to develop an Implementation Plan that would meet the requirements of the Az ISA Board of Directors and the ACC. The work group developed a plan that included several stages in the development of Az ISA functions. The benefits of this approach are separation of information on costing and implementation considerations associated with each function. The information can be used to evaluate the current and future needs of the Az ISA. The implementation stages are:

The phase development of Az ISA is based on three phases, as follow:

1. Initial Phase - This phase includes Alternative Dispute Resolution (ADR) and Limited Protocol Manual oversight. This oversight function includes OASIS and Allocated Retail Network Transmission (ARNT). All TPs/CAOs will implement the Az ISA's protocols, except those specifically granted waivers.

2. Full Compliance Phase - In this phase, Az ISA functions will include all responsibilities in Competition Rules. In addition to the Initial Phase function, Az ISA will: a) be responsible for OASIS/ATC calculations, b) utilizing standardized procedures for transmission reservation & scheduling and c) implementing a statewide transmission planning process.

3. Expanded Features Phase - Although not a part of the Competition Rules, there are features which can enhance the Az ISA functionality. Namely ARNT and Energy Imbalance (EI) trading and ARNT auction settlement.

Each phase of implementation is covered individually in Section 3. Section 3 includes references to the part of By-laws, Protocols or ACC rule that require the function, and the plan for implementing the function.

The format for the detailed plan is the following:

- Identification of the phase and task
- Identification of the activities to be undertaken
- Identification of the controlling rule or requirement for the activity (i.e. the Protocol Manual, the By-Laws of the Az ISA, and/or Arizona Corporation Commission Rule applicable to Affected Utilities)
- Activities included in the phase
- Activities not included in the phase
- Implementation Requirements (Equipment and Resources, Staffing , Capital, Operations and Maintenance Expenses, Timeframe for Completion, Timeframe for Implementation, Contingency Plan
- Plan Detail and Costs

Proposed Az ISA Implementation Plan Timeline

1.	Utilities submit Protocols Manual to ACC	June 15, 2000
2.	Utilities submit Implementation Plan to ACC for review	June 15, 2000
3.	Az ISA draft FERC filing completed and distributed to Az ISA membership for review	June 30, 2000
4.	Az ISA Board considers approval of FERC Filing	July 17, 2000
5.	Az ISA provides ACC with copy of FERC Filing	August 2, 2000
6.	ACC Open Meeting	August 22-23, 2000
7.	Az ISA files tariff with FERC	By September 23, 2000
8.	Az ISA implements FERC approved tariff	By November 23, 2000

SECTION 3
IMPLEMENTATION PLAN PHASES

Phase 1, Task 1 ADR Process

Implementation Directives

Protocols Manual

Protocols Manual Section I "Introduction", Paragraph 6."Disputes": " Disputes arising from the application or implementation of these Protocols shall be resolved pursuant to the dispute resolution procedures contained in Section 6 of the Az ISA By-Laws."

Az ISA By-laws

"5.3.9. Implement the dispute resolution procedures provided in Section 6 as appropriate;"

"5.3.10. Provide oversight and take action, as required, to ensure compliance with the Protocols Manual and FERC-recognized Standards of Conduct related to transmission access and operation of the Interconnected Transmission System; investigate and take action on complaints related to the application of the Protocols Manual and such Standards of Conduct and to resolve other issues related to discriminatory treatment in the provision of transmission service;"

"5.3.11. Make immediate decisions, based on the Protocols Manual, with respect to irregularities discovered during the performance of his/her duties described in Section 5.3.10 and with respect to disputes between transmission providers and transmission users"

"6. Az ISA Dispute Resolution Process that includes: Section 6.1, "Fast-Track ADR", Section 6.2., "Alternative Dispute Resolution Procedures", and Section 6.3. "Disputes Involving Government Agencies"."

ACC Rule R14-2-1609

R14-2-1609D-3. "The Arizona Independent Scheduling Administrator shall provide dispute resolution processes that enable market participants to expeditiously resolve claims of discriminatory treatment in the reservation, scheduling, use, and curtailment of transmission services."

Activities included in Phase1, Task 1

Executive Director to provide ADR
Limited Protocol Manual oversight

Activities not included in Phase 1,Task 1

Protocol Manual Oversight
Data collection from Transmission Providers

Phase 1, Task 1 Implementation Plan

I.	Equipment and Resources	Executive Director to provide ADR
II.	Staffing	1. Executive Director 2. Part time administrative support
III.	Capital	None
IV.	O and M Expenses	$125K
V.	Timeframe	By November 23,2000
VI.	Implementation	N/A – Staff available
VII.	Contingency Plan	None

Phase 1, Task 1 Detail and Costs

ADR and Limited PM Oversight				
Item	Function	Capital $1000	O and M $1000/yr	Staffing Requirements
1	ADR		75	0.5
2	Legal		50	
	Total	-	$125	0.5

Az ISA Costs		
Item	Cost Item	$/yr
1	O and M	$125,000
2	Capital for 2yr	-
	Total	$125,000

Phase 1, Task 2 - Administer Interim Protocols Manual

Interim Protocols Manual.

The Interim Protocols Manual (PM) is the set of Protocols as amended and conditionally accepted by the Az ISA board on April 7, 2000. The Az ISA Board approved implementation of the Protocols on an interim basis until a FERC approved Regional Transmission Organization is established. The Board further approved implementation of the Protocols on an interim basis subject to certain conditions being met. Furthermore, implementation of many of the Az ISA organizational responsibilities specified in the PM would be contingent on meeting defined retail transaction levels.

Implementation Directives

Protocols Manual

Protocols Manual Section I "Introduction", Paragraph 3 –" During the development of the plan for the Az ISA, the stakeholders determined the need for a set of operational and administrative protocols -- the "Protocols Manual" -- to govern operations of the Az ISA."

Protocols Manual Section I "Introduction", Paragraph 3 – "The Protocols Manual, as set forth herein, defines the duties to be performed and the procedures to be followed by the Az ISA, CAOs and TPs that become members of the Az ISA, and SCs."

Az ISA By-laws

"5.3.3 Develop with interested representatives of the Member Classes the Protocols Manual for the approval of the Board"

"5.3.10. Provide oversight and take action, as required, to ensure compliance with the Protocols Manual and FERC-recognized Standards of Conduct related to transmission access and operation of the Interconnected Transmission System; investigate and take action on complaints related to the application of the Protocols Manual and such Standards of Conduct and to resolve other issues related to discriminatory treatment in the provision of transmission service;"

ACC Rule R14-2-1609

R14-2-1609D-2. "The Arizona Independent Scheduling Administrator shall implement and oversee the nondiscriminatory application of operating protocols to ensure statewide consistency for transmission access. These operating protocols shall include, but are not limited to, protocols for determining transmission system transfer capabilities, committed uses of the transmission system, available transfer capabilities, Must-Run Generating Units, energy scheduling, and energy imbalances."

Activities included in Phase 1, Task 2:

ADR
Limited monitoring of TPs OASIS and ARNT scheduling functions

Activities not included in Phase1,Task 2

State wide OASIS
State wide scheduling
State wide planning
ARNT auction and trading
Energy Imbalance trading and settlement

Phase 1, Task 2 - Implementation Requirements

I.	Equipment and Resources	Personal computers, and office supplies
II.	Staffing	1. 2 Data technicians 2. Engineer 3. Administrative Assistant/Office Manager
III.	Capital	1. 4 PC workstations 2. Office furniture Total $30K
IV.	O and M Expenses	1. Staffing 2. Other Expenses Total $300
V.	Timeframe	By November 23,2000
VI.	Implementation	Staff in place by October 23, 2000
VII.	Contingency Plan	No staff in place by October 23, 2000 1. TPs to provide data to Az ISA as needed for ADR and oversight 2. Director available to perform ADR and limited oversight 3. Continue to recruit: (i) engineer, (ii) analysis (part time office manager onboard)

Phase 1, Task 2 - Plan Detail and Costs

April 7 PM w/o Planning/Scheduling or ARNT/EI Additions				
Item	Function	Capital $1000	O and M $1000/yr	Staffing Requirements
1	ATC/OASIS		75	0.5
2	Administer PM	15	210	3
3	Administrative and Infrastructure		150	1
4	Legal		50	
	Total	15	$485	4.5

Az ISA Costs	
Cost Item	$/yr
O and M	485,000
Capital for 2yr	8,223
Total	$493,233

Phase 2, Task 1 - OASIS and ATC Calculation

Implementation Directives

Protocols Manual

Protocols Manual Section 4 "Transmission Reservations and OASIS Management Principles" addresses the approach the Az ISA will utilize to implement a statewide OASIS. Prior to the Az ISA's implementation of a statewide OASIS, OASIS management for RNITS will continue to be performed by the TPs, with Az ISA oversight. After the Az ISA has implemented the statewide OASIS, the Az ISA will administer this single statewide OASIS for reservations for both RNITS and wholesale transmission service provided pursuant to the TP's OATT until such time as a RTO takes over such function.

Protocols Manual Section 4 "Transmission Reservations and OASIS Management Principles" addresses the process the Az ISA will utilize to monitor and calculate ATC.

Paragraph 4.3: Az ISA will monitor release of ATC on each TP's OASIS.
Paragraph 4.4: Az ISA will begin to develop systems to allow it to calculate and update ATC.

Az ISA By-laws

"5.3.4 Calculate ATC.

5.3.5 Monitor the OASIS with the ultimate objective of developing and operating one state-wide OASIS on which (i) all ATC is posted, (ii) all transmission reservation requests are received, and (iii) ancillary services and secondary transmission are posted.

5.3.7. Update ATC after receipt of accepted transmission reservations and confirmed energy schedules.

5.3.8 Monitor releases of ATC to ensure compliance with the Protocols Manual."

ACC Rule R14-2-1609

R14-2-1609D-1: "The Arizona Independent Scheduling Administrator shall calculate Available Transmission Capacity (ATC) for Arizona transmission facilities that belong to the Affected Utilities or other Arizona Independent Scheduling Administrator participants and shall develop and operate an overarching statewide OASIS."

Activities included in Phase2, Task 1

Az ISA developed OASIS and Website
Staff to operate and maintain OASIS
Staff to monitor ATC

Activities not included in Phase 2, Task 1

N/A

Phase2, Task 1 - Implementation Requirements

I. Equipment and Resources	1. 2 PC workstations 2. Office furniture 3. High speed data communication link 4. Adapt existing OASIS site
II. Staffing	2 engineers
III. Capital	1. 2 PC workstations 2. Office furniture Total $15K
IV. O and M Expenses	1 Staffing $200K 2. OASIS site $10K Total $210
V. Timeframe	Post October 15, 2000
VI. Implementation	1. Az ISA Technical workgroup will determine technical requirements of Az ISA OASIS site 2. Az ISA Technical workgroup to determine data, software and hardware needed for Az ISA to compute ATC, CU and TTC 3. Post October 15, 2000 specifics will determine timetable for staffing, equipment and facilities requirements. 4. Recruit staff
VII. Contingency Plan	TPs to provide data to Az ISA as needed

Phase 2, Task 1 Detail and Costs

OASIS and ATC Calculation				
Item	Function	Capital $1000	O and M $1000/yr	Staffing Requirements
1	ATC/OASIS	15	210	2
2	Administer PM			
	Total	15	210	2

Az ISA Costs	
Cost Item	$/yr
O and M	210,000
Capital for 2yr	8,223
Total	$218,223

Phase 2, Task 2 - State Wide Standardized Scheduling Procedure (including Wholesale)

Implementation Directives

Protocols Manual

Protocols Manual Section VI "Scheduling Protocol" defines the processes and requirements for scheduling energy over specific transmission path(s) for Retail Network Load.

Az ISA By-laws

"5.3.6. Receive transmission reservation requests and energy schedules concurrently with receipt by Member control area operators and transmission owners"

ACC Rule R14-2-1609

R14-2-1606D-4. "All requests (wholesale, Standard Offer retail, and competitive retail) for reservation and scheduling of the use of Arizona transmission facilities that belong to the Affected Utilities or other Arizona Independent Scheduling Administrator participants shall be made to, or through, the Arizona Independent Scheduling Administrator using a single, standardized procedure."

Phase 2, Task 2 - Implementation Plan

I.	Equipment and Resources	1. 2 Scheduling consoles 2. 4 PC workstations
II.	Staffing	1. 2 – 7x24 Scheduling Desks 10 – Schedulers 2. 3 Preschedulers 3. Supervisor
III.	Capital	1. Scheduling Software $500k 2. Network Software, Interface to TPs, Voice recorder, Computer hardware and PCs -- $200k
IV.	O and M Expenses	1. Payroll $1,400k 2. Technical support services $45k
V.	Timeframe	Post October 15, 2000
VI.	Implementation	Hire personnel, procure hardware and software by September 1, 2000
VII.	Contingency Plan	Using staff identified under "Monitoring PM": TPs to copy schedules to Az ISA as requested

Phase 2, Task 2 - Plan Detail and Costs

State wide Scheduling				
Item	Function	Capital $1000	O and M $1000/yr	Staffing Requirements
1	State wide scheduling	700	1,445	14
	Total	700	1,445	14

Az ISA Costs	
Cost Item	$/yr
O and M	1,445,000
Capital for 2yr	383,752
Total	$1,828,752

Phase 2, Task 3 - State Wide Transmission Planning

Implementation Directives

Protocols Manual

Protocols Manual Section III "Total Transmission Capability (TTC) Determination Principles" identifies transmission planning/operations areas that the Az ISA will participate subject to the Az ISA Board's direction.

"2. Subject to the Board's Direction, the Az ISA Executive Director shall:

2.1 Participate in the determination of TTC and Committed uses within the Interconnected Transmission System and revisions thereto.

2.2 Cause the Az ISA to become an affiliate member of the WSCC.

2.3 Participate in SWRTA-sponsored regional coordinated transmission planning efforts.

2.4 Attend, as needed, WSCC Operational Transfer Capability Study Group (OTCSG) meetings for discussion of seasonal ratings on qualified paths within the AZ-NM sub-region of the WSCC.

2.5 As Operating Committee chair, preside over efforts to achieve consistent application of Committed Use determinations within the Interconnected Transmission System.

2.6 Participate in Arizona joint-utility operating and planning study efforts for TTC.

2.7 Participate in the coordination of transmission maintenance schedules among TPs."

Az ISA By-laws

"5.3.2 Participate in (i) operating studies used to determine TTC, (ii) coordination of transmission maintenance schedules, (iii) Member control area operators' and transmission owners' determination of TTC, and (iv) determination of committed uses on the Interconnected Transmission System"

ACC Rule R14-2-1609

R14-2-1609D-5 "The Arizona Independent Scheduling Administrator shall implement a transmission planning process that includes all Arizona Independent Scheduling Administrator participants and aids in identifying the timing and key characteristics of required reinforcements to Arizona transmission facilities to assure that the future load requirements of all participants will be met"

Phase 2, Task 3 - Implementation Plan

I.	Equipment and Resources	2 High-end PC workstations
II.	Staffing	2 – Planning engineers
3.	Capital	Workstations and office equipment Total 20K
4.	O and M Expenses	Payroll $200K
5.	Timeframe	Post October 15, 2000
6.	Implementation Plan	Hire experienced personnel, procure hardware and software.
7.	Contingency Plan	Participate in SWRTA, WSCC and Arizona operating and planning studies. Continue to recruit for planning engineers.

