UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Entergy Services, Inc. **Docket No. OA08-149-___**

MOTION OF ENTERGY SERVICES, INC. FOR A FURTHER EXTENSION OF TIME TO COMPLY WITH ORDER 676-C

Pursuant to Rules 212 and 2008 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure, 18 C.F.R. § 385.212 and 385.2008 (2008), Entergy Services, Inc. ("ESI" or "Entergy"), acting on behalf of the Entergy Operating Companies,[1] hereby requests a further extension of the time granted by the Commission to Entergy for compliance with certain requirements of Order No. 676-C.[2] As indicated, in its "Motion Of Entergy Services, Inc. For An Extension Of Time" filed in this docket on January 30, 2009 ("January 30, 2009 Motion"), ESI sought, and the Commission granted, an extension of time through August 31, 2009, for Entergy to comply with the following North American Energy Standards Board ("NAESB") Business Practice Standards ("Standards") adopted and made mandatory for public utilities in Order No. 676-C: WEQ-001-10.1.5; WEQ-001-10.5.3; WEQ-001-11; WEQ-001-12; WEQ-013-3.2; and WEQ-013-2.6. ESI now respectfully requests that the Commission grant a further extension of time to comply with the referenced WEQ

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1 The Entergy Operating Companies are Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., and Entergy Texas, Inc.

2 *Standards for Business Practices and Communication Protocols for Public Utilities*, Order No. 676, 71 Fed. Reg. 26,199 (May 4, 2006), FERC Stats. & Regs. ¶ 31,216 (2006), *reh'g denied*, Order No. 676-A, 116 FERC ¶ 61,255 (2006), *amended*, Order No. 676-B, 72 Fed. Reg. 21,095 (Apr. 30, 2007), FERC Stats. & Regs. ¶ 31,246 (2007), *revised*, Order No. 676-C, 73 Fed. Reg. 43,848 (July 29, 2008), FERC Stats. & Regs. ¶ 31,274 (2008) ("Order No. 676-C"), *order on clarification and reh'g*, Order No. 676-D, 124 FERC ¶ 61,317 (2008).

requirements until September 28, 2009, to allow ESI to accommodate the request of its stakeholders to delay ESI's transition to its new OASIS software platform and associated software developed by Open Access Technologies International, Inc. ("OATi").

I. COMMUNICATION

All correspondence and communications related to this filing should be directed to:

David Fishel Assistant General Counsel Entergy Services, Inc. 101 Constitution Avenue, N.W. Suite 200 East Washington, D.C. 20001 (202) 530-7317 dfishel@entergy.com	Stephen M. Spina Joseph C. Hall Morgan Lewis & Bockius, LLP 1111 Pennsylvania Avenue, N.W. Washington, D.C. 20004 (202) 739-5958/5236 (202) 739-3001 (fax) sspina@morganlewis.com jchall@morganlewis.com

II. BACKGROUND

In Order No. 676-C, the Commission required public utilities to modify their Open Access Transmission Tariffs ("OATT") to incorporate the revised Standards by reference in their next OATT filing.[3] Entergy incorporated these Standards by reference into its OATT in its Order No. 890-B[4] compliance filing on September 8, 2008, which is still pending before the Commission.[5]

As noted by the Commission in its February 4, 2009 Notice Granting Extension**,** Entergy is in the process of migrating to a new OASIS platform developed by OATi (using the "webTrans" and "webOASIS" applications) that is compliant with the WEQ-

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3 *Id.* at P 82.

4 *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed. Reg. 12,266 (Mar. 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007), *order on reh'g*, Order No. 890-A, 73 Fed. Reg. 2,984 (Jan. 16, 2008), FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh'g*, Order No. 890-B, 73 Fed. Reg. 39,092 (July 8, 2008), 123 FERC ¶ 61,299 (2008) ("Order No. 890-B"), *order on reh'g*, Order No. 890-C, 126 FERC ¶ 61,228 (2009).

5 *See* Filing of Entergy Services, Inc. in Docket No. OA08-149-000 (Sept. 8, 2008).

001-10.1.5; WEQ-001-10.5.3; WEQ-001-11; WEQ-001-12; WEQ-013-3.2; and WEQ-013-2.6. The February 4, 2009 extension was granted to allow Entergy to complete this transition and ensure the functionality of the OATi software.

Entergy anticipated transitioning to the new OATi platform by June 1, 2009, and on May 5, 2009 filed a revised Attachment C reflecting the transition in Docket No. ER09-1180 to address the transition generally, as well as to address variations between Entergy's current software applications and the OASIS software and supporting applications provided by OATi. On May 28, 2009, Entergy requested a deferral of the effective date of the revised Attachment C until the implementation of the OATi platform in August 2009 in order to test the new OATi software for compliance with regulatory and other requirements (including Entergy-specific customizations) and to provide necessary training to Entergy, Entergy's Independent Coordinator of Transmission ("ICT"), and Entergy stakeholders ("May 28 Notice"). The instant request for a further extension of time to comply with Order 676-C is made specifically to accommodate additional training requested by Entergy's stakeholders.

In the May 28 Notice, Entergy committed to providing fifteen (15) days' notice to the Commission prior to transitioning to its new OASIS platform. The filing that ESI committed to make in the May 28 Notice, along with appropriately revised tariff sheets, is being concurrently filed in Docket ER09-1180, with a requested effective date of September 28, 2009, as proposed by the ICT Stakeholder Policy Committee in its August 13, 2009 special meeting, memorialized in the draft minutes submitted herewith as Attachment 1.

III. SUPPORT FOR FURTHER EXTENSION OF TIME

The Commission may, for good cause, extend the time for compliance with a Commission order unless otherwise provided by law.[6] To determine if good cause exists, the Commission will review the facts surrounding a request for an extension of time.[7] As described below, good cause exists here for the Commission to grant ESI's request for a further extension of time.

As indicated in its January 30, 2009 Motion requesting an extension for compliance with certain NAESB Standards in Version 1.4 of the Wholesale Electric Quadrant Standards adopted by FERC in order 676-C, ESI is currently compliant with most of the Standards.[8] However, ESI cannot fully implement all of the Standards without migrating to a fully compliant OASIS platform. Hence, ESI has been implementing a transition to a new OASIS platform provided by OATi.

To prepare its stakeholders to transition to the new OASIS platform on August 31, 2009, ESI published a demonstration OASIS website, and allowed stakeholders to access the site from July 20, 2009 through August 7, 2009. The demonstration website allowed Entergy's stakeholders to access the new OASIS platform and to interact with the ICT, including the opportunity to submit simulated transmission service requests. Stakeholders were also provided basic user training, hosted by OATi, on July 20 and July 27, 2009, as well as ESI-specific trainings conducted by ESI employees on July 27 and August 6, 2009. During these trainings ESI invited user interaction and feedback on the new OATi OASIS platform. Notice of the availability of the demonstration OASIS website and the trainings was posted on the secured homepage of Entergy's current

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6 *See* 18 C.F.R. § 385.2008.

