Entergy Services, Inc.
101 Constitution Avenue, N.W.
Suite 200 East
Washington, DC 20001
Tel: 202 530 7316
Fax: 202 530 7350
e-mail: emurph1@entergy.com

Erin M. Murphy
Senior Counsel
Federal Energy Regulatory Affairs

January 3, 2010

VIA ELECTRONIC DELIVERY

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: *Entergy Services, Inc.*, Docket No. ER11-___-000
Entergy Services, Inc. Order Nos. 729 and 676-E Compliance Filing

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act ("FPA"),[1] Part 35 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") regulations,[2] and Order No. 714[3] regarding electronic filing of tariff submittals, Entergy Services, Inc. ("Entergy"), on behalf of the Entergy Operating Companies,[4] hereby submits revisions to its Open Access Transmission Tariff ("OATT") in conformance with the Commission's directives in Order Nos. 729[5] and 676-E.[6] Entergy requests an effective date of April 1, 2011, for these revisions.

Order No. 729 approved, as mandatory and enforceable, six Modeling, Data, and Analysis ("MOD") Reliability Standards. Order No. 676-E approved eleven Business Practice Standards developed by the Wholesale Electric Quadrant of the North American Energy Standards Board. Pursuant to the clarification granted by the Commission in Order No. 729-B, both the Reliability Standards approved in Order No. 729 and the Business Practice Standards approved in Order No. 676-E will become effective on April 1, 2011.[7] The revisions to

---

1 16 U.S.C. § 824d (2006).
2 18 C.F.R. Part 35 (2010).
3 *Electronic Tariff Filings*, Order No. 714, 124 FERC ¶ 61,270 (2008).
4 The Entergy Operating Companies are Entergy Arkansas, Inc., Entergy Gulf States Louisiana, LLC, Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., and Entergy Texas, Inc.
5 *Mandatory Reliability Standards for the Calculation of Available Transfer Capability, capacity Benefit Margins, Transmission Reliability Margins, Total Transfer Capability, and Existing Transmission Commitments and Mandatory Reliability Standards for the Bulk-Power System*, Order No. 729, 129 FERC ¶ 61,155 (2009), *order on clarification*, Order No. 729-A, 131 FERC ¶ 61,109 (2010), *order on reh'g and clarification*, Order No. 729-B, 132 FERC ¶ 61,027 (2010)
6 *Standards for Business Practices and Communication Protocols for Public Utilities*, Order No. 676-E, 129 FERC ¶ 61,162 (2009).
7 Order No. 729-B at P 13-15.

Attachment C and section 4 of the Entergy OATT included in this filing are necessary to accommodate these Reliability Standards and Business Practice Standards. As explained below, the revisions to Attachment C proposed herein reflect the revisions currently pending in Docket Nos. ER05-1065-011 and OA07-32-008 as well as the revisions to the currently-effective Attachment C accepted by the Commission in Docket No. ER09-1180-000.

I. BACKGROUND

A. Order No. 729

On November 24, 2009, the Commission issued Order No. 729, approving as mandatory and enforceable six Reliability Standards developed and filed for approval by the North American Electric Reliability Corporation ("NERC"): MOD-001-1 (Available Transmission System Capability); MOD-004-1 (Capacity Benefit Margin); MOD-008-1 (TRM Calculation Methodology); MOD-028-1 (Area Interchange Methodology); MOD-029-1 (Rated System Path Methodology); and MOD-030-2 (Flowgate Methodology).

These Reliability Standards had been developed, in part, in response to the Commission's concern, expressed in Order No. 890, that consistency and transparency in the calculation of available transfer capability and its components are central to the Commission's open access policy and that a lack of consistency across the industry regarding the calculation of available transfer capability was a threat to the reliability of the bulk-power system. In Order No. 890, the Commission directed NERC to develop appropriate Reliability Standards to address these issues. Shortly thereafter, in Order No. 693, the Commission rejected certain MOD Reliability Standards then pending at the Commission, finding that they were not consistent with the directives in Order No. 890, and directed NERC to revise those Standards consistent with Order No. 890.

In response to these orders, NERC developed and filed with the Commission the six MOD Reliability Standards listed above. The Commission, although it directed certain additional changes to these Reliability Standards, concluded that they should be approved as mandatory and enforceable. As the Commission explained,

> The approved Reliability Standards will enhance transparency in the calculation of available transfer capability, requiring transmission operators and transmission service providers to calculate available transfer capability using a specific methodology that is both explicitly documented and available to reliability entities who request it. The approved Reliability Standards also require documentation of the detailed representations of the various components that comprise the available transfer capability equation, including the specification of modeling and risk assumptions and the disclosure of outage processing rules to other reliability entities. These actions will make the processes to calculate available transfer capability and its various components more transparent, which in turn will allow the Commission and others to ensure consistency in their application. By

promoting consistency, standardization and transparency, these Reliability Standards enhance the reliability of the Bulk-Power System.[8]

The Commission made the new MOD Reliability Standards effective "the first day of the first calendar quarter that is twelve months beyond the sate that the Reliability Standards are approved by all applicable regulatory authorities."[9] In Order No. 729-A, the Commission agreed that this stated implementation plan was problematic as it would not inform the subject entities regarding these other regulatory approvals and, as a result, "presents some compliance risks."[10] To clarify the compliance obligations, the Commission stated that the MOD Reliability Standards approved in Order No. 729 would become effective on January 1, 2011.[11] Subsequently, in Order No. 729-B, the Commission clarified that these Reliability Standards would become effective on April 1, 2011.

As explained in Order Nos. 729-B and 676-E, any necessary tariff revisions, including revisions to a Transmission Provider's Attachment C must be filed at least 90 days before the effective date of the MOD Reliability Standards approved in Order No. 729 and the Business Practice Standards approved in Order No. 676-E.[12] As a result, those tariff revisions must be filed on or before January 3, 2011.

B. Order No. 676-E

On November 24, 2009, the Commission issued Order No. 676-E, in which it revised its regulations to incorporate by reference certain Business Practice Standards adopted by the Wholesale Electric Quadrant of the North American Energy Standards Board. The new standards include standards on Open Access Same-Time Information Systems, the Open Access Same-Time Information Systems Standards & Communications Protocols, the Open Access Same-Time Information Systems Data Dictionary, Coordinate Interchange, Area Control Error, Inadvertent Interchange Payback, Transmission Loading Relief—Eastern Interconnection, Gas/Electric Coordination, Public Key Infrastructure, and the Open Access Same-Time Information Systems Implementation Guide.

The Commission clarified in Order No. 729-B that the revised Business Practice Standards approved in Order No. 676-E would become effective on April 1, 2011, in accordance with the revised effective date for the six MOD Reliability Standards approved in Order No. 729 as discussed above. The Commission also directed public utilities to modify their OATTs to incorporate by reference the revised Business Practice Standards at least 90 days before the effective date of the revised Business Practice Standards. As a result, those tariff revisions must be filed on or before January 3, 2011.

---

8 Order No. 729 at P 3.
9 Order No. 729 at P 95.
10 Order No. 729-A at P 7.
11 Order No. 729-A at P 7.
12 Order No. 729-B at P 16; Order No. 676-E at P 34.

II. DESCRIPTION OF THE INSTANT FILING

A. Order No. 729 OATT Revisions

1. Applicable MOD Reliability Standards

Entergy is updating Attachment C of its Tariff to reflect the changes to Entergy's calculation of available transfer capability required by the Reliability Standards approved by the Commission in Order No. 729. In particular, Entergy is modifying its Attachment C to reflect Reliability Standards MOD-001-1 (Available Transmission System Capability) and MOD-030-2 (Flowgate Methodology), which will become effective on April 1, 2011.[13]

The other four Reliability Standards approved by the Commission in Order No. 729 do not apply to Entergy.

- MOD-004-1 (Capacity Benefit Margin) does not apply to Entergy because Entergy does not maintain Capacity Benefit Margin.

- MOD-008-1 (TRM Calculation Methodology) does not apply to Entergy because Entergy does not maintain Transmission Reliability Margin.

- MOD-028-1 (Area Interchange Methodology) does not apply to Entergy because Entergy uses the Flowgate Methodology under MOD-030-2 to calculate Available Flowgate Capability values.

- MOD-029-1 (Rated System Path Methodology) does not apply to Entergy because Entergy uses the Flowgate Methodology under MOD-030-2 to calculate Available Flowgate Capability values.

2. Pending and Accepted Revisions to Attachment C

Entergy submitted revisions to its Attachment C for Commission approval by a compliance filing dated April 3, 2009, in Docket Nos. ER05-1065-011 and OA07-32-008, in compliance with Order No. 890 and the Commission's orders in Docket No.s EL05-52-000 and ER05-1065-000 approving Entergy's Independent Coordinator of Transmission. These tariff revisions are still pending before the Commission. The revisions to Attachment C proposed herein reflect the revisions to Attachment C filed on April 3, 2009.

In addition, Entergy submitted revisions to its currently-effective Attachment C on May 5, 2009, in Docket No. ER09-1180-000. These revisions were intended to reflect Entergy's transition to software developed by OATi ("webTrans") for the calculation of Available Flowgate Capability values and the evaluation of transmission service availability for Entergy's Operating, Planning, and Study Horizons. The Commission accepted these revisions on December 18, 2009, effective September 28, 2009.[14] Accordingly, the revisions to Attachment C proposed herein also reflect the revisions accepted by the Commission in Docket No. ER09-

[13] Order No. 729-B at P 13.
[14] *Entergy Services, Inc.*, 129 FERC ¶ 61,260 (2009).

1180-000.

3. Attachment C Revisions Resulting from the MOD Reliability Standards

As reflected in the revised Attachment C proposed herein, a significant amount of the narrative description regarding the calculation of Available Transfer Capability has been removed from the Entergy Attachment C. These changes are proposed to avoid possible duplication and/or conflict between Attachment C and the more detailed Available Transfer Capability Implementation Document ("ATCID") that Entergy must maintain pursuant to MOD-001-1 Requirement R3. Many of the Requirements that are mandatory and enforceable under MOD-001-1 and MOD-030-2 address the same requirements as Attachment C to the *pro forma* OATT. As a result, maintaining extensive narrative descriptions of the calculation of, in Entergy's case, Available Flowgate Capability, in two separate documents would inevitably lead to conflicts between the two documents.

For that reason, Entergy is proposing to remove from Attachment C those sections that substantively address the same matters addressed by the Entergy ATCID.[15] Where relevant, the sections of Attachment C will cross-reference the Entergy ATCID. Except to the extent required by the MOD Reliability Standards approved in Order No. 729, Entergy is not substantively changing its methodology for calculating Available Transfer Capability. Instead, the procedures for calculating Available Transfer Capability in the version of Attachment C filed on April 3, 2009, and still pending with the Commission, will simply be transferred to the Entergy ATCID.[16]

For example, the *pro forma* OATT requires that Attachment C "describe the step-by-step modeling study methodology and criteria for adding or eliminating flowgates (permanent and temporary)." However, MOD-030-2 Requirement R2.1 contains a detailed description of the method that Transmission Operators must use to determine the flowgates to use in their AFC process. Rather than maintain the detailed narrative explanation of Entergy's compliance with MOD-030-2 Requirement R2.1 in the Entergy ATCID and a somewhat less detailed description of identifying flowgates in Attachment C, Entergy will transition all of the substantive requirements regarding the addition and elimination of flowgates, including both temporary and permanent flowgates, to the Entergy ATCID. The relevant sections of Attachment C, instead of containing a narrative description, will cross-reference the Entergy ATCID. This will avoid the possibility of a conflict between the Entergy ATCID procedures the Entergy OATT Attachment C.

This approach offers significant advantages apart from ensuring the appropriate implementation of the MOD Reliability Standards. First, transparency will be assured. The Entergy ATCID will be publicized to a wide variety of industry members, all of whom will be

[15] Entergy is also removing from Attachment C those definitions that are no longer necessary as a result of these changes.

[16] A draft version of the Entergy ATCID reflecting this approach, including the incorporation of the April 3, 2009 Attachment C provisions, was circulated to Entergy's stakeholders in early November 2010.

notified prior to any changes to the Entergy ATCID.[17] This list includes:

- Each Planning Coordinator associated with or adjacent to Entergy's Transmission Service Provider area.
- Each Reliability Coordinator associated with or adjacent to the Entergy Transmission Service Provider area.
- Each Transmission Operator associated with the Entergy Transmission Service Provider area.
- Each Transmission Service Provider whose area is adjacent to the Entergy Transmission Service Provider area.

Furthermore, pursuant to NAESB Business Practice Standard WEQ-001-13.1.5, Entergy will publicly post the Entergy ATCID such that any interested parties will have access to it.

Finally, the ATCID that Entergy will maintain is far more detailed than the equivalent narratives in Attachment C, providing enhanced transparency regarding the calculation of Available Flowgate capability and, as a result of the continent-wide applicability of these MOD Reliability Standards, increased consistency with the calculations of other Transmission Providers.

B. Order No. 676-E OATT Revisions

Entergy is updating Section 4 of its OATT to reflect the changes mandated by Order No. 676-E, incorporating by reference eleven Business Practice Standards adopted by the Wholesale Electric Quadrant of the North American Energy Standards Board.

III. PROCEDURAL MATTERS

A. Effective Dates

In Order No. 729-B, the Commission clarified that the NAESB WEQ Business Practice Standards approved by Order No. 676-E would become effective on April 1, 2011.[18] Entergy requests that the revised tariff sheets submitted in compliance with Order No. 676-E, incorporating those NAESB WEQ Business Practice Standards, become effective on April 1, 2011.

In Order No. 729-B, the Commission also clarified that the MOD Reliability Standards approved in Order No. 729 would become effective on April 1, 2011.[19] Entergy requests that the revised tariff sheets incorporating the revisions to Attachment C needed to comply with the MOD Reliability Standards approved by Order No. 729 also become effective April 1, 2011.

Both the MOD Reliability Standards approved in Order No. 729 and the NAESB

[17] *See* MOD-001-1 Requirements R4 and R5.
[18] Order No. 729-B at P 15.
[19] Order No. 729-B at P 13-14.

Business Practice Standards approved in Order No. 676-E will become effective on April 1, 2011. As a result, it is critical that Entergy's OATT reflect the implementation of those Standards.

B. Service and Posting

In addition to making this filing with the Commission, Entergy has posted a copy of this filing on its OASIS and has provided a copy of this filing to the state and local regulators of the Entergy Operating Companies. Entergy requests that the Commission waive the requirement in 18 C.F.R. § 385.2010 (2010) for Entergy to serve this filing on its customers, as Entergy has posted the filing on its OASIS. A hard copy of this filing is also available at Entergy's corporate headquarters in New Orleans, Louisiana and its offices in Washington, D.C.

C. Communications

Should any additional information be required, please contact any of the following:

Erin M. Murphy
Senior Counsel
Entergy Services, Inc.
101 Constitution Avenue, N.W.
Suite 200 East
Washington, D.C. 20001
(202) 530-7316
(202) 530-7350 (fax)
emurph1@entergy.com

Stephen M. Spina
J. Daniel Skees
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave, N.W.
Washington, DC 20004
(202) 739-5958/5834
(202) 739-3001 (fax)
sspina@morganlewis.com
dskees@morganlewis.com

D. Exhibits Included with This Filing

Attachment A: Clean tariff sheets including the changes necessary to reflect the Reliability Standards approved in Order No. 729 and the NAESB Business Practice Standards approved in Order No. 676-E.

Attachment B: Redline tariff sheets including the changes necessary to reflect the Reliability Standards approved in Order No. 729 and the NAESB Business Practice Standards approved in Order No. 676-E.

IV. CONCLUSION

For the reasons discussed above, Entergy respectfully requests that the Commission accept the proposed revisions to the Entergy OATT, included herein, to take effect April 1, 2011.

Sincerely,

/s/

Erin M. Murphy

Stephen M. Spina
J. Daniel Skees

Attorneys for Entergy Services, Inc.

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the forgoing document upon those designated on the official service list compiled by the Secretary in this proceeding.

Dated this 3rd day of January 2010.