Phase 2, Task 3 – Plan Detail and Costs

State Wide Transmission Planning				
Item	Function	Capital $1000	O and M $1000/yr	Staffing Requirements
1	State wide planning	20	200	
	Total	20	200	2

Az ISA Costs	
Cost Item	$/yr
O and M	200,000
Capital for 2yr	10,964
Total	$210,964

Phase 3, Task 1 - Additional PM Requirements -- Allocated Retail Network Transmission Protocol (ARNT) and Energy Imbalance (EI) Trading, Auction and Settlements

Implementation Directives

Protocols Manual

Protocols Manual Section V "Allocated Retail Network Transmission Protocol" identifies ARNT auction and trading mechanisms.

Protocols Manual Section IX "Energy Imbalance Protocol" identifies EI trading and settlement mechanisms

Phase 3, Task 1 - Implementation Plan

I.	Equipment and Resources	2 PC workstations
II.	Staffing	2 – Accounting Technicians
III.	Capital	Workstations and office equipment Trading and settlement software Total 1,020K
IV.	O and M Expenses	Payroll 100K
V.	Timeframe	Board approval of business plan prior to June 30,2001 and competitive retail load levels reach 500 MW
VI.	Implementation Plan	Hire experienced personnel, procure hardware and software.
VII.	Contingency Plan	None

Phase 3, Task 1 - Plan Details and Costs

Additional Requirements -- ARNT and EI				
Item	Function	Capital $1000	O and M $1000/yr	Staffing Requirements
1	ARNT and EI	10	2,100	2
	Total	10	2,100	2

Az ISA Costs	
Cost Item	$/yr
O and M	2,100,000
Capital for 2yr	5,482
Total	$2,105,482

APPENDICES

- Appendix A - Az ISA Membership List
- Appendix B - Board of Directors
- Appendix C - April 7, 2000 Resolution

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

APPENDIX A

Transmission Facilities Providers Class Chair – Mike Raezer, TEP

Member	Representative	Alternate
Arizona Electric Power Cooperative (AEPCO)	Larry D. Huff	Patricia Cooper
Arizona Public Service Company (APS)	Cary Deise	Robert Smith
Electrical District #3 of Pinal County	Grant R. Ward	Dennis L. Delaney
Graham County Electric Cooperative	Nelson Peck	Larry D. Huff
Tucson Electric Power Company (TEP)	Michael Raezer	Ed Beck

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

Local Load Serving Entities Class Chair – Resal Craven, Citizens Utilities

Member	Representative	Alternate
Aguila Irrigation District	Henry A. Brubaker	Dennis L. Delaney
Ak-Chin Indian Community	Leonard S. Gold	Dennis L. Delaney
Buckeye Water Conservation & Drainage District	Jackie Meck	Dennis L. Delaney
Chandler Heights Citrus Irrigation District	Dan Kleinman	Dennis L. Delaney
Citizens Utilities Company	Resal A. Craven	Tyge Legier
City of Mesa	John Branch	Jerry Brouwer
City of Safford/Gila Resources	Kenneth Mecham	Dennis L. Delaney
City of Williams	Dennis Dalbeck	Michael Margrave
Duncan Valley Electric Cooperative	Jack Shilling	Patricia Cooper
Electrical District #7 of Maricopa County	R. D. Justice	Dennis L. Delaney
Electrical District #8 of Maricopa County	James Downing	Dennis L. Delaney
Electrical District #1 of Pinal County	Grant R. Ward	Dennis L. Delaney

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

Member	Representative	Alternate
Electrical District #2 of Pinal County	Thomas S. Martin	Andrew McBride
Electrical District #4 of Pinal County	Ron McEachern	Dennis L. Delaney
Electrical District #5 of Pinal County	William D. Woehlecke	Dennis L. Delaney
Electrical District #6 of Pinal County	Henry C. Douglas	Dennis L. Delaney
Harquahala Valley Power District	Jeffrey J. Woner	Dennis L. Delaney
HoHoKam Irrigation & Drainage District	Jack Long	Thomas S. Martin
Maricopa Water District	James R. Sweeney	Dennis L. Delaney
McMullen Valley Water Conservation & Drainage District	James D. Downing	Dennis L. Delaney
Navajo Tribal Utility Authority	Randall N. Medicine Bear	Walter F. Wolf, Jr.
Ocotillo Water Conservation District	Jackson Bogle	Dennis L. Delaney
Page Electric Utility	William Kent Romney	Rolland McHaney
Roosevelt Irrigation District	Stanley H. Ashby	Dennis L. Delaney

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

Member	Representative	Alternate
Salt River Project	Robert E. Kondziolka	Jessica J. Youle
San Tan Irrigation District	Ardith Viste	Dennis L. Delaney
Sulphur Springs Valley Electric Coop.	Creden W. Huber/ Anselmo Torres	Patricia Cooper
Tonopah Irrigation District	Elizabeth Story	Dennis L. Delaney
Town of Thatcher	Terry Hinton	Dennis L. Delaney
Town of Wickenburg	Tom Candelaria	Dennis L. Delaney
Trico Electric Cooperative	Charles N. Emerson	Ron Brown
Wellton-Mohawk Irrigation & Drainage District	Cory Prochaska	C. L. Gould

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

Aggregators Class Chair – Patricia (Trish) Gambino

Member	Representative	Alternate
Arizona Public Service Energy Services	Bob Anderson	Barbara Klemstine
Avra Valley Irrigation & Drainage District	John Kai, Jr.	Michael A. Curtis
Cortaro-Marana Irrigation District	Robert Condit	Michael A. Curtis
Eastern Competitive Solutions	Leroy Michael	Michael A. Curtis
Mohave Electric Cooperative, Inc.		Leroy Michael
Navopache Electric Cooperative, Inc.	Leroy Michael	
New Energy Ventures Southwest	Phil Harper	Tracey Fitchitt
PG&E Energy Services	Patricia A. Gambino	Charles Post

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

Independent Generators & Wholesale Power Marketers

Class Chair – Vann E. Prater, Dynegy

Member	Representative	Alternate
Arizona Power Authority	Donald J. Esgar	James P. Bartlett
California Power Exchange, Corp.	Martin B. Ochotorena	Kenneth A. Fiscella
Calpine	Ralph Hollenbacher	Richard Zahner
Constellation Power Source, Inc.	Bruce McAllister	Jason Cox
Dynegy, Inc.	Vann E. Prater	Barry N. P. Huddleston
Griffith Energy	Dana L. Diller	Jay I. Moyes
Pinnacle West Energy Corporation	David Rumolo	Justin Thompson
Reliant Energy Wholesale Group	John Orr	John Simpson
Southern Company Energy Marketing	Richard Menar	Bobby Campo

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

End Users Class Chair – Andrew Gregorich, BHP Copper

Member	Representative	Alternate
Agri-Business Council of AZ	David C. Iwanski	Joseph F. Abate
Arizonans for Electric Choice & Competition	Kevin Higgins	
Central Arizona Water Conservation District	John D. Newman	Tom Delgado
Honeywell	David M. Mills	Kevin Higgins
Irrigation & Electrical Districts Association	Robert S. Lynch	R. Gale Pearce
ON Semiconductor	Dave Madden	
Phelps Dodge Corporation	Tim Summers	Choi Lee
Residential Utility Consumers Office	Prem Bahl	Lindy Funkhouser

Arizona Independent Scheduling Administrator Association (Az ISA)
Membership List

***Ex officio* Class**

Member	Representative	Alternate
Arizona Corporation Commission	Ray Williamson	Asher Emerson

APPENDIX B

Arizona Independent Scheduling Administrator Association (Az ISA)

Board of Directors
April 2000

Transmission Facilities Providers Class

Larry Huff, Arizona Electric Power Cooperative (2 years)
Cary Deise, Arizona Public Service Company (1 year)

Local Load Serving Entities Class

Dennis Delaney, K. R. Saline & Associates (consultant) (2 years)
Rob Kondziolka, Salt River Project (1 year)

Aggregators Class

Patricia (Trish) Gambino, PG&E Energy Services (1 year)
Leroy Michael, consultant (2 years)

Independent Generators and Wholesale Power Marketers Class

Vann E. Prater, Dynegy (1 year)
Vacant (2 years)

End-Use Customers Class

Kevin Higgins, Energy Strategies, Inc. (consultant) (2 years)
Prem Bahl, Residential Utility Consumers Office (1 year)

Acting Executive Director

Patrick J Sanderson, Arizona ISA

APPENDIX C

APRIL 7, 2000 AISA Resolution
AS AMENDED AND APPROVED BY THE AISA BOARD ON APRIL 7, 2000.

The AISA Board recognizes that the functions preformed by the AISA are on an interim basis until a FERC approved Regional Transmission Organization is established. Therefore, the Board conditionally accepts the AISA Protocols as presented April 7, 2000. The Board further approves implementation of the Protocols on an interim basis subject to the following conditions:

1) The FERC regulated transmission owners (APS and TEP) will file the Protocols with FERC with notice of this Board's conditional approval in substitution for the draft AISA protocols which they had previously filed;

2) AISA will recognize SRP's substitution of the applicable portion of its Board approved protocols for the ARNT (except as set forth in (4) below), Must Run and Energy Imbalance Protocols. For those protocols other than ARNT, Must Run and Energy Imbalance SRP will recommend to the SRP Board to adopt the AISA protocols as soon as practicable and will fully implement the AISA Protocols when 50% of the direct retail access load in Section 4.3.4.1 (5) of AISA Protocol No. V is achieved For the ARNT, Must Run and Energy Imbalance Protocols SRP will recommend to the SRP Board to adopt the AISA Protocols when both of the following occur: a) direct access load in the SRP distribution territory reaches 200 MW and b) statewide retail access reaches 500 MW.

3) By means of an appropriate instrument submitted with their regulatory authority and the AISA, the AISA transmission owners (APS, TEP, AEPCO and SRP) agree that solely for the limited purpose of furthering the interim AISA functions, each shall instruct its Scheduling Coordinator (for standard offer service) to exchange part of its standard offer ARNT as set forth in Paragraph 4 below, (approximately 500 MW for the State) to competitive Scheduling Coordinators serving load within the transmission owner's service area until such time as the AISA implements an ARNT auction and trading mechanism. Any AISA ARNT auction and trading or Energy Imbalance trading will not be implemented by the Board until competitive direct access load in Arizona exceeds 500 MW and the condition in Paragraph 7 below is met. Therefore, with regard to Protocol V and Protocol IX, implementation approval is granted at this time only for Section 4 of Protocol No. V (ARNT) as revised below, Section 3.6.1 of Protocol No. IX (Energy Imbalance), and such other sections of Protocol Nos. V and IX as may be necessary to implement these sections, respectively;

4) The following changes shall be and hereby are made to the ARNT protocol:

   a) Section 4.3.4.1 is deleted in its entirety and replaced with the following:

      "4.3.4.1 As an addendum to the procedure specified in Section 4.3.3, until any ARNT auction is approved and implemented, each TP's Standard Offer SC shall exchange up to an amount of MW (set forth by the individual TP below) of ARNT from the Standard Offer SC to Competitive SCs for service to retail load within the transmission owner's service territory, at the request of the Competitive SCs, in return for a Competitive SC's exchange to Standard Offer SC of an equal amount of ARNT on other ARNT paths to the same Load Zone.

      (1) For Arizona Public Service Company (APS): The amount shall equal 200 MW from Palo Verde to the APS Load Zones.

      (2) For Tucson Electric Power Company (TEP): The amount shall equal 80 MW from Four Corners to the TEP Load Zone.

      (3) For Arizona Electric Power Cooperative, Inc. (AEPCO): The amount shall equal 4 MW from Westwing to Vail to service Retail Network Load in the Southeastern Arizona Load

Zone and 5 MW at Westwing for deliveries to the Western Area Power Administration to service Retail Network Load in the Mohave Electric Cooperative Load Zone.

(4) For Citizens Utilities Company (Citizens Utilities): This Section 4.3.4.1 shall not apply to Citizens Utilities because there is only one ARNT path to each relevant Citizens Utilities' Retail Network Load Zone.

(5) For Salt River Project Agricultural Improvement and Power District (SRP): The amount shall equal 200 MW from Palo Verde to the SRP Load Zone."

b) In Section 4.3.4.2, the commitment dates of "September 1, 2000" and "December 31, 2000" shall be changed respectively to "September 1, 2001" and "December 31, 2001";

5) The Protocols shall not be used to establish a precedent for transmission service to wholesale customers or for transmission service to be developed under Desert STAR and FERC regulated transmission owners shall include such statement and their agreement to it in any filing made with FERC seeking approval of implementation of the Protocols conditionally approved herein;

6) An AISA Monitoring Plan shall be developed and presented to the Board for approval prior to September 1, 2000;

7) The AISA shall develop a Business Plan for consideration and approval by this Board prior to June 30, 2001, covering all aspects of AISA activities after that date including any ARNT auction or energy imbalance trading mechanism;

8) For energy imbalance penalties the dead band will be + or – 10%; outside the dead band the penalty will be 10% of the cost. The matrix in the protocols will be deleted.

9) The FERC Filing Package to be presented to this Board for its consideration and approval prior to filing shall be consistent with this resolution. The AISA staff shall simultaneously present to the Board a detailed plan indicating how the AISA will perform the obligations it represents it will perform upon approval of its filing;

10) Change Section 4.8 of the March 2000 draft Protocols Part VIII, Must Run to read: Recovery of Must-Run Generation Fixed Costs occurs as part of the retail end-use customers' service charge regulated by the ACC. Must-Run Generation Fixed Costs are the Fixed Costs associated with specific Must-Run Generation units. Must-Run Generation Fixed Costs will be limited to the percentage of each Must-Run Generation unit's annual usage that is attributable to providing Must-Run Generation service.

EXHIBIT B

PROTOCOLS MANUAL

Arizona Independent Scheduling Administrator Association (Az ISA)

May 4, 2000

ARIZONA ISA PROTOCOLS MANUAL
AS AMENDED AT THE MAY 4, 2000 BOARD MEETING

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I. Introduction

1. History

On September 7, 1994, the ACC conducted a workshop on retail electric competition. The purpose of the workshop was for the ACC, the ACC staff, the utilities, and other concerned parties to learn more about the issues surrounding the potential for competition in the retail supply of electricity. The workshop was Arizona's first step in identifying and addressing policy issues regarding retail electric competition and it resulted in the formation of an Electric Competition Working Group.

At an Electric Competition Working Group meeting held on January 25, 1995, three task forces were formed: (1) Energy Efficiency and Environment, (2) Regulatory, and (3) System and Markets. The System and Markets task force was charged with addressing transmission access and prices; transmission and generation system operation; system reliability; and other related issues. This task force was the first to investigate the various methods for operating a transmission system. These three task forces met during the next eighteen months and helped develop a set of draft rules on electric competition.

On August 28, 1996, ACC staff filed a set of draft rules on retail competition for review by all interested parties. Additional workshops were held to receive comments and three public comment meetings were held in early December 1996. After extensive public input at the workshops and the public comment meetings, the ACC issued Decision No. 59943 on December 26, 1996 adopting the Competition Plan.

The ACC's decision resulted in the formation of several different working groups with an objective to ensure the transition to a competitive retail electric market. ACC staff conducted numerous meetings of those working groups, addressing issues that included metering, meter reading, billing, safety, reliability, ancillary services, committed uses, must-run generation, development of operational protocols, and the feasibility of developing an ISO or ISA. These working groups conducted meetings in 1997 and the first seven months of 1998 to provide suggestions for amending the Competition Plan. Decision No. 61071, issued by the ACC on August 10, 1998, adopted rule amendments on an emergency basis addressing a number of pertinent technical, administrative, and regulatory issues needed in order to implement electric competition in Arizona.