7 *See, e.g.*, *Salt Lake County Water Conservancy District*, 31 FERC ¶ 61,201 at 61,413 (1985).

8 Order No. 676-C at P 10.

OASIS. Entergy's training materials are also available on its OASIS under "Special Notice Postings."

During the training sessions and system preview period, Entergy's stakeholders perceived differences between particular functionalities provided by ESI's current OASIS and the analogous functionalities provided by ESI's new OASIS platform. In both trainings, ESI's stakeholders expressed concerns regarding the perceived differences between the two OASIS platforms resulting in a need for additional user training, which would coincide with the demands of summer peak load if the transition to the new platform occurred in August as planned.

In order to minimize potential effects on the market and allow greater participation in training sessions, stakeholders attending the Entergy trainings proposed a delay of Entergy's transition to the OATi platform until after the summer peak period. Stakeholders also requested the opportunity to more formally provide feedback on the functionality of the OATi OASIS, and that ESI work with OATi to provide an OASIS that is functionally more comparable to the current platform.

At the request of participating stakeholders, the ICT called a special meeting of its Stakeholders Policy Committee on August 13, 2009 to consider a motion introduced by NRG Energy, Inc. for ESI to delay its transition to the new OASIS platform to a date beyond the summer peak. At this meeting, held by teleconference, the parties reached an agreement on the following three points: (1) that Entergy would delay its transition to an OATi-hosted OASIS platform until September 28, 2009; (2) that Entergy would solicit and collect input from the stakeholders on topics for four additional, focused, training sessions before the transition; and (3) that the Near Term Transmission Issues Working Group would compile a list of additional or revised functionalities desired by the

stakeholders for Entergy to review with OATi to determine if these additional or revised functionalities are feasible in the future. Attachment 1 to this motion includes the draft minutes from the August 13, 2009 SPC teleconference. Attachment 2 to this motion includes Entergy's Notice of Transition to OATi being submitted concurrent with this Motion.

Whereas compliance with all of the requirements adopted in Order 676-C is dependent on Entergy's migration to its new OASIS platform, Entergy respectfully requests a further extension of time until September 28, 2009, to comply with the following Standards: WEQ-001-10.1.5; WEQ-001-10.5.3; WEQ-001-11; WEQ- 001-12; WEQ-013-3.2; and WEQ-013-2.6, which extension would allow Entergy to accommodate the requests of its stakeholders as described above.

IV. CONCLUSION

For the foregoing reasons, Entergy requests that the Commission grant it an extension of time until September 28, 2009 to comply with the standards described above.

Respectfully Submitted,

/s/ David Fishel
David Fishel
Assistant General Counsel
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Attorneys for Entergy Services, Inc.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have this day caused the foregoing Motion to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated this 18th day of August, 2009.

Joseph C. Hall
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Washington, D.C. 20004
Tel: (202) 739-5958
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ATTACHMENT 1

DRAFT NOTES FROM AUGUST 13, 2009 SPC TELECONFERENCE

SPP Southwest Power Pool

Southwest Power Pool, Inc.

ICT STAKEHOLDERS POLICY COMMITTEE MEETING

August 13, 2009

Conference Call

• Draft MINUTES •

SPP Chair, Bruce Rew, called the conference call to order at 3:00 p.m. There were 26 in attendance on the call (Table 1 – Attendance List). The conference call had been requested by a group of stakeholders. The stakeholders presented a recommendation included in appendix one of these minutes. Bruce Rew discussed the urgency of the meeting and discussion to decide the action to be taken on implementation of the new OASIS system. Entergy currently has a FERC filing in place with the intent of implementing the new OATI system no later than August 31 and has an advance notification requirement of 15 days.

Peter Collins, NRG, discussed the proposed motion and the reasons for the concerns. There is additional training required and they desired to have enhanced functionality of the new OASIS system. In their opinion the current system provides functionality that needs to be included in the new system. Mark McCulla, Entergy, discussed the process that Entergy has gone through to get to this point. Entergy could support a delay of implementation until September 28, 2009. Implementing enhancements to the application at this point would most likely not be possible in the time frame proposed in the motion.

The SPC discussed at length the new OATI application and functionality that would provide stakeholders improved functionality.

A compromise SPC position was reached as follows:

> The SPC supports a proposed September 28, 2009 implementation of the new OATI system. The NTTIWG will immediately begin development of an OATI application enhancement list that will be provided to Entergy with a target of September 15. This list will contain OATI OASIS application enhancements that Entergy will pursue with OATI.

The motion was approved by the SPC. The call finished up with a discussion of how Entergy can improve the training they are providing for the new system. Training calls will be held at 1 pm central time to facilitate greater participation by stakeholders.

Meeting adjourned at approximately 4:11 p.m.

Respectfully Submitted,
Bruce Rew

SPP Southwest Power Pool

APPENDIX ONE:

PROPOSED MOTION TO SPC

Background:

Entergy is converting its current OASIS operating platform from Areva to OATI. At the July 23, 2009 ICT SPC meeting, Entergy announced that it would activate the new OATI software during the month of August, 2009. Beginning in July, 2009, Entergy and OATI held training and demonstrations for Entergy transmission customers on the new OATI system. There are serious concerns on the part of the transmission customers regarding the cutover to OATI:

1) The transition to a new operating system in what has historically been a month with peak loads adds uncertainty to the transmission customers who heavily rely on the accessibility and functionality of the transmission system. Given the peak season, it is best to delay the implementation of the new software to a less critical timeframe so as to minimize any inadvertent impact that the transition may entail. The possible interruptions created by the transition to a new software platform during peak loads could impact the transmission customer's requirements to meet its energy needs, and as such a deferral of the release to a less critical time is prudent.
2) The limited training that has been available to the transmission customers has raised concerns and questions on several critical functionalities of the existing software that do not seem to be currently functional in the OATI system. Additional time is needed to continue to work with OATI and the transmission customers to make sure the functionality of the OATI product matches the expectations of the transmission customers and maintain the functionality of the existing system.
3) Additional training is needed for transmission customers before the system goes live. Although the training provided has given a general overview of the new system, additional training to better understand all the functionalities is needed.

Therefore, the SPC stakeholders move that the ICT and Entergy delay the go live transition of the Entergy Oasis from August, 2009 to a date not earlier than November 1, 2009 to allow for the resolution of the above referenced problems.

ATTACHMENT 2

NOTICE OF EFFECTIVE DATE FOR TRANSITION TO OATI SOFTWARE

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Morgan Lewis
COUNSELORS AT LAW

Joseph Charles Hall
202.739.5236
jchall@MorganLewis.com

August 18, 2009

VIA HAND DELIVERY

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

Re: *Entergy Services, Inc.*, Docket No. ER09-1180, Notice of Effective Date for Transition to OATi Software

Dear Secretary Bose:

On May 5, 2009, in the above-referenced proceeding, Entergy Services, Inc. ("Entergy"), on behalf of the Entergy Operating Companies,[1] submitted revised tariff sheets for the currently effective version of Attachment C to Entergy's Open Access Transmission Tariff ("OATT") reflecting Entergy's anticipated transition to software developed by OATi for the calculation of Available Flowgate Capability ("AFC") values ("webTrans") and for the evaluation of transmission service availability for Entergy's Operating, Planning, and Study Horizons (respectively, "webOASIS" and "May 5 Filing"). In the May 5 Filing, Entergy explained that it anticipated transitioning to webTrans and webOASIS on June 1, 2009 and requested that the tariff sheets included in its filing be accepted to become effective on that date.