/s/

J. Daniel Skees
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave, N.W.
Washington, DC 20004
(202) 739-5834
(202) 739-3001 (fax)
dskees@morganlewis.com

i. Business Practices for Open Access Same-Time Information Systems (OASIS), Version 1.4 (WEQ-001, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standards 001-0.2 through 001-0.8, 001-0.14 through 001-0.20, 001-2.0 through 001-9.6.2, 001-9.8 through 001-12.5.2, and 001-A and 001-B;

ii. Business Practices for Open Access Same-Time Information Systems (OASIS) Standards & Communications Protocols, Version 1.4 (WEQ-002, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standards 002-1 through 002-5.10;

iii. Open Access Same-Time Information Systems (OASIS) Data Dictionary, Version 1.4 (WEQ-003, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standard 003-0;

iv. Coordinate Interchange (WEQ-004, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 004-0 through 004-13, and 004-A through 004-D;

v. Area Control Error (ACE) Equation Special Cases Standards (WEQ-005, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 005-0.1 through 005-3.1.3, and 005-A;

vi. Manual Time Error Correction (WEQ-006, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 006-0.1 through 006-12;

vii. Inadvertent Interchange Payback (WEQ-007, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 007-0.1 through 007-2, and 007-A;

viii. Transmission Loading Relief – Eastern Interconnection (WEQ-008, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 008-0.1 through 008-3.11.2.8, and 008-A through 008-D;

ix. Gas/Electric Coordination (WEQ-011, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standards 011-0.1 through 011-1.6;

x. Public Key Infrastructure (PKI) (WEQ-012, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Recommended Standard, Certification, Scope, Commitment to Open Standards, and Standards 012-0.1 through 012-1.26.5; and

xi. Business Practices for Open Access Same-Time Information Systems (OASIS) Implementation Guide, Version 1.4 (WEQ-013, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Introduction and Standards 013-0.1 through 013-4.2.

xii. Open Access Same-Time Information Systems (OASIS), Version 1.5 (WEQ-001, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009), with the exception of Standards 001-0.1, 001-0.9 through 001-0.13, 001-1.0, 001-9.7, 001-14.1.3, and 001-15.1.2

xiii. Open Access Same-Time Information Systems (OASIS) Standards & Communications Protocols, Version 1.5 (WEQ-002, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xiv. Open Access Same-Time Information Systems (OASIS) Data Dictionary, Version 1.5 (WEQ-003, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xv. Coordinate Interchange (WEQ-004, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xvi. Area Control Error (ACE) Equation Special Cases (WEQ-005, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xvii Manual Time Error Correction (WEQ-006, Version 001, October 31, 2007, with minor corrections applied on Nov. 16, 2007)

xviii. Inadvertent Interchange Payback (WEQ-007, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xix. Transmission Loading Relief – Eastern Interconnection (WEQ-008, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xx. Gas/Electric Coordination (WEQ-011, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xxi. Public Key Infrastructure (PKI) (WEQ-012, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xii. Open Access Same-Time Information Systems (OASIS) Implementation Guide, Version 1.5 (WEQ-013, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009).

i. Business Practices for Open Access Same-Time Information Systems (OASIS), Version 1.4 (WEQ-001, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standards 001-0.2 through 001-0.8, 001-0.14 through 001-0.20, 001-2.0 through 001-9.6.2, 001-9.8 through 001-12.5.2, and 001-A and 001-B;

ii. Business Practices for Open Access Same-Time Information Systems (OASIS) Standards & Communications Protocols, Version 1.4 (WEQ-002, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standards 002-1 through 002-5.10;

iii. Open Access Same-Time Information Systems (OASIS) Data Dictionary, Version 1.4 (WEQ-003, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standard 003-0;

iv. Coordinate Interchange (WEQ-004, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 004-0 through 004-13, and 004-A through 004-D;

v. Area Control Error (ACE) Equation Special Cases Standards (WEQ-005, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 005-0.1 through 005-3.1.3, and 005-A;

vi. Manual Time Error Correction (WEQ-006, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 006-0.1 through 006-12;

vii. Inadvertent Interchange Payback (WEQ-007, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 007-0.1 through 007-2, and 007-A;

viii. Transmission Loading Relief – Eastern Interconnection (WEQ-008, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Purpose, Applicability, and Standards 008-0.1 through 008-3.11.2.8, and 008-A through 008-D;

ix. Gas/Electric Coordination (WEQ-011, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Standards 011-0.1 through 011-1.6;

x. Public Key Infrastructure (PKI) (WEQ-012, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Recommended Standard, Certification, Scope, Commitment to Open Standards, and Standards 012-0.1 through 012-1.26.5; and

xi. Business Practices for Open Access Same-Time Information Systems (OASIS) Implementation Guide, Version 1.4 (WEQ-013, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007) including Introduction and Standards 013-0.1 through 013-4.2.

xii. Open Access Same-Time Information Systems (OASIS), Version 1.5 (WEQ-001, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009), with the exception of Standards 001-0.1, 001-0.9 through 001-0.13, 001-1.0, 001-9.7, 001-14.1.3, and 001-15.1.2

xiii. Open Access Same-Time Information Systems (OASIS) Standards & Communications Protocols, Version 1.5 (WEQ-002, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xiv. Open Access Same-Time Information Systems (OASIS) Data Dictionary, Version 1.5 (WEQ-003, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xv. Coordinate Interchange (WEQ-004, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xvi. Area Control Error (ACE) Equation Special Cases (WEQ-005, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xvii Manual Time Error Correction (WEQ-006, Version 001, October 31, 2007, with minor corrections applied on Nov. 16, 2007)

xviii. Inadvertent Interchange Payback (WEQ-007, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xix. Transmission Loading Relief – Eastern Interconnection (WEQ-008, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xx. Gas/Electric Coordination (WEQ-011, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xxi. Public Key Infrastructure (PKI) (WEQ-012, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009)

xii. Open Access Same-Time Information Systems (OASIS) Implementation Guide, Version 1.5 (WEQ-013, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009).

Document comparison by Workshare Professional on Friday, December 31, 2010 4:57:21 PM

Input:	
Document 1 ID	file://C:/Documents and Settings/emurph1/Desktop/section 4.2.doc
Description	section 4.2
Document 2 ID	file://C:/Documents and Settings/emurph1/Desktop/section 4.2_rev.doc
Description	section 4.2_rev
Rendering set	standard

Legend:	
Insertion	
~~Deletion~~	
~~Moved from~~	
Moved to	
Style change	
Format change	
~~Moved deletion~~	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	11
Deletions	0
Moved from	0
Moved to	0
Style change	0
Format changed	0
Total changes	11

ATTACHMENT C

Methodology To Assess Available Transfer Capability

1. GENERAL

1.1 Division of Responsibilities

The division of responsibilities between the Transmission Provider and the Independent Coordinator of Transmission ("ICT") in performing duties related to the procedures described in this Attachment C is controlled by Attachment S to the Tariff, including the Transmission Service Protocol and other ICT Protocols appended thereto (collectively, the "ICT Protocols").

The term "Entergy" is used to delineate the requirements or procedures applicable to the Transmission System and the Tariff generally, but is not used to delineate the division of responsibilities between Entergy and the ICT. Instead, the term "Transmission Provider" is used to delineate those duties that are performed by Entergy personnel, as opposed to the ICT.

1.2 Definitions

Capitalized terms used herein are defined in Section 1 and Attachment M (Source and Sink) of the Tariff, and NAESB Open Access Same-Time Information System ("OASIS") Standard WEQ-001-2.2 (Firm and Non-Firm) and NAESB OASIS Implementation Guide Standard WEQ-013-2.2 (Transaction Status). Additional capitalized terms used herein are defined below solely for purposes of this Attachment C.

AFC Process: The software, data inputs, assumptions and flow-based study methodology used to calculate AFC values and evaluate TSRs in the Operating, Planning and Study Horizons.

AFC Software: As defined in Section 2.2 of the Transmission Service Protocol. A list of software applications, including off-line calculation tools, used in the AFC Process is included in the TSR Business Practices.

Available Flowgate Capability (AFC): The amount of transfer capability remaining over a Flowgate for additional transmission service above Existing Transmission Commitments. AFC may be Firm or Non-Firm as described in Sections 3.2 and 3.3.

Available Transfer Capability (ATC): A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above Existing Transmission Commitments.

Automatic Generation Control (AGC) Facility: For purposes of the AFC Process, AGC Facilities are those generating facilities that are available to balance load and generation in the AFC Process. The designation of a facility as an AGC Facility in the AFC Process is a modeling assumption and is not based on whether the facility has automatic generation control capability.

Base Case Models: As defined in Section 2.3 of the Transmission Service Protocol. When referenced in this Attachment C, "Base Case Model" includes the EMS-Based Models and the Monthly Base Case Models used to calculate AFC values.

Base Flow $_{NON\text{-}FIRM}$: The power flow impact on a Flowgate attributable to Non-Firm and Firm Existing Transmission Commitments that are modeled as discrete injections or withdrawals in Base Case Models.

Base Flow $_{FIRM}$: The power flow impact on a Flowgate attributable to Firm Existing Transmission Commitments that are modeled as discrete injections or withdrawals in Base Case Models.

Capacity Benefit Margin (CBM): The amount of Firm transmission transfer capability reserved by the Transmission Provider for LSEs, whose loads are located on the Transmission System, to enable access by those entities to generation from interconnected systems to meet generation reliability requirements.

Counterflow: The impact from transmission Reservations that decrease the flow on a monitored Flowgate.

Customer: A Transmission Customer, Network Customer, Eligible Customer or the Transmission Provider when designating resources and loads on behalf of its Native Load Customers, as applicable.

EMS-Based Models: The Base Case Models derived from the Transmission Provider's EMS State Estimator and used to calculate AFC values in the Operating and Planning Horizons.

Embedded Control Area: A Control Area that is not directly interconnected with any other Control Area or transmission system other than the Transmission Provider's Control Area and Transmission System.

Energy Management System (EMS): The collection of software and hardware used to monitor and operate the Transmission System in real-time.

Entergy Available Transfer Capability Implementation Document (Entergy ATCID): The document maintained by the Transmission Provider in accordance with NERC Reliability Standards MOD-001-1 and MOD-030-2 and providing the Transmission Provider's methodology for calculating available transmission system capability using the flowgate methodology in accordance with those NERC Reliability Standards.

Existing Transmission Commitments (ETCs): The existing uses of the Transmission System consisting of Firm ETCs and Non-Firm ETCs.

External Control Area: A Control Area other than an Embedded Control Area or the Transmission Provider's Control Area.

Firm AFC: The amount of Firm transfer capability over a Flowgate that remains available for additional transmission service as calculated per the formula in Section 3.3.

Firm Existing Transmission Commitments (Firm ETCs): The existing Firm uses of the Transmission System, as adjusted for Counterflows and released and redirected Firm service. Firm ETCs include: (1) Firm service to the Transmission Provider's Native Load Customers; (2) Firm Network Service from Network Resources; (3) Firm PTP Service; (4) grandfathered Firm service under pre-Order No. 888 transmission or bundled agreements; and (5) rollover rights associated with maintaining Firm service.

First-Tier External Control Area: An External Control Area that is directly interconnected with the Transmission Provider's Control Area and Transmission System.

Flowgate: A Flowgate is either: (1) a single transmission facility (monitored element); or (2) a set of transmission facilities (monitored and contingent elements). Flowgates represent transmission facilities that are monitored in the AFC Process for potential constraints.

Generating Facility Owner: The owner of a generating facility interconnected with the Transmission System pursuant to an LGIA or other interconnection and operating Agreement.

Interchange: The amount of energy estimated to flow across the boundary between two Control Areas.

Load Serving Entities (LSEs): Network Customers and the entity responsible for serving the Transmission Provider's Native Load Customers.

Master List of Flowgates (Master List): The list of Flowgates monitored in the AFC Process pursuant to Section 2.

Monthly Base Case Models: The Base Case Models derived from the NERC/SERC regional modeling process described in Section 15 and the Entergy ATCID and used to calculate AFC values in the Study Horizon.

Most Limiting Flowgates: For each transfer path, the Flowgates used to evaluate a TSR pursuant to Section 10.1.

NERC: The North American Electric Reliability Corporation in its role as the Electric Reliability Organization.

NERC Reliability Standards: The currently effective mandatory reliability standards adopted by NERC and approved by the Commission.

Net Interchange: The amount of net energy estimated to flow across the boundary of a Control Area based on the Interchange values that Control Area shares with each adjacent Control Area.

Network Service: Network Integration Transmission Service.

Non-Firm Existing Transmission Commitments (Non-Firm ETC): The existing Non-Firm uses of the Transmission System, as adjusted for Counterflows, released TRM and CBM capacity, and released or redirected Firm service. Non-Firm ETCs include: (1) Non-Firm service to the Transmission Provider's Native Load Customers; (2) Secondary Network

Service; (3) Non-Firm PTP Service; and (4) grandfathered Non-Firm service under pre-Order No. 888 transmission or bundled agreements.

Non-Firm AFC: The amount of Non-Firm transfer capability over a Flowgate that remains available for additional transmission service as calculated per the formula in Section 3.2.

Operating Horizon: The horizon for calculating AFC values that includes all hours of the current day (Day 1) and, after 12:00 p.m. of the current day, all hours of the next day (Day 2).

Planning Horizon: The horizon for calculating AFC values that extends from the end of the Operating Horizon through the thirty-first day (Day 31).

PMax Flowgate: A Flowgate which represents the maximum rating of a generating facility pursuant to the relevant LGIA or other interconnection and operating agreement.

PTP Service: Point-to-Point Transmission Service.

Remaining ETCs: Existing Transmission Commitments that are algebraically decremented from AFC values as described in the Entergy ATCID.

Reservation: A TSR that has been both: (1) Accepted or Counteroffered by the ICT; and (2) Confirmed or submitted Pre-Confirmed by the Customer. A TSR that has not entered a final state of Confirmed is not a Reservation for purposes of this Attachment C.

Response Factors: A measure of the impact that each Source-to-Sink transaction has on a monitored Flowgate, as calculated on a transaction-specific and Flowgate-specific basis.

RFCalc: The Response Factor Calculator software application (or its successor).

Scenario Analyzer: The software that posts approximate AFC values and allows Customers to evaluate transfer capability without actually submitting a TSR.

Secondary Network Service: Secondary service provided on a Non-Firm basis pursuant to Section 28.4 of the Tariff.

SERC: SERC Reliability Corporation.

Significantly Impacted Flowgate: For a particular TSR, a Significantly Impacted Flowgate is any Flowgate for which the TSR has a Response Factor equal to or greater than the three percent (3%) Response Factor threshold specified in Section 9.2.

State Estimator: A software application designed to produce the best estimate of electric system voltage and phase angles utilizing available measurements.

Study Horizon: The horizon for calculating AFC values that extends from the end of the Planning Horizon (Month 2) through the eighteenth month (Month 18).

TieCap Flowgate: A Flowgate used to evaluate power flows between the Transmission Provider's Control Area and other Control Areas as described in the Entergy ATCID.

Total Flowgate Capability (TFC): The total capability of a Flowgate based on the thermal, voltage, stability or contractual limits for the facilities that define the Flowgate.

Transmission Reliability Margin (TRM): The amount of transmission transfer capability needed to provide a reasonable level of assurance that the system will remain reliable. TRM accounts for the inherent uncertainty in system conditions and its associated effects on transfer capability evaluations and the need for operating flexibility to ensure reliable system operation as system conditions change.

Transmission Service Request Business Practices (TSR Business Practices): The business practices referenced in Sections 2.1, 2.4, 2.12, and 2.13 of the Transmission Service Protocol, including but not limited to the specific practices identified in Section 14 herein.

Transmission Service Request (TSR): A request submitted over OASIS for: (1) PTP Service; (2) Network Service; (3) Secondary Network Service; or (4) designation of a Network Resource by the entity responsible for serving the Transmission Provider's Native Load Customers.

Transmission Service Protocol: The ICT Transmission Service Protocol appended to Attachment S to the Tariff.

webTrans: The Transmission Provider's software application used to process TSRs and calculate AFC values, including any successor software that may be developed by OATi.

1.3 Applicability

In accordance with Attachment S to the Tariff and the Transmission Service Protocol, the ICT applies the procedures set forth herein on a non-discriminatory basis to evaluate ATC/AFC within an eighteen-month horizon for the following types of TSRs: (1) Short-Term Firm PTP Service; (2) Non-Firm PTP Service; (3) requests by existing Network Customers to designate new Network Resources in daily, weekly or monthly increments; and (4) Secondary Network Service.

The ICT responds to valid Completed Applications for PTP Service, Network Service and Secondary Network Service described in the preceding paragraph by performing studies pursuant to this Attachment C to assess whether sufficient transmission capability exists to accommodate the service requested in the Application. PTP Service TSRs are submitted based on Source(s) and Sink(s) as required by Attachment M of the Tariff. Network Resource TSRs are submitted by designating Network Resources and/or Network Load as required by Sections 30 and 31 of the Tariff. Secondary Network Service TSRs are submitted by identifying resources that are not designated Network Resources pursuant to Section 28.4 of the Tariff.

2. CRITERIA FOR MONITORED FLOWGATES

2.1 Criteria for Initial Selection of Monitored Flowgates

The AFC Process determines AFC by monitoring the impact of TSRs on certain specified Flowgates. The Transmission Provider includes Flowgates used in the AFC Process based, at a minimum, on the procedures contained in the Entergy ATCID, in accordance with Reliability Standard MOD-030-2—Flowgate Methodology.

2.2 Criteria for Adding/Removing Monitored Flowgates

The ICT posts the Master List of Flowgates ("Master List") on OASIS, as well as a log of all changes thereto. The ICT or the Transmission Provider may propose to modify the Master List (on a permanent or temporary basis) by including new Flowgates or removing existing Flowgates. If an original Flowgate is renamed, the original name is noted on the Master List. For modifications proposed by the Transmission Provider (either permanent or temporary), the Transmission Provider documents and supplies to the ICT all studies, analyses and research conducted in connection with the proposed change. The ICT reviews and validates all proposed changes to the Master List to ensure that such changes are consistent with the criteria outlined below. For purposes of this Section 2.2, the responsibility of the ICT to "review and validate" means that the ICT reviews the inputs and results of any study or analysis and confirms that the study results reasonably reflect the application and product of the criteria specified in this Section 2.2.

2.2.1 Adding New Flowgates

The Transmission Provider uses the procedures in the Entergy ATCID to add new Flowgates to the Master List. The ICT reviews and validates that new Flowgates are added to the Master List in accordance with those criteria.

2.2.2 Removing Flowgates

The Transmission Provider uses the procedures in the Entergy ATCID to remove Flowgates from the Master List. The ICT reviews and validates that the removal of Flowgates from the Master List is in accordance with that process.

2.2.3 Adding and Removing Temporary Flowgates

The Transmission Provider uses the procedures in the Entergy ATCID to add and remove temporary Flowgates to the Master List. The ICT reviews and validates that temporary Flowgates are added to the Master List in accordance with those criteria.

3. CALCULATION OF AFC VALUES

3.1 Base Case Models

The AFC Process generates Base Case Models that simulate anticipated Transmission System conditions based on the data inputs and assumptions described in Sections 4 - 9 and in the Entergy ATCID. Flowcharts of the AFC Process identifying the databases used in calculating AFC values are attached as Appendix 1 to this Attachment C.