In parallel with this process, the Arizona legislature passed the Electric Power Competition Act. The Act was signed into law on May 29, 1998. The Act requires certain public power entities and the ACC to coordinate their efforts in the transition to retail competition to promote consistent statewide application of rules, procedures, and orders.

I. INTRODUCTION

The stakeholders in the Competition Plan reached general consensus that to provide comparable non-discriminatory retail transmission access, and to facilitate a robust and efficient competitive electric market in Arizona, an ISO should be implemented. Consequently, the stakeholders in the Competition Plan and others in the Desert Southwest region undertook a process to evaluate the feasibility of forming Desert STAR, a regional ISO that would include Arizona. Efforts to form Desert STAR continue, spurred by the Notice of Proposed Rulemaking on RTOs, Docket No. RM99-2-000, issued by the FERC on May 13, 1999.

Recognizing that Desert STAR could not be operational in the time frame necessary for implementation of the Competition Plan, the ACC's Reliability and Safety Working Group formulated a plan for an Az ISA that would operate in the interim. This concept was endorsed by the ACC, which set forth requirements for an ISA in its proposed rules governing implementation of the Competition Plan, [Section R14-2-1609]. As a result, the Az ISA was formed in September 1998 as a non-profit Arizona corporation to support the provision of comparable, non-discriminatory retail access to the Arizona transmission system to facilitate a robust and efficient competitive electric market in Arizona.

2. Phase-In of Retail Electric Competition in Arizona

Under the Competition Plan and the Act, retail electric competition in Arizona is being implemented in two phases. Stated very generally, 20% of the retail electric load in Arizona is eligible to elect to purchase commodity electricity and other competitive services starting in 1999, with eligibility extending to 100% of retail electric customers as of January 2001.

Additionally, the Act exempts certain ESPs from the requirement to provide for retail electric competition in their service territories: small cities and towns; certain electrical, power, irrigation and water conservation districts; the Arizona Power Authority; and larger cities and towns that affirmatively elect not to sell electric generation service outside their service territories. [1]

3. Functions of the Az ISA/Protocols Manual and Amendments Thereto

The Az ISA is intended to serve as an interim electric transmission scheduling administrator to facilitate the operation of Arizona's competitive electric retail market until the implementation of an RTO that supercedes the Az ISA.

During the development of the plan for the Az ISA, the stakeholders determined the need for a set of operational and administrative protocols — the "Protocols Manual" — to govern operations of the Az ISA. This Protocols Manual has been developed through a participatory process open to all stakeholders. The Protocols Manual, as set forth herein, defines the duties to be performed and the procedures to be followed by the Az ISA,

[1] See the definition of Public Power Entity, A.R.S. §30-801(16).

CAOs and TPs that become members of the Az ISA, and SCs. It is intended that the Protocols Manual will result in the CAOs' and TPs' employment of uniform and non-discriminatory standards and procedures for the use of the Interconnected Transmission System for retail electric service.

The Protocols Manual addresses the following subjects as they affect transmission for retail electric competition: total transmission capability determination; retail transmission allocation; retail transmission reservations and OASIS; congestion management; emergency operations; must-run generation; ancillary services; energy imbalance for retail transmission; scheduling; and after-the-fact checkout/settlement for retail transmission. Implementation of the ARNT, Energy Imbalance and Must Run Protocols is to occur in two phases. In Phase I, which is to commence upon the effective date of the Protocols Manual, the following elements will be implemented:

- The temporary ARNT allocation mechanism as set forth in Section 4.3.4.1 of the ARNT Protocol.

- Temporary Must-Run Generation Procedures as set forth in Section 6 of the Must-Run Protocol.

- The temporary imbalance settlement mechanism as set forth in Section 3.6.1 of the Energy Imbalance Protocol.

In Phase II, the balance of the ARNT, Must-Run and Energy Imbalance Protocols, are to be implemented. Phase II commences when competitive direct access load in Arizona exceeds 500 MW and the Board has approved a business plan covering all aspects of Az ISA activities after that date, including an ARNT auction and energy imbalance trading mechanism.

In addition to insuring compliance with the Protocols Manual throughout the two phases of Protocols implementation, as described above, the Az ISA will monitor the operations of the Interconnected Transmission System and will provide oversight and take action, as required, to insure compliance with FERC-recognized standards of conduct related to transmission access and the operation of the Interconnected Transmission System. The Az ISA will also act on complaints related to the application of the Protocols Manual and such standards of conduct, and resolve other issues related to discriminatory treatment in the provision of transmission service.

Further, the Az ISA will monitor conditions indicating market anomalies or market inefficiencies and take action to remedy such conditions should they arise. In this regard, TPs, CAOs and SCs will be obligated to maintain, and to provide to the Az ISA in a format reasonably requested by the Az ISA, complete and accurate records concerning Load forecasts, Schedule reservations and ARNT adjustments for a period of 13 months, except that voice recordings need only be retained for 30 days. If a matter is

in dispute, however, any records related to the dispute would need to be retained until the matter is resolved.

The Az ISA will enter into a "Schedule Administration Agreement" with each TP and CAO which is a member of the Az ISA which will further elaborate upon each party's respective functions and responsibilities as set forth in this Protocols Manual. Further, the Protocols Manual is to be made part of the Az ISA's and the TPs' OATTs. All tariffs and other agreements affecting provision of retail transmission will be filed with the FERC by the Az ISA and by any member of the Az ISA with an OATT and must be accepted or approved by the FERC.

The Board of Directors of the Az ISA recognizes the Protocols Manual as a dynamic document that will need to change as conditions warrant. For this reason, a standing Operating Committee was formed with responsibility for continued development and refinement of the Protocols Manual. Any member may request the Operating Committee to consider Protocols Manual revisions. Any revisions to the Protocols Manual recommended by the Operating Committee will require approval by the Az ISA Board of Directors, amendment as necessary of the tariffs and agreements referenced above, and revised filings with FERC, as appropriate.

The Protocols Manual is not intended to create precedent for any governing agreement, tariff, protocols or associated agreements of Desert STAR or other RTO which may be formed that includes Arizona parties and transmission facilities. An Az ISA member or a party to an Az ISA-related agreement will not be held to have endorsed or agreed to any portion of the Protocols Manual for incorporation into the governing documents, tariff, protocols or associated agreements of Desert STAR or other RTO.

4. Scheduling Coordinators

The utilization of SCs is a significant feature of Arizona's framework for retail electric competition, as developed through the ACC's stakeholder working group process, reflected in the Competition Plan, and incorporated in this Protocols Manual. Utilization of SCs is required for scheduling of all service to retail electric loads. There is no requirement for wholesale loads to be represented by SCs. Wholesale transmission will continue to be provided pursuant to the TPs' OATTs.

It is anticipated that the economic benefits of providing and charging for SC services will attract a pool of qualified SCs sufficiently large enough to provide competitive SC services in Arizona. The Az ISA will conduct a survey to develop a list of interested providers.

Each entity seeking certification as an SC will be required to enter into an SC Certification Agreement with the Az ISA. Execution of said document will signify the entity's agreement to comply with and be bound by the Protocols Manual, the dispute

resolution provisions of the Az ISA By-Laws, and the Az ISA Tariff. At a minimum all SCs will be required to meet the following criteria:

- Twenty-four hour manned operation for all days of the year.
- The ability to interface with the CAOs' and TPs' websites, requiring dedicated, full time Internet access with a Web browser.
- Twenty-four hour telephone and facsimile capabilities.
- Electronic submission of load forecasts, schedules (including NERC tags), and actual customer load data.
- Availability for on-site inspection of operations of SC services and unannounced site visits.
- Agreement to notify in writing the CAOs, TPs and Az ISA regarding changes in office address, telephone and facsimile numbers, or e-mail addresses, one week prior to the change.

SCs will also be required to enter into a "Scheduling Coordinator Agreement" with each affected TP, setting forth the following SC responsibilities: forecasting their customers' load requirements; submitting balanced schedules in which resources equal the customers' loads plus transmission and distribution losses; arranging for necessary transmission and Ancillary Services; purchasing or providing Local Generation as necessary for delivery into Load Zones with transmission import limitations; responding to system contingencies and curtailments on pre-schedule and real time basis as directed by the CAOs or TPs; and complying with the after-the-fact schedule checkout and settlement processes. The Scheduling Coordinator Agreement will also set forth applicable creditworthiness standards, address the issue of the liability of the Az ISA with respect to actions taken hereunder, and set forth additional criteria specific to interfacing with the TP's system, as required.

As a related matter, each Third Party Supplier (defined as entities other than the Az ISA, TPs, CAOs or SCs) will be required to enter into a "Generator Agreement" with the applicable TP or CAO which will set forth the terms and conditions under which the Third Party Supplier will provide electric energy and Ancillary Services for the applicable Load Zone.

The Protocols Manual recognizes two types of SCs: Competitive SCs and Standard Offer SCs. Competitive SCs provide SC services for those retail electric customers that elect to purchase competitive electric service. Standard Offer SCs provide SC services for their bundled retail service customers, i.e., those electric customers that cannot (because of phase-in) or do not elect to participate in retail competition.

5. Scheduling for Wholesale Transactions and Treatment of Existing Agreements

The rights and obligations of transmission customers requesting and receiving wholesale network integration transmission service or point-to-point transmission service and the TP providing the service are defined by the TP's OATT. The Protocols do not change the way wholesale transmission service is either requested or provided.

Similarly, the Protocols do not impact the provision of transmission service by TPs to customers with Existing Agreements. Existing Agreements will continue to be implemented pursuant to their terms and conditions.

6. Disputes

Disputes arising from the application or implementation of these Protocols shall be resolved pursuant to the dispute resolution procedures contained in Section 6 of the Az ISA By-Laws.

II. Definitions

ACC – The Arizona Corporation Commission

Act — The Electric Power Competition Act, A.R.S. §§ 30-801, et seq.

Allocated Retail Network Transmission (ARNT) — Each SC's pro-rata share of transmission paths within a given TP's transmission network that are reserved as a Committed Use for RNITS.

Ancillary Services — Interconnected operations services identified by the FERC under Order No. 888, as necessary to effect a transfer of electricity between purchasing and selling entities and for which a TP must provide under the TP's OATT. The six Ancillary Services identified by FERC are: Scheduling, System Control and Dispatch Service; Reactive Supply and Voltage Control from Generation Sources Service; Regulation and Frequency Response Service; Energy Imbalance Service; Operating Reserve: Spinning Reserve Service; and Operating Reserve: Supplemental Reserve Service.

Arizona Independent Scheduling Administrator Association (Az ISA) — A non-profit Arizona corporation established: to coordinate development of operational and administrative protocols necessary to implement retail direct transmission access in the State of Arizona; to act as a scheduling administrator on behalf of the providers and users of retail transmission service on the Interconnected Transmission System within the State of Arizona; and to oversee scheduling, reservation and OASIS management for RNITS by CAOs and TPs which are members of the Az ISA.

Available Transfer Capability (ATC) — A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above Committed Uses.

Balanced Schedule — A Schedule for which the sum of a SC's Retail Network Resource Schedules, in whole megawatt increments, including Local Generation Requirement allocations, equals the SC's submitted Schedule of Retail Network Load, adjusted for losses, in whole megawatt increments, with respect to all entities for which the SC submits Schedules.

Committed Uses (CU) — The amount of transmission capacity that is unavailable for sale to the marketplace due to reservations for network transmission service uses; prudent reserves; existing contractual commitments for power purchases, exchanges, and sales; existing contractual commitments for transmission service; other pending potential uses of transfer capability pursuant to pending transmission requests; and a transmission reliability margin. Committed Uses are further defined in the report entitled "Determination of Available Transfer Capability within the Western Interconnection", adopted by the Colorado Coordinated Planning Group, Northwest Regional Transmission Association, Southwest Regional Transmission Association, Western Regional Transmission Association and Western Systems Coordinating Council in March 1997, and as may be subsequently revised.

II. DEFINITIONS

Competition Plan — The Retail Electric Competition Rules adopted in Decision No. 59943 on December 26, 1996 by the ACC, as amended, set forth in the Arizona Administrative Code at §§ R14-2-1601 et seq.

Competitive Scheduling Coordinator (Competitive SC) — A SC that schedules power transactions for end-use electric customers purchasing commodity electricity from ESPs.

Control Area (CA) — An electric system or systems, bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other CAs and contributing to frequency regulation of the Western Interconnection.

Control Area Operator (CAO) — An operator of a CA which has executed an SAA. The rights and responsibilities of a CAO under these Protocols may be assigned to an agent designated by the CAO, if so specified in the applicable SAA.

Curtailment — A reduction in the delivery of scheduled capacity or energy.

Direct Access Service Request (DASR) — A form that contains all necessary billing and metering information to allow end-use customers to switch ESPs. This form must be submitted to the UDC by either the customer's ESP or the customer.

Discretionary Local Generation — Local Generation that SCs schedule at their own volition for Retail Network Load within a Load Zone.

DLF — Distribution Loss Factor.

Dynamic Schedule — A telemetered reading or value that is updated in real time and is used as a Schedule in the automatic generation control/area control error equation, the integrated value of which is treated as a Schedule.

Electric Service Provider (ESP) — A company which is supplying, marketing, or brokering at retail any of the competitive services described in the ACC's Competition Plan. ESPs referenced in the Az ISA Protocols are those that supply the competitive services of electrical energy.

EHV — Extra high voltage, generally 230 kilovolts (kV) and above.

Emergency — Any abnormal system condition that requires automatic or immediate manual action to prevent or limit loss of transmission facilities or generation supply that could adversely affect the reliability of the electric system.

Energy Imbalance — In any hour, the difference (in KWh) between a SC's actual energy delivery to the TP and the SC's actual Retail Network Load, including all applicable losses.

II. DEFINITIONS

Energy Imbalance Service — The supplying of energy (positive or negative), by the TP to an SC, in a quantity equal to the SC's Energy Imbalance.

Existing Agreement — All contractual obligations for use of a TP's transmission system in place prior to the effective date of the Az ISA filing as established by the FERC.

FERC — The Federal Energy Regulatory Commission.

Final Schedules —Schedules used in the settlement for transmission and Ancillary Services and NERC Policy 1F, Inadvertent Interchange Standard, and which have been updated for real-time operating conditions and have been verified by the parties.

Firm Energy — Energy purchased from a unit which gives rise to an obligation to provide reserves in accordance with the applicable provisions of the SRSG.

Fixed Cost — Those costs of generation, transmission and/or distribution of electricity which do not vary with the kilowatt-hours (kWhs) produced, sold, or transmitted. These are annual costs associated with expenses that are (or would be) incurred by an entity irrespective of the output of its generation resources or the throughput of transmission and/or distribution facilities used for the delivery of energy. Fixed Cost includes expenses such as: depreciation, taxes (income, payroll, property), insurance, cost of debt money, return on equity or internally generated investment, rents that are unavoidable, administrative and general (A&G) and operations and maintenance (O&M) expenses that are not avoidable, allocated general plant, allocated intangible plant, and cash working capital.

Generator Agreement — An agreement entered into by the Third Party Supplier and the applicable TP setting forth the terms and conditions under which the Third Party Supplier will provide electric energy or Ancillary Services for the applicable Load Zone.