On May 28, 2009, Entergy filed a notice with the Federal Energy Regulatory Commission ("Commission") explaining that Entergy and Entergy's Independent Coordinator of Transmission ("ICT") believed that additional testing and training was warranted before the transition to webTrans and webOASIS could be implemented ("May 28 Notice"). In that filing, Entergy proposed to defer the June 1, 2009 transition date originally proposed for the implementation of webTrans and webOASIS until August 2009. The May 28 Notice explained that Entergy would submit a second notice to the Commission notifying it of the actual transition date to webTrans and webOASIS at least fifteen (15) days prior to implementation of webTrans and WebOASIS. This notice would include the Attachment C tariff sheets included in the May 5 Filing revised to reflect the actual implementation date for webTrans and webOASIS.

After submitting the May 28 Notice, Entergy conducted additional testing and continued to prepare for the transition to webTrans and webOASIS. At the July 23, 2009 Stakeholder Policy Committee ("SPC") meeting, Entergy announced its plan to transition to webTrans and

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[1] 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.

webOASIS in August 2009, and its intent to provide training for its customers on webOASIS. After several training sessions had been conducted with stakeholders, several stakeholders requested that Entergy conduct additional training sessions before transitioning to webTrans and webOASIS, and that the transition date itself be delayed until after the Summer peak months. This issue was discussed at a specially convened August 13, 2009 SPC teleconference, during which Entergy, the ICT and the stakeholders agreed to defer the transition to webTrans and webOASIS until September 28, 2009.

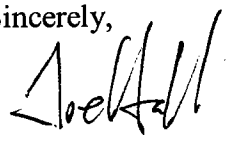
During the August 13 teleconference, the parties also agreed that additional Entergy-specific training sessions would be held before Entergy's transition to webTrans and webOASIS. Further, the parties agreed that the Near Term Transmission Issues Working Group ("NTTIWG") will compile a list of additional or revised functionalities that the stakeholders desire as enhancements to the webTrans and webOASIS software. This list will be provided to Entergy and the ICT by September 15, 2009 for review, and Entergy will work with OATi to determine if these additional or revised functionalities are feasible. The parties agreed, however, that there is insufficient time to include any of the NTTIWG's requested enhancements in the webTrans and webOASIS software by September 28, 2009. Attachment 1 to this notice includes the draft minutes from the August 13, 2009 SPC teleconference.

Accordingly, and pursuant to its commitment in the May 28 Notice and the August 13, 2009 SPC teleconference, Entergy hereby notifies the Commission that Entergy intends to transition to webTrans and webOASIS on September 28, 2009. Attachments 2 and 3 to this notice include clean and redlined Attachment C tariff sheets revising the original June 1, 2009 effective date for the transition to webTrans and webOASIS to September 28, 2009.

Good cause exists to grant any necessary waivers in order to allow the revised tariff sheets included in this filing to be effective September 28, 2009. The Attachment C tariff sheets included in this filing contain no substantive revisions from those included in the May 5 Filing. They reflect only the deferred implementation date of September 28, 2009 for the transition to webTrans and webOASIS. In light of the fact that no substantive revisions are being proposed in this filing, the Commission should grant any and all necessary waivers to allow the September 28, 2009 effective date requested by Entergy.

Please do not hesitate to contact me with any questions at the contact information provided above.

Sincerely,



Joseph C. Hall

Attorney for Entergy Services, Inc.

CERTIFICATE OF SERVICE

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

Dated 18th day of August 2009.

Joseph C. Hall
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Avenue N.W.
Washington, DC 20004
(202) 739-5236

Attachment 1

Minutes from the Stakeholder Policy Committee Teleconference Held on August 13, 2009

SPP Southwest Power Pool

Southwest Power Pool, Inc.

ICT STAKEHOLDERS POLICY COMMITTEE MEETING

August 13, 2009

Conference Call

• Draft MINUTES •

SPP Chair, Bruce Rew, called the conference call to order at 3:00 p.m. There were 26 in attendance on the call (Table 1 – Attendance List). The conference call had been requested by a group of stakeholders. The stakeholders presented a recommendation included in appendix one of these minutes. Bruce Rew discussed the urgency of the meeting and discussion to decide the action to be taken on implementation of the new OASIS system. Entergy currently has a FERC filing in place with the intent of implementing the new OATI system no later than August 31 and has an advance notification requirement of 15 days.

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The motion was approved by the SPC. The call finished up with a discussion of how Entergy can improve the training they are providing for the new system. Training calls will be held at 1 pm central time to facilitate greater participation by stakeholders.

Meeting adjourned at approximately 4:11 p.m.

Respectfully Submitted,
Bruce Rew

SPP Southwest Power Pool

TABLE ONE:		
Company	**Last Name**	**First Name**
Arkansas Electric Coop. Corp.	Frizzell	Ronnie
ConocoPhillips	Clynes	Terri
Entegra Power Group	Heisey	John
Entegra Power Group/UPP	Turner	Rebecca
Entergy	Bornholdt	Mary
Entergy	Norton	Mac
Entergy	McCulla	Mark
Entergy	Wells	Connie
Entergy	Cassingham	Paul
Entergy	Goin	Michael
Entergy	Bigelow	Christina
Entergy Services, Inc.	Wolf	Matt
Fordis Energy	Chang	Richard
Kelson Energy	Saylor	Woody
KGen Power	Lee	Tina
NRG	Collins	Peter
NRG Louisiana Generating, LLC	Vosburg	Jennifer
Paliza Consulting, LLC.	Paliza	Roberto
RRI Energy	Simpson	John
Southwest Power Pool	Rew	Bruce
Southwest Power Pool	Hudson	Dowell
Southwest Power Pool	Woods	Jodi
Southwest Power Pool	Mitchell	Ty
Southwest Power Pool	Davis	Julie
Suez	LONA	ROBERT
Zachary David Wilson, P.A.	Wilson	Zachary

SPP Southwest Power Pool

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PROPOSED MOTION TO SPC

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1) The transition to a new operating system in what has historically been a month with peak loads adds uncertainty to the transmission customers who heavily rely on the accessibility and functionality of the transmission system. Given the peak season, it is best to delay the implementation of the new software to a less critical timeframe so as to minimize any inadvertent impact that the transition may entail. The possible interruptions created by the transition to a new software platform during peak loads could impact the transmission customer's requirements to meet its energy needs, and as such a deferral of the release to a less critical time is prudent.
2) The limited training that has been available to the transmission customers has raised concerns and questions on several critical functionalities of the existing software that do not seem to be currently functional in the OATI system. Additional time is needed to continue to work with OATI and the transmission customers to make sure the functionality of the OATI product matches the expectations of the transmission customers and maintain the functionality of the existing system.
3) Additional training is needed for transmission customers before the system goes live. Although the training provided has given a general overview of the new system, additional training to better understand all the functionalities is needed.