3.2 Non-Firm AFC Formula

webTrans computes Non-Firm AFC for the Operating, Planning and Study Horizons. RFCalc and off-line calculator tools calculate Base Flow (including the impact of Non-Firm and Firm

ETCs) by solving the applicable Base Case Model. The AFC Software may adjust the Base Flow to remove a percentage of the Counterflow from Non-Firm ETCs as described in the Entergy ATCID. webTrans algebraically decrements the AFC values for the Most Limiting Flowgates to reflect the impact of any Remaining ETCs as described in the Entergy ATCID.

webTrans determines Non-Firm AFC in accordance with the following formula:

$$AFC_{NF} = TFC - (ETC_{Fi} + ETC_{NF} - counterflows_{NF}) - CBM_{i} - TRM_{i} + Postbacks_{Fi}$$

Where:

$(ETC_{Fi} + ETC_{NF} - counterflows_{NF})$ = Base Flow + Remaining Firm and Non-Firm TSRs in a pending or active state not included in Base Flow

Base Flow = Positive Direction Flow - (Counterflow direction flow * (1 - Counterflow factor))

Positive Direction Flow is the flow amount in base flow that flows in the defined direction of the flowgate.

AFC_{NF} is the non-firm Available Flowgate Capability for the Flowgate for that period.

TFC is the Total Flowgate Capability of the Flowgate.

ETC_{Fi} is the sum of the impacts of existing firm Transmission commitments for the Flowgate during that period.

ETC_{NFi} is the sum of the impacts of existing non-firm Transmission commitments for the Flowgate during that period.

CBM_{Si} is the impact of any schedules during that period using Capacity Benefit Margin.

TRM_{Ui} is the impact on the Flowgate of the Transmission Reliability Margin that has not been released (unreleased) for sale as non-firm capacity by the Transmission Service Provider during that period.

$Postbacks_{NF}$ are changes to non-firm Available Flowgate Capability due to a change in the use of Transmission Service for that period, as defined in Business Practices.

$counterflows_{NF}$ are adjustments to non-firm AFC as determined by the Transmission Provider and specified in the Entergy ATCID.

Counterflow factor is a factor used to remove a portion of the counterflow from the Base flow calculation.

Base Flow is the power flow impact attributable to Existing Transmission Commitments that are modeled as discrete injections or withdrawals in the Base Case Models. In the Operating and Planning Horizon, Base Flow includes both Firm and Non-firm Commitments. In Study Horizon, Base Flow includes Firm Commitments.

3.3 Firm AFC Formula

webTrans computes Firm AFC for the Planning and Study Horizons. Firm AFC is not available for the Operating Horizon. The AFC Software calculates Base Flow (including the impact of Non-Firm and Firm ETCs) by solving the applicable Base Case Model. After the Base Case Model has been solved for a time segment, webTrans removes the effects of Non-Firm ETCs to calculate Base Flow (Firm). The AFC Software may adjust the Base Flow to remove a percentage of the Counterflow from Firm ETCs as described in the Entergy ATCID for the Planning and Study Horizions. webTrans algebraically decrements the AFC values for the Most Limiting Flowgates to reflect the impact of any Remaining ETCs as described in the Entergy ATCID. webTrans uses the following formula to determine Firm AFC:

$$AFC_F = TFC - (ETC_{Fi} - counterflows_{Fi}) - CBM_i - TRM_i + Postbacks_{Fi}$$

Where:

$(ETC_{Fi} - counterflows_{Fi})$ = Adjusted Base Flow + Remaining firm TSRs in a pending or active state not included in base flow

Adjusted Base Flow = Base Flow – Impact from Non-Firm TSRs included in Base Flow

Base Flow = Positive Direction Flow - (Counterflow direction flow * (1 - Counterflow factor))

Positive Direction Flow is the flow amount in base flow that flows in the defined direction of the flowgate.

AFC_F is the firm Available Flowgate Capability for the Flowgate for that period.

TFC is the Total Flowgate Capability of the Flowgate.

ETC_{Fi} is the sum of the impacts of existing firm Transmission commitments for the Flowgate during that period.

CBM_i is the impact of the Capacity Benefit Margin on the Flowgate during that period.

TRM_i is the impact of the Transmission Reliability Margin on the Flowgate during that period.

Postbacks$_{Fi}$ are changes to firm AFC due to a change in the use of Transmission Service for that period, as defined in Business Practices.

counterflows$_{Fi}$ are adjustments to firm AFC as determined by the Transmission Provider and specified in the Entergy ATCID.

Counterflow factor is a factor used to remove a portion of the counterflow from the Base flow calculation.

Base Flow is the power flow impact attributable to Existing Transmission Commitments that are modeled as discrete injections or withdrawals in the Base Case Models. In the Operating and Planning Horizon, Base Flow includes both Firm and Non-firm Commitments. In Study Horizon, Base Flow includes Firm Commitments.

3.4 Link to Transmission Provider's AFC Formulas

In addition to the description provided in Sections 3.2 and 3.3 above, the formulas that the Transmission Provider uses when calculating AFC are available on the info.htm page of the Transmission Provider's OASIS by selecting the link titled "Calculation of AFC.".

3.5 AFC Calculation Horizons

The frequency of calculation of AFC in the Operating Horizon, Planning Horizon, and Study Horizon is described in the Entergy ATCID.

3.6 Resynchronization of AFC Values

AFC values are resynchronized as described in the Entergy ATCID.

4. TOTAL FLOWGATE CAPABILITY

TFC is calculated as described in the Entergy ATCID.

5. MARGINS

5.1 Transmission Reliability Margin

A TRM value of zero is used in calculating AFC values and in reviewing TSRs on the Transmission System, unless the Transmission Provider submits a filing under Section 205 of the Federal Power Act for a higher value.

5.2 Capacity Benefit Margin

A CBM value of zero is used in calculating AFC values and in reviewing TSRs on the Transmission System, unless the Transmission Provider submits a filing under Section 205 of the Federal Power Act for a higher value. Such a filing will also address the release of CBM for Non-Firm service.

6. DATA INPUTS FOR BASE CASE MODELS

Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying (or collecting) the data inputs and information necessary for creating the hourly and daily EMS-Based Models and the Monthly Base Case Models. These procedures are described in the Entergy ATCID.

7. MODELING BASE FLOWS

Base flows, including service to network/Transmission Provider's native load customers, firm and non-firm PTP service, existing transmission commitments not modeled in base flows, net interchange, and external control areas are modeled in accordance with the procedures contained in the Entergy ATCID.

8. COUNTERFLOWS

The AFC Software may adjust the Base Flow associated with a particular Flowgate by removing a percentage of Counterflow impacts in the calculation of AFC values. The formula used for adjusting Base Flows to take into account Counterflows is set forth in Section 3. Counterflow impacts on AFC values are calculated in accordance with the procedures contained in the Entergy ATCID.

The Transmission Provider, in conjunction with the ICT, reviews scheduling data and other operational experience to determine Counterflow percentages and evaluate the reasonableness of the established Counterflow percentages through periodic reviews. The Transmission Provider provides to the ICT all studies, analysis and research conducted in connection with any proposed change to the Counterflow calculation. The ICT independently reviews and validates these, and posts on OASIS notice of any such change prior to effectiveness. For purposes of this section, the responsibility of the ICT to “review and validate” means that the ICT reviews the inputs and results of any study or analysis provided by the Transmission Provider and confirms that the results reasonably reflect the application and product of such studies and analyses. The TSR Business Practices identify: (1) the amount of Counterflow impacts removed from the Base Flow; (2) the actual Counterflow calculations, including workpapers, with any historical data used to derive the Counterflow percentages; (3) the frequency of reviews of Counterflows; and (4) a description of the process used to review scheduling data and other operational experience for purposes of establishing Counterflow percentages in sufficient detail to address reasonable inquiries as to Counterflows in the Operating, Planning and Study Horizons.

9. RESPONSE FACTORS

In order to evaluate whether a TSR uses all, some, or none of the AFC for a particular Flowgate, the AFC Software calculates Response Factors using the EMS-Based Models and Monthly Base Case Models. The Response Factors for a particular TSR determine which Flowgates meet the specified threshold for being considered Significantly Impacted Flowgates for that TSR under Section 9.3.

9.1 Response Factors For Directly Interconnected Generating Facilities

Response Factors are calculated for each generating facility that is directly interconnected with the Transmission System, including all facilities within the Transmission Provider’s Control Area

and any Embedded Control Areas, regardless of ownership or affiliation. RFCalc utilizes State Estimator models to calculate Response Factors in the Operations and Planning Horizons, while the ICT uses Monthly Base Case Models developed by the Transmission Provider and off-line power flow applications to calculate Response Factors in the Study Horizon. Response Factors are resynchronized on the same basis and with the same frequency as AFC values as described in Section 3.6. When calculating Response Factors, the AFC Software relies on participation factors to define how specific generating facilities participate in the transfer relative to other generating facilities within the same Source or Sink. The participation factor is a measure of a generating facility's relative upward or downward movement within a Source or Sink during Response Factor calculations. The TSR Business Practices describe the process for incorporating existing and new Sources and Sinks in the calculation of Response Factors, including subsystem definitions and participation factors.

9.2 Response Factors For First-Tier External Control Areas

As described in further detail below, Response Factors for a First-Tier External Control Area are used to evaluate TSRs from any generating facility in that Control Area, unless a generator-specific Response Factor has been calculated for a border generating facility.

For transactions that Source in an External Control Area, Response Factors for the External Control Area are calculated by ramping up available generating facilities or AGC Facilities in that Control Area on a modified *pro rata* basis, such that all generating facilities simultaneously reach their rated maximum outputs. For transactions that sink in an External Control Area, Response Factors are calculated for the External Control Area by ramping down available generating facilities or AGC Facilities in that Control Area on a modified *pro rata* basis, such that all generating facilities reach their rated minimum outputs simultaneously. The TSR Business Practices describe the process for incorporating existing and new Sources and Sinks in the calculation of Response Factors for External Control Areas, including subsystem definitions and participation factors.

Generator-specific Response Factors are calculated on an "as needed" basis for border generating facilities, *i.e.*, generating facilities that are located on other transmission systems/Control Areas and are also in "close electric proximity" to the Transmission System. The ICT or the Transmission Provider may propose that a generator-specific Response Factor be calculated for a border generating facility consistent with the criteria provided below. Response Factor proposals offered by the Transmission Provider are subject to review and validation by the ICT and are accompanied by any studies, analysis and research conducted by the Transmission Provider. For purposes of this Section 9.2, the review and validation responsibility of the ICT means that the ICT reviews the studies and analysis to verify that the Transmission Provider followed the applicable criteria and that the results reasonably reflect the application and product of such studies and analyses.

To determine whether generator-specific Response Factors should be calculated for a border generating facility, two criteria are applied. First, the generating facility must be in close electric proximity to the Transmission System such that the generating facility is either: (1) directly interconnected with the Transmission System, but located in a different Control Area; or (2) interconnected with the Transmission System of another transmission provider within one or two buses of the Transmission System. Second, a significant difference must exist between the Response Factors for all other generating facilities in the External Control Area and the Response Factors for the specific border generating facility.

9.3 Response Factor Threshold

To determine whether a Flowgate is a Significantly Impacted Flowgate, a Response Factor threshold of three percent (3%) is applied. A Flowgate is only considered a Significantly Impacted Flowgate for a particular TSR if the Response Factor for that Flowgate is equal to or greater than the three percent (3%) threshold. If operating conditions indicate that a revision to the Response Factor threshold is necessary to enable accurate representation of system transfer capability and, thereby maintain system reliability, the Transmission Provider will reevaluate this threshold with notice to ICT. All changes to the Response Factor threshold are filed with the Commission.

10. EVALUATING TSRs

10.1 Flowgates Used to Evaluate TSRs

Although the AFC Process monitors many Flowgates, webTrans uses a more limited set of Flowgates to evaluate individual TSRs. When evaluating any single TSR, webTrans considers no more than fifteen Flowgates, which are referred to as the Most Limiting Flowgates for that TSR. The Most Limiting Flowgates for any TSR include: (1) any applicable PMax Flowgate; (2) any applicable TieCap Flowgates; and (3) the Significantly Impacted Flowgates with the lowest AFC values. The list of Flowgates used to evaluate a particular TSR is re-determined during each resynchronization.

10.2 Accepting and Refusing TSRs

For each TSR, the AFC Software identifies the Most Limiting Flowgates for that TSR and evaluates the additional loading impact of the TSR on those Flowgates. The amount of capacity requested is separately multiplied by the Response Factor for each of the Most Limiting Flowgates to produce the additional loading impact of the TSR on each Flowgate. The loading impact is subtracted from the AFC value for each Flowgate. Each TSR is evaluated against these values as follows:

i. If the AFC values for all of the Most Limiting Flowgates remain positive or equal to zero after being reduced to account for the additional loading, the TSR is Accepted.

ii. If the AFC value for any of the Most Limiting Flowgates is negative after being reduced to account for the additional loading impact of the TSR, and there are no Reservations with a priority lower than the TSR that can be Preempted under Section 13.2 of the Tariff, the TSR is Refused or Counteroffered.

iii. If the AFC value for any of the Most Limiting Flowgates is negative after being reduced to account for the additional loading impact of the TSR, and one or more Reservations with a priority lower than the TSR can be Preempted under Section 13.2 of the Tariff to increase the AFC value on that Flowgate, the TSR is Accepted (to the extent that preemption caused the AFC value returned to the same level that existed prior to the reduction to account for the TSR) or Counteroffered (to the extent that preemption caused the AFC value to increase but not completely return to the same level that existed prior to the reduction to account for the TSR). The lower priority Reservations are Preempted only to the extent necessary to alleviate the additional loading impact of the Accepted TSR or the portion of the TSR that is Counteroffered.

10.3 PMax and TieCap Flowgates

Regardless of the applicable AFC values for other Flowgates, Accepted TSRs and Reservations from a particular generating facility shall not exceed the maximum rating of that facility as described in the governing LGIA or other interconnection and operating agreement. The amount of AFC available across a Control Area interface cannot exceed the total interface rating between the two Control Areas. Consistent with NERC Reliability Standards and operating agreements, the capacity between these interfaces is rated. This limit is typically defined by the thermal limit of all transmission facilities that define the interface. Other Control Area interfaces may be limited based upon the maximum generation capability or load of that Control Area. These limits are honored in the AFC Process through proxy Flowgates, referred to as the PMax and TieCap Flowgates. To the extent that the TSR, standing alone or aggregated with other TSRs or Reservations, exceeds the maximum rating of the generating facility, the PMax Flowgate will be limiting for that particular TSR. To the extent that the TSR, standing alone or aggregated with other TSRs or Reservations, exceeds the interface limit, the TieCap Flowgate will be limiting for that particular TSR.

10.4 Redirect TSRs

Requests to Redirect all or a portion of a Firm PTP Reservation from an alternate Point-of-Receipt (Source) or to an alternative Point-of-Delivery (Sink) on a Firm basis are evaluated in the following manner: (1) the Most Limiting Flowgates associated with both TSRs (the original TSR and the Redirect TSR) are identified; (2) the AFC Flowgates are separated into two groups (Group 1 includes Flowgates that are common to both TSRs and Group 2 includes the remaining Flowgates identified in the list of the Most Limiting Flowgates by the Redirect TSR); and (3) the impact of the Redirect TSR is then calculated and evaluated according to subsections (i)-(v) below:

i. If the AFC value of any Flowgates in Group 1 is less than or equal to zero, before applying the impact of the Redirect TSR, and the impact of the Redirect is greater than the parent TSR (higher Response Factor), the Redirect TSR is Refused.

ii. If the AFC value of any Flowgate in Group 2 is less than or equal to zero, before applying the impact of the Redirect TSR, the Redirect TSR is Refused.

iii. If the AFC value of any Flowgates in Group 1 is greater than zero, before applying the impact of the Redirect TSR, and the impact of the Redirect is greater than the parent TSR (higher Response Factor), the Redirect TSR is Counteroffered for a MW amount equal to the MW that would cause the AFC on the Flowgate to equal zero.

iv. If the impact of the Redirect TSR causes the AFC of any Flowgate in Group 2 to drop below zero, the Redirect TSR is Counteroffered for a MW amount equal to the MW that would cause the AFC of the Most Limiting Flowgate (*i.e.*, the Flowgate with the largest negative AFC value) in Group 2 to equal zero.

v. In all other circumstances, the Redirect TSR is Accepted.

11. SYSTEM IMPACT STUDIES

System Impact Studies are performed in accordance with Attachment D to the Tariff. System Impact Studies are not performed for TSRs that fall within the Operating, Planning or Study Horizons of the AFC Process, except as specifically provided for in Attachment D.

12. SCENARIO ANALYZER

The Transmission Provider posts approximate AFC values by supplying a Scenario Analyzer tool that identifies the applicable AFC value for any Source/Sink path for which AFC values are calculated. The Scenario Analyzer allows Customers to evaluate transfer capability by submitting a proxy service request. The Scenario Analyzer provides Customers with an immediate response by performing the same flow-based review and using the same flow-based engine webTrans uses to determine whether actual TSRs can be accommodated. The Scenario Analyzer notifies the Customer whether or not the evaluation passes the AFC check and provides evaluation identification number (SA###). The Customer can then query the request evaluation within OASIS and is provided the following information associated with the request: all constrained Most Limiting Flowgates, the hour(s) when the constraints exist, and the amount of Flowgate capacity available. Because the Scenario Analyzer does not submit an actual TSR over OASIS, it does not decrement Flowgate AFC or guarantee that AFC will be available when an actual TSR is submitted over OASIS.

13. AFC-RELATED DATA

A list of the AFC-related data that is either posted on OASIS or supplied upon request is contained in the TSR Business Practices, including a description of any applicable confidentiality requirements and procedures. The list identifies: (1) the data used to calculate AFC values; (2) information and supporting data used to explain the reason(s) TSRs are Refused or Counteroffered; (3) other AFC-related information provided by the Transmission Provider; and (4) whether the information referenced in (1)-(3) is posted on OASIS on a regular basis or is provided upon request.