Holiday — Those holidays specified by the CAO or TP, including New Year's Day, Martin Luther King Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, the Friday after Thanksgiving Day and Christmas. If a holiday falls on a Saturday, it is observed on the preceding Friday. Sunday holidays are observed on the following Monday.

Import Limit — The maximum amount of electric power that can be transferred into a Load Zone while maintaining Interconnected Transmission System reliability. Some factors to be considered when assessing Interconnected Transmission System reliability are voltage stability, thermal limits and resource deficiencies.

Import Limited Load Zone — A Load Zone with a defined Import Limit which will vary with generation and transmission operating conditions and Interconnected Transmission System configuration.

II. DEFINITIONS

Interconnected Transmission System — That portion of each TP's transmission system which is utilized for bulk power transactions within the State of Arizona.

ISA — An independent scheduling administrator.

ISO — An independent system operator.

kW — Kilowatt, or 1,000 watts.

kWh — Kilowatt-hour, or 1,000 watts per hour.

Load — The amount of electric power delivered or required at any specified point or points on a system.

Load Profiling — A process of estimating end-use customers' hourly energy consumption based on measurements of similar customers.

Load Zone — A defined geographic region of a UDC's service territory.

Local Generation — Generation located within a Load Zone.

Local Generation Requirements — The amount of Local Generation required to avoid exceeding scheduling imports exceeding a Load Zone's Import Limit.

Loop Flow — The inherent characteristic of an interconnected transmission system whereby there is a difference between the scheduled and actual power flow, assuming zero inadvertent interchange, on a given transmission path.

Loss Factors — Factors projected by the TP that will be applied to provide for the recovery of electrical losses on the TP's transmission and/or distribution system.

Market Price — For the purpose of settlement for Energy Imbalance service, Market Price shall be deemed to equal:(I) for on-peak hours, the California ISO SP-15 Hourly Ex Post price for the hour, divided by the average of the California ISO SP-15 Hourly Ex Post indices for the on-peak hours for the day and then multiplied by the Dow Jones Palo Verde Daily firm On-Peak Index for the day, plus associated transmission costs, if any; (ii) for off-peak hours, the California ISO SP-15 Hourly Ex Post price for the hour, divided by the average of the California ISO SP-15 Hourly Ex Post indices for the off-peak hours for the day and then multiplied by the Dow Jones Palo Verde Daily firm Off-Peak Index for the day, plus associated transmission costs, if any.

Must-Offer Generation — The Must-Run Generation less any previously committed Local Generation.

Must-Run Generation — Local Generation that must be in operation to maintain for electric system security.

MW — Megawatt, or 1,000 kilowatts (kW).

MWh — Megawatt hour, or 1,000 kilowatts per hour.

NERC — The North American Electric Reliability Council.

Non-Compliant — A condition where an entity fails to fulfill its obligation under the Protocols. Such a condition may constitute a material breach of the SC Certification Agreement, SCA, SAA and/or Generator Agreement and may result in penalties, suspension or termination of the entity's rights under such agreements.

OASIS (Open Access Same-Time Information System) — The information system and standards of conduct contained in Part 37 of the FERC's regulations and all additional requirements implemented by subsequent FERC's orders dealing with OASIS.

Open Access Transmission Tariff (OATT) — Az ISA or individual TP tariff for open access transmission service filed with the FERC.

Operating Committee — A standing committee of the Az ISA formed to take on the responsibility for the continuing development and refinement of the Protocols.

Operating Day —The day of Schedule implementation.

Operating Hour —The hour for which Schedules are implemented.

Operating Month —The month in which the Operating Day occurs.

Operating Reserve: Spinning Reserve Service — The providing of unloaded generation capacity, under the control of a TP, which is synchronized, frequency responsive, ready to serve additional demand immediately and which is fully available within ten minutes.

Operating Reserve: Supplemental Reserve Service — The providing of operating reserve capable of serving demand within ten minutes, or interruptible load that can be removed from the system in ten minutes.

Point-to-Point Transmission Service — The reservation and transmission of capacity and energy on either a firm or non-firm basis from the point(s) of receipt to the point(s) of delivery.

II. DEFINITIONS

Protocols — The operational and administrative procedures used by the Az ISA, CAOs, TPs and SCs to implement retail direct transmission access in the State of Arizona as stated herein and as may be revised from time to time.

Regulation and Frequency Response Service — The providing of generating capacity that follows moment-to-moment variations in the demand or supply in a Control Area and maintains scheduled interconnection frequency.

Retail Network Load — The Load that a SC designates for RNITS under the TP's OATT.

Retail Network Integration Transmission Service (RNITS) — Transmission service provided to a SC for use to serve its share of Retail Network Load within a TP's service area pursuant to the TP's OATT.

Retail Network Resource — A resource owned, purchased or leased to serve Retail Network Load. Retail Network Resources do not include any resource or any portion thereof, which is committed for sale to third parties or otherwise cannot be called upon to meet Retail Network Load on a non-interruptible basis.

Reactive Supply and Voltage Control From Generating Sources Service — The providing of reactive supply through changes to generator reactive output to maintain transmission line voltage and facilitate electricity transfers.

Regional Transmission Organization (RTO) — An entity that meets the minimum characteristics, performs the functions and accommodates the open architecture conditions set forth at Subpart F of Part 35 of the FERC's regulations.

SC Certification Agreement — An agreement to be entered into by the Az ISA with each entity seeking certification as an SC by the Az ISA.

Schedule — An agreed-upon quantity of energy (in megawatts), start and end times, beginning and ending ramp times and ramp rates, and transaction type required for delivery and receipt of power and energy between the contracting parties and the Control Area(s) involved in a power transaction.

Schedule Administration Agreement (SAA) — An agreement between the Az ISA and each TP and CAO which is a member of the Az ISA setting forth the duties to be performed and the procedures to be followed by the CAOs, TPs, SCs, and the Az ISA with respect to the operation of the Interconnected Transmission System.

Scheduling Coordinator (SC) — An entity that provides Schedules for power transactions over transmission or distribution systems to a TP and has been certified as an SC by the Az ISA.

II. DEFINITIONS

Scheduling Coordinator Agreement (SCA) — An Agreement between the TP and the SC setting forth SC's responsibilities in the following areas: forecasting of customer load requirements; submission of balanced schedules; arranging for necessary transmission and Ancillary Services; provision of Local Generation, as needed; responding to system contingencies and curtailments; compliance with after-the-fact schedule checkout and settlement processes. In addition, this agreement will set forth creditworthiness standards, address the issue of the liability of the Az ISA with respect to actions taken by the parties hereunder and set forth any additional criteria specific to interfacing with the TP's system, as required.

Scheduling, System Control, and Dispatch Service — The providing of service for: a) scheduling, b) confirming and implementing interchange schedules with other Control Areas, including intermediary Control Areas providing transmission service, and c) ensuring operational security during interchange transactions.

Standard Offer Scheduling Coordinator (Standard Offer SC) — A Scheduling Coordinator that schedules power transactions for bundled retail loads under standard offer rates.

Southwest Reserve Sharing Group (SRSG) — An agreement under which the parties pool certain generating resources to meet their reserve requirements set forth by NERC and the WSCC.

System Incremental Cost (SIC) — The cost ($/MWh) incurred or avoided by the TP as a result of providing Energy Imbalance Service under these Protocols, through the dispatch of generation or through purchases/sales with Third Party Suppliers.

Third Party Suppliers — Third Party Suppliers include any entity involved in the supplying of electric energy or Ancillary Services other than a CAO, TP, SC or the Az ISA.

TLF — Transmission Loss Factor.

Total Transfer Capability (TTC) — At any point in time, a transmission path's reliability limit, which can not exceed the rating of the path.

Trading Entity — An entity, created or engaged by the Az ISA and under its direction and control, which shall facilitate and administer after-the-fact trading of Energy Imbalances by SCs and settlement of Energy Imbalances.

Transmission Provider (TP) — An entity that owns, controls or operates facilities used for the transmission of electricity in interstate commerce and has executed an SAA. The rights and responsibilities of a TP under these Protocols may be assigned to an agent designated by the TP, if so specified in the applicable SAA.

II. DEFINITIONS

Unaccounted For Energy (UFE) — The difference between the energy delivered to the TP's system (internal generation and deliveries from resources outside the TP's system) and the end use Loads (determined by meters and load profiles), adjusted for the appropriate losses.

Utility Distribution Company (UDC) — The electric utility entity that constructs, operates and maintains the distribution system for the delivery of power to the end user.

Variable Cost — Those costs of generation, transmission or distribution of electricity that vary with the kWhs produced, sold, or transmitted.

WSCC — The Western Systems Coordinating Council.

WSCC Unscheduled Flow Reduction Procedure — A WSCC Procedure used by the CAO to alleviate Loop Flow on the transmission system.

WSCC Qualified Path — A transmission path that qualifies for curtailments due to unscheduled flow in accordance with the WSCC Unscheduled Flow Reduction Procedure.

III. Total Transmission Capability (TTC) Determination Principles

1 Each TP shall:

1.1 Determine TTC and Committed Uses for paths located within its transmission system. This will be done in consultation with the Operating Committee of the Az ISA.

1.2 Notify the Az ISA of changes to TTC for paths located within its transmission system.

2. Subject to the Board's Direction, the Az ISA Executive Director shall:

2.1 Participate in the determination of TTC and Committed Uses within the Interconnected Transmission System and revisions thereto.

2.2 Cause the Az ISA to become an affiliate member of the WSCC.

2.3 Participate in SWRTA-sponsored regional coordinated transmission planning efforts.

2.4 Attend, as needed, WSCC Operational Transfer Capability Study Group (OTCSG) meetings for discussion of seasonal ratings on qualified paths within the AZ-NM sub-region of the WSCC.

2.5 As Operating Committee chair, preside over efforts to achieve consistent application of Committed Use determinations within the Interconnected Transmission System.

2.6 Participate in Arizona joint-utility operating and planning study efforts for TTC.

2.7 Participate in the coordination of transmission maintenance schedules among TPs.

IV. Transmission Reservations and OASIS Management Principles

1. Purpose

The purpose of these principles is to delineate the role of the Az ISA with respect to Retail Network Integration Transmission Service (RNITS) reservation practices and OASIS management. The Az ISA shall implement a state-wide OASIS. Prior to the Az ISA's implementation of a state-wide OASIS, OASIS management for RNITS will continue to be performed by the TPs, with Az ISA oversight. After the Az ISA has implemented the state-wide OASIS, the Az ISA will administer this single state-wide OASIS for reservations for both RNITS and wholesale transmission service provided pursuant to the TP's OATT until such time as a RTO takes over such function.

2. Parties

The Transmission Reservations and OASIS Management Principles apply to the following entities:

2.1 SCs

2.2 TPs

2.3 Az ISA

3. General Conditions

3.1 There will be no change in the processing of requests for Point-to-Point Transmission Service by the TPs. TPs will continue to ensure that their OASIS systems comply with FERC requirements.

3.2 TPs will continue to provide wholesale transmission service pursuant to their OATTs. This Protocol is not intended to modify the provision of wholesale transmission services as specified in the TPs' OATTs nor to alter Existing Agreements.

4. Prior to Az ISA Implementation of a State-Wide OASIS:

4.1 Upon implementation of the Protocols, or as soon thereafter as reasonable and practicable, the Az ISA will have a "same-time" view into each TP's OASIS so that it can be actively notified of all new transmission reservation requests and transmission reservation status changes for both wholesale transmission service and RNITS. This same-time view will be implemented with the cooperation of the TPs and shall enable the Az ISA to view all information posted, including information otherwise only accessible to the respective TP.

4.2 Should the Az ISA request, it will be copied simultaneously by the TPs on all RNITS Schedules.

4.3 Az ISA will monitor release of ATC on each TP's OASIS.

4.4 Az ISA will begin to develop systems to allow it to calculate and update ATC.

5. Upon Az ISA Implementation of the State-Wide OASIS

5.1 All ATC for the TPs' transmission systems shall be posted on the state-wide OASIS.

5.2 The state-wide OASIS shall be used to receive and forward all wholesale and retail transmission reservation requests to the respective TPs.

5.3 All Ancillary Services and transmission access rights traded in secondary markets shall be posted on the state-wide OASIS.

V. Allocated Retail Network Transmission Protocol

1. Purpose

The Allocated Retail Network Transmission (ARNT) Protocol governs the allocation of Retail Network Integration Transmission Service (RNITS) among Competitive and Standard Offer SCs in Arizona's competitive retail electricity market.

The purpose of this Protocol is to ensure that each SC is provided comparable, non-discriminatory access to the TP's transmission system to serve the SC's share of total Retail Network Load. This objective will be met by: (i) the Az ISA's conducting of monthly transmission rights auctions of all of the transmission capacity reserved for Committed Uses for Retail Network Load on each of the transmission paths within a given TP's transmission system that is reserved as a Committed Use for RNITS; and (ii) the allocation to each SC of a pro rata share of the revenues associated with the monthly auctions, except for (iii) those Load Zones that are served by only one path on the system of the TP whose service area includes the Load Zone. For these Load Zones, each SC shall receive network service rights based on its pro rata share of the retail Committed Use reservation based on the same formula for calculating the amount of ARNT auction revenues that SC's receive in other Load Zones.

For the purposes of this Protocol, a TP's transmission system shall include, to the extent not prohibited by law or contract, all of those transmission rights which are provided to the TP under contract from a third party, where such rights both: (i) have historically been used to serve Retail Network Load; and (ii) the cost of such rights is included in the TP's annual transmission revenue requirements under its OATT, or rate schedule, as applicable.

Each SC's pro rata share of the revenue from the monthly auction of the rights to use a transmission path that has been reserved to provide RNITS into a Load Zone shall be determined by dividing the Retail Network Load served by the SC in the Load Zone by the total Retail Network Load in the Load Zone.

After SCs receive their ARNT in the monthly transmission rights auctions, they may subsequently make arrangements with one another through trading of such ARNT in secondary markets or they may trade for ATC to use certain Retail Network Resources.

RNITS on each TP's system can be used only to serve Retail Network Load within that TP's service area. In addition, RNITS may not be converted by SCs to other types of transmission service, such as Point-to-Point Transmission Service. However, SCs may acquire Point-to-Point Transmission Service, if it is available, in addition to their ARNT to serve their shares of Retail Network Load, pursuant to the appropriate part of the TP's OATT.

The monthly ARNT auction procedures are to be implemented when competitive direct access load in Arizona reaches 500 MW and the Board has approved a business plan covering all aspects of Az ISA activities after that date, including the ARNT auction and trading mechanisms described above. Prior to that date, the temporary ARNT allocation procedures, specified in Section 4 of this Protocol, shall be used commencing with the effective date of the Protocols Manual.

2. Parties

The ARNT Protocol applies to the following entities:

2.1 CAOs

2.2 SCs

2.3 Az ISA

2.4 TPs

3. Allocation and Trading of ARNT

The Az ISA shall ensure that the necessary systems and procedures are put into place to conduct monthly auctions of ARNT and to account for: (i) the trading of ARNT; and (ii) the exchange of ARNT for ATC, within a given TP's transmission system.

3.1 By September 1 of each year, each TP, with oversight by the Az ISA, shall determine the total retail Committed Use reservations on each transmission path on a monthly basis for the next calendar year and on an annual basis for the next ten years. The determination of retail Committed Use reservations shall be based on the TP'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. The EHV transmission paths that have reservations for Committed Uses to facilitate the delivery of Retail Network Resources to Retail Network Load in the State of Arizona, as they may be modified from time to time, shall be posted on the Az ISA's website (www.az-isa.org). Each congested interface within the State of Arizona shall also be posted on the Az ISA website. The retail Committed Use reservations on the TP's transmission paths shall be used to update long term ATC on the OASIS. ARNT for individual SCs shall not be determined at this time.