Therefore, the SPC stakeholders move that the ICT and Entergy delay the go live transition of the Entergy Oasis from August, 2009 to a date not earlier than November 1, 2009 to allow for the resolution of the above referenced problems.

Attachment 2

Clean Tariff Sheets Revising the Original June 1, 2009
Effective Date to September 28, 2009

Provider will provide the ICT with an updated Master List and the ICT will post such updated Master List to the Entergy OASIS.

As indicated in 2.2.2.4, the 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 on the Transmission System.

3. CALCULATION OF AFC VALUES

3.1 Base Case Models

The AFC process generates a base case model that simulates anticipated system conditions. The base system conditions include projected load, generation dispatch, system configuration/outages, and base flow transactions. RFCalc produces power flow models representing the two distinct time periods: (1) hourly models in the Operating and Planning Horizons for Hour 1 to Hour 168; (2) daily models in the Planning Horizon for Day 8 to Day 31. An off-line planning model process using PSS/E produces monthly power flow models for Month 2 to Month 18 of the Study Horizon. 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 calculate AFC values, and serves as the interface to web OASIS.

The power flow model used to determine constrained facility base flow and Response Factors for the Operating and Planning Horizons is based on the Transmission Provider's EMS and a state estimator snapshot of the real-time system. The power flow model for the Study Horizon uses off-line power flow studies, such as PSS/E and MUST. During the resynchronization process, the base case models are modified to reflect additional transactions as discrete injections and withdrawals. Using these models as the starting point, RFCalc applies the formulas described below to compute the AFC value on each monitored flowgate. Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying data inputs and information necessary for creating hourly, daily and monthly base case models. The ICT will be 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" shall mean that the ICT will take reasonable steps to ensure that the data inputs are properly loaded and reflected in either RFCalc or the Transmission Provider's modeling processes and that the resultant AFC values (i) reasonably reflect the application and product of RFCalc or the Transmission Provider's modeling processes and (ii) are reasonably consistent with the current topology of the Transmission System.

3.2 AFC Formula for Non-firm Transmission Service Requests

WebTrans computes Non-Firm AFC for the Operating, Planning and Study Horizons. Non-Firm AFC is the capacity that remains on a constrained facility after subtracting power flows for service to Native Load Customers, Network Customers, Firm Point-to-Point Customers, Non-Firm Point-to-Point Customers and other firm and non-firm transactions. Non-Firm AFC is computed in the Planning Horizon using the same power flow solution as used for Firm AFC, with the exception that the effects of non-firm reservations will not be removed from base flows by webTrans. After the power flow model has been solved for a time segment, RFcalc and PAAC take the base flows of constrained facilities and adjust them to remove a percentage of the counter-flows from both firm and non-firm reservations. After

adjusting base flows for the effects of counterflow, webTrans uses the following formula to determine Non-Firm AFC:

$$\text{Non-Firm AFC} = \text{Rating} - \text{TRM} - \text{ETC} - \text{Adjusted Base Flow}_{\text{NON-FIRM}}$$

Where:

Non-Firm AFC	=	the amount of non-firm transfer capability over that flowgate that remains available for additional transmission service reservations above and beyond existing uses of the transmission system
Rating	=	the capability of a flowgate in a time period
TRM	=	Transmission Reliability Margin
ETC	=	Existing Transmission Commitments (reservations) not included in the base flow calculation which are handled algebraically by webTrans
Adjusted Base Flow (Non-Firm)	=	the expected firm and non-firm power flow through a Flowgate in a time period with all pertinent flows included in the power flow base case and adjusted for counterflow impacts

3.3 AFC Calculation Horizons

AFC values are calculated for three different time periods: (1) the Operating Horizon, which includes all hours of the current day (Day 1) and, after 12:00 p.m., all hours of the next day (Day 2); (2) the Planning Horizon, which extends from the end of the Operating Horizon through the thirty-first day (Day 31); and (3) the Study Horizon, which extends from the end of the Planning Horizon through the eighteenth month (Month 18).

3.3.1 Operating Horizon

In the Operating Horizon, the Non-Firm AFC values for each flowgate are calculated by webTrans, which uses Response Factors and base flow calculated by RFCalc. The topology for the base case model for the first three hours in the Operating Horizon is generated by Entergy's State Estimator. The relevant unit commitment and load forecast inputs are incorporated into the model. Beyond the first three hours, RFCalc creates the base case model using Entergy's EMS as modified to take into account outages, unit commitment, load forecasts and other system conditions. Using the power flow models and Non-Firm AFC formula discussed above, webTrans calculates Non-Firm AFC values for all hours of Day 1 and, after 12:00 p.m., all hours of Day 2. This calculation is performed for Non-firm AFC values only. Firm AFC values are not calculated for the Operating Horizon because requests for firm Transmission Service must be submitted by 12:00 p.m. on the day prior to commencement of such service. Because firm service cannot be requested during the Operating Horizon, only Non-Firm AFCs are calculated for that horizon. All Non-Firm AFC values and Response Factors for the Operating Horizon are calculated and updated at least on an hourly basis to reflect changing system conditions, including additional confirmed Transmission Service reservations and schedules. 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.

3.3.2 Planning Horizon

In the Planning Horizon, Firm and Non-Firm AFC values for each flowgate are calculated by webTrans, which uses Response Factors and base flow calculated by RFCalc. The base case model is generated by RFCalc using data from Entergy's EMS as modified to take into account outages, unit commitment, load forecasts and other system conditions. WebTrans calculates hourly Firm and Non-Firm AFC values for each flowgate for Day 2 through Day 7 and daily Firm and Non-Firm AFC values for Day 3 to Day 31. WebTrans updates both Firm AFC and Non-Firm AFC values for the Planning Horizon at least every day to reflect changing system conditions, including additional confirmed Transmission Service reservations. In between such updates, Non-Firm and Firm AFC values are decremented algebraically to reflect subsequent Transmission Service reservations.

3.3.3 Study Horizon

In the Study Horizon, the ICT, using data inputs and power flow models developed by the Transmission Provider and reviewed and validated by the ICT, calculates monthly Response Factors and AFC values by conducting off-line power flow studies, such as PSS/E and MUST. The off-line planning models are developed on a rolling eighteen-month basis and are representative of monthly peak-hour conditions. webTrans calculates both Firm and Non-Firm AFC values for the Study Horizon and updates those value at least on a monthly basis to reflect changing system conditions and additional confirmed transmission reservations. In between such updates, Non-Firm and Firm AFC values are decremented algebraically to reflect subsequent Transmission Service reservations.