14. TSR BUSINESS PRACTICES RELATED TO AFC PROCESS

Additional detail regarding the AFC Process is available in the TSR Business Practices posted on OASIS. At a minimum, the TSR Business Practices will address the following AFC-related topics:

i. Software Applications Used in the AFC Process (Section 1.2)
ii. Frequency of Resynchronizations (Section 3.6)
iii. Facility Ratings (Section 4.2)
iv. Load Data Submission–Operating/Planning Horizons (Section 6.2.1)
v. Generation Dispatch Data Submission–Operating/Planning Horizons (Section 6.3.1)
vi. Generation Dispatch Data Submission–Study Horizon (Section 6.3.2)
vii. Generating Facility Operating Characteristics (Section 6.5)
viii. Transmission Construction Projects Not Currently-In Service (Section 6.6)
ix. Zonal Import Limits (Section 7.1.2)
x. Counterflows (Section 8)
xi. Adding New Sources and Sinks (Section 9.1)
xii. Calculation of Response Factors (Sections 9.1 and 9.2)
xiii. Data Regarding the AFC Process (Section 13)

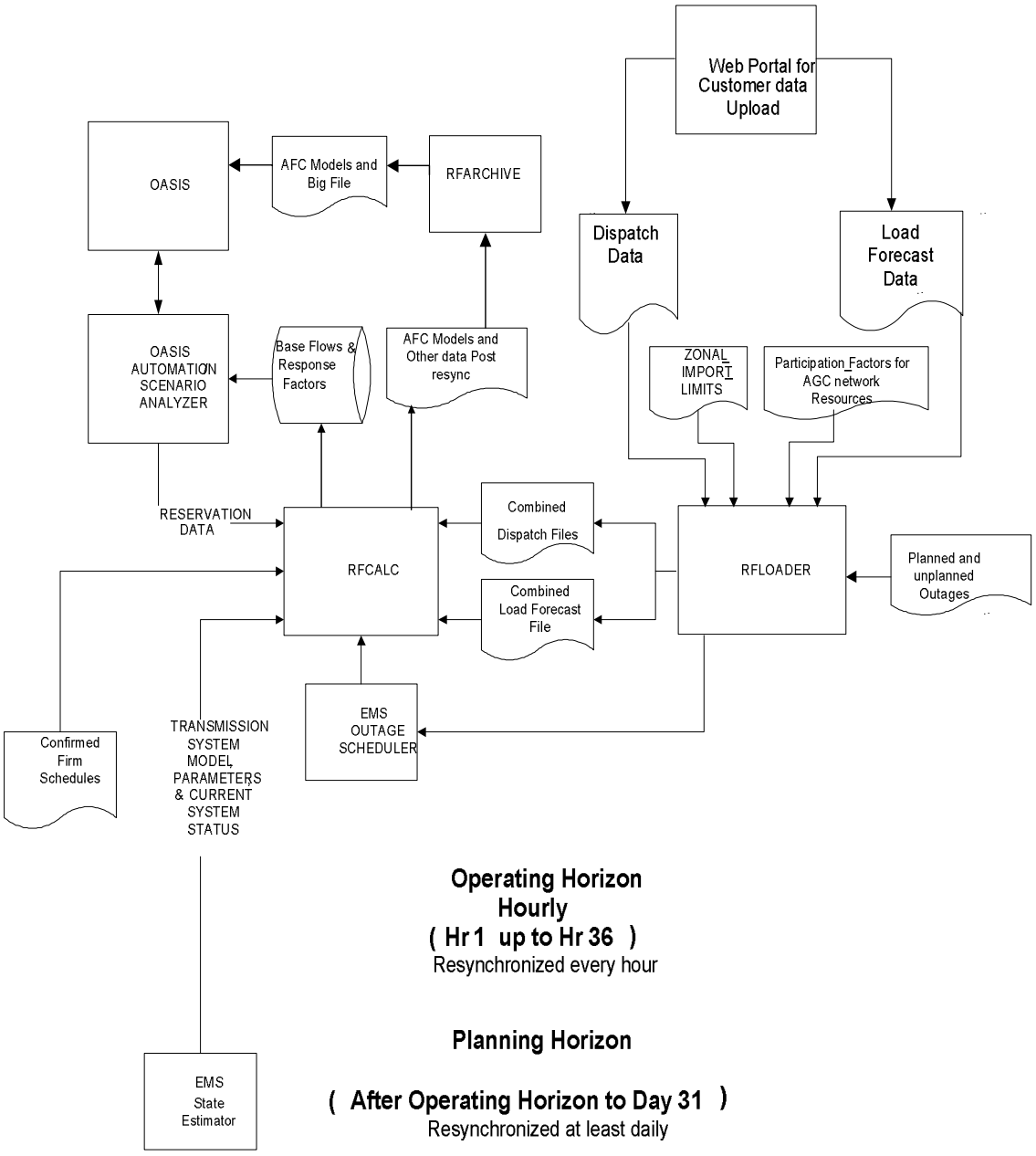
The TSR Business Practices, including the practices listed above, are subject to the requirements of Section 4 of the Tariff and Section 5 of the Transmission Service Protocol.

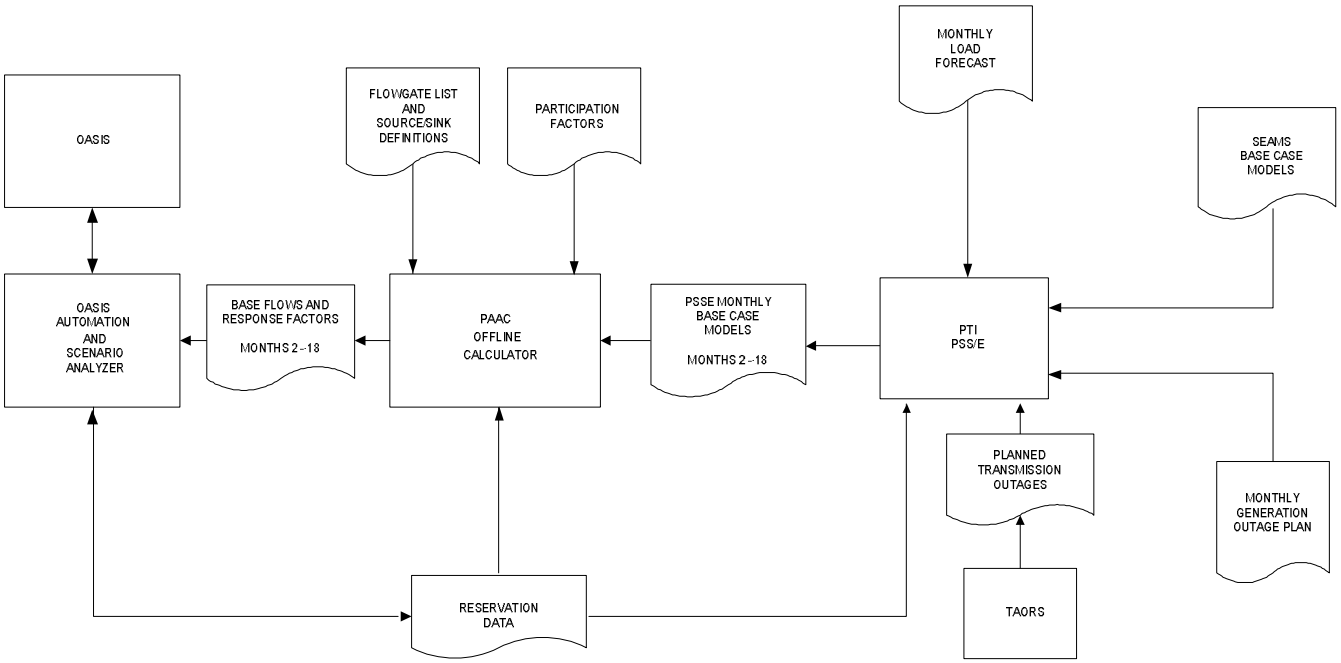
15. REGIONAL COORDINATION

The Transmission Provider coordinates transfer capability values with neighboring utilities in accordance with applicable NERC Reliability Standards, SERC regional criteria, and NAESB business practices (once effective, as appropriate). The Transmission Provider and the ICT participate with NERC multi-regional and SERC regional modeling groups to develop the NERC/SERC regional models and the transmission planning models described in Attachment K. The NERC and SERC regional models are developed consistent with the applicable NERC/SERC modeling group procedures, the current SERC near-term and long-term procedure manuals, and all applicable, current NERC Reliability Standards and SERC reliability criteria. The regional models include an aggregation of each SERC participant's transmission planning model for their respective transmission systems. Pursuant to Attachments D and K, the NERC/SERC regional models are the basis for the Annual and Seasonal Base Case Models used for transmission planning, System Impact Studies and Facilities Studies. Pursuant to Attachment K and the Transmission Service Protocol, the ICT participates in the NERC/SERC regional model development processes with the Transmission Provider.

Additional regional coordination procedures are contained in the Entergy ATCID.

Appendix 1 – Flowcharts





Study Horizon
Monthly
(Month 2 to Month 18)
Resynchronized at least once a month

ATTACHMENT C

Methodology To Assess Available Transfer Capability

1. GENERAL

1.1 Division of Responsibilities

The division of responsibilities between the Transmission Provider and the Independent Coordinator of Transmission ("ICT") in performing duties related to the procedures described in this Attachment C is controlled by Attachment S to the Tariff, including the Transmission Service Protocol and other ICT Protocols appended thereto (collectively, the "ICT Protocols").

The term "Entergy" is used to delineate the requirements or procedures applicable to the Transmission System and the Tariff generally, but is not used to delineate the division of responsibilities between Entergy and the ICT. Instead, the term "Transmission Provider" is used to delineate those duties that are performed by Entergy personnel, as opposed to the ICT.

1.2 Definitions

Capitalized terms used herein are defined in Section 1 and Attachment M (Source and Sink) of the Tariff, and NAESB Open Access Same-Time Information System ("OASIS") Standard WEQ-001-2.2 (Firm and Non-Firm) and NAESB OASIS Implementation Guide Standard WEQ-013-2.2 (Transaction Status). Additional capitalized terms used herein are defined below solely for purposes of this Attachment C.

AFC Process: The software, data inputs, assumptions and flow-based study methodology used to calculate AFC values and evaluate TSRs in the Operating, Planning and Study Horizons.

AFC Software: As defined in Section 2.2 of the Transmission Service Protocol. A list of software applications, including off-line calculation tools, used in the AFC Process is included in the TSR Business Practices.

Available Flowgate Capability (AFC): The amount of transfer capability remaining over a Flowgate for additional transmission service above Existing Transmission Commitments. AFC may be Firm or Non-Firm as described in Sections 3.2 and 3.3.

Available Transfer Capability (ATC): A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above Existing Transmission Commitments.

Automatic Generation Control (AGC) Facility: For purposes of the AFC Process, AGC Facilities are those generating facilities that are available to balance load and generation in the AFC Process. The designation of a facility as an AGC Facility in the AFC Process is a modeling assumption and is not based on whether the facility has automatic generation control capability.

Base Case Models: As defined in Section 2.3 of the Transmission Service Protocol. When referenced in this Attachment C, "Base Case Model" includes the EMS-Based Models and the Monthly Base Case Models used to calculate AFC values.

Base Flow $_{NON\text{-}FIRM}$: The power flow impact on a Flowgate attributable to Non-Firm and Firm Existing Transmission Commitments that are modeled as discrete injections or withdrawals in Base Case Models.

Base Flow $_{FIRM}$: The power flow impact on a Flowgate attributable to Firm Existing Transmission Commitments that are modeled as discrete injections or withdrawals in Base Case Models.

~~Critical Energy Infrastructure Information (CEII): As defined in Attachment K.~~

~~Confidential Information: As defined in Attachment K.~~

Capacity Benefit Margin (CBM): The amount of Firm transmission transfer capability reserved by the Transmission Provider for LSEs, whose loads are located on the Transmission System, to enable access by those entities to generation from interconnected systems to meet generation reliability requirements.

Counterflow: The impact from transmission Reservations that decrease the flow on a monitored Flowgate.

Customer: A Transmission Customer, Network Customer, Eligible Customer or the Transmission Provider when designating resources and loads on behalf of its Native Load Customers, as applicable.

~~Default Format: The generation dispatch methodology used in the Operating and Planning Horizons when a LSE fails to submit generation dispatch data as required in Section 6.3.~~

EMS-Based Models: The Base Case Models derived from the Transmission Provider's EMS State Estimator and used to calculate AFC values in the Operating and Planning Horizons.

~~Effective ATC: The amount of ATC effectively available for a particular Source/Sink pair based on the Significantly Impacted Flowgate with the lowest AFC value for that Source/Sink pair.~~

Embedded Control Area: A Control Area that is not directly interconnected with any other Control Area or transmission system other than the Transmission Provider's Control Area and Transmission System.

Energy Management System (EMS): The collection of software and hardware used to monitor and operate the Transmission System in real-time.

Entergy Available Transfer Capability Implementation Document (Entergy ATCID): The document maintained by the Transmission Provider in accordance with NERC Reliability Standards MOD-001-1 and MOD-030-2 and providing the Transmission Provider's

methodology for calculating available transmission system capability using the flowgate methodology in accordance with those NERC Reliability Standards.

Existing Transmission Commitments (ETCs): The existing uses of the Transmission System consisting of Firm ETCs and Non-Firm ETCs.

External Control Area: A Control Area other than an Embedded Control Area or the Transmission Provider's Control Area.

Firm AFC: The amount of Firm transfer capability over a Flowgate that remains available for additional transmission service as calculated per the formula in Section 3.3.

Firm Existing Transmission Commitments (Firm ETCs): The existing Firm uses of the Transmission System, as adjusted for Counterflows and released and redirected Firm service. Firm ETCs include: (1) Firm service to the Transmission Provider's Native Load Customers; (2) Firm Network Service from Network Resources; (3) Firm PTP Service; (4) grandfathered Firm service under pre-Order No. 888 transmission or bundled agreements; and (5) rollover rights associated with maintaining Firm service.

First-Tier External Control Area: An External Control Area that is directly interconnected with the Transmission Provider's Control Area and Transmission System.

Flowgate: A Flowgate is either: (1) a single transmission facility (monitored element); or (2) a set of transmission facilities (monitored and contingent elements). Flowgates represent transmission facilities that are monitored in the AFC Process for potential constraints.

Generating Facility Owner: The owner of a generating facility interconnected with the Transmission System pursuant to an LGIA or other interconnection and operating Agreement.

~~HE: Hour Ending.~~

~~Hourly Format: The dispatch information file described in Section 6.3.1.2.~~

Interchange: The amount of energy estimated to flow across the boundary between two Control Areas.

Load Serving Entities (LSEs): Network Customers and the entity responsible for serving the Transmission Provider's Native Load Customers.

~~Local Planning Criteria: The Transmission Provider's local reliability criteria as defined in Attachment K.~~

Master List of Flowgates (Master List): The list of Flowgates monitored in the AFC Process pursuant to Section 2.

Monthly Base Case Models: The Base Case Models derived from the NERC/SERC regional modeling process described in Section 15 and the Entergy ATCID and used to calculate AFC values in the Study Horizon.

Most Limiting Flowgates: For each transfer path, the Flowgates used to evaluate a TSR pursuant to Section 10.1.

NERC: The North American Electric Reliability Corporation in its role as the Electric Reliability Organization.

NERC Reliability Standards: The currently effective mandatory reliability standards adopted by NERC and approved by the Commission.

Net Interchange: The amount of net energy estimated to flow across the boundary of a Control Area based on the Interchange values that Control Area shares with each adjacent Control Area.

Network Service: Network Integration Transmission Service.

Non-Firm Existing Transmission Commitments (Non-Firm ETC): The existing Non-Firm uses of the Transmission System, as adjusted for Counterflows, released TRM and CBM capacity, and released or redirected Firm service. Non-Firm ETCs include: (1) Non-Firm service to the Transmission Provider's Native Load Customers; (2) Secondary Network Service; (3) Non-Firm PTP Service; and (4) grandfathered Non-Firm service under pre-Order No. 888 transmission or bundled agreements.

Non-Firm AFC: The amount of Non-Firm transfer capability over a Flowgate that remains available for additional transmission service as calculated per the formula in Section 3.2.

~~OASIS Automation: The Transmission Provider's software application used to process TSRs and calculate AFC values, including any successor software that may be developed by OATI.~~

Operating Horizon: The horizon for calculating AFC values that includes all hours of the current day (Day 1) and, after 12:00 p.m. of the current day, all hours of the next day (Day 2).

Planning Horizon: The horizon for calculating AFC values that extends from the end of the Operating Horizon through the thirty-first day (Day 31).

PMax Flowgate: A Flowgate which represents the maximum rating of a generating facility pursuant to the relevant LGIA or other interconnection and operating agreement.

~~Priority Dispatch: The generation dispatch information referenced in Section 6.3.2 and described in the TSR Business Practices.~~

PTP Service: Point-to-Point Transmission Service.

~~Qualifying Facility: A cogeneration or small production facility that meets criteria established in the Public Utility Regulatory Policies Act of 1978 and the Commission's implementing regulations in 18 CFR Part 292.~~

Remaining ETCs: Existing Transmission Commitments that are algebraically decremented from AFC values as described in ~~Section 7.3~~the Entergy ATCID.

Reservation: A TSR that has been both: (1) Accepted or Counteroffered by the ICT; and (2) Confirmed or submitted Pre-Confirmed by the Customer. A TSR that has not entered a final state of Confirmed is not a Reservation for purposes of this Attachment C.

Response Factors: A measure of the impact that each Source-to-Sink transaction has on a monitored Flowgate, as calculated on a transaction-specific and Flowgate-specific basis.

RFCalc: The Response Factor Calculator software application (or its successor).

Scenario Analyzer: The software that posts approximate AFC values and allows Customers to evaluate transfer capability without actually submitting a TSR.

Secondary Network Service: Secondary service provided on a Non-Firm basis pursuant to Section 28.4 of the Tariff.

SERC: SERC Reliability Corporation.