3.2 On the 15th day of each month:

3.2.1 Each TP shall post for the following month its

3.2.1.1 hourly Loss Factors,

3.2.1.2 estimated hourly total Retail Network Load,

3.2.1.3 estimated hourly total Local Generation Requirements, and

3.2.1.4 the total retail Committed Use reservation for each hour on each transmission path.

3.2.2 Local Generation that is committed to run and schedule exports outside the Load Zone by the 15th day of the month ahead will increase MW for MW the ARNT on any transmission path that the Local Generation is scheduled on, up to the TTC on the path (in either direction). The total retail Committed Use reservation into an Import Limited Load Zone, plus any additional import capability into the Import Limited Load Zone that can be made available pursuant to Section 5.1 of the Must-Run Protocol, shall be available to be included in the ARNT auctions which shall take place on the 17th day of the month ahead. ARNT can be auctioned up to the lesser of:

- Total ARNT, or
- Import Limit, considering exports as described above.

3.3 On the 17th day of the month ahead, the Az ISA or its designated agent shall conduct auctions of the ARNT on each transmission path, as follows:[2]

3.3.1 The auction of ARNT on each transmission path shall be conducted independently of the auctions of ARNT on other transmission paths.

3.3.2 The ARNT product to be auctioned shall be a sequential block of hourly rights to use the transmission path for all of the hours of the month following the auction. The number of sequential blocks of ARNT for a transmission path shall equal the maximum amount of ARNT available for any of the hours in the month; and if the amount of ARNT in other hours is less than such maximum amount, the rights acquired by the winning bidders shall be pro rated downward during such hours.

3.3.3 Only SCs who are responsible for serving Retail Network Load may participate in the auction of ARNT. Such SCs may participate only in the auction for ARNT on transmission paths that may be used to serve such Retail Network Load.

3.3.4 Each auction shall be a "market clearing price" auction as further described below. For the retail Committed Use reservations between each Network Resource injection or receipt point and a particular Load Zone, the Az ISA or its designated agent shall stack bids from lowest price to highest price, accept the highest bids by moving down the bid stack until the quantity of accepted bids is equal to the amount of ARNT to be auctioned, and charge all of the winning SCs the price equal to the

[2] The ARNT auction procedure shall not apply for Retail Network Load in the Citizens Utilities Load Zones, as there is only one ARNT transmission path into each Load Zone. Therefore, allocation of ARNT to SCs *pro rata* with their shares of Retail Network Load will be used instead.

last-accepted bid. This price is called the market clearing price for the ARNT on that transmission path. The Az ISA shall post the results of each ARNT auction, including the winning bidder(s), the market clearing price(s) and quantities awarded, by transmission path.

3.3.5 Each SC shall be required to pay the Az ISA or its designated agent the market clearing price multiplied by the amount of ARNT awarded to the SC for each path.

3.3.6 Each SC's credit for a pro-rata share of the revenue from the ARNT auction for each transmission path shall be equal to the ratio of each SC's actual Retail Network Load in each Load Zone to the total Retail Network Load in the Load Zone as determined at the time of the TP's monthly system peak. Each TP shall perform this calculation, subject to Az ISA oversight.

3.3.7 The Az ISA shall render statements to each SC for monies due under Section 3.3.5 and monies owed under Section 3.3.6 pursuant to a schedule and the terms and conditions as set forth in the SC Certification Agreement.

3.3.8 By 0630 each day, each SC shall forecast its hourly Retail Network Load in each Load Zone for the succeeding seven days commencing with hour ending 0100 of the following day and provide its forecasts to the Az ISA and to each TP with respect to the load served in that TP's service area, both in the manner reasonably requested by the Az ISA. If an SC acquires at auction and/or in the secondary market an aggregate amount of ARNT into a Load Zone which exceeds the SC's forecasted peak Retail Network Load less the amount of Local Generation the SC has committed to purchase in the Load Zone, if any, during the next seven days, the SC must release, at no charge to the Az ISA, such excess amount for use by other SCs at 0800 seven days ahead of the Operating Day.

Such excess amount of ARNT shall be allocated among capacity-deficient SCs on the basis of the ratio of each SC's ARNT deficiency over the total ARNT deficiency of all the SCs in that Load Zone. ARNT deficiencies shall be equal to the positive difference calculated as follows: (i) each SC's Retail Network Resource scheduled in a particular Load Zone during the peak hour of the same day during the immediately prior week, less (ii) the greater of the amount of Local Generation the SC has committed to purchase in the Load Zone or the SC's Local Generation Requirement, less (iii) the amount of ARNT the SC has to serve load in that Load Zone. Each SC shall calculate its capacity deficiency in accordance with the above formula and the Az ISA's procedures and provide the Az ISA with its calculations by 0800 seven days before the Operating Day.

3.3.9 At 1300 seven days in advance of each Operating Day, each TP shall determine whether the TP's peak Retail Network Load forecast for each of its Load Zones exceeds the total amount of ARNT already made available to serve such Load Zone and communicate these results to the Az ISA. The Az ISA shall electronically post such amounts. Each capacity-deficient SC may acquire ATC as ARNT by designating Retail Network Resources with the applicable TP. Each capacity-deficient SC shall be limited in its rights under this Section to an amount of transmission based on the product of: (a) the amount of additional ARNT to each Load Zone made available under this Section and (b) the ratio of (i) the SC's capacity-deficiency to that Load Zone to (ii) the sum of all capacity deficiencies to that Load Zone.

3.3.10 On a day-ahead basis, but prior to the close of the day-ahead schedule, each SC that has a capacity deficiency may schedule additional Retail Network Resources using any available capacity that the applicable TP has reserved as retail Committed Use to serve that SC's load to reduce or eliminate the deficiency in an amount up to the SC's load in a Load Zone less the sum of (a) its ARNT and (b) the SC's Local Generation schedule in that Load Zone. After the close of the day-ahead schedule, any SC may schedule additional Retail Network Resources on a shorter-term basis using any ATC in an amount up to the SC's reasonable load forecast for a Load Zone less the sum of its ARNT and Local Generation to serve load in that Load Zone.

3.3.11 Subsequent to each Az ISA ARNT auction, SCs may trade their ARNT with one another, in hourly blocks, until the deadline specified in Section 3.5 The AZ ISA shall implement a mechanism to track the trading of ARNT. Each TP shall post on its OASIS as ATC any ARNT on its system not sold at auction. If the Az ISA has implemented a state-wide OASIS, then it shall post the ATC.

3.4 In the event that one or more transmission path's reservations exceeds its TTC, the Az ISA will instruct the SCs to adjust their designated Retail Network Resources to reduce the transmission path total reservation to the transmission path TTC. The Az ISA shall develop a methodology for implementing this backstop. The Az ISA shall submit the Retail Network Load and Retail Network Resource forecasts to the CAOs and each CAO shall immediately update ATC on the CAO's OASIS accordingly.

3.5 Until two days ahead of Operating Day, SCs may continue to: (i) trade their ARNT among themselves; and/or (ii) surrender all or part of their ARNT to the CAO, through the Az ISA, in exchange for an equivalent amount of ATC on the system of the TP on whose system the ARNT was based to be redesignated as RNITS. The Az ISA shall send the final results of the trades and exchanges to the CAOs by 1600 hours two days prior to Operating Day.

3.6 Each SC must exercise good faith and due diligence in performing all activities under this Protocol. In particular, each SC must exercise good faith in its bidding

behavior with the intent of acquiring ARNT needed to serve its Retail Network Load. The Az ISA shall monitor the amount of ARNT acquired by each SC and compare it to the SC's actual Retail Network Load. The Az ISA shall also monitor the amount of ARNT that each SC relinquishes seven days ahead of the Operating Day and the amount, if any, by which each SC's ARNT to a particular Load Zone exceeds the amount of load the SC served in that Load Zone, less any Local Generation within that Load Zone. The Az ISA may investigate consistent or substantial releases or failures to release, as well as other anomalies. If an SC fails to satisfy these requirements, then the Az ISA may deem them to be non-compliant with the Protocols and take any and all corrective actions at its disposal.

3.7 *Changes to System Configurations*

If contingencies or changes in system configuration result in a reduction in the total amount of ARNT available on a particular transmission path, each affected SC's ARNT shall be multiplied by a percentage equal to the reduced total amount of ARNT available to all SCs at this particular transmission path divided by the total amount of ARNT originally made available to all SCs on said path.

Note: All allocations, Schedules, and forecasts forwarded to a CAO by the Az ISA shall be provided per SC, by path, by hour.

4. Temporary Mechanism for Allocation of ARNT[3]

During Phase I, the following temporary ARNT allocation procedures shall be used in lieu of the procedures set forth in Sections 3.1 through 3.7:

4.1 The transmission requirements needed to serve the TP's total Retail Network Load shall be determined by the TP on a monthly basis, based on the TP's current retail customer Committed Use allocations.

4.2 On the 15th day of each month, each TP shall post for the following month its:

[3] In the Salt River Project Agricultural Improvement and Power Districts (SRPs) distribution territory, ARNT procedures will follow the SRPs Board-approved protocols initially. This protocol differs from the Az ISA Temporary Mechanism for Allocation of ARNT in the following ways: (1) ARNT *can* be traded among SCs; (2) ARNT is allocated day-ahead instead of six days ahead; and (3) each Competitive SCs ARNT is kept equal to its Load when Local Generation is required. The required Local Generation is scheduled by the Standard Offer SC. When direct retail access load in the SRP distribution area reaches 200 MW and statewide direct retail access reaches 500 MW, and upon SRP-Board approval, SRP will fully implement the AZ ISA ARNT Protocol.

4.2.1 hourly Loss Factors,

4.2.2 estimated hourly total Retail Network Load for each Load Zone,

4.2.3 estimated hourly total Local Generation Requirements, and

4.2.4 the total retail Committed Use reservation for each hour on each transmission path.

SCs may use this information to estimate their ARNT requirements.

4.3 Six Days Ahead

4.3.1 The TP shall, for each Load Zone, total the energy scheduled by each SC for the SC's share of total Retail Network Load during the Control Area's previous day peak hour.

4.3.2 The TP shall, for each Load Zone, 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.

4.3.3 The TP shall multiply the retail Committed Use reservation on each transmission path (from Section 4.2.4 above) by each SC's percentage (from Section 4.3.2 above). The resulting hourly MW quantities for each SC will be provided as ARNT to that SC by the TP.

4.3.4 In the absence of the ARNT auction and trading mechanisms, the pro rata allocation of rights on all ARNT paths would place an inordinate burden on Competitive SCs, who would have limited mechanisms to access liquid energy trading hubs for Retail Network Resources to serve their Retail Network Loads. In mitigation of the burden placed on Competitive SCs by the absence of the ARNT auction and trading mechanisms, each TP's Standard Offer SC has stipulated that it shall trade part of its ARNT allocation to Competitive SCs during the period prior to implementation of the ARNT auction and trading mechanisms, as follows:

4.3.4.1 As an alternative to the procedure specified in Section 4.3.3, until any ARNT auction is implemented, each TP's Standard Offer SC shall exchange up to an amount of MW (set forth by the individual TP below) of ARNT from the Standard Offer SC to Competitive SCs for service to retail load within the transmission owner's service territory, at the request of the Competitive SCs, in return for a Competitive SC's exchange to the Standard Offer SC of an equal amount of ARNT on other ARNT paths to the same Load Zone.

For *Arizona Public Service Company (APS):* The amount shall equal 200 MW from Palo Verde to the APS Load Zones.

For *Tucson Electric Power Company (TEP):* The amount shall equal 80 MW from Four Corners to the TEP Load Zone.

For *Arizona Electric Power Cooperative, Inc. (AEPCo):* The amount shall equal 4 MW from Westwing to Vail to serve Retail Network Load in the Southeastern Arizona Load Zone and 5 MW at Westwing for deliveries to the Western Area Power Administration to serve Retail Network Load in the Mohave Electric Cooperative Load Zone.

For *Citizens Utilities Company (Citizens Utilities):* This Section 4.3.4.1 shall not apply to Citizens Utilities because there is only one ARNT path to each relevant Citizens Utilities' Retail Network Load.

For *Salt River Project Agricultural Improvement and Power District (SRP):* The amount shall equal 200 MW from Palo Verde to the SRP Load Zone.

4.3.4.2 Should the Az ISA's ARNT auction and trading mechanism not be in place by September 1, 2001, the commitment of the Standard Offer SCs to the mechanism specified in Section 4.3.4.1 shall be reevaluated by the Az ISA to consider whether an extension beyond December 31, 2001 can be arranged.

4.3.4.3 In allocating the MW made available pursuant to Section 4.3.4.1, each TP shall allocate the amount of MW described to Competitive SCs who request such an allocation on a pro rata basis, by dividing the SC's Retail Network Load in the Load Zone(s) by the sum, for all of the requesting SCs, of the Retail Network Loads in the Load Zone(s).

4.4 Day Ahead

4.4.1 Any ATC posted on the TP's OASIS may be acquired by an SC as RNITS to serve its share of Retail Network Load.

4.4.2 Any ARNT allocated to an SC which is not scheduled by the SC as of the deadline for submission of balanced Schedules pursuant to the Scheduling Protocol shall be posted as ATC on the TP's OASIS.

4.4.3 The TP shall verify that the sum of an SC's Retail Network Load Schedules on a transmission path does not exceed that SC's ARNT on that path.

4.5 Changes to System Configuration

Whenever system configurations change such that the Import Limits or Local Generation Requirements change, each SC's ARNT and share of Local Generation Requirements shall also change accordingly. Allocation percentages (Section 4.3.2 above) shall remain the same.

VI. Scheduling Protocol

1. Purpose

The purpose of this Protocol is to define the processes and requirements for scheduling for Retail Network Load, including losses. Scheduling is the process of arranging for the delivery of energy from one location to another over specified transmission path(s). All Schedules must comply with WSCC and NERC procedures and guidelines. All Schedules must be stated in increments of 1,000 kW (1MW) per hour.

Each SC shall schedule for the Retail Network Load for which it is responsible. In addition, each SC is responsible for making necessary transmission reservations, establishing its Schedules for Retail Network Resources, and ensuring that the amount of Retail Network Resources delivered matches the Retail Network Load for which the SC is scheduling.

Each CAO or TP is responsible for assessing and approving or denying the Schedule based on established reliability criteria and adequacy of transmission. Energy transactions shall be scheduled by SCs, but shall only be implemented by and between Control Areas.

2. Parties

The Scheduling Protocol applies to the following entities:

2.1 SCs

2.2 CAOs

2.3 TPs

In addition, should the Az ISA request, it shall be copied by the SCs and CAOs/TPs on all communications and decisions on any and all Schedules and Schedule changes. In the event of a disputed scheduling decision, the Az ISA shall initiate appropriate dispute resolution procedures.

3. Balanced Schedules

An SC must submit a Balanced Schedule for each Load Zone. A Schedule that is not balanced will be considered Non-Compliant.

4. Must-Run Generation Scheduling Requirements

For must-run generation scheduling requirements, see Section 5 of the Must-Run Generation Protocol.