3.4 AFC Formula for Firm Transmission Service Requests

WebTrans computes Firm AFC for the Planning and Study Horizons. Firm AFC is not available for the Operating Horizon, and therefore, is not computed for this time frame. Firm AFC is the capacity that remains on the constrained facility after subtracting power flows for service to Native Load Customers, Network Customers, Firm Point-to-Point Customers and other firm transactions.

For the Planning Horizon, Firm AFC will be determined at least once a day during the daily resynchronization by solving a power flow model that includes both firm and non-firm transmission reservation and is based on data from the Transmission Provider's Energy Management System (EMS). For the Study Horizon, Firm AFC will be determined on a monthly basis by solving off-line power flow models that include firm transmission reservations. In the Study Horizon, the impact of Non-Firm reservations will be algebraically decremented by webTrans and not included in the base flow. The flows on constrained facilities should represent base flows that serve Native Load Customers, Network Customers, Firm Point-to-Point Customers and other firm transactions.

After the power flow model has been solved for a time segment for the Planning Horizon, webTrans takes the base flows of constrained facilities and adjusts them to remove the effects of non-firm reservations from the most limiting facilities that were evaluated in the power flow model. RFcalc and PAAC also take the base flows of constrained facilities and adjusts them to remove a percentage of the counter-flows from firm reservations (subject to Section 4.6) for the Planning Horizon and the Study Horizon. WebTrans uses the following formula to determine Firm AFC:

$$\text{Firm AFC} = \text{Rating} - \text{TRM} - \text{ETC} - \text{CBM} - \text{Adjusted Base Flow}_{\text{FIRM}}$$

Where:

Firm AFC	=	the amount of firm transfer capability over that flowgate that remains available for additional transmission service reservations above and beyond existing uses of the transmission system
Rating	=	the capability of a flowgate in a time period
TRM	=	Transmission Reliability Margin
CBM	=	Capacity Benefit Margin
ETC	=	Existing Transmission Commitments (reservations) not included in the base flow calculation which are handled algebraically by webTrans
Adjusted Base Flow (Firm)	=	the expected firm power flow through a flowgate in a time period with all pertinent flows included in the power flow base case and adjusted for counterflow impacts

3.5 Resynchronization of AFC Values

AFC values will be resynchronized: (i) every hour during the Operating Horizon; (ii) at least every day for the Planning Horizon; (iii) and no less than every month during the Study Horizon. Resynchronizations may occur more frequently if necessary. 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. The ICT may also direct resynchronizations of AFC values pursuant to Section 8.3 of the Transmission Service Protocol.

For the Operating and Planning Horizons, RFCalc incorporates all the data inputs during the resynchronization process to develop power flow models that define each time point included in the Operating and Planning Horizons. During the resynchronization process, prior commitment and confirmed TSRs are modeled into the base case as discrete injections and withdrawals, and new base flows are determined from these models. Using the new base flow amounts and models, RFCalc recalculates the base flow value on each monitored flowgate in the Master List. For the Study Horizon, this process is performed by an off-line AFC calculator. When a new TSR is accepted between resynchronizations, the "Most Limiting Flowgates"[1] that are significantly impacted by that particular request will be updated in webTrans by algebraically decrementing the appropriate AFC values. At the time of the next resynchronization, the TSRs that have been confirmed since the last resynchronization will then be modeled as physical injections and withdrawals in the same manner of all other previously granted service requests.

[1] Although the AFC process will monitor approximately 300-500 flowgates, webTrans will use a more limited set of flowgates, as determined by RFCalc or PAAC, to evaluate individual TSRs. The Most Limiting Flowgates are up to fifteen flowgates with the lowest effective ATC values for the TSR at issue that also have a response factor of at least 3%.

4. INPUTS TO BASE CASE MODELS AND THE AFC FORMULAS

4.1 Base Flow

The Base Flow calculation for Firm AFC values takes into account all existing firm Transmission Service, including capacity reserved for: (1) Firm Point-to-Point Transmission Service; (2) service to Network and Native Load customers; and (3) other firm Transmission Service, such as service under pre-Order No. 888 grandfathered agreements. The Base Flow calculation will also take into account any relevant counterflows.

Entergy models the output of QF/Cogeneration units to a level sufficient to meet any host load requirements. To the extent there is a firm or non-firm reservation from a QF, it will be handled the same as a firm or non-firm reservation from any other source on the Transmission System.

Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying the data inputs and information necessary for creating the hourly, daily and monthly base case models. RFCalc utilizes this data to create hourly and daily models, while the Transmission Provider creates monthly models for use with off-line power flow applications, such as PSSE/MUST. 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 shall obligate 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 (i) reasonably reflect the application and product of these modeling processes and (ii) are reasonably consistent with the current topology of the Transmission System.

To account for all existing firm uses of the Transmission System, assumptions must be made for the load forecast, unit commitment, scheduled outages, counterflows, and net interchange. The actual dispatch on the Transmission System may differ from the expected dispatch modeled in the AFC process due to uncertainties involving unplanned unit outages and unplanned derates, Qualified Facility puts, load forecasting, and short-term purchases by Network Customers.

4.2 Load Forecast

For the Operating Horizon and the Planning Horizon, Entergy's System Planning Organization (SPO) and all other AFC process participants will be provided with a secure Web-based portal to upload the load forecast data. Pursuant to Section 4.2.1, SPO and all Network Customers will be required to submit load forecast data for their respective loads through this portal. If a Network Customer does not supply load forecast data for a particular time period, historical data will be used to create a load forecast for purposes of calculating AFC values. SPO supplies a load forecast for the load served by Entergy. All other Network Customers supply a load forecast for their own load. To the extent that RFcalc must calculate a load for load areas not included in the SPO supplied load forecast, this is accomplished by assigning these non-forecasted areas a factor, and then applying the scaling factor to calculate the area load based on an assumed forecast area.

For the Study Horizon, the load forecast is based on inputs received from SPO for the Entergy Control Area. For Network Customers and Control Areas that are embedded in footprint of the Transmission System, the Transmission Provider uses load forecast data to the extent it is supplied by the host entity. If no such data is available, the Transmission Provider defines the load level for these Control Areas/Network Customers based on a scaling factor using the peak load forecast as reference. External Control Area

will first dispatch the AGC generators in the Control Area where the customer load resides. These generators can be dispatched up to their MW max limit. If after this step the load has still not been met, RFcalc will change the NI of the Control Area where the customer load resides to meet the load. If changing the NI also does not meet the load the Powerflow for that timepoint may diverge. For customers who are full or partial requirement customers of SPO, their unbalanced load will be balanced by using SPO resources.

4.2.2.1 Treatment of Excess Reservations for Network/Native Load

Under the procedures described above in Section 4.2.1.1, there will be instances where reservations that have been confirmed are not modeled or "dispatched" in the base case. These reservations are referred to as "Excess Reservations." To prevent overselling, RFcalc will algebraically decrement the impact of Excess Reservations on the two proxy flowgates (PMAX and TIECAP). For those reservations that are partially dispatched in the base case model (*i.e.,* not at full output), the un-modeled impact of those reservations will be decremented against these two flowgates also. The impact of Excess Reservations would *not* be decremented against the other flowgates included in the list of the Most Limiting Flowgates.