Significantly Impacted Flowgate: For a particular TSR, a Significantly Impacted Flowgate is any Flowgate for which the TSR has a Response Factor equal to or greater than the three percent (3%) Response Factor threshold specified in Section 9.2.

~~Stack Format: The dispatch information file described in Section 6.3.1.1.~~

State Estimator: A software application designed to produce the best estimate of electric system voltage and phase angles utilizing available measurements.

Study Horizon: The horizon for calculating AFC values that extends from the end of the Planning Horizon (Month 2) through the eighteenth month (Month 18).

TieCap Flowgate: A Flowgate used to evaluate power flows between the Transmission Provider's Control Area and other Control Areas as described in the Entergy ATCID~~Section 4.1~~.

Total Flowgate Capability (TFC): The total capability of a Flowgate based on the thermal, voltage, stability or contractual limits for the facilities that define the Flowgate.

Transmission Reliability Margin (TRM): The amount of transmission transfer capability needed to provide a reasonable level of assurance that the system will remain reliable. TRM accounts for the inherent uncertainty in system conditions and its associated effects on transfer capability evaluations and the need for operating flexibility to ensure reliable system operation as system conditions change.

Transmission Service Request Business Practices (TSR Business Practices): The business practices referenced in Sections 2.1, 2.4, 2.12, and 2.13 of the Transmission Service Protocol, including but not limited to the specific practices identified in Section 14 herein.

Transmission Service Request (TSR): A request submitted over OASIS for: (1) PTP Service; (2) Network Service; (3) Secondary Network Service; or (4) designation of a

Network Resource by the entity responsible for serving the Transmission Provider's Native Load Customers.

Transmission Service Protocol: The ICT Transmission Service Protocol appended to Attachment S to the Tariff.

~~Unit Commitment (UC) Format: The dispatch information file described in Section 6.3.1.3.~~

webTrans: The Transmission Provider's software application used to process TSRs and calculate AFC values, including any successor software that may be developed by OATI~~.~~

1.3 Applicability

In accordance with Attachment S to the Tariff and the Transmission Service Protocol, the ICT applies the procedures set forth herein on a non-discriminatory basis to evaluate ATC/AFC within an eighteen-month horizon for the following types of TSRs: (1) Short-Term Firm PTP Service; (2) Non-Firm PTP Service; (3) requests by existing Network Customers to designate new Network Resources in daily, weekly or monthly increments; and (4) Secondary Network Service.

The ICT responds to valid Completed Applications for PTP Service, Network Service and Secondary Network Service described in the preceding paragraph by performing studies pursuant to this Attachment C to assess whether sufficient transmission capability exists to accommodate the service requested in the Application. PTP Service TSRs are submitted based on Source(s) and Sink(s) as required by Attachment M of the Tariff. Network Resource TSRs are submitted by designating Network Resources and/or Network Load as required by Sections 30 and 31 of the Tariff. Secondary Network Service TSRs are submitted by identifying resources that are not designated Network Resources pursuant to Section 28.4 of the Tariff.

2. CRITERIA FOR MONITORED FLOWGATES

2.1 Criteria for Initial Selection of Monitored Flowgates

The AFC Process determines AFC by monitoring the impact of TSRs on certain specified Flowgates. The Transmission Provider includes Flowgates used in the AFC Process based, at a minimum, on the procedures contained in the Entergy ATCID, in accordance with Reliability Standard MOD-030-2—Flowgate Methodology.~~In selecting the initial set of monitored Flowgates, the Transmission Provider performed a one-time historical analysis that included Flowgates that violated: (1) 100% loading of a transmission facility rating for normal operation; (2) 100% loading of a transmission facility rating during first contingency conditions; (3) 92% of nominal voltage under single contingency conditions for transmission substation voltages below 230 kV; (4) a 92% to 96% nominal voltage under single contingency conditions for EHV stations (230 kV and above); and (5) 100% of the stability rating (as established by specific stability studies) under normal operation or single contingency event.~~

~~The Transmission Provider used criteria based upon NERC Standard I.A and SERC's supplement to that standard (which were in effect when the one-time historical analysis was performed) to define when a transmission facility exceeds 100% of its rating. In determining whether a facility met that criteria, the Transmission Provider reviewed its existing power flow~~

~~studies, including Generator Operating Limit studies, Total Transfer Capability/ATC studies, System Impact Studies and studies performed in the real-time environment. These studies were performed by using a base case power flow model to simulate a series of contingency analyses and monitoring all transmission facilities above a select voltage level depending upon the study being performed. To the extent that a particular facility exceeded 100% of its rating in previous studies or in real-time operating conditions, the Transmission Provider considered the frequency and severity of those occurrences when determining whether the Flowgate should be monitored.~~

2.2 Criteria for Adding/Removing Monitored Flowgates

The ICT posts the Master List of Flowgates ("Master List") on OASIS, as well as a log of all changes thereto. The ICT or the Transmission Provider may propose to modify the Master List (on a permanent or temporary basis) by including new Flowgates or removing existing Flowgates. If an original Flowgate is renamed, the original name is noted on the Master List. For modifications proposed by the Transmission Provider (either permanent or temporary), the Transmission Provider documents and supplies to the ICT all studies, analyses and research conducted in connection with the proposed change. The ICT reviews and validates all proposed changes to the Master List to ensure that such changes are consistent with the criteria outlined below. For purposes of this Section 2.2, the responsibility of the ICT to "review and validate" means that the ICT reviews the inputs and results of any study or analysis and confirms that the study results reasonably reflect the application and product of the criteria specified in this Section 2.2.

2.2.1 Adding New Flowgates

The Transmission Provider uses the ~~following process~~procedures in the Entergy ATCID to add new Flowgates to the Master List. The ICT reviews and validates that new Flowgates are added to the Master List in accordance with thosee ~~following~~ criteria.

~~When, through operational experience, a Flowgate violates the loading, stability, or voltage criteria for either normal operation or single contingency conditions as established in the Local Planning Criteria, the Transmission Provider adds the identified Flowgate to the Master List and the ICT updates the Master List on OASIS.~~

~~When new facilities, including, but not limited to, generating facilities and transmission facility additions or upgrades, are added to the Transmission System, the Transmission Provider performs studies to identify additional Flowgates to add to the Master List, in accordance with the criteria listed in subsection (i) above.~~

~~When a new transmission facility is added that relieves an existing Flowgate listed on the Master List, the Transmission Provider performs studies to determine whether a Flowgate should be identified to replace the unconstrained Flowgate on the Master List, in accordance with the criteria listed in subsection (i) above.~~

~~Flowgates outside of the Transmission System may also be included in the list of Flowgates to be monitored consistent with applicable NERC Reliability Standards. These external Flowgates are used to determine transfer capability values that may be limited by Flowgates external to the Transmission System.~~

2.2.2 Removing Flowgates

The Transmission Provider uses the ~~following~~ procedures in the Entergy ATCID ~~process~~ to remove Flowgates from the Master List. The ICT reviews and validates that the removal of Flowgates from the Master List is in accordance with thate ~~following~~ process.~~:~~

~~On an annual basis, the Transmission Provider reviews the AFC Impact Logs to determine which Flowgates on the Master List have not limited service on the Transmission System.~~

~~From the resulting list of Flowgates identified in the annual process, the Transmission Provider derives a subset of Flowgates with loading levels that do not exceed 60 percent of the applicable rating to populate a list of Flowgates that are candidates for removal. This list is generated as follows: (1) Flowgates that did not appear in any final TSR evaluation are given the highest priority for removal and are at the top of the proposed removal list; and (2) evaluated Flowgates with the smallest post-request loading as a function of Total Flowgate Capability ("TFC") are added to the list in ascending order of magnitude.~~

~~The Transmission Provider reviews the list of removal candidates against historical real-time flow data to identify the post-contingent loading level of each Flowgate candidate proposed for removal. Where the historical projected post-contingent loading violates the facility rating, the Flowgate is excluded from the list of removal candidates.~~

~~The resulting list is sorted by post-request loading level (as identified in subsection (ii) above) and prioritized for removal from the Master List. If the number of Flowgates identified through this removal review process exceeds the number of Flowgates added to the Master List in the~~

~~review year, the Transmission Provider removes the same number of Flowgates as were added to the Master List in the review year. If fewer Flowgates are identified by the removal review process than were added during the review year, the Transmission Provider expands the total number of Flowgates on the Master List as necessary to maintain reliability of the Transmission System. The Transmission Provider provides the ICT with an updated Master List and the ICT posts the updated Master List on OASIS.~~

~~As indicated above, the AFC Process is designed to retain a constant number of Flowgates (approximately 300 Flowgates) on the Master List. Expansion of this total number of Flowgates may be necessary as system conditions change.~~

2.2.3 Adding and Removing Temporary Flowgates

The Transmission Provider uses the ~~following process~~procedures in the Entergy ATCID to add and remove temporary Flowgates to the Master List. The ICT reviews and validates that temporary Flowgates are added to the Master List in accordance with those ~~following~~ criteria.

~~The Transmission Provider identifies one or more Flowgates that may be necessary to add to the AFC Process due to a temporary system configuration or condition in accordance with the criteria listed in subsection 2.2.1(i) above. Temporary system configurations and conditions include planned or unplanned transmission facility outages and other temporary or unforeseen system events.~~

~~The temporary Flowgate is added to the AFC Process in advance of the temporary system configuration/condition or after the temporary condition is detected depending on the circumstances. The temporary Flowgate is applied to one or more of the AFC horizons (Operating, Planning and/or Study Horizons) depending on the expected duration of the temporary system configuration or condition. The Transmission Provider provides the ICT with an updated Master List and the ICT posts the updated Master List on OASIS.~~

~~The Transmission Provider monitors the temporary system configuration or condition resulting in the addition of a temporary Flowgate. Once the temporary configuration or condition has ended, the temporary Flowgate implemented as a result of the temporary configuration or condition is identified for removal. The Transmission Provider provides the ICT with an updated Master List and the ICT posts the updated Master List on OASIS.~~

3. CALCULATION OF AFC VALUES

3.1 Base Case Models

The AFC Process generates Base Case Models that simulate anticipated Transmission System conditions based on the data inputs and assumptions described in Sections 4 - 9 and in the Entergy ATCID. Flowcharts of the AFC Process identifying the databases used in calculating AFC values are attached as Appendix 1 to this Attachment C.

~~In accordance with Sections 8.1 and 8.2 of the Transmission Service Protocol, the Transmission Provider maintains and services the AFC Software, including webTrans. webTrans is a software application developed by OATi used to process TSRs and to callculate AFC values, and serves as the interface to webOASIS. Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is also responsible for supplying data inputs and information~~

~~necessary for creating EMS-Based Models and Monthly Base Case Models. The ICT is responsible for reviewing and validating the data inputs, information and Base Case Models. For purposes of this Section 3, the responsibility of the ICT to "review and validate" means that the ICT takes reasonable steps to ensure that the data inputs are properly loaded and reflected in either the AFC Software or the Transmission Provider's modeling processes and that the resultant AFC values: (1) reasonably reflect the application and product of AFC Software or the Transmission Provider's modeling processes; and (2) are reasonably consistent with the current topology of the Transmission System.~~

3.2 Non-Firm AFC Formula

~~OASIS Automation~~webTrans computes Non-Firm AFC for the Operating, Planning and Study Horizons. RFCalc and off-line calculator tools calculate Base Flow (including the impact of Non-Firm and Firm ETCs) by solving the applicable Base Case Model. The AFC Software may adjust the Base Flow to remove a percentage of the Counterflow from Non-Firm ETCs as described in the Entergy ATCID~~Section 8~~. ~~OASIS Automation~~webTrans algebraically decrements the AFC values for the Most Limiting Flowgates to reflect the impact of any Remaining ETCs as described in the Entergy ATCID~~Section 7~~.

~~OASIS Automation~~webTrans determines Non-Firm AFC in accordance with the following formula:

~~$AFC_{NF} = TFC - ETC_{Fi} - ETC_{NF} - CBM_{Si} - TRM_{Ui} + Postbacks_{NF} + counterflows_{NF}$~~

~~The Entergy formula:~~

$AFC_{NF} = TFC - (ETC_{Fi} + ETC_{NF} - counterflows_{NF}) - CBM_{i} - TRM_{i} + Postbacks_{Fi}$

Where:

$(ETC_{Fi} + ETC_{NF} - counterflows_{NF})$ = Base Flow + Remaining Firm and Non-Firm TSRs in a pending or active state not included in Base Flow

Base Flow = Positive Direction Flow - (Counterflow direction flow * (1 - Counterflow factor))

Positive Direction Flow is the flow amount in base flow that flows in the defined direction of the flowgate.

AFC_{NF} is the non-firm Available Flowgate Capability for the Flowgate for that period.

TFC is the Total Flowgate Capability of the Flowgate.

ETC_{Fi} is the sum of the impacts of existing firm Transmission commitments for the Flowgate during that period.

ETC_{NFi} is the sum of the impacts of existing non-firm Transmission commitments for the Flowgate during that period.

CBM_{Si} is the impact of any schedules during that period using Capacity Benefit Margin.

TRM_{Ui} is the impact on the Flowgate of the Transmission Reliability Margin that has not been released (unreleased) for sale as non-firm capacity by the Transmission Service Provider during that period.

$Postbacks_{NF}$ are changes to non-firm Available Flowgate Capability due to a change in the use of Transmission Service for that period, as defined in Business Practices.

$counterflows_{NF}$ are adjustments to non-firm AFC as determined by the Transmission Provider and specified in the Entergy ATCID.

Counterflow factor is a factor used to remove a portion of the counterflow from the Base flow calculation.

Base Flow is the power flow impact attributable to Existing Transmission Commitments that are modeled as discrete injections or withdrawals in the Base Case Models. In the Operating and Planning Horizon, Base Flow includes both Firm and Non-firm Commitments. In Study Horizon, Base Flow includes Firm Commitments.

3.3 Firm AFC Formula

~~OASIS Automation~~webTrans computes Firm AFC for the Planning and Study Horizons. Firm AFC is not available for the Operating Horizon. The AFC Software calculates Base Flow (including the impact of Non-Firm and Firm ETCs) by solving the applicable Base Case Model. After the Base Case Model has been solved for a time segment, ~~OASIS Automation~~webTrans removes the effects of Non-Firm ETCs to calculate Base Flow (Firm). The AFC Software may adjust the Base Flow to remove a percentage of the Counterflow from Firm ETCs as described in the Entergy ATCID~~Section 8~~ for the Planning and Study Horizions. ~~OASIS Automation~~ webTrans algebraically decrements the AFC values for the Most Limiting Flowgates to reflect the impact of any Remaining ETCs as described in the Entergy ATCID~~Section 7~~. ~~OASIS Automation~~webTrans uses the following formula to determine Firm AFC:

~~$AFC_F = TFC - ETC_{Fi} - CBM_i - TRM_i + Postbacks_{Fi} + counterflows_{Fi}$~~

~~The Entergy formula:~~

$AFC_F = TFC - (ETC_{Fi} - counterflows_{Fi}) - CBM_i - TRM_i + Postbacks_{Fi}$

Where:

$(ETC_{Fi}$ - $counterflows_{Fi})$ = Adjusted Base Flow + Remaining firm TSRs in a pending or active state not included in base flow

Adjusted Base Flow = Base Flow – Impact from Non-Firm TSRs included in Base Flow

Base Flow = Positive Direction Flow - (Counterflow direction flow * (1 - Counterflow factor))

Positive Direction Flow is the flow amount in base flow that flows in the defined direction of the flowgate.

AFC_F is the firm Available Flowgate Capability for the Flowgate for that period.

TFC is the Total Flowgate Capability of the Flowgate.

ETC_{Fi} is the sum of the impacts of existing firm Transmission commitments for the Flowgate during that period.

CBM_1 is the impact of the Capacity Benefit Margin on the Flowgate during that period.

TRM_1 is the impact of the Transmission Reliability Margin on the Flowgate during that period.

$Postbacks_{Fi}$ are changes to firm AFC due to a change in the use of Transmission Service for that period, as defined in Business Practices.

$counterflows_{Fi}$ are adjustments to firm AFC as determined by the Transmission Provider and specified in the Entergy ATCID.

Counterflow factor is a factor used to remove a portion of the counterflow from the Base flow calculation.

Base Flow is the power flow impact attributable to Existing Transmission Commitments that are modeled as discrete injections or withdrawals in the Base Case Models. In the Operating and Planning Horizon, Base Flow includes both Firm and Non-firm Commitments. In Study Horizon, Base Flow includes Firm Commitments.

~~Firm AFC = TFC – TRM – CBM – Firm ETCs~~

~~Firm ETCs = Adjusted Base Flow$_{FIRM}$ + Remaining Firm ETCs~~

~~Adjusted Base Flow$_{FIRM}$ = Adjusted Base Flow$_{NON-FIRM}$ – Non-Firm ETCs~~

3.4 Link to Transmission Provider's AFC Formulas

In addition to the description provided in Sections 3.2 and 3.3 above, the formulas that the Transmission Provider uses when calculating AFC are available on the info.htm page of the Transmission Provider's ~~web~~OASIS by selecting the link titled "Calculation of AFC.".