5. Validation

Each CAO or TP shall check all Schedules submitted by the SCs to verify that the following criteria are met:

5.1 The Schedules submitted by each SC are Balanced Schedules for each Load Zone.

5.2 Schedules of Firm Energy from Retail Network Resources are associated with firm transmission paths.

5.3 NERC tags are accurate.

5.4 The SC's Schedules on given transmission path(s) do not exceed the SC's ARNT and/or acquired transmission rights on those path(s).

6. Time Lines

6.1 Overview

The pre-scheduling period starts at 1800 hours two days ahead of Operating Day and ends at 1400 hours on the day ahead of Operating Day, at which time the CAO or TP begins the pre-Schedule checkout process. Activities that occur during the pre-scheduling period are described in Sections 6.2 and 6.3 below. The pre-Schedule checkout process is described in Section 6.4 below.

6.2 Pre-Scheduling Period: Two Days Ahead of Operating Day

By 1800 hours two days ahead of Operating Day (for example, by 1800 hours on Monday for Wednesday), the TP will publish on its OASIS the following information for each hour of the Operating Day:

6.2.1 A forecast of conditions, including transmission line and other transmission facility outages, updating ATC accordingly;

6.2.2 A forecast of the TP's total Load, by Load Zone;

6.2.3 The TP's total Local Generation Requirements, by Load Zone.

6.3 Pre-Scheduling Period: Day Ahead of Operating Day

6.3.1 By 0600 hours on the day ahead of Operating Day, the TP will update all data that has changed from the two day ahead forecasts.

6.3.2 By 0630 hours, each SC shall provide to the TP via e-mail or other electronic means agreed to by the TP and SC, a forecast of its hourly Retail Network Load by Load Zone for the succeeding seven days commencing with the hour ending 0100 of the following day.

6.3.3 By 0800 hours, each SC shall submit to the TP its initial Local Generation Schedule, which must meet or exceed its share of Local Generation Requirements.

6.3.4 By 1000 hours, each SC shall submit to the TP any adjustments to its purchase of Must-Offer Generation.

6.3.5 By 1400 hours, for each Operating Hour:

6.3.5.1 Each SC shall submit its day ahead Balanced Schedule, including the appropriate NERC tags and the required adjustments to Must-Take Generation quantities, via e-mail or other electronic means agreed to by the TP and SC;

6.3.5.2 Each SC shall submit its Schedules for self-provided Ancillary Services, if any, to the TP and the Az ISA via e-mail or other electronic means agreed to by the TP and SC.

6.4 Pre-Schedule Checkout Process

The CAO or TP shall check the Schedule submissions to verify that each SC has met the following criteria:

- Each Schedule is balanced within each Load Zone.
- Each Schedule has a firm transmission path associated with a firm energy schedule.
- NERC tags are accurate.

6.4.1 By 1600 hours on the day ahead of Operating Day and for each Operating Hour, the CAO or TP shall:

6.4.1.1 Validate all SC-submitted day-ahead Balanced Schedules;

6.4.1.2 Notify SCs of errors discovered with their Schedules during validation;

6.4.1.3 Validate all SC-submitted Schedules for self-provided Ancillary Services which were part of their day-ahead Balanced Schedules;

6.4.1.4 Notify SCs of any Local Generation Requirements which the SC has failed to include in day-ahead Schedules but which the CAO or TP requires to run in the Operating Day.

6.4.2 By 1630 hours, each SC must submit a revised Schedule to correct any errors reported to it by the CAO or TP.

6.4.3 By 1700 hours, the CAO or TP shall validate Schedule corrections submitted by each SC at 1630 hours. The SCA to be entered into by each SC shall set forth all circumstances where failure to meet validation criteria shall cause the CAO or TP to reject the SC's Schedule, and such criteria shall be applied uniformly to all SCs. If the SC does not meet all such validation criteria, the SC is in a Non-Compliant condition and will be so notified as such by the CAO or TP. A rejected Schedule shall result in the release of the ARNT associated with the rejected Schedule to the CAO or TP in order for the CAO or TP to serve the SC's Retail Network Load. Rejected Schedules will be set to zero for the purpose of calculating charges for Energy Imbalance Service.

6.4.4 The CAO will coordinate with adjacent Control Areas on the net Schedules between the CAO's Control Area and such other Control Areas. If the CAO and the operator of an adjacent Control Area have different records with respect to the net Schedules, individual SC Schedules will be examined. If required, the CAO will notify the TP and SC of such problems and require the affected SCs to correct their Schedules.

6.4.5 Upon completion of the pre-Schedule checkout process, ATC will be recalculated and posted on the OASIS.

6.5 Operating Day/Real-time Scheduling

6.5.1 By 1 hour and 15 minutes prior to the Operating Hour, each CAO or TP will update its system load forecast for the next four hours.

6.5.2 By 45 minutes prior to the Operating Hour, each SC may submit Schedule changes to the CAO or TP. For Schedule increases requiring additional RNITS on posted transmission paths, the SC must acquire ATC to designate as RNITS. Such ATC will be made available on a first-come-first-served-basis.

6.5.3 By 30 minutes prior to the Operating Hour, each CAO will begin the checkout process between the adjacent Control Areas and notify SCs and TPs of any scheduling discrepancies.

6.5.4 By 20 minutes prior to the Operating Hour, each CAO will complete Schedule checkouts with adjacent Control Areas and notify SCs and TPs of rejected Schedules and reasons for the rejection.

6.5.5 At 10 minutes prior to the Operating Hour, the CAO will begin the ramp.

6.6 Variances

A CAO or TP may implement 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 or TP's control. The TP shall post information regarding such variances on its OASIS as soon as practicable, and will include the following information:

- The exact timing requirements affected;
- Details of any substituted timing requirements;
- An estimate of the period for which this variance will apply; and
- Reasons for the temporary variance.

7. Loss Factors

Each TP shall determine the Loss Factors which shall be used by the SCs in preparation of Schedules and by the TPs for settlement. Loss Factors for each hour of the following month shall be published on the TP's OASIS on or before the 15th of every month for use during the following month.

8. Existing Agreements

Scheduling of transactions under Existing Agreements shall be performed by the parties to such Existing Agreements in accordance with the provisions of such Existing Agreements.

9. Scheduling Ancillary Services Resources

9.1 An SC that chooses to have the CAO or TP provide Ancillary Services is not required to schedule such Ancillary Services with the CAO or TP.

9.2 The requirements of this Section 9 are in addition to the requirements specified in the Ancillary Services Protocol.

9.3 To the extent that a SC's purchase of firm energy and capacity from any qualified resource within SRSG is used to meet the SC's self-provision requirements for operating reserves pursuant to Section 3.4 of the Ancillary Services Protocol, the SC is not required to Schedule such operating reserves with the CAO or TP. The SC must provide notification, as required by the CAO or TP.

9.4 For the following Ancillary Services, the SCs may self-provide, by Schedule, all or a portion of their requirements:

9.4.1 Regulation and Frequency Response Service – An SC that elects to self-provide its Regulation and Frequency Response Service obligation must satisfy the Ancillary Services Protocol.

9.4.2 Operating Reserves: Spinning Reserve Service – An SC that elects to self-provide its Spinning Reserve Service obligation to the CAO must meet all SRSG, NERC and WSCC requirements and the following criteria:

9.4.2.1 The provider of Spinning Reserve Service generation is responsible for scheduling or arranging for the scheduling of the minimum energy output of generation located within the Control Area. When, by arrangement, the SC is the responsible party, it shall schedule appropriately the minimum output of the generation required to provide its Spinning Reserve Service obligation.

9.4.2.2 Under normal operating conditions, the SC may not change the point(s) of receipt for delivery of its Spinning Reserves after they have been specified by the SC in the day-ahead scheduling process. In the event of a contingency affecting the resource, the point(s) of receipt for delivery of Spinning Reserves may be changed if approved by the CAO or TP and the SC has obtained the appropriate firm transmission.

9.4.2.3 The CAO or TP shall reduce the quantity of the Spinning Reserve Services it competitively procures by the corresponding amount of the Spinning Reserve Services self-provided by the SCs.

9.4.2.4 Any unit that satisfies the Ancillary Services Protocol may provide reserves. If purchased from a unit that is not a qualified SRSG resource, then the reserves must be dynamically scheduled.

9.4.3 Operating Reserves: Supplemental Reserves Service – An SC that self-provides all or a portion of its Supplemental Reserves Service obligation to the CAO or TP must meet all SRSG, NERC and WSCC requirements and the following criteria:

9.4.3.1 Under normal operating conditions, the SC may not change the point(s) of receipt for delivery of its Supplemental Reserves after they have been specified by the SC in the day-ahead scheduling process. In the event of an Emergency, the point(s) of receipt for delivery of Supplemental Reserves may be changed if approved by the CAO or TP and the SC has obtained the appropriate firm transmission.

9.4.3.2 The CAO or TP shall reduce the quantity of Supplemental Reserves Services it competitively procures by the corresponding amount of the Supplemental Reserves Service(s) self-provided by the SCs.

9.4.3.3 If purchased from a unit that is not a qualified SRSG resource, than the reserves must be dynamically scheduled.

VII. Ancillary Services Protocol

1. Purpose

The purpose of this Protocol is to specify the obligations of the SCs, TPs and CAOs concerning the provision of Ancillary Services to support retail transactions. All Ancillary Services must meet all applicable FERC, NERC, WSCC and SRSG criteria.

2. Parties

The Ancillary Services Protocol applies to the following entities:

2.1 SCs

2.2 CAOs

2.3 Third Party Suppliers

2.4 TPs

All disputes regarding the provision of Ancillary Services pursuant to this Protocol shall be referred to the Az ISA for initiation of appropriate dispute resolution procedures.

3. Ancillary Services

3.1 FERC has identified six Ancillary Services that the TP is required to offer and that are required for unbundled open access transmission:

3.1.1 Scheduling, System Control and Dispatch Service

3.1.2 Reactive Supply and Voltage Control from Generation Sources Service

3.1.3 Regulation and Frequency Response Service

3.1.4 Energy Imbalance Service

3.1.5 Operating Reserve – Spinning Reserve Service

3.1.6 Operating Reserve – Supplemental Reserve Service

3.2 The TP shall be the sole supplier to the SCs of the following services for loads served within its CA or system:

3.2.1 Scheduling, System Control and Dispatch Service

3.2.2 Reactive Supply and Voltage Control from Generation Sources Service Charges for these services will be pursuant to the TP's OATT.

3.3 An SC may self-provide all or a portion of the SC's requirements for the following Ancillary Services or purchase all or a portion of such requirements from the TP pursuant to the TP's OATT:

3.3.1 *Regulation and Frequency Response Service:* The Regulation and Frequency Response requirement shall be that specified in the TP's OATT. An SC may obtain this service from the TP, may self-provide it, or may purchase the service from a third party up to the amount specified in the TP's OATT.

3.3.2 *Energy Imbalance Service:* SCs will incur charges pursuant to the Energy Imbalance Protocol.

3.3.3 *Operating Reserve – Spinning Reserve Service*: The Spinning Reserve requirement shall be that specified in the TP's OATT. Any SRSG, NERC or WSCC penalties imposed upon the TP as the result of an SC not meeting its Spinning Reserves obligations shall be passed on to the SC pursuant to the terms of the Scheduling Coordinator Agreement. An SC may obtain this service from the TP or self-provide it from resources that satisfy the SRSG requirement.

3.3.4 *Operating Reserve – Supplemental Reserve Service:* The Supplemental Reserve requirement shall be that specified in the TP's OATT. Any SRSG, NERC or WSCC penalties imposed upon the TP as a result of an SC not meeting its Supplemental Reserve obligations shall be passed on to the SC pursuant to the terms of the Scheduling Coordinator Agreement. An SC may obtain this service from the TP or self-provide it from resources that satisfy the SRSG requirement.

3.4 An SC's purchase of Firm Energy shall be deemed to contribute towards the SC's self-provision requirements for Operating Reserves (Spinning Reserves and/or Supplemental Reserves) in a CA provided that the Firm Energy is either:

3.4.1 Purchased from a resource on the system of any member of the SRSG, in which case the credit for self-provision shall equal the TP's OATT reserve requirement x .75 x the Firm Energy scheduled in each hour; or

3.4.2 Purchased from a resource that is not on the system of a member of the SRSG and: (i) the CAO can verify the selling party's readiness to supply the Operating Reserves in the form of energy in excess of the Firm Energy transaction scheduled within the time frames required by the WSCC; and (ii) the SC can, in addition to delivering the Firm Energy on a firm primary transmission path, deliver the Firm Energy on a

secondary transmission path within the Operating Reserves' time requirements upon the loss of the primary path.

4. Transmission Requirements for Self-Provision

An SC that self-provides Ancillary Services is responsible for reserving the firm transmission required to allow delivery of service to and within the CA or the TP's system. An SC that uses transmission service from outside the CA or the TP's system to deliver an Ancillary Service shall be responsible for acquiring the necessary contracts for firm transmission service from such CA or TP's system. If the CAO/TP is able to reduce its reservation of transmission capacity for Ancillary Services when an SC self-provides these services, the SC shall be afforded an opportunity to apply this freed-up transmission capacity toward meeting its transmission requirement for its self-provided Ancillary Services. Transmission reserved for Ancillary Services may only be used for Ancillary Services. If an SC modifies the resources associated with its self-provision of Ancillary Service, it shall modify its required transmission reservations accordingly.

5. Interface Requirements for Self-Provision

An SC desiring to self-provide Ancillary Services must have entered into an agreement with the TP and the Third Party Supplier for the provision of these services. Additionally, the necessary infrastructure and procedures specified under such agreement must be in place before the SC will be allowed to self-provide.

VIII. Must-Run Generation Protocol

1. Purpose:

The purpose of this Protocol is to provide a framework and process governing the access to energy from Must-Run Generation to support retail transactions in a competitive market. During certain hours, load within a Load Zone may exceed the Import Limit on the Interconnected Transmission System. For such hours, each SC's ARNT will be insufficient to serve 100 percent of the SC's share of Retail Network Load in the Load Zone through imports alone. Such conditions will require that Local Generation be made available to SCs. For each SC, the difference between its share of Retail Network Load in the Load Zone and its ARNT will be specified in advance, and will be the SC's Local Generation Requirement. Third Party Suppliers that have facilities with Must-Offer Generation obligations that commit to run and commit to schedule exports from the Load Zone by the 15th day of the month ahead will decrease the Local Generation Requirement on a MW for MW basis. The specification of the SC's share of the Local Generation Requirement will occur concurrently with the steps taken in the administration of the ARNT Protocol.

Implementation of the Must-Run Generation Protocol is to occur in two phases. In Phase I, which commences with the effective date of this Protocols Manual, the Temporary Must-Run Generation Procedures set forth in Section 6 will be implemented. In Phase II, which commences when competitive direct retail access load in Arizona reaches 500 MW and the Board has approved a business plan covering all aspects of Az ISA activities (including all Phase II activities), the Must-Run Generation Procedures set forth in Sections 1-5 of this Protocol will be implemented.

2. Parties

The Must-Run Generation Protocol applies to the following entities:

2.1 CAOs

2.2 SCs

2.3 TPs

2.4 Third Party Suppliers

2.5 Az ISA

3. Local Generation Management Options for Must-Run Generation Requirements

Each SC shall manage its obligation to provide its share of the Local Generation Requirement by using one or more of the following means:

3.1 Scheduling Discretionary Local Generation;

3.2 Purchasing Must-Offer Generation;

3.3 Acquiring ARNT into the Import-Limited Zone from another SC;[4] or

3.4 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).