4.2.2.2 Modeling Point-to-Point Service

RFcalc will model most firm point-to-point reservations (imports and exports) at their respective reservation levels. There are some customers that serve load using grandfathered point-to-point reservations. For these specific point-to-point reservations that sink to Network Load, RFcalc will utilize the process described in Section 4.2.2.1.

4.2.2.3 Modeling Unconfirmed Reservations

WebTrans will algebraically decrement the top 15 flowagtes for Reservations (both Point-to-Point and new Network Resources) that are in accepted mode and counteroffered. They will not be modeled in base flows after resynchronization. Reservations that are in accepted or counter offer mode will be algebraically decremented against the top fifteen flowgates. The decrementation will be on the proxy flowgates (PMAX and TIECAP) and the remaining flowgates until such time as they are withdrawn, rejected or confirmed. All reservations that are in study mode will be algebraically decremented against the top fifteen flowgates. Once an accepted request is confirmed, it will only be modeled if included in the customer's dispatch files or until such time as RFcalc requires modeling of those reservations to meet the customer's load. When an accepted request is confirmed in between resynchronizations, it will continue to be algebraically decremented until such time there is an RFCalc and webTrans resync. Confirmed reservations for Network Resources that are not modeled by RFcalc will be treated as Excess Reservations and will be decremented against the proxy flowgates (PMAX and TIECAP) but not the remaining top-fifteen flowgates.

4.2.3 Unit Commitment and Dispatch – Planning Horizon and Study Horizon

Unit commitment and dispatch is based on information provided by SPO and other Network Customers. For the Entergy Operating Companies serving Entergy native load, the Network Resources of the Entergy Operating Companies are set to meet Entergy's native load based in part on information provided by the entity responsible for serving that load, *i.e.,* Entergy's SPO group. This information varies depending on the time horizon in question. Additional information from other sources that is used to determine unit commitment includes updated data regarding Network Resources, purchases and sale transactions, and

shape of load curve. Load forecasts for external areas other than those listed above are derived by using a scaling factor.

Subsystem files for hourly models only include units that are online and have an assigned participation factor. Therefore, these units are the only participants in the transfer because RFCalc specifically uses units that are online in the calculation of response factors.

Transmission outages, both planned and unplanned, for facilities with voltage levels 115 kV or more, are included in AFC operating and planning models. Outages of bus breakers and power transformers are manually inserted into the models.

4.3.2 Study Horizon

Pursuant to Section 6.2 of the Transmission Service Protocol, the Transmission Provider provides to the ICT and other modeling group participants such data and information as may be necessary to prepare and update the monthly models used in the Study Horizon. The Transmission Provider creates the monthly models used in the Study subject to the ICT's review and validation pursuant to Sections 6.1 and 6.2 of the Transmission Service Protocol. The ICT reviews and validates the data inputs provided by the Transmission Provider to ensure that the data inputs and resulting models are consistent with the Transmission Provider's criteria.

When developing generation dispatch data inputs for monthly models, the Transmission Provider assumes IPP units in the Study Horizon models are dispatched to the level of the reservations that are active for that facility. The Transmission Provider also assumes QF/cogeneration units are dispatched to the level of the load at the facility. If there are any reservations from the QF/cogeneration units, such reservations are added to the units dispatch level. In the absence of any OASIS reservations, the net injection from the QF is zero MWs. Network Resource units are dispatched economically using the ECDI function of PSS/E to create a least-cost dispatch for each case. When necessary to enforce zonal import limits, the case is dispatched by zones rather than by area. When this occurs, an IDEV file that recreates the dispatch is saved.

When developing topology data inputs for monthly models, the Transmission Provider assumes all 500kV lines that are scheduled out of service for one day are modeled out of service for the entire month, and all 115kV – 230kV lines that are scheduled out of service for at least five days are modeled out of service for the entire month. The Transmission Provider schedules multiple lines as out of service when the outages overlap or when non-overlapping outages have no impact on one another. The Transmission Provider also models critical lines as out of service even if the lines are not out of service for the required time frame but should be modeled out of service to better reflect the system conditions for the month. The Transmission Provider updates line outages in models at least once a month and the ICT posts the updates on OASIS. OASIS Study Horizon model postings are updated once a week with new creation times, but newly retrieved line outages information is not included in this update.

When developing load data inputs for monthly models, the Transmission Provider assumes Entergy's load for each month is the peak value forecasted by SPO for the month. Cogeneration, industrial, and auxiliary load is assumed to be constant for every month. LAGN, SMEPA, ETEC, MDEA, SRMPA, and TVA embedded loads are added to the case based on either a load forecast, or monthly factors of the peak value. DENL's load is scaled for each month based on load forecast. CLECO, LAGN, and DERS loads in the non-peak models for each season are scaled by a factor. The LAFA load is modeled based on the load forecast data for each month.

There are no assumptions with respect to imports in the monthly models except for the Amite South import limit, which is held to a value of approximately 2000 MW.

When developing transaction data inputs for monthly models, the Transmission Provider models all monthly transactions in the appropriate month. Transactions which serve embedded loads, such as LAGN, SMEPA, ETEC, SRMPA, TVA, and MDEA, will match the value of the embedded load for the month. Transactions between CLECO and LAFA are adjusted so that the Bonin generator only generates 1 MW. Transactions which serve DENL match the load in DENL minus 20 MW of their own generation. Transactions which serve DERS match the load in the Control Area. Long term firm contracts are assumed to expire if not renewed one year prior to the end date of the contract. If the date of the monthly model creation is greater than one year before the end of the contract, rollover rights are assumed. If the date of the monthly model creation is within one year of the transaction end date, and a renewal has not been confirmed, the transaction is removed from the models representing the months after the end date of the contract. Transaction data and all other topology in models are updated and posted on OASIS at least once a month. Transaction data is typically updated weekly in models. Thus, the posting dates on OASIS typically change weekly for Study Horizon models.

When developing unit commitment data inputs for monthly models, the Transmission Provider assumes all units that are offline for at least two weeks are out of service for the entire month. However, if two units in the same region are out of service at non-overlapping intervals during the month, only one unit is modeled offline. IPP units that have reservations are placed on-line, but if the facility has multiple units at one station, only the units that are required to meet the level of reservations are set on-line.

The Transmission Provider models Sterlington 7, Patterson 3 & 4, Moses, Lynch, Monroe, Mabelvale, Ritchie, and Lake Catherine 1, 2, & 3 units as out of service at all times if there is already a sufficient amount of generation. The Natchez unit is also modeled offline.

The formula for determining the amount of generation in the base case is only used for IPPs/QF and base loaded units of Entergy. The value is calculated by adding the MW of base case to the MW of transmission reserved to the MW of transmission scheduled. All other data inputs match the respective models.