~~3.5 AFC Calculation Horizons~~

~~3.5.1 Operating Horizon~~

~~In the Operating Horizon, Non-Firm AFC values for each Flowgate are calculated by OASIS AutomationwebTrans, which uses Response Factors and Base Flows calculated by RFCalc. OASIS AutomationwebTrans calculates Non-Firm AFC values for all hours of Day 1 and, after 12:00 p.m., all hours of Day 2. Firm AFC values are not calculated for the Operating Horizon because TSRs for Network Resources and Firm PTP Service must be submitted by 12:00 p.m. on the day prior to commencement of such service.~~

~~3.5.2 Planning Horizon~~

~~In the Planning Horizon, Firm and Non-Firm AFC values for each Flowgate are calculated by OASIS AutomationwebTrans, which uses Response Factors and Base Flows calculated by RFCalc. OASIS AutomationwebTrans calculates hourly Firm and Non-Firm AFC values for Day 2 through Day 7 and daily Firm and Non-Firm AFC values for Day 8 to Day 31.~~

~~3.5.3Study Horizon~~

~~In the Study Horizon, the ICT, using data inputs and Base Case Models developed (or collected) by the Transmission Provider, calculates monthly Response Factors and Base Flows by conducting off-line power flow studies. The Base Case Models are developed on a rolling (at least) eighteen-month basis and are representative of monthly peak-hour conditions. Firm and Non-Firm AFC values for each Flowgate are calculated for the peak hour of each month from Month 2 to Month 18.~~

~~3.6 Resynchronization of AFC Values~~

~~AFC values are resynchronized every hour during the Operating Horizon, at least every day during the Planning Horizon, and no less than every month during the Study Horizon. Resynchronizations may occur more frequently if necessary. To the extent the Transmission Provider agrees to more frequent resynchronizations on a regular basis, the TSR Business Practices will describe the basis for that frequency. The ICT may also direct resynchronizations of AFC values pursuant to Section 8.3 of the Transmission Service Protocol. Resynchronization may be delayed in certain circumstances, including but not limited to, allowing for the archiving of data associated with the prior resynchronization. To the extent that RFCalc cannot compute~~

~~a scheduled resynchronization, the last valid RFCalc resynchronization is used to post AFC values and to evaluate TSRs.~~

~~During the resynchronization process, the AFC Software incorporates updated data inputs to develop EMS-Based Models and Monthly Base Case Models that define each time point included in the Operating, Planning and Study Horizons. The updated data inputs are used to calculate new AFC values in accordance with the formulas described in Sections 3.2 and 3.3.~~

~~When a new TSR is in Study, Accepted, or Counteroffered status between resynchronizations, or a Reservation is Confirmed between resynchronizations, the AFC values for the Most Limiting Flowgates are updated in OASIS AutomationwebTrans by algebraically decrementing the impact of the new transactions as described in Section 7.3.1. At the time of the next resynchronization, the Operating, Planning and Study Horizons are updated so that new Reservations are modeled as physical injections and withdrawals (rather than by algebraic decrementing) as described in Section 7.~~

~~4. TOTAL FLOWGATE CAPABILITY~~

~~4.1Calculation of Total Flowgate Capability~~

~~TFC is calculated based on the thermal, voltage, stability or contractual limits for the facilities that define the Flowgate. For the TieCap Flowgates used to evaluate power flows between the Transmission Provider's Control Area and each First-Tier External Control Area and Embedded Control Area, the TFC value is the total interface rating between the two Control Areas. The rating for a TieCap Flowgate is defined by either: (1) the thermal limit of all transmission facilities that define the interface; (2) a contractual limit contained in operating agreements; or (3) the maximum generation capability or load of that Control Area. For PMax Flowgates, the TFC value represents the maximum rating of the generating facility pursuant to the relevant LGIA or other interconnection and operating agreement. For all other Flowgates, the TFC value is based on the thermal, stability or voltage limits as calculated in accordance with Section 4.2. The Master List of Flowgates identifies which Flowgates are based on voltage or stability. All other Flowgates are based on thermal limits.~~

~~4.2Transmission Facility Ratings~~

~~For purposes of TFC calculations, Transmission Provider's facility ratings are established in accordance with NERC Reliability Standard FAC-008 and FAC-009 (or any successor standards). The Transmission Provider uses the normal rating (as defined by NERC Reliability Standards) for purposes of TFC calculations. The TSR Business Practices describe the basis for the Transmission Provider's facility ratings.~~

3.5 AFC Calculation Horizons

The frequency of calculation of AFC in the Operating Horizon, Planning Horizon, and Study Horizon is described in the Entergy ATCID.

3.6 Resynchronization of AFC Values

AFC values are resynchronized as ~~specified~~described in the Entergy ATCID.

4. TOTAL FLOWGATE CAPABILITY

TFC is calculated as described in the Entergy ATCID.

5. MARGINS

5.1 Transmission Reliability Margin

A TRM value of zero is used in calculating AFC values and in reviewing TSRs on the Transmission System, unless the Transmission Provider submits a filing under Section 205 of the Federal Power Act for a higher value.

5.2 Capacity Benefit Margin

A CBM value of zero is used in calculating AFC values and in reviewing TSRs on the Transmission System, unless the Transmission Provider submits a filing under Section 205 of the Federal Power Act for a higher value. Such a filing will also address the release of CBM for Non-Firm service.

6. DATA INPUTS FOR BASE CASE MODELS

Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying (or collecting) the data inputs and information necessary for creating the hourly and daily EMS-Based Models and the Monthly Base Case Models. –These procedures are described in the Entergy ATCID.

7. MODELING BASE FLOWS

Base flows, including service to network/Transmission Provider's native load customers, firm and non-firm PTP service, existing transmission commitments not modeled in base flows, net interchange, and external control areas are modeled in accordance with the procedures contained in the Entergy ATCID.

8. COUNTERFLOWS

~~Counterflow impacts on AFC values are calculated in accordance with the procedures contained in the Entergy ATCID.~~

~~**6. DATA INPUTS FOR BASE CASE MODELS**~~

~~6.1Responsibilities~~

~~Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying (or collecting) the data inputs and information necessary for creating the hourly and daily EMS-Based Models and the Monthly Base Case Models. For the Operating and Planning Horizons, the EMS-Based Models are created by RFCalc relying on data inputs collected by the Transmission Provider and data taken from the Transmission Provider's EMS State Estimator. For the Study Horizon, the Transmission Provider creates Monthly Base Case Models for use with off-line power flow applications. The Monthly Base Case Models are derived from the Seasonal Base Case Models developed pursuant to the NERC and SERC regional modeling processes described in Section 15 and Attachment D to the Tariff. Sections 6 and 7 below describe the process used by RFCalc to create the EMS-Based Models and the~~

process used by the Transmission Provider to create Monthly Base Case Models from the Seasonal Base Case Models. The ICT is responsible for reviewing and validating the data inputs, information and Base Case Models supplied by the Transmission Provider. The ICT's "review and validation" responsibility obligates the ICT to take reasonable steps to ensure that the data inputs are properly loaded and reflected in the Transmission Provider's modeling processes and that the resultant AFC values: (1) reasonably reflect the application and product of these modeling processes; and (2) are reasonably consistent with the current topology of the Transmission System.

LSEs are required to submit the load and generation dispatch data for use in the AFC Process as described below. The fact that the Transmission Provider develops load and generation forecast methodologies to account for instances where an LSE has failed to supply this data or where the supplied data does not comply with the applicable requirements does not eliminate or alter the obligation on LSEs to supply the required data in the first instance. The process and format for LSEs to submit load and generation dispatch data required under Attachment K is governed by those Tariff provisions. The process and format for LSEs to submit other load and generation dispatch data used in AFC calculations is governed by this Attachment C and any applicable TSR Business Practices, except that the provisions of Section 9.2 of Attachment K shall apply to all load and generation data supplied by LSEs that qualifies as CEII or Confidential Information.

6.2 Load Forecasts

6.2.1 Operating and Planning Horizons

LSEs are required to submit load forecast data for their respective loads through a secure Web-based portal. The data submitted must include the forecasted hourly load for next 11 days and forecasted peak-hour load for the next 24 days. The TSR Business Practices further specify the format, content and timing of the load data submission. If a LSE does not supply load forecast data for a particular time period pursuant to this Section 6.2.1, the Transmission Provider creates a load forecast for purposes of calculating AFC values by assigning these non-forecasted areas a factor derived using historical load values for the LSE. The TSR Business Practices further describe the process and format for LSEs to submit the required load forecast data for the Operating and Planning Horizons.

6.2.2 Study Horizon

Load forecast data for LSEs is based on the data provided by those LSEs pursuant to Attachment K to the Tariff. The Transmission Provider uses this load forecast data in the development of the Monthly Base Case Models. If no such data is provided, the Transmission Provider defines the load level based on a monthly scaling factor. The monthly scaling factor utilizes the peak historical load for the LSE and/or Transmission Provider as a reference. Cogeneration, industrial, and auxiliary load is assumed to be constant in each month.

6.3 Generation Dispatch Forecasts

6.3.1 Operating and Planning Horizons

LSEs are required to submit generation dispatch data for their loads through the same secure Web-based portal used for the submission of load data. LSEs have the option of submitting generation dispatch data in one of three formats: (1) Stack Format; (2) Hourly Format; and (3)

~~Unit Commitment Format (UC Format). If a LSE fails to properly submit generation dispatch data in one of these formats, RFCalc relies on the data identified in Section 7.1.1.4 under the Default Format. The TSR Business Practices further describe the process and format for LSEs to submit the required generation dispatch forecast data for the Operating and Planning Horizons.~~

~~6.3.1.1 Stack Format~~

~~LSEs that choose the Stack Format option are required to submit three separate lists (or "stacks") of Reservations for Network Resources meeting their load, with each list arranged in the dispatch order preferred by the LSE with the resource to be dispatched first listed first and the resource to be dispatched last listed last. A separate stack should be submitted for each of the following periods: (1) the peak hours (HE 7-22) for each day of the next 11 days; (2) the off-peak hours (HE 1-6, 23-24) for the next 11 days; and (3) the peak hours for the next 24 days.~~

~~The Reservations listed in each Stack Format file must be identified by OASIS ID numbers. Only Reservations may be submitted in the Stack Format file. TSRs cannot be submitted in the Stack Format file. Only Reservations serving the LSE's load can be specified in the Stack Format file. The sum total of the Reservation capacity listed in the Stack Format file must be at least equal to the highest forecasted load and losses in each hour of the three periods identified above. To the extent that partial or full requirements customers included in load of the Transmission Provider's Native Load Customers submit separate generation dispatch data, the dispatch file that is provided is not required to have generation match load and losses.~~

~~6.3.1.2 Hourly Format~~

~~LSEs that choose the Hourly Format option are required to submit a forecasted hourly dispatch for each hour of the next 11 days, (Days 1-11) and for the peak-hour load for each day of the next 24 days (Days 12-35). The forecasted hourly and peak-hour dispatch must be provided on a Reservation-specific basis. Resources that do not currently have an OASIS ID number are required to obtain an OASIS ID number that is used for purposes of this option. Only Reservations may be submitted in the Hourly Format. TSRs cannot be submitted in the Hourly Format file. The forecasted hourly dispatch listed in the Hourly Format file must be equal to the forecasted load and losses for each time point. To the extent that partial or full requirements customers included in load of the Transmission Provider's Native Load Customers submit separate generation dispatch data, the dispatch file that is provided is not required to have generation match load and losses.~~

~~6.3.1.3 Unit Commitment Format~~

~~LSEs that choose the UC Format option are required to submit the following information:~~

~~i. A UC Format file that contains the LSE's Network Resource Reservations and the following information for those Network Resources: (1) minimum and maximum run levels as established in the relevant LGIA, other interconnection and operating agreement or power supply arrangement; (2) resource availability (*i.e.*, outage schedule); and (3) a forecasted hourly dispatch of those resources for each hour of the next 11 days, (Days 1-11) and for the peak-hour load for each day of the next 24 days (Days 12-35). This forecasted hourly dispatch, standing alone, does not have to equal total load and losses but cannot exceed total load and losses.~~

ii. One or more Stack Format files containing the LSE's Reservations arranged in dispatch order. A separate Stack Format is required for each period (peak during the next 11 days, off-peak during the next 11 days, and peak for the next 20 days) for which the UC Format file is insufficient to meet load and losses in any hour.

The UC and Stack Format files, when combined, must provide sufficient resources to meet forecasted load and losses in each hour of the three periods identified above. To the extent that partial or full requirements customers included in the load of Transmission Provider's Native Load Customers submit separate generation dispatch data, the dispatch file is not required to have generation match load and losses. Only Reservations may be submitted in the UC Format. TSRs cannot be submitted in the UC Format files. The TSR Business Practices set forth the requirements for types of Reservations that may be included in UC Format files.

6.3.2 Study Horizon

LSEs are required to provide planned and unplanned outage data and a Priority Dispatch file for their respective Network Resources under this Section 6.3.2. The Priority Dispatch file contains the LSE's preferred priority stack dispatch for its Network Resources. The TSR Business Practices describe the process and format for submitting such information, including the requirements related to the types of Reservations that may be included in the Priority Dispatch file.

Because the Monthly Base Case Models represent the single peak-hour for each month, any Network Resources that are scheduled to be offline for at least two weeks during the month are treated as out-of-service in the peak-hour model used for the entire month. If two Network Resources in the same transmission planning region are out of service at non-overlapping intervals during the month, only one Network Resource is modeled offline. In determining which Network Resource to model offline, the Transmission Provider will model the Network Resource with the largest facility rating, unless the other Network Resource has a more significant reliability impact.

6.4 Generation Dispatch for Qualifying Facilities

In the Operating and Planning Horizon, Qualifying Facilities are dispatched at a net injection level of zero MW. In the Study Horizon, Qualifying Facilities are dispatched to the level of the relevant facility's host load such that the host load is served entirely by the Qualifying Facility. Any generation in excess of the amount required to serve the Qualifying Facility's host load is modeled as follows. Network Resource Reservations sourced from a Qualifying Facility are added to that facility's dispatch level as described in Section 7.1.1 (Operating and Planning Horizons) and Section 7.1.2 (Study Horizon). Reservations for PTP Service are added to a Qualifying Facility's dispatch level in accordance with Section 7.2.

6.5 Generating Facility Operating Characteristics

Generating Facility Owners are required to provide the following information for use in the AFC Process: facility ratings, operating characteristics, minimum and maximum run levels, planned and unplanned outages, and derates. The TSR Business Practices specify the format and process for submitting such information.

6.6 Transmission System Topology and Outages

6.6.1 Operating and Planning Horizons

The EMS-Based Models used in the Operating and Planning Horizons include a detailed representation of the Transmission Provider's Control Area and Transmission System and Embedded Control Areas. For the first three hours of the Operating Horizon, transmission system topology is supplied to RFCalc from the EMS State Estimator. The Transmission Provider adjusts this topology for Hours 4 through Day 31, based on planned and unplanned transmission facility outage schedules. Transmission outages (planned and unplanned) on facilities with voltage levels at 115 kV or above are incorporated into the Base Case Models. The TSR Business Practices describe how transmission construction projects not currently in-service are treated for purposes of the EMS-Based Models.

6.6.2 Study Horizon

The Monthly Base Case Models include a detailed representation of the Transmission Provider's Control Area and Transmission System and Embedded Control Areas. Transmission system topology is derived from the Seasonal and Monthly Base Case Models referenced in Section 6.1. The system topology represented in the Monthly Base Case Models is updated during each Study Horizon update, including planned and unplanned transmission outages and any changes to the transmission outage schedule that may occur between each update. When developing topology data inputs for the Monthly Base Case Models, the Transmission Provider assumes: (1) all 345 kV and 500 kV lines that are scheduled out of service are modeled out of service for the entire month; and (2) all 115 kV – 230 kV lines that are scheduled out of service for at least five days are modeled out of service for the entire month. The Transmission Provider may model outages of certain critical 115 kV – 230 kV lines scheduled to be out of service for less than five days during the month if reliability concerns are anticipated during the outage. The TSR Business Practices describe how transmission construction projects not currently in-service are treated for purposes of the Monthly Base Case Models.

6.7 Rollover Rights Under Section 2.2 of the Tariff

Reservations with rollover rights under Section 2.2 of the Tariff are assumed to expire if not renewed prior to the applicable deadline. If data collection for the relevant model is completed prior to the deadline for renewing rollover rights, the Transmission Provider assumes that rollover rights are exercised by the Customer. If data collection for the relevant model is completed after the applicable deadline and a renewal TSR has not been submitted, the prior Reservation is removed from the Base Case Models.

7. MODELING BASE FLOWS

7.1 Service to Network/Transmission Provider's Native Load Customers

7.1.1 Operating and Planning Horizon

RFCalc relies on the Stack, Hourly and UC Format files to model service to Network Load and the Transmission Provider's Native Load Customers provided that those files meet the requirements specified herein. Otherwise, RFCalc dispatches generation for Network Load and the Transmission Provider's Native Load Customers by relying on the Default Format, as described in Section 7.1.1.4. In the Operating Horizon, RFCal also relies on Firm schedules to

model services to these loads. Regardless of the format selected, generation is modeled to serve load in the following order (first-to-last): (1) Network Customers outside of the Transmission Provider's Control Area; (2) Network Customers and grandfathered customers in the Transmission Provider's Control Area; (3) Network Customers that are full or partial requirements customers of the entity supplying the Transmission Provider's Native Load Customers; and (4) Transmission Provider's Native Load Customers. When necessary to enforce zonal import limits, the EMS-Based Models may also be dispatched by specific zones rather than on an entire Control Area basis pursuant to the TSR Business Practice related to enforcing zonal import limits.

7.1.1.1 Hourly Format

For LSEs that choose the Hourly Format, RFCalc dispatches the Reservations as specified in the file. All Reservations (or portions thereof) that are not dispatched in the Hourly Format file but that are still available for scheduling by the LSE on a Firm basis are modeled in accordance with Section 7.3.2. If the dispatch provided in the Hourly Format file is insufficient to serve the load of that LSE, or is in excess of that load and losses, the Default Format is used except for LSEs that have alternative arrangements for serving the shortfall (*e.g.*, customers that have other full or partial requirements contracts or have reserved additional service). For these full or partial requirements customers, the hourly dispatch is not required to be equal to load and losses, and any unbalanced portion of their load is balanced with full or partial requirements resources.

7.1.1.2 Stack Format

For LSEs that choose the Stack Format, RFCalc dispatches the Reservations sequentially in the dispatch order until the load requirements are met. Once RFCalc has dispatched the Reservations such that generation meets load and losses, any remaining Reservations (or portions thereof) are modeled in accordance with Section 7.3.2.