4. Must-Run Generation Framework

4.1 The Must Run Generation Protocol is applicable to the following Import-Limited Load Zones:

- SRP Phoenix
- APS Phoenix
- Tucson
- Yuma

4.2 For each Import-Limited Load Zone, the TP will determine the total Local Generation Requirement for each hour, which will be equal to the forecasted Retail Network Load within the Import-Limited Load Zone minus the Import Limit. Local Generation providers that have facilities with Must-Offer Generation obligations that commit to run and commit to schedule exports from the Load Zone by the 15th day of the month ahead will decrease the total Local Generation Requirement on a MW for MW basis.[5]

4.3 Each SC scheduling into an Import-Limited Load Zone will be assigned a share of the total Local Generation Requirement for each hour. The Az ISA will

[4] The SC providing the additional ARNT may be causing its own share of the Local Generation Requirement to increase, all things being equal.

[5] Third Party Suppliers that have Local Generation facilities with *no* Must-Offer Generation obligations that commit to run and commit to schedule outside the Load Zone may make it possible for imports into the Load Zone to be increased; however, unless such Local Generation facilities are committed to meet Local Generation Requirements in the event that the export is reduced, any increase in transmission imports could only be made if such transmission were recallable.

calculate each SC's share of Local Generation Requirement for each hour of the month and each SC's ARNT for each transmission path for each day of the month. The Az ISA will communicate the results of this allocation to all SCs by the 15th day of the month prior to the Operating Month. This function will be performed by the TPs until the Az ISA has the capability but, in no event, later than such time as the ARNT trading mechanism is implemented.

4.4 Each SC's share of the total Local Generation Requirement will be equal to that SC's scheduled Retail Network Load within the Import-Limited Load Zone minus the SC's ARNT into that same zone.

4.5 Each SC must meet its share of the Local Generation Requirement by one or more of the means identified in Section 3 of this Protocol.

4.6 For each Import-Limited Load Zone, the provider of Must-Run Generation service (e.g., the TP) must provide the amount of Must-Offer Generation scheduled by SCs, up to the amount of the total Local Generation Requirement. Must Offer Energy is provided at regulated prices as described in Sections 4.8 and 4.9 of this Protocol.

4.7 Each SC will be given the opportunity to purchase Must-Offer Generation up to the amount of the SC's share of the Local Generation Requirement.

4.8 Recovery of Must-Run Generation Fixed Costs occurs as part of the retail end-use customers' service charge regulated by the ACC. Must-Run Generation Fixed Costs are the Fixed Costs associated with specific Must-Run Generation units. Must-Run Generation Fixed Costs will be limited to the percentage of each Must-Run Generation unit's annual usage[6] that is attributable to providing Must-Run Generation service.

4.9 Recovery of Must-Run Generation Variable Costs occurs via SC purchases of Must-Offer Generation. These purchases will take place using a regulated pricing mechanism that reflects the actual Variable Cost of Must-Run Generation within each Load Zone, for each hour, as it is dispatched in the most economic sequence permitted by system conditions.

5. Must-Run Generation Scheduling Sequence

5.1 Month Ahead of Operating Month

Pursuant to Section 3.2.3 of the ARNT Protocol, the monthly auctions of ARNT and share of Local Generation Requirement for each SC shall be completed by the 17th day of the month ahead of the Operating Month. Local Generation providers that have facilities with Must-Offer Generation obligations that commit to run and commit to schedule exports from the Load Zone by the 15th day of the

[6] In certain circumstances, a generation facility that is needed for Must-Run Generation purposes on a first-contingency basis may have a total annual usage of zero. When such a generation facility is used, the owner of the generation facility will not be precluded from recovering appropriate Must-Run Generation Fixed Costs.

month ahead of the Operating Month will decrease the Local Generation Requirement on a MW for MW basis. When such situations occur, ARNT into the Load Zone is increased by the amount of the reduction in the total Local Generation Requirement and is included in the auction of ARNT to SCs.[7] Concurrently, the Must-Offer Generation obligation of the Local Generation provider is reduced MW for MW. Should a Local Generation provider's export of energy be reduced during a must run situation for any reason, the Must-Offer Generation obligation will be restored in the amount of the export reduction.

Generators within Load Zones may be scheduled to serve Load outside the Load Zone without committing by the 15th day of the month ahead of the Operating Month. However, while this generation may result in increased ATC into the Load Zone, the Must-Offer Generation obligation will not change.

5.2 18th Day of the Month Prior To Operating Month Through Two Days Ahead of Operating Day

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 shall be reported by the SCs to the Az ISA, tracked by the Az ISA and communicated by the Az ISA to TPs, as set forth in Section 5.3.

5.3 Two Days Ahead of Operating Day

By 1600 hours two days ahead of Operating Day, the Az ISA will submit the final results of the trades and exchanges of ARNT and each SC's share of Local Generation Requirements to the TP. The TP shall update its OASIS accordingly.

5.4 Day Ahead of Operating Day

Each SC will submit its Balanced Schedule pursuant to Section 6.3 of the Scheduling Protocol, which must meet or exceed its share of the Local Generation Requirement and must specify its intended purchase of Must-Offer Generation. Must-Offer Generation made available to an SC is capped at the SC's share of the Local Generation Requirement. An SC may schedule Discretionary Local Generation and/or reduce its share of Retail Network Load within the Load Zone through dispatchable direct retail Load tripping.

5.5 18th Day of the Month Prior To Operating Month Through Scheduling Hour

5.5.1 Changes in System Configurations

If contingencies or changes in system configurations result in a reduction in an SC's ARNT into an Import Limited Load Zone, the SC's

[7] ARNT can be made available up to the lesser of: (i) total ARNT; or (ii) the Import Limit, considering exports.

share of the Local Generation Requirement shall be recalculated using the formula specified in Section 4.4.

5.5.2 Increased Exports by Must-Offer Generation Providers after ARNT is Allocated

If Local Generation providers that have facilities with Must-Offer Generation obligations schedule exports from the Load Zone after ARNT is allocated, such scheduling shall not decrease the Local Generation provider's Must-Offer Generation obligation even if it results in an increase in ATC into the Load Zone.

6. Temporary Must-Run Generation Procedures[8]

During Phase I of Protocols implementation, temporary changes must be made to the Must-Run Generation Protocol to correspond to the temporary ARNT allocation procedures that will be in effect. The temporary Must-Run Generation procedures differ from the standard procedures in the following ways:

6.1 There is no trading of ARNT among SCs.

6.2 SCs' ARNT and shares of the Local Generation Requirement are specified and communicated to the SCs by the TPs ahead of the Operating Day. Local Generation providers that have facilities with Must-Offer Generation obligations that commit to run and commit to schedule outside the Load Zone by seven (7) days ahead of the Operating Day will decrease the total Local Generation Requirement. If there are changes in system conditions, the Local Generation Requirement may be modified subject to the provisions of Section 5.5 of this Protocol.

6.3 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 TP 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

[8] The Temporary Must-Run Generation Procedures in the SRPs distribution territory will differ from the description here in the following ways: (1) ARNT *can* be traded among SCs; (2) ARNT is allocated day-ahead instead of six days ahead; and (3) Local Generation Requirements are not identified for individual SCs. Instead, each SCs ARNT is kept equal to its Load and any required Local Generation is scheduled by the Standard Offer SC, with the net incremental costs being allocated to all end-use customers in the Load zone. When direct retail access load in the SRP distribution area reaches 200 MW and statewide direct retail access reaches 500 MW, and upon SRP-Board approval, SRP will implement Sections 1-5 of the Az ISA Must-Run Protocol.

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.

IX. Energy Imbalance Protocol

1. Purpose

The purpose of this Protocol is to establish procedures for the accounting, after-the-fact trading and settlement for Energy Imbalance Service and to create incentives for reasonable scheduling and operational behavior by SCs.

Implementation of the Energy Imbalance Protocol is to occur in two phases. Phase I, which commences with the effective date of this Protocols Manual, the Temporary Imbalance Settlement Mechanism set forth in Section 3.6.1. will be implemented. In Phase II, which commences when competitive direct retail access load in Arizona reaches 50 MW and the Board has approved a business plan covering all aspects of Az ISA activities (including all Phase II activities), the Energy Imbalance Procedures set forth in Section 5 of this Protocol will be implemented.

2. Parties

The Energy Imbalance Protocol applies to the following entities:

2.1 SCs

2.2 CAOs

2.3 UDCs

2.4 TPs

2.5 Az ISA

3. Principles

3.1 Standard Offer SCs (SCs for bundled retail loads) will be treated somewhat differently than Competitive SCs prior to the implementation of a RTO that supercedes the Az ISA. It is intended that the Standard Offer SCs' unique benefits and burdens will neither advantage nor disadvantage them in the competitive marketplace during this transition period.

3.1.1 Standard Offer SCs will not have the same metering requirements or Energy Imbalance requirements as Competitive SCs.

3.1.2 Standard Offer SCs will have the 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.

3.2 All settlements for Energy Imbalance shall be determined on an hourly basis.

3.3 Energy Imbalance shall be determined for each Load Zone.

3.4 Settlement for Energy Imbalance Service shall be in dollars.

3.5 The Trading Entity shall facilitate and administer after-the-fact trading of Energy Imbalances by SCs and settlement of Energy Imbalances. SCs will settle their Energy Imbalances with the Trading Entity, and the Trading Entity shall settle with each TP. *Costs that vary with the volume of Energy Imbalance trading transactions between SCs shall be borne by the SCs that are parties to such trades. All other costs associated with the Energy Imbalance trading function shall be recovered from all SCs through a charge levied by the* Az ISA on all Retail Network Loads. **[The foregoing text in italics is a placeholder only - the actual cost allocation method to be used is to be determined after receipt of vendor RFP information.]** The Trading Entity and each TP shall enter into an agreement to facilitate billing and settlement for Energy Imbalances. Pursuant to its agreement with the TP, the Trading Entity will be subject to the creditworthiness requirements under each TP's respective OATT.

3.6 During Phase I of Protocols implementation, the Temporary Imbalance Settlement Mechanism, specified below, shall be used in lieu of the procedures specified in Section 5 of this Protocol.

3.6.1 Temporary Imbalance Settlement Mechanism[9]

Each TP shall perform Energy Imbalance settlement accounting with each Competitive SC as follows:

Within sixty-one (61) days after the last day of the month, each TP shall provide the following information to each Competitive SC for each hour of the month:

[9] The Temporary Imbalance Settlement Mechanism in the SRPs distribution territory will differ from the description here in the following ways: (1) the Market Price is equal to the Ca ISO Ex-Post Market SP 15; (2) Energy Imbalances within the +/- 10% deadband are cleared at the higher of SRPs System Lambda or Market Price; (3) the deadband for each hour is the greater of +/- 10% of the SCs load or 1 MW; and (4) there is no penalty for the first 50 hours each month that an SCs Energy Imbalance exceeds the deadband. When direct retail access load in the SRP distribution area reaches 200 MW and statewide direct retail access reaches 500 MW, and upon SRP-Board approval, SRP will implement the Energy Imbalance Procedures set forth in Section 5 of the Az ISA Energy Imbalance Protocol.

- The energy consumed in the TP's system by each Competitive SC's Retail Network Load (LActual), in KWh;
- The energy scheduled into the TP's system by each Competitive SC's Retail Network Resource (RActual), in KWh;
- Each Competitive SC's Energy Imbalance in the TP's system, in KWh;
- The System Incremental Cost for the TP's system, in $/Mwh; and
- The Market Price.

For purposes of determining hourly Energy Imbalance amounts applicable only to Competitive SCs, each TP shall calculate hourly Energy Imbalances for individual Competitive SCs in accordance with this Protocol. Settlement for Energy Imbalance shall be determined in the following manner:

- During an hour in which the Competitive SC's Energy Imbalance is negative (that is, the Competitive SC consumed more energy than it provided), the price at which Energy Imbalances shall be settled (in $/MWh) shall be equal to the higher of the SIC for the TP's system or the Market Price. The Competitive SC will make payment to the TP.
- During an hour in which the Competitive SC's Energy Imbalance is positive (that is, the Competitive SC provided more energy than it consumed), the price at which Energy Imbalances shall be settled (in $/MWh) shall be equal to the lower of the SIC for the TP's system or the Market Price. The Competitive SC will receive payment or credit for this from the TP.
- The TP shall establish an Energy Imbalance deadband equal to the greater of 2 MW or +/- 10% of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the SC's scheduled transaction(s). During an hour in which the Competitive SC's Energy Imbalances exceeds the Energy Imbalance deadband, the TP shall levy a penalty equal to the product of: (i) the amount (in kWh) by which the Competitive SC's Energy Imbalances exceeds the deadband; and (ii) 10% of the greater of the TP's SIC or Market Price when the Competitive SC underschedules; or the lower of SIC or Market Price when the Competitive SC overschedules.

4. Nature of Energy Imbalance Service

Energy Imbalance Service is the supplying of energy by the TP to a Competitive SC in an amount equal to the net hourly MWh mismatch (which may be a positive or a negative quantity) between the SCs actual delivery to the TP's system during an hour

and the SC's actual Retail Network Load in the TP's system during the hour, including applicable transmission and distribution losses.

The Energy Imbalance settlement process assigns charges or credits to the SC as compensation for energy supplied by or taken by the TP. Because the TP can maintain the energy balance for the TP's system on a real-time basis only to the extent that all users of the transmission system reasonably minimize their Energy Imbalances, the settlement process also assigns penalties to SCs with large Energy Imbalances which place burdens on TP.

5. Calculation of Energy Imbalance Charges and Penalties

5.1 Each TP shall calculate each Competitive SC's hourly Energy Imbalance as the SC's [R_{Actual} - L_{Actual}], where:

5.1.1 R_{Actual} = the actual energy delivery from the SC's Retail Network Resources scheduled into the TP's system (includes integrated hourly generation within the TP's system plus imports from other TP systems)

5.1.2 L_{Actual} = the actual energy consumption by the SC's share of Retail Network Load within the TP's system (integrated hourly demand for the SC's share of Retail Network Load, based on both interval-metered Load and load-profiled Load), including the TP's applicable calculated transmission and distribution losses.

5.2 Within sixty-one days after the last day of the month, each TP shall provide the following information to the Trading Entity for each hour of the month:

(i) The energy consumed in the TP's system by each Competitive SC's Retail Network Load (LActual), in KWh;

(ii) The energy provided to the TP's system by each Competitive SC's Retail Network Resources (RActual), in KWh;

(iii) Each Competitive SC's Energy Imbalance in the TP's system, in KWh;

(iv) The net Energy Imbalance for the TP's system, in KWh;

(v) The SIC for the TP's system, in $/MWh; and

(vi) The Energy Imbalance deadband for the TP's system, in KWh.

The Trading Entity shall make the information specified in Section 5.2(i) – (vi) available to the affected Competitive SC immediately, provided that the Trading Entity and the affected Competitive SC shall treat the information specified in

Sections 5.2(i) - (iii) and (v) as confidential information not subject to disclosure to third parties, however said information may be disclosed to the affected customer of the Competitive SC upon said customer's agreement to also maintain the confidentiality of this information.

5.3 The Trading Entity shall make the Market Price for each hour of the month available to each Competitive SC and to each TP as soon as such information is available.

5.4 The net Energy Imbalance for the TP's system shall equal the sum of the Energy Imbalances of the Competitive SCs serving Retail Network Load on the TP's system.