There are three separate types of units modeled in the monthly loadflow models (Study Horizon) and the unit commitment and dispatch process varies with each type of unit. The three unit types are IPP units, cogeneration units, and Network Resource units (all other units). The IPP units are dispatched to the level of the reservations that are active for that facility. Cogeneration units are dispatched to the level of the load at the facility so that the host load is served entirely by the cogeneration unit. If there are any reservations from the units, those are added to the dispatch level of the units. In the absence of any OASIS reservations, the net injection from the cogeneration unit into the Entergy system is zero MW. The third type of unit is the Network Resource unit, which utilizes some PSS/E software logic in determining dispatch levels. The Network Resource units are dispatched economically using the ECDI function of PSS/E. An ECDI file containing heat rate and fuel cost information is passed to PSS/E and PSS/E sets the level of generation according to the economic information, so that the case achieves a least cost dispatch.

4.4 TRM

Transmission Reliability Margin (TRM) is 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 AFC calculation, and the need for operating flexibility to ensure reliable system operation as system conditions change. The current value of TRM used by Entergy for the purposes of short-term AFC calculations for eighteen months or less is zero.

4.5 Capacity Benefit Margin

Capacity Benefit Margin (CBM) is the amount of firm transmission transfer capability preserved by the transmission provider for Load-Serving Entities (LSEs), whose loads are located on that Transmission Service Provider's system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies. A CBM value of "zero" will be used in calculating AFC values and in reviewing TSRs on the Transmission System, unless Entergy submits a Section 205 filing for a higher value.

4.6 Counter-Flows

RFCalc adjusts the base flow associated with a particular flowgate by removing a percentage of counterflow impacts in the calculation of AFC values. Transmission Provider includes 100% of counterflows created by firm and non-firm reservations when evaluating TSRs in the Operating, Planning and Study Horizons. In the Operating and Planning Horizon, Entergy will include 100% of counterflows created by firm schedules when evaluating TSRs in the Operating Horizon.

The Transmission Provider will review scheduling data and other operational experience on a bi-annual basis to determine the viability of the established counterflow percentages and will provide to the ICT all studies, analysis and research conducted in connection with any proposed change to the counterflow calculation. The ICT will independently review and validate, and shall post on OASIS notice of, any such change prior to effectiveness. For purposes of this Section 4.6, the responsibility of the ICT to "review and validate" shall mean that the ICT will review the inputs and results of any study or analysis provided by the Transmission Provider and shall confirm that the results reasonably reflect the application and product of such studies and analyses.

The formula used for adjusting base flows to take into account counterflows is described below:

$$Adjusted\ Base\ Flow_{\ Flowgate1} = Original\ Base\ Flow_{Flowgate1} + (CF_1 * X')$$

Where,

X = *Positive Flow*

X' = *CounterFlow*

$$Original\ Base\ Flow_{Flowgate1} = X - X'$$

CF_1 = *Counter Flow factor*

circuit elements owned by them and will coordinate the rating of the tie line with the co-owner such that it utilizes the lowest rating between the two systems.

Entergy may have a contractual interest in a joint ownership transmission line whereby the capacity of the line is allocated among the owners. The allocated capacity may be based upon the thermal capacity of the line or other considerations. Entergy will follow this criteria to rate the circuit elements owned by them and will coordinate the rating of the tie line with the co-owner such that it utilizes the lowest rating between the two systems.

There may be instances when a derating of a transmission line element is required due to damaged equipment. The limit may be caused by such factors as broken strands, damaged connectors, failed cooling fans, or other damage reducing the thermal capability.

5. RESPONSE FACTORS

5.1 Introduction to Response Factors

Response Factors measure the impact that each source-to-sink transaction has on a monitored flowgate. Response Factors are calculated on a transaction-specific and flowgate-specific basis. To implement transaction-specific Response Factors, Response Factors are calculated for each generator that is directly interconnected with the Transmission System, including all generators within the Entergy Control Area, regardless of ownership or affiliation. Response Factors are also calculated, on an as needed basis, for other generators that are located in such close electric proximity to the Transmission System that they have a specific impact on the Transmission System. Response Factors are also calculated, on an as needed basis, for Control Areas that are directly interconnected to the Transmission System and are applied to TSRs from generators that do not have specific Response Factors. The RFCalc software utilizes state estimator models to calculate Response Factors in the Operations and Planning Horizons, while the ICT uses off-line planning models developed by the Transmission Provider and commercial power flow applications, such as PSS/E and MUST, to calculate Response Factors in the Study Horizon.

5.2 Updating Response Factors

Response Factors are resynchronized on the same basis as AFC values, *i.e.,* every hour during the Operating Horizon, at least every day (four times a day) for the Planning Horizon, and no less than every month during the Study Horizon. Resynchronizations may occur more frequently if necessary. 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.

5.3 Response Factors for Generators Outside of the Entergy Control Area

For generators outside of the Entergy Control Area, Response Factors will be calculated for the non-Entergy Control Areas. These Response Factors will be used to evaluate service requests from each generator in the non-Entergy Control Area, unless a generator-specific Response Factor has been calculated for a border generating unit.

For transactions that source in a non-Entergy Control Area, Response Factors will be calculated for the non-Entergy Control Area by ramping up available generating facilities in the non-Entergy Control Area on a modified *pro rata* basis, such that all generating facilities reach their rated maximum outputs (P_{max}) simultaneously. For transactions that sink in a non-Entergy Control Area, Response Factors will be

calculated for the non-Entergy Control Area by ramping down available generating facilities in the non-Entergy Control Area on a modified *pro rata* basis, such that all generating facilities reach their rated minimum outputs (P_{min}) simultaneously.

Generator-specific Response Factors will be calculated on an as needed basis for border generating units, *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 unit consistent with the criteria provided below. Response Factor proposals offered by the Transmission Provider will be subject to review and validation by the ICT and shall be accompanied by any studies, analysis and research conducted by the Transmission Provider. For purposes of this Section 5.3, the review and validation responsibility of the ICT shall mean that the ICT will review 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 border generating facilities, two criteria are applied. First, the generator will have to be in close electric proximity to the Transmission System such that the generator 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 busses of the Transmission System. Second, there will have to be a significant discrepancy between the Response Factors for all other generators in the non-Entergy Control Area and the Response Factors for the specific border generating facility in question.

5.4 Response Factor Cutoff

In order to evaluate whether a particular service request will use all, some, or none of the AFC for a particular flowgate, RFCalc, State Estimator models and off-line planning models are used to calculate Response Factors. The Response Factors generated by Transmission Provider's AFC process measures the power flow impact that each source-to-sink transaction has on each flowgate for the post-contingency configuration of the system. If the power flow impact of particular TSR has an insignificant impact on a flowgate, that flowgate is not monitored when evaluating the request. To determine whether a flowgate is significantly impacted by a particular TSR, a Response Factor threshold of 3% is applied. Only flowgates with Response Factors at or above the 3% threshold will be considered when determining whether to approve the TSR. Thus, if the Response Factor for a particular flowgate is less than 3%, then the AFC process will not consider the flowgate when determining whether service should be granted. If the Response Factor for a particular flowgate is equal to or greater than 3%, and the AFC value indicates that the flowgate is one of the Most Limiting Flowgates for that transaction, then the flowgate will be evaluated to determine whether the particular TSR should be granted.