7.1.1.3 UC Format

For LSEs that choose the UC Format, RFCalc dispatches the available Network Resources at the hourly levels specified in the UC Format file. RFCalc uses the Reservations identified in the Stack Format file to meet load to the extent that the dispatch of the UC Format file does not fully serve the load and losses. While modeling Reservations specified in the Stack Format file, RFCalc only dispatches the portion of a Reservation not specified in the UC Format file. If there are any Reservations remaining after load has been met, those Reservations are modeled in accordance with Section 7.3.2.

7.1.1.4 Default Format

All LSEs are required to provide generation dispatch and load forecast data in accordance with Sections 6.2.1 and 6.3.1. RFCalc dispatches Reservations and resources according to the Default Format during any resynchronization where generation dispatch information has not been provided in accordance with Section 6.3.1 (*i.e.*, where a valid Hourly, Stack or UC Format file is not available as described below). This includes instances where a LSE fails to meet its obligation to provide the file or where the file does not meet the applicable requirements.

Under the Default Format, generation is dispatched to meet load as follows. If the load data is provided by a LSE, RFCalc uses that data. If the load data is not provided, RFCalc derives the

load by using a scale factor against the load forecast for the Transmission Provider's Native Load Customers. If the LSE has provided a UC Format file, RFCalc first models the UC Format file dispatch and then models all other Reservations (Network Resources and PTP Service sinking to the LSE) to meet the remaining load. RFCalc models these Reservations in reverse queue order and only dispatches the portion of a Reservation not specified in the UC Format file. If the LSE has not provided a UC Format file, or if the dispatch provided in the relevant dispatch files (UC and/or Stack or Hourly) are not sufficient to meet the load and losses of the LSE, RFCalc balances the remaining load and losses as follows:

i. For LSEs that have alternative arrangements for serving the shortfall (*e.g.*, customers that have other full or partial requirements contracts or have reserved additional service), any unbalanced portion of their load is balanced with the full or partial requirements resources.

ii. For LSEs that do not have such arrangements, RFCalc models any additional Reservations that sink to the LSE but that have not been specified in the Stack Format file (if such a file was provided). These Reservations are modeled in reverse queue order (*i.e.*, the last queued are modeled first). If the LSE provided an Hourly Format file and the dispatch in the file is insufficient to meet the LSE load or is in excess of load and losses, RFCalc will model the Reservations that sink to the LSE in reverse queue order. If the load is still not met after modeling all of the LSE's Reservations, RFCalc utilizes the AGC Facilities in the Control Area in which the load resides to meet the remaining load. If the load is still not met after exhausting all AGC Facilities, RFCalc adjusts the Net Interchange of the Control Area to balance the load. If the Net Interchange adjustment also fails to meet the load, the powerflow may diverge for that particular timepoint.

7.1.2 Study Horizon

Generation dispatch for service to Network Load and the load of the Transmission Provider's Native Load Customers will based on the Priority Dispatch file required under Section 6.3.2 to the extent that such a file is provided. To the extent a LSE fails to provide the Priority Dispatch file, service to that LSE's load is represented by modeling power purchase contracts designated as Network Resources in monthly or yearly increments or for which Secondary Network Service has been obtained in monthly increments and dispatching owned generating facilities that are Network Resources for that LSE to meet any shortfall between those contracts and load plus losses. To the extent that power purchase contracts exceed load plus losses, those contracts will be dispatched in reverse queue order until generation meets load plus losses. The initial dispatch levels for each LSE are modified (either according to the Priority Dispatch file or on a *pro rata* basis in the absence of such a file) as follows:

i. Generation dispatch levels for each LSE are modified as necessary to account for differences in the load contained in Seasonal Base Case Models and the Monthly Base Case Models, updated generation outage data, and changes in Net Interchange calculated pursuant to Section 7.4.1.2.

ii. When necessary to enforce zonal import limits, the Base Case Models may also be dispatched by specific zones rather than on an entire Control Area basis pursuant to the Transmission Provider's business practice for enforcing zonal import limits.

When a LSE does not have sufficient Network Resources or Secondary Network Service to meet its load and losses, the Transmission Provider dispatches uncommitted generating facilities that are deliverable within the Control Area (*i.e.*, generating facilities with NRIS) on a *pro rata* basis to meet the remainder.

Any Reservations in excess of the Customer's load will not be modeled in the Base Case Model. Per Section 7.3.2, the unmodeled portion of these requests will be algebraically decremented on the PMax and TieCap Flowgates. Expiration dates and rollover rights for Firm Network Resource Reservations will be handled in accordance with Section 6.7.

7.2Modeling Firm and Non-Firm PTP Service

7.2.1 Operating Horizon

In the Operating Horizon, Firm PTP Service Reservations are modeled at the level at which service has been scheduled and Non-Firm PTP Service Reservations are modeled at their respective Reservation capacity levels, provided that no generating facility exceeds the maximum rating provided pursuant to Section 6.5. Where a grandfathered customer serves its load using grandfathered transmission service comparable to either PTP Service or a combination of grandfathered transmission service and PTP Service, the grandfathered service or PTP Service is treated as service to Network Load/Transmission Provider's Native Load Customers and is modeled in accordance with Section 6.3.

7.2.2 Planning Horizon

In the Planning Horizon, Firm PTP Service Reservations and Non-Firm PTP Service Reservations at their respective Reservation capacity levels, provided that no generating facility exceeds the maximum rating provided pursuant to Section 6.5. Where a grandfathered customer serves its load using grandfathered transmission service comparable to either PTP Service or a combination of grandfathered transmission service and PTP Service, the grandfathered service or PTP Service is treated as service to Network Load/Transmission Provider's Native Load Customers and is modeled in accordance with Section 6.3. As set forth in Section 3.3, the effects of Non-Firm PTP Service Reservations modeled in the Planning Horizon is removed to calculate Base Flow (Firm) and Firm AFC values.

7.2.3 Study Horizon

In the Study Horizon, Firm PTP Service Reservations and Non-Firm PTP Service Reservations are modeled at their respective Reservation capacity levels, provided that no generating facility exceeds the maximum rating provided pursuant to Section 6.5. Where a grandfathered customer serves its load using grandfathered transmission service comparable to either PTP Service or a combination of grandfathered transmission service and PTP Service, the grandfathered service or PTP Service is treated as service to Network Load/Transmission Provider's Native Load Customers and is modeled in accordance with Section 6.3. As set forth in Section 3.3, the effects of Non-Firm PTP Service Reservations modeled in the Study Horizon are removed to calculate Base Flow (Firm) and Firm AFC values.

7.3 Existing Transmission Commitments Not Modeled in Base Flows

7.3.1TSRs

PTP TSRs and Network Resource TSRs that have a status of Accepted or Counteroffered are not modeled as discrete injections or withdrawals in Base Flows in the Operating, Planning, and Study Horizons. These TSRs are algebraically decremented against the PMax and TieCap Flowgates and the remaining Most Limiting Flowgates until such time as they are Withdrawn, Refused, or Confirmed. When an Accepted or Counteroffered TSR is Confirmed in between resynchronizations in the Operating and Planning Horizons, the TSR continues to be algebraically decremented against the PMax and TieCap Flowgates and the remaining Most Limiting Flowgates until such time as there is an RFCalc and OASIS AutomationwebTrans resynchronization. When an Accepted or Counteroffered TSR is Confirmed in between resynchronizations in the Study Horizon, the TSR continues to be algebraically decremented against the PMax and TieCap Flowgates and the remaining Most Limiting Flowgates until such time as there is a recalculation of Base Flows through the off-line calculator tools and an OASIS AutomationwebTrans resynchronization. If a TSR is Withdrawn, Refused, or otherwise becomes invalid in between resynchronizations in the Operating, Planning and Study Horizons, the TSR is no longer algebraically decremented against the PMax and TieCap Flowgates and the remaining Most Limiting Flowgates after the following resynchronization. TSRs that are in Study mode are algebraically decremented against the PMax and TieCap Flowgates and the remaining Most Limiting Flowgates in all horizons.

7.3.2 Reservations In Excess of Network Load and Native Load

Under the procedures for modeling of generation dispatch described in Section 7.1, there will be instances where certain Network Resource Reservations or grandfathered Reservations are not modeled in the EMS-Based Models or Monthly Base Case Models. These Reservations are algebraically decremented on the PMax and TieCap Flowgates. For those Reservations that are partially dispatched in the EMS-Based or Monthly Base Case Models, the un-modeled impact of those Reservations is algebraically decremented against the PMax and TieCap Flowgates. In both instances described above, the impact of such Reservations is not algebraically decremented against the other Significantly Impacted Flowgates. This process is the same for the Operating, Planning and Study Horizons, except for PMax Flowgates in the Operating Horizon which are determined by using the MW output of each generating facility as computed by RFCalc.

7.4 Net Interchange and External Control Areas

7.4.1 Net Interchange

7.4.1.1 Operating and Planning Horizons

Net Interchange for the Transmission Provider's Control Area is computed by using all Reservations and Schedules that are modeled in accordance with Sections 7.1 and 7.2 to balance the loads and bilateral transactions with all Embedded Control Areas and First-Tier External Control Areas. RFCalc derives Net Interchange for larger First-Tier External Control Areas by taking actual, current Net Interchange information from the State Estimator and adjusting that value to forecast future Net Interchange values. For smaller First-Tier External Control Areas and Embedded Control Areas, the Net Interchange is computed by using the Reservations/Schedules available from the OASIS in the same manner as Net Interchange computations for Transmission Provider's Control Area.

7.4.1.2 Study Horizon

Net Interchange for the Transmission Provider's Control Area is computed by using all Reservations that are modeled to balance the loads and bilateral transactions with all Embedded Control Areas and First-Tier External Control Areas. The Net Interchange for External Control Areas is derived: (1) from the SERC regional models and Seasonal Base Case Models for the Interchange between that External Control Area and any other adjacent External Control Area; and (2) from Reservations taken from the Transmission Provider's OASIS for the Interchange between the Transmission Provider's Control Area and that External Control Area. All Reservations between the Transmission Provider Control Area and the First-Tier External Control Areas are modeled in accordance with Sections 7.1-7.3. Any base transactions that exist in the SERC regional models and Seasonal Base Case Models between the Transmission Provider's Control Area and First-Tier External Control Areas or Embedded Control Areas are updated to reflect Reservations taken from OASIS.

7.4.2 External Control Areas

7.4.2.1 Operating and Planning Horizons

The EMS-Based Models contain a detailed representation of certain External Control Areas and all other External Control Areas are equivalenced (*i.e.*, are modeled at less than full detail). Transmission system topology for External Control Areas is derived from the EMS-Based Model and is updated each business day to reflect transmission facility outages for External Control Areas based on NERC SDX outage data provided by those Control Areas. Only outages on facilities that are contained in the EMS-Based Models can be modeled in the Operating and Planning Horizons. Load data for equivalenced External Control Areas is based on data provided by the Southwest Power Pool RTO ("SPP RTO") or derived from NERC SDX data, as scaled to match the equivalence detail of each External Control Area in the EMS-Based Models. Load data for non-equivalenced External Control Areas is derived consistent with Section 6.2.1 or using NERC SDX or SPP RTO data.

In the absence of generation dispatch data for equivalenced External Control Areas, RFCalc initializes generating facilities at the level specified by the State Estimator. After modeling Reservations for each equivalenced External Control Area, RFCalc adjusts the dispatch of AGC

~~Facilities in that Control Area to balance the load and Net Interchange. The adjustment is implemented on a modified *pro rata* basis, so that all AGC Facilities reach their rated maximum or minimum limits simultaneously.~~

~~For non-equivalenced External Control Areas, RFCalc initializes generating facilities at their minimum output level and then dispatches these facilities based on the generation dispatch data provided by the Control Area Operator (or Reservations if needed). If the Control Area load and Net Interchange is not balanced, RFCalc adjusts the dispatch of AGC Facilities in that Control Area to balance the load and Net Interchange. The adjustment is implemented on a modified *pro rata* basis, such that all AGC Facilities reach their rated maximum or minimum limits simultaneously.~~

~~7.4.2.2 Study Horizon~~

~~In the Monthly Base Case Models, External Control Areas are modeled at the level of detail contained in the NERC/SERC regional models and Seasonal Base Case Models developed pursuant to the modeling and updating processes described in Section 15 herein and Attachment D to the Tariff. These models incorporate the system topology, facility ratings, generation dispatch, load forecasts, Net Interchange, and transmission uses provided by External Control Areas that participate in the SERC modeling process. Data for the Southern Company and TVA Control Areas are further updated on a monthly basis in coordination with those entities as described in Section 15 herein.~~

~~In addition to the updates mentioned above, the Transmission Provider updates First-Tier External Control Area information in the Monthly Base Case Models as follows: (1) Net Interchange between the Transmission Provider's Control Area and First-Tier External Control Areas is updated with data from OASIS as per Section 7.4.1.2; (2) generating facilities that are located in First-Tier External Control Areas and have generator-specific Response Factors are committed and dispatched in accordance with the Reservations sourced from each facility; and (3) if a First-Tier External Control Area operator provides a preferred priority stack dispatch for that Control Area, the generating facilities included in the priority stack dispatch file are committed and dispatched in the order provided. After modeling the generating facilities as described above, or in the absence of the External Control Area Operator providing the data referenced in (3) above, all generating facilities in the First-Tier External Control Area not declared to be out of service by the External Control Area are scaled on a modified *pro rata* basis (so that all generating facilities reach their rated maximum or minimum limits simultaneously) to account for any remaining imbalance between generation and load plus losses.~~

~~8. COUNTERFLOWS~~

The AFC Software may adjust the Base Flow associated with a particular Flowgate by removing a percentage of Counterflow impacts in the calculation of AFC values. The formula used for adjusting Base Flows to take into account Counterflows is set forth in Section 3. Counterflow impacts on AFC values are calculated in accordance with the procedures contained in the Entergy ATCID.

The Transmission Provider, in conjunction with the ICT, reviews scheduling data and other operational experience to determine Counterflow percentages and evaluate the reasonableness of the established Counterflow percentages through periodic reviews. The Transmission

Provider provides to the ICT all studies, analysis and research conducted in connection with any proposed change to the Counterflow calculation. The ICT independently reviews and validates these, and posts on OASIS notice of any such change prior to effectiveness. For purposes of this section, the responsibility of the ICT to "review and validate" means that the ICT reviews the inputs and results of any study or analysis provided by the Transmission Provider and confirms that the results reasonably reflect the application and product of such studies and analyses. The TSR Business Practices identify: (1) the amount of Counterflow impacts removed from the Base Flow; (2) the actual Counterflow calculations, including workpapers, with any historical data used to derive the Counterflow percentages; (3) the frequency of reviews of Counterflows; and (4) a description of the process used to review scheduling data and other operational experience for purposes of establishing Counterflow percentages in sufficient detail to address reasonable inquiries as to Counterflows in the Operating, Planning and Study Horizons.

9. RESPONSE FACTORS

In order to evaluate whether a TSR uses all, some, or none of the AFC for a particular Flowgate, the AFC Software calculates Response Factors using the EMS-Based Models and Monthly Base Case Models. The Response Factors for a particular TSR determine which Flowgates meet the specified threshold for being considered Significantly Impacted Flowgates for that TSR under Section 9.3.

9.1 Response Factors For Directly Interconnected Generating Facilities

Response Factors are calculated for each generating facility that is directly interconnected with the Transmission System, including all facilities within the Transmission Provider's Control Area and any Embedded Control Areas, regardless of ownership or affiliation. RFCalc utilizes State Estimator models to calculate Response Factors in the Operations and Planning Horizons, while the ICT uses Monthly Base Case Models developed by the Transmission Provider and off-line power flow applications to calculate Response Factors in the Study Horizon. Response Factors are resynchronized on the same basis and with the same frequency as AFC values as described in Section 3.6. When calculating Response Factors, the AFC Software relies on participation factors to define how specific generating facilities participate in the transfer relative to other generating facilities within the same Source or Sink. The participation factor is a measure of a generating facility's relative upward or downward movement within a Source or Sink during Response Factor calculations. The TSR Business Practices describe the process for incorporating existing and new Sources and Sinks in the calculation of Response Factors, including subsystem definitions and participation factors.

9.2 Response Factors For First-Tier External Control Areas

As described in further detail below, Response Factors for a First-Tier External Control Area are used to evaluate TSRs from any generating facility in that Control Area, unless a generator-specific Response Factor has been calculated for a border generating facility.

For transactions that Source in an External Control Area, Response Factors for the External Control Area are calculated by ramping up available generating facilities or AGC Facilities in that Control Area on a modified *pro rata* basis, such that all generating facilities simultaneously reach their rated maximum outputs. For transactions that sink in an External Control Area, Response Factors are calculated for the External Control Area by ramping down available generating facilities or AGC Facilities in that Control Area on a modified *pro rata* basis, such that all generating facilities reach their rated minimum outputs simultaneously. The TSR Business

Practices describe the process for incorporating existing and new Sources and Sinks in the calculation of Response Factors for External Control Areas, including subsystem definitions and participation factors.

Generator-specific Response Factors are calculated on an “as needed” basis for border generating facilities, *i.e.*, generating facilities that are located on other transmission systems/Control Areas and are also in "close electric proximity" to the Transmission System. The ICT or the Transmission Provider may propose that a generator-specific Response Factor be calculated for a border generating facility consistent with the criteria provided below. Response Factor proposals offered by the Transmission Provider are subject to review and validation by the ICT and are accompanied by any studies, analysis and research conducted by the Transmission Provider. For purposes of this Section 9.2, the review and validation responsibility of the ICT means that the ICT reviews the studies and analysis to verify that the Transmission Provider followed the applicable criteria and that the results reasonably reflect the application and product of such studies and analyses.

To determine whether generator-specific Response Factors should be calculated for a border generating facility, two criteria are applied. First, the generating facility must be in close electric proximity to the Transmission System such that the generating facility is either: (1) directly interconnected with the Transmission System, but located in a different Control Area; or (2) interconnected with the Transmission System of another transmission provider within one or two buses of the Transmission System. Second, a significant difference must exist between the Response Factors for all other generating facilities in the External Control Area and the Response Factors for the specific border generating facility.