5.5 The Energy Imbalance deadband for the TP's system shall equal the greater of 2 MW or 1.5% of the sum of the Retail Network Load scheduled within the TP's system by Competitive SCs and Standard Offer SCs.

5.6 During an hour in which the sum of the Competitive SCs' Energy Imbalances is positive (that is, the Competitive SCs collectively provided more energy than they consumed), the price at which Energy Imbalances shall be settled (in $/MWh) shall be equal to the lower of the SIC for the TP's system or the Market Price.

5.7 During an hour in which the sum of the Competitive SCs' Energy Imbalances is negative (that is, the Competitive SCs collectively consumed more energy than they provided), the price at which Energy Imbalances shall be settled (in $/MWh) shall be equal to the higher of the SIC for the TP's system or the Market Price.

5.8 Competitive SCs shall be provided the opportunity to trade their Energy Imbalance accounts within an individual TP's system as part of the settlement process. At the end of the trading period, the Trading Entity shall be responsible for settlement with each Competitive SC for the SC's final allocation of the net hourly Energy Imbalances, at the prices specified in Sections 5.6 and 5.7.

5.9 During an hour in which the sum of the Competitive SCs' Energy Imbalances exceeds the Energy Imbalance deadband for the TP's system, the Az ISA, or its designated agent, shall levy a penalty equal to the product of: (i) the amount (in MWh) by which the absolute value of the sum of the Competitive SCs' Energy Imbalances exceeds the deadband; and (ii) 10% of the price specified in Section 5.6 (if the sum of the Energy Imbalances is positive) or Section 5.7 (if the sum of the Energy Imbalances is negative).

5.10 The Trading Entity shall allocate this penalty to each Competitive SC based on each SC's final (after all trading of Energy Imbalances has been completed) Energy Imbalance. Each Competitive SC's share of the charge shall equal that SC's penalty allocation factor divided by the sum of the penalty allocation factors of all of the Competitive SCs. The SC's penalty allocation factor shall equal the absolute value of the amount by which the SC's Energy Imbalance (in MWh) exceeds the greater of 2 MW or 1.5% of the SC's scheduled Retail Network Load in the TP's system.

5.11 In calculating the Energy Imbalance deadband for each TP's system pursuant to Section 5.5 and the penalties pursuant to Section 5.9 and 5.10, the following additional criteria shall apply. Competitive SCs that have met their Operating Reserve obligations, and whose imports into the TP's system and/or Retail Network Resources within the TP's system are reduced due to unplanned forced curtailments, shall not incur Energy Imbalance penalties during the period prior to the first opportunity to update Schedules, provided that the Competitive SC's Schedule(s) for the period of the unplanned curtailment would otherwise fall within the deadband.

5.12 Each Competitive SC shall settle with the Trading Entity for the Energy Imbalance charges, credits and penalties, as specified above.

5.13 Each TP shall settle with the Trading Entity no later than 5 days after the TP renders its invoice for the net amount of the Energy Imbalance charges. Such invoice shall be rendered within 61 days after the last day of the month and calculated in accordance with Section 5 of this Protocol.

5.14 The Trading Entity, with the input and approval of the Az ISA, shall implement administrative procedures and deadlines for the procedures described above and for validating trades of Energy Imbalances among the Competitive SCs.

5.15 Each TP shall settle with its Standard Offer SC for imbalance energy provided to, or received from, the Standard Offer SC by remitting to the Standard Offer SC the amount determined pursuant to Section 5.13 less the amount determined pursuant to Section 5.9. Any revenues collected through penalties charged to Competitive SCs shall be retained by the TP and shall not be credited to the account of the Standard Offer SC.

6. Transmission and Distribution Loss Factors (TLFs and DLFs)

6.1 TLFs and DLFs to be used for scheduling shall be calculated by the TPs, UDCs, or their designated agents, and posted on the TP's website on or before the 15th day of the month prior to which the TLFs and DLFs are to be used.

6.2 The TLFs for each TP's system shall be system-wide rather than location-specific. The TLFs may vary from day-to-day and hour-to-hour.

6.3 The DLFs for each UDC area shall be system-wide rather than location-specific, but they may be voltage-dependent and may vary from day-to-day and hour-to-hour.

7. Unaccounted-For Energy (UFE)

For each TP which calculates UFE on an hourly basis:

7.1 The TP shall calculate UFE for the hour as the total amount of energy input into its system from all sources during the hour minus the total amount of energy delivered (whether internally metered or profiled) to the actual Loads (including calculated transmission and distribution losses) during the hour.

7.2 Each SC shall be allocated a share of the hourly UFE calculated above, based on the ratio of the SC's actual hourly load (including losses) to total system hourly delivered load (including losses).

7.3 Each Competitive SC's Energy Imbalance account shall be adjusted for UFE before it is provided to the Competitive SC and the Trading Entity for Energy Imbalance account trading. If the Competitive SC oversupplies during an hour in which the UFE is positive or if a Competitive SC undersupplies during an hour in which the UFE is negative (i.e., the Competitive SC helps to reduce the UFE problem), then the TP shall adjust each Competitive SC's Energy Imbalance account downward and shall credit the Competitive SC's UFE account. Otherwise, no UFE account adjustments will be made.

7.4 The TP shall charge or credit UFE to each SC at the TP's SIC.

8. Comparability

A Standard Offer SC that does not act as a passive provider of last resort and actively negotiates new agreements that do not qualify as standard offer and that are priced below the otherwise applicable standard offer rate for similar service, shall, with regard to scheduling for customers taking service under such agreements, be subject to all of the same requirements, including scheduling and Energy Imbalance, as Competitive SCs. Standard offer rate include those approved by the ACC as Standard Offer agreements and Salt River Project Agricultural Improvement and Power District's Standard Price Plans, as approved by its Board of Directors.

Pursuant to Section R14-2-1615 of the Arizona Administrative Code, Standard Offer SCs that are electric distribution cooperatives which choose not to provide competitive electric services outside their distribution service territory are exempt from the requirements of this section.

X. Congestion Management Principles

1. Purpose

The purpose of these Principles is to describe the process for mitigating congestion on transmission paths where capacity has been reserved for serving Retail Network Load within the TP's system. These congestion management principles shall apply to all SCs that are scheduling a share of Retail Network Load within the TP's system. Use of the Interconnected Transmission System for wholesale power transactions shall continue to be governed by the terms and provisions of the TP's OATT or the terms and provisions of Existing Agreements, whichever may apply.

2. Parties

The Congestion Management principles apply to the following entities:

2.1 SCs

2.2 CAOs

2.3 Az ISA

2.4 TPs

3. EHV Transmission Paths

The EHV transmission paths that have reservations for Committed Uses to facilitate the delivery of Retail Network Resources to Retail Network Load in the State of Arizona, as such reservations may be modified from time to time, will be posted on the Az ISA's website (www.az-isa.org). Each congested interface within the State of Arizona will also be posted on the Az ISA website.

4. Congestion Management Practices

4.1 The ARNT Protocol ensures that total transmission path reservations will not exceed the TTC.

4.2 Congestion related to a Load Zone's Import Limit shall be managed with Local Generation pursuant to the Must-Run Generation Protocol.

4.3 If planned maintenance results in a reduction of the TTC of a transmission path, transmission reservations shall be reduced pursuant to the TP's OATT. RNITS shall be reduced pro-rata based on each SC's then-current reservation on that affected transmission path.

4.4 Any Schedule Curtailments on a WSCC Qualified Path required by implementation of the WSCC Unscheduled Flow Mitigation Procedure shall be made pursuant to that procedure.

4.5 If forced outages, Loop Flow or other unexpected system conditions reduce transmission path capability in real time, the TPs shall make transmission path Curtailments first to non-firm Schedules and, if required, to firm Schedules (wholesale and retail) on a non-discriminatory pro-rata basis, based on the Schedules on the path and consistent with the terms of the TP's OATT. The TP shall notify the Az ISA as soon as practical of Curtailments and of the parties affected.

4.6 If an Emergency condition necessitates redispatch to relieve transmission path loading, those SCs scheduling on the transmission path shall share in the cost of the Emergency redispatch based on the terms of the TP's OATT. The TP shall notify the Az ISA as soon as practical of the Emergency redispatch condition(s) and of the parties affected.

XI. Emergency Operations Protocol

1. Purpose

The purpose of the Emergency Operations Protocol is to describe system conditions that warrant Emergency operations and procedures used to mitigate or eliminate those system conditions and return the electric system to a normal operating condition.

2. Parties

The Emergency Operations Protocol applies to the following entities:

2.1 SCs

2.2 CAOs

2.3 TPs

In addition, any disputes related to Emergency operations shall be referred to the Az ISA for resolution pursuant to the dispute resolution procedures outlined in the Az ISA By-laws.

3. Interface Requirements

The CAO or TP may issue instructions and information to SCs and adjacent CAOs or TPs during Emergency operating conditions.

3.1 Emergency communications shall occur via direct telephone contact.

3.2 Outage and Curtailment information shall be posted on the TP's OASIS.

4. Emergency Operations

The CAO or TP is authorized to take those actions, automatic or manual, that are necessary to:

4.1 Maintain system reliability.

4.2 Fulfill WSCC reliability obligations.

4.3 Comply with the Emergency Operations Policies of NERC, WSCC, SRSG and their successors.

The SC's share of Retail Network Load shall be subject to all applicable emergency operation standards promulgated by NERC, WSCC, SRSG, the TP and the CAO. Emergency operation may include, but is not limited to, automatic or manual operation of under-frequency relaying equipment, load shedding equipment, and voltage reduction equipment.

5. Emergency Conditions and Curtailments

5.1 The CAO or TP may curtail an SC's Schedules under Emergency conditions. Such Emergency conditions include, but are not limited to, the following circumstances:

WSCC-mandated circumstances such as the WSCC's "Unscheduled Flow Reduction Procedure." The CAO shall curtail Schedules based upon a WSCC predefined matrix.

5.1.1 Emergency outages on any of the CAO's or TP's EHV transmission paths that impact Import Limits.

5.1.2 Emergency outages of third party facilities that impact Import Limits.

5.2 Load shedding shall be administered in a non-discriminatory manner and within the CAO's or TP's technical limitations. The CAO or TP shall take those actions required to avoid shedding Load for entities deemed critical to the community.

5.3 SCs shall follow the CAO's or TP's instructions to aid in remedying system problems under Emergency conditions. System problems include, but are not limited to, transmission equipment overloads, system frequency or voltage conditions that are outside of safe operating ranges, and CAO's or TP's energy deficiencies.

5.4 After curtailing all non-firm Schedules, the CAO or TP shall implement 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.

5.5 When Schedules have been curtailed in accordance with Section 5.1 herein, affected SCs shall provide modified Schedules pursuant to Section 6.5 of the Scheduling Protocol beginning with the next Operating Hour.

6. Management of Emergencies

In the event of an Emergency, the CAO or TP shall:

6.1 Initiate action it considers necessary to preserve or restore stable operation of the CAO's or TP's system, including but not limited to:

6.1.1 Committing and dispatching all necessary available generation and Ancillary Services.

6.1.2 Tripping all interruptible demand designated for reliability uses.

6.1.3 Initiating the public appeals process for Load Curtailment as appropriate.

6.1.4 Shedding Load to curtail demand on an involuntary basis.

6.2 Inform adjacent CAOs and TPs as to the nature and extent of the Emergency, in accordance with established WSCC procedures.

6.3 Within a reasonable period of time, inform SCs of the Emergency and update them as the system is restored and stabilized.

6.4 Cease Emergency operations as soon as the system has been restored to normal operations and is stabilized.

7. Implementation of Emergency Dispatch Instructions

7.1 Each SC shall respond to CAO or TP dispatch instructions immediately upon notification during Emergencies.

7.2 Non-Compliant condition: An SC that does not execute the instructions of the CAO or TP during Emergency situations shall be considered to be in a Non-Compliant condition.

XII. After-The-Fact Checkout Protocol

1. Purpose

The purpose of the After-the-Fact Checkout Protocol is to establish procedures for determining each SC's Final Schedule. This information is required for settlement of transmission and Ancillary Services, as well as to ensure that all involved CAOs can meet the requirements of NERC Policy 1F, Inadvertent Interchange Standard. The process for checking out Schedules involves all parties to a power transaction, including CAOs TPs SCs and Third Party Suppliers.

2. Parties

The Checkout Protocol applies to the following entities:

2.1 SCs

2.2 CAOs

2.3 TPs

2.4 Third Party Suppliers

2.5 Az ISA

3. Checkout Process and Timelines

3.1 Normal business days for the purposes of this Protocol are Monday through Friday, excluding Holidays.

3.2 The TP shall select one of the following two options for its checkout process and timeline:

3.2.1 Option One:

3.2.1.1 After-the-fact checkout information shall be posted electronically. Access to the information shall be limited to the parties involved in the transaction and the Az ISA, which shall have access to all of the posted after-the-fact information.

3.2.1.2 Each SC's Final Schedules shall be posted electronically by the TP within two (2) normal business days after the trading day.

3.2.1.3 Within five (5) normal business days after the later of the actual or scheduled electronic posting of each SC's final Schedules, the SC shall inform the TP of any disagreement with the Final Schedules. Failure by the SC to inform the TP of such disagreement within the specified time period shall constitute acceptance of the Final Schedules as posted. The SC shall notify the TP of a disagreement electronically, with a copy to the Az ISA, and shall include the following information:

- Dispute date;
- Dispute hour;
- Explanation of the dispute; and
- SC contact name, phone number and e-mail address.

3.2.1.4 The TP shall acknowledge receipt of the SC's disagreement within one (1) normal business day.

3.2.1.5 The parties shall endeavor to resolve the disagreement within ten (10) normal business days.

3.2.1.6 The TP shall promptly notify the SC and the Az ISA regarding the resolution of a disagreement.

3.2.1.7 Once a month, concurrent with the TP's issuance of the SC's monthly invoice, the TP shall notify the Az ISA and the impacted SC(s) of any unresolved Schedule disputes and the status thereof. Monthly invoices issued by the TP shall reflect the values posted by the TP unless the TP has notified the SC of changes.

3.2.1.8 Due to the timing of the NERC inadvertent energy checkout process, the TP may need to make changes to the previously posted Final Schedules. In such instance, the TP shall notify the SC of the changes. Within five (5) normal business days after such notification, the SC will notify the TP and the Az ISA of any disagreement with the changed Final Schedules, and the parties shall use the same procedures described in Sections 3.2.1.3 through 3.2.1.5 above.

3.2.2 Option Two:

3.2.2.1 The Schedule verification steps listed below shall be completed electronically or via direct telephone communication.

3.2.2.2 After 2400 hours on each trading day, the TP shall verify with each SC the SC's Final Schedules for the day.

3.2.2.3 Within five (5) normal business days after the trading day, as part of the Control Area checkout process, the TP shall verify with each SC the individual hourly values for each of the SC's Final Schedules.

3.2.2.4 Within ten (10) normal business days after the end of the calendar month in which the trading day occurred, the TP shall contact the SC to correct any discrepancies found in the monthly Control Area checkout process.

3.3 The TP shall use all available information to investigate any after-the-fact disagreements with an SC, including phone recordings, tags, etc.

3.4 Should the TP or the SC believe that a disagreement cannot be resolved pursuant to this Protocol, either or both parties may submit the disagreement to the Az ISA for dispute resolution pursuant to the By-Laws of the Az ISA.

3.5 The TP shall specify the electronic mode of communication for posting Final Schedules, disagreements, resolution and status of resolution.