9.3 Response Factor Threshold

To determine whether a Flowgate is a Significantly Impacted Flowgate, a Response Factor threshold of three percent (3%) is applied. A Flowgate is only considered a Significantly Impacted Flowgate for a particular TSR if the Response Factor for that Flowgate is equal to or greater than the three percent (3%) threshold. If operating conditions indicate that a revision to the Response Factor threshold is necessary to enable accurate representation of system transfer capability and, thereby maintain system reliability, the Transmission Provider will reevaluate this threshold with notice to ICT. All changes to the Response Factor threshold are filed with the Commission.

10. EVALUATING TSRs

10.1 Flowgates Used to Evaluate TSRs

Although the AFC Process monitors many Flowgates, ~~OASIS Automation~~webTrans uses a more limited set of Flowgates to evaluate individual TSRs. When evaluating any single TSR, ~~OASIS Automation~~webTrans considers no more than fifteen Flowgates, which are referred to as the Most Limiting Flowgates for that TSR. The Most Limiting Flowgates for any TSR include: (1) any applicable PMax Flowgate; (2) any applicable TieCap Flowgates; and (3) the Significantly Impacted Flowgates with the lowest AFC values. The list of Flowgates used to evaluate a particular TSR is re-determined during each resynchronization.

10.2 Accepting and Refusing TSRs

For each TSR, the AFC Software identifies the Most Limiting Flowgates for that TSR and evaluates the additional loading impact of the TSR on those Flowgates. The amount of capacity requested is separately multiplied by the Response Factor for each of the Most Limiting Flowgates to produce the additional loading impact of the TSR on each Flowgate. The loading impact is subtracted from the AFC value for each Flowgate. Each TSR is evaluated against these values as follows:

i. If the AFC values for all of the Most Limiting Flowgates remain positive or equal to zero after being reduced to account for the additional loading, the TSR is Accepted.

ii. If the AFC value for any of the Most Limiting Flowgates is negative after being reduced to account for the additional loading impact of the TSR, and there are no Reservations with a priority lower than the TSR that can be Preempted under Section 13.2 of the Tariff, the TSR is Refused or Counteroffered.

iii. If the AFC value for any of the Most Limiting Flowgates is negative after being reduced to account for the additional loading impact of the TSR, and one or more Reservations with a priority lower than the TSR can be Preempted under Section 13.2 of the Tariff to increase the AFC value on that Flowgate, the TSR is Accepted (to the extent that preemption caused the AFC value returned to the same level that existed prior to the reduction to account for the TSR) or Counteroffered (to the extent that preemption caused the AFC value to increase but not completely return to the same level that existed prior to the reduction to account for the TSR). The lower priority Reservations are Preempted only to the extent necessary to alleviate the additional loading impact of the Accepted TSR or the portion of the TSR that is Counteroffered.

10.3 PMax and TieCap Flowgates

Regardless of the applicable AFC values for other Flowgates, Accepted TSRs and Reservations from a particular generating facility shall not exceed the maximum rating of that facility as described in the governing LGIA or other interconnection and operating agreement. The amount of AFC available across a Control Area interface cannot exceed the total interface rating between the two Control Areas. Consistent with NERC Reliability Standards and operating agreements, the capacity between these interfaces is rated. This limit is typically defined by the thermal limit of all transmission facilities that define the interface. Other Control Area interfaces may be limited based upon the maximum generation capability or load of that Control Area. These limits are honored in the AFC Process through proxy Flowgates, referred to as the PMax and TieCap Flowgates. To the extent that the TSR, standing alone or aggregated with other TSRs or Reservations, exceeds the maximum rating of the generating facility, the PMax Flowgate will be limiting for that particular TSR. To the extent that the TSR, standing alone or aggregated with other TSRs or Reservations, exceeds the interface limit, the TieCap Flowgate will be limiting for that particular TSR.

10.4 Redirect TSRs

Requests to Redirect all or a portion of a Firm PTP Reservation from an alternate Point-of-Receipt (Source) or to an alternative Point-of-Delivery (Sink) on a Firm basis are evaluated in the following manner: (1) the Most Limiting Flowgates associated with both TSRs (the original

TSR and the Redirect TSR) are identified; (2) the AFC Flowgates are separated into two groups (Group 1 includes Flowgates that are common to both TSRs and Group 2 includes the remaining Flowgates identified in the list of the Most Limiting Flowgates by the Redirect TSR); and (3) the impact of the Redirect TSR is then calculated and evaluated according to subsections (i)-(v) below:

i. If the AFC value of any Flowgates in Group 1 is less than or equal to zero, before applying the impact of the Redirect TSR, and the impact of the Redirect is greater than the parent TSR (higher Response Factor), the Redirect TSR is Refused.

ii. If the AFC value of any Flowgate in Group 2 is less than or equal to zero, before applying the impact of the Redirect TSR, the Redirect TSR is Refused.

iii. If the AFC value of any Flowgates in Group 1 is greater than zero, before applying the impact of the Redirect TSR, and the impact of the Redirect is greater than the parent TSR (higher Response Factor), the Redirect TSR is Counteroffered for a MW amount equal to the MW that would cause the AFC on the Flowgate to equal zero.

iv. If the impact of the Redirect TSR causes the AFC of any Flowgate in Group 2 to drop below zero, the Redirect TSR is Counteroffered for a MW amount equal to the MW that would cause the AFC of the Most Limiting Flowgate (*i.e.*, the Flowgate with the largest negative AFC value) in Group 2 to equal zero.

v. In all other circumstances, the Redirect TSR is Accepted.

11. SYSTEM IMPACT STUDIES

System Impact Studies are performed in accordance with Attachment D to the Tariff. System Impact Studies are not performed for TSRs that fall within the Operating, Planning or Study Horizons of the AFC Process, except as specifically provided for in Attachment D.

12. SCENARIO ANALYZER

The Transmission Provider posts approximate AFC values by supplying a Scenario Analyzer tool that identifies the applicable AFC value for any Source/Sink path for which AFC values are calculated. The Scenario Analyzer allows Customers to evaluate transfer capability by submitting a proxy service request. The Scenario Analyzer provides Customers with an immediate response by performing the same flow-based review and using the same flow-based engine ~~OASIS Automation~~webTrans uses to determine whether actual TSRs can be accommodated. The ~~If sufficient AFC exists, the~~ Scenario Analyzer notifies the Customer whether or not the evaluation passes the AFC check and provides evaluation identification number (SA###). The Customer can then query the request evaluation within OASIS and is provided ~~that sufficient AFC is available for the proposed transaction. If sufficient AFC does not exist, the Scenario Analyzer provides the Customer~~ the following information associated with the request: all constrained Most Limiting Flowgates, the hour(s) when the constraints exist, and the amount of Flowgate capacity available. Because the Scenario Analyzer does not submit an actual TSR over OASIS, it does not decrement Flowgate AFC or guarantee that AFC will be available when an actual TSR is submitted over OASIS.

13. AFC-RELATED DATA

A list of the AFC-related data that is either posted on OASIS or supplied upon request is contained in the TSR Business Practices, including a description of any applicable confidentiality requirements and procedures. The list identifies: (1) the data used to calculate AFC values; (2) information and supporting data used to explain the reason(s) TSRs are Refused or Counteroffered; (3) other AFC-related information provided by the Transmission Provider; and (4) whether the information referenced in (1)-(3) is posted on OASIS on a regular basis or is provided upon request.

14. TSR BUSINESS PRACTICES RELATED TO AFC PROCESS

Additional detail regarding the AFC Process is available in the TSR Business Practices posted on OASIS. At a minimum, the TSR Business Practices will address the following AFC-related topics:

i. Software Applications Used in the AFC Process (Section 1.2)
ii. Frequency of Resynchronizations (Section 3.6)
iii. Facility Ratings (Section 4.2)
iv. Load Data Submission–Operating/Planning Horizons (Section 6.2.1)
v. Generation Dispatch Data Submission–Operating/Planning Horizons (Section 6.3.1)
vi. Generation Dispatch Data Submission–Study Horizon (Section 6.3.2)
vii. Generating Facility Operating Characteristics (Section 6.5)
viii. Transmission Construction Projects Not Currently-In Service (Section 6.6)
ix. Zonal Import Limits (Section 7.1.2)
x. Counterflows (Section 8)
xi. Adding New Sources and Sinks (Section 9.1)
xii. Calculation of Response Factors (Sections 9.1 and 9.2)
xiii. Data Regarding the AFC Process (Section 13)

The TSR Business Practices, including the practices listed above, are subject to the requirements of Section 4 of the Tariff and Section 5 of the Transmission Service Protocol.

15. REGIONAL COORDINATION

The Transmission Provider coordinates transfer capability values with neighboring utilities in accordance with applicable NERC Reliability Standards, SERC regional criteria, and NAESB business practices (once effective, as appropriate). The Transmission Provider and the ICT participate with NERC multi-regional and SERC regional modeling groups to develop the NERC/SERC regional models and the transmission planning models described in Attachment K. The NERC and SERC regional models are developed consistent with the applicable NERC/SERC modeling group procedures, the current SERC near-term and long-term procedure manuals, and all applicable, current NERC Reliability Standards and SERC reliability criteria. The regional models include an aggregation of each SERC participant's transmission planning model for their respective transmission systems. Pursuant to Attachments D and K, the NERC/SERC regional models are the basis for the Annual and Seasonal Base Case Models used for transmission planning, System Impact Studies and Facilities Studies. Pursuant to Attachment K and the Transmission Service Protocol, the ICT participates in the NERC/SERC regional model development processes with the Transmission Provider.

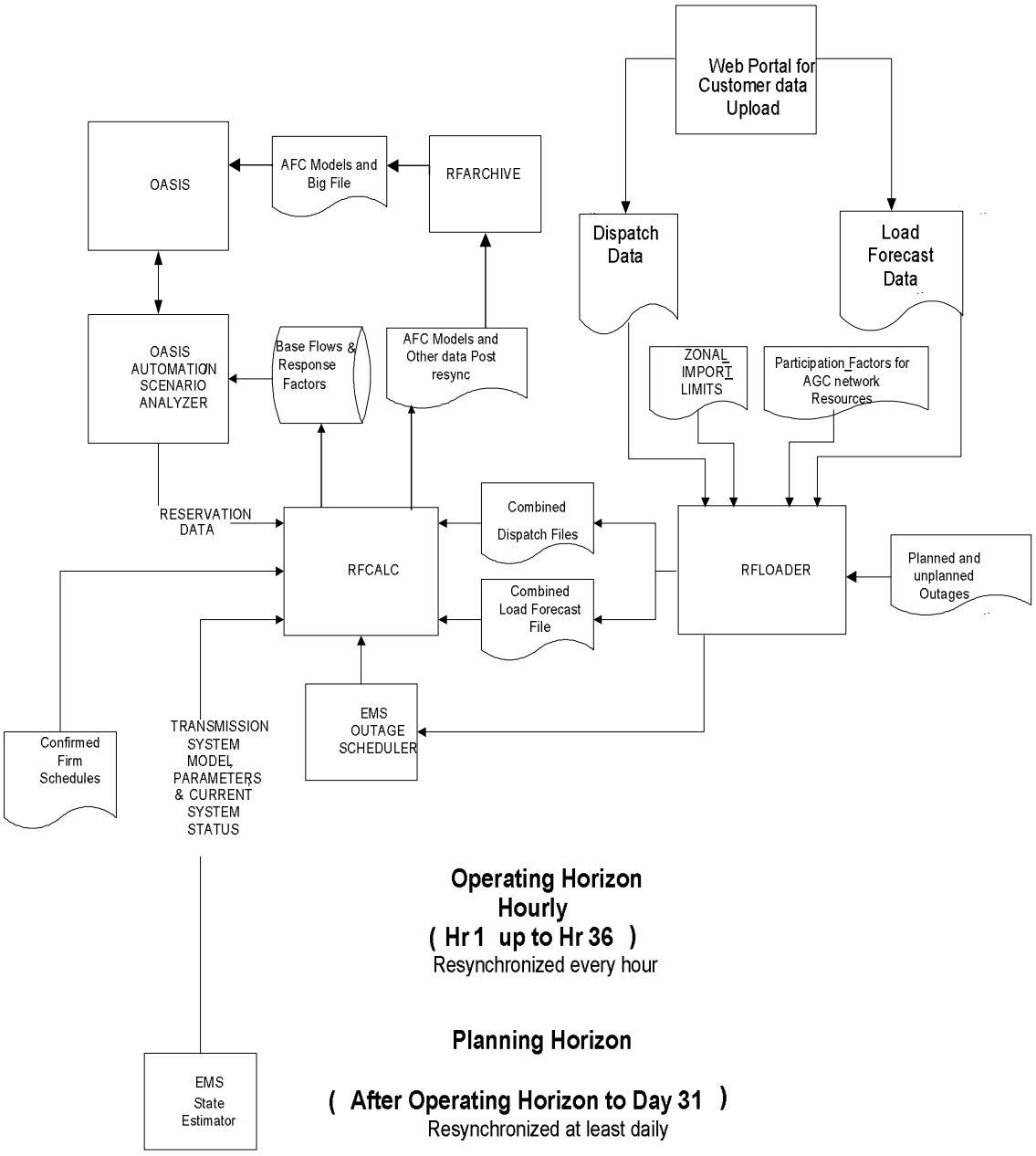
Additional regional coordination procedures are contained in the Entergy ATCID.~~The Seasonal Base Models derived from the NERC/SERC regional process are the basis for the Monthly Base~~

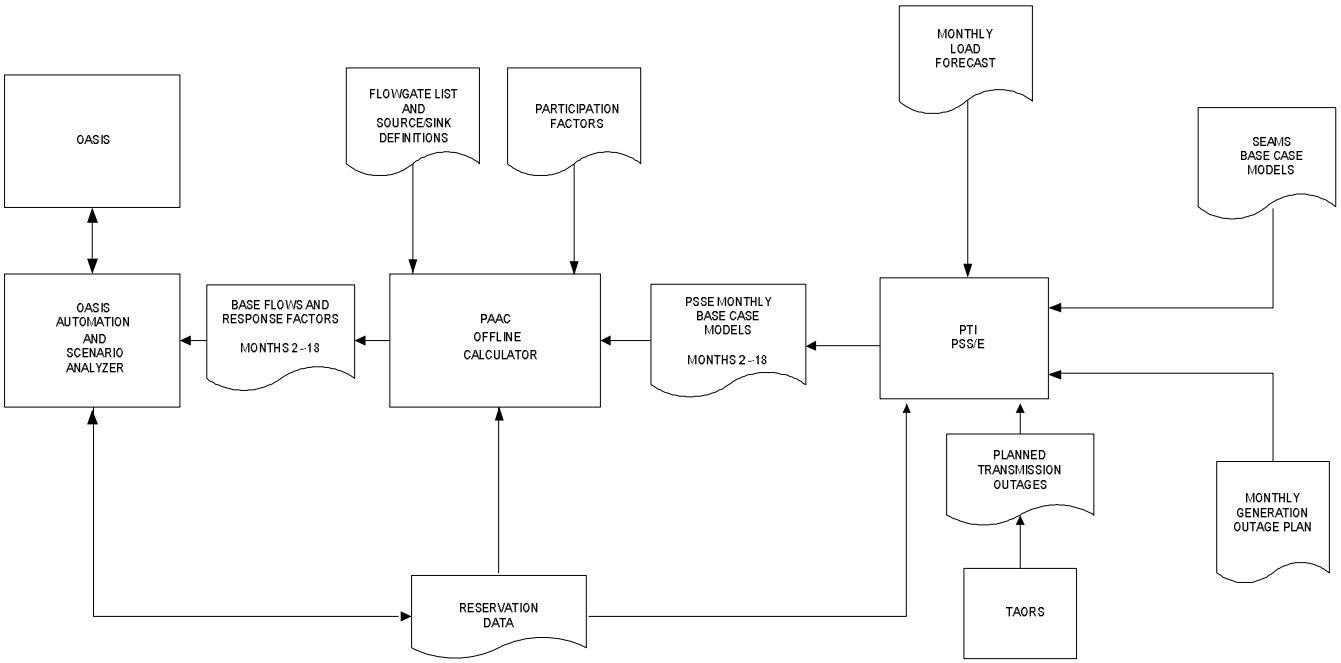
~~Case Models used to calculate AFC values in the Study Horizon. The Seasonal Base Case Models are updated according to the frequency required by applicable NERC Reliability Standards or SERC reliability criteria (if any), but in no event less than the frequency specified in Attachment K. The Seasonal Base Case Models incorporate the system topology, facility ratings, generation dispatch, load forecasts, and transmission uses provided by each SERC participant as part of the NERC/SERC regional modeling processes. The updating process for the Seasonal Base Case Models is described in Attachment D.~~

~~The Transmission Provider further coordinates with Southern Company and TVA on a monthly basis to update the Seasonal Base Case Models and produce updated data inputs for the Monthly Base Case Models used to calculate AFC values for Months 2-18 of the Study Horizon. The monthly updates coordinated with Southern Company and TVA include updates to the same system parameters (system topology, facility ratings, generation dispatch, load forecasts, and transmission uses) provided by each SERC participant as part of the SERC regional modeling processes, except that those parameters are provided for each individual month. The Transmission Provider further updates the Monthly Base Case Models with data available from other External Control Areas as described in Section 7.4.~~

~~For the EMS-Based Models used in the Operating and Planning Horizons, transmission facility outages for External Control Areas are derived from NERC SDX outage data provided by those Control Areas. Load data for External Control Areas is based on data supplied by the SPP RTO or the NERC SDX. Additional updates to data for External Control Areas is described in Section 7.4.~~

Appendix 1 – Flowcharts





Study Horizon
Monthly
(Month 2 to Month 18)
Resynchronized at least once a month