5.5 Modified Response Factor Cutoff

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, then the Transmission Provider will reevaluate this threshold with notice to ICT. All changes to the Response Factor threshold will be filed with FERC.

6. WEBTRANS AND EVALUATING TSRs

webTrans automatically processes requests for Transmission Service using a flow-based approach to determine AFC for monitored flowgates webTrans is integrated with Transmission Provider's EMS and State Estimator, and uses power flow models developed from both RFCalc and the Transmission Provider's

off-line planning models used in the Study Horizon. WebTrans will be used as the link between the AFC calculation process and the reserving and scheduling of Transmission Service under the Tariff. As individual TSRs are received, webTrans applies the applicable Response Factors to determine the impact new requests will have on the relevant flowgates and approves or denies the request based on that impact. The ICT determines the final status of each TSR based on the information provided by webTrans.

6.1 Flowgates Used to Evaluate Requests

Although the AFC process will monitor approximately 300-500 flowgates, webTrans will use a more limited set of flowgates, as determined by RFCalc, to evaluate individual service requests. When evaluating individual service requests, webTrans will only consider those flowgates that are: (1) "significantly impacted" by the request at issue, *i.e.*, those flowgates with a Response Factor equal to or greater than 3%; and (2) the Most Limiting Flowgates. Thus, to determine which flowgates should be evaluated for a particular source-sink combination, RFCalc will: (1) ignore all flowgates with a Response Factor of less than the Response Factor cutoff of 3%; and (2) will select from the remaining flowgates the fifteen flowgates with the lowest effective ATC values. The list of flowgates used to evaluate a particular service request will be redetermined during each resynchronization.

6.2 Approving and Denying Service

As individual transmission requests are submitted over OASIS, webTrans will apply the appropriate Response Factors to each request in order to evaluate the impact of the request on the most-limiting, significantly-affected flowgates. The amount of capacity requested will be multiplied by the Response Factor for a particular flowgate. The product of the requested capacity and the Response Factor will represent the additional loading impact of the new service on the flowgate and will be subtracted from the AFC value for that flowgate. As discussed above, this process will be applied to the Most Limiting Flowgates. If the AFC for all the flowgates remains positive or equal to zero after being reduced to account for the new transaction, the request will be approved. If the AFC value on any of the flowgates becomes negative or otherwise exceeds the rated capability of the facilities in question, then the request will be denied, unless service of a lower priority may be preempted to bring the AFC value back to zero or positive. The preempting of service with a lower priority will be conducted pursuant to governing FERC policies.

6.3 Pmax and Interface Limits

Regardless of the applicable AFC values, accepted TSRs from a particular generator shall not exceed the maximum output of that generator. Additionally, the amount of Transmission Service available across a Control Area interface can not exceed the total interface rating between the two Control Areas. Consistent with NERC Operating Policies 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 neighboring Control Area. Both the Pmax and Interface limits will be honored in the AFC process through a proxy flowgate. To the extent that the service request exceeds either the Pmax or interface limit, the proxy flowgate will appear as one of the Most Limiting Flowgates for that particular transaction.

6.4 Redirect Requests

Requests to redirect all or a portion of a firm transmission reservation from an alternate point-of-receipt (source) or to an alternative point-of-delivery (sink) on a firm basis is evaluated in the following manner. First, the Most Limiting Flowgates by each request (the original request and the redirect request) are identified. Next, the AFC values are used to separate the flowgates into two groups. Group 1 includes flowgates that have an AFC value that is less than or equal to zero *and* are common to both requests.

Group 2 includes the remaining flowgates identified in the list of the Most Limiting Flowgates by the redirect request. Next, the current impact of the original request is removed from the AFC value of the flowgates in both groups (the AFC value is increased by the capacity of the request multiplied by the response factor of each flowgate). Note that the current impact of the original request may differ from the impact originally evaluated because power flows may have changed since the original request was accepted. The impact of the redirect request is then calculated and evaluated as follows:

- If the impact of the redirect request causes the AFC of any flowgate in Group 1 to decrease, the redirect request will be denied.
- If the AFC value of any flowgate in group 2 is less than or equal to zero, before applying the impact of the redirect request, the redirect will be denied.
- If the impact of the redirect request causes the AFC of any flowgate in Group 2 to drop below zero, a counteroffer may be made for a MW amount equal to the MWs that would cause the AFC of the most limited flowgate (*i.e.*, the flowgate with the largest negative AFC value) in Group 2 to equal zero.
- In all other circumstances, the redirect request will be accepted.

7. SCENARIO ANALYZER

7.1 Introduction

The Scenario Analyzer allows transmission customers to evaluate transfer capability without actually submitting an OASIS request. The Scenario Analyzer provides customers with an immediate response by performing the same flow-based review that is used by webTrans to determine whether actual service requests can be accommodated. The Scenario Analyzer notifies the customer whether or not the evaluation passes the AFC check and provides an evaluation identification number (SA###). The Customer can then query the request evaluation within OASIS and is provided the following information associated with the request; the timepoints of the request, the amount of flowgate capacity available, the response factor, and the transfer capability that is available. However, because the Scenario Analyzer does not submit an actual service request over OASIS, it does not decrement flowgate AFC. The Scenario Analyzer uses the same flow-based engine as webTrans.

There are two evaluation options under the Scenario Analyzer related to Queue position. The 'Last' Queue Position provides customers with AFC information that reflects all queued requests with a status of Confirmed, Accepted, Counteroffer, and Study taken into account. The 'First' Queue Position option provides customers with AFC results (i.e. decrements to the AFC) based only on confirmed reservations. There are also two report format options under the Scenario Analyzer. The 'Brief' Report Format will create a report with the limiting flowgate information. The 'Full' Report Format will create a report containing the flowgate information for all of the impacted flowgates (up to the top fifteen).

7.2 How to use the Scenario Analyzer

The Scenario Analyzer is an OASIS module that allows Transmission Customers to evaluate availability on certain designated constrained facilities for the Source and Sink pair, but does not decrement ATC since no request has been submitted. The Scenario Analyzer and the Request Evaluation module can be found on the Revervations tab of the webOASIS by checking the AFC/Flowgate Reports box. The Information that is entered on the Scenario Analyzer Entry Form is:

Provider
Source name
Sink name
POR name
POD name
Transmission Service
Start time (for each time segment)
Stop time (for each time segment)
Capacity value (for each time segment)

After entering information in the Scenario Analyzer form on OASIS, 'Enter Scenario' is selected to enter into the Scenario Entry Submission window. From there the user can choose the 'Queue Position' to be used and the 'Report Format' to be used. The user would then select the 'Check AFC' button at the top of the Submission window to view the afc Pass/Fail and the evaluation id. The user can return to the Request Evaluation module and enter the evaluation id from the Scenario Analyzer to view the report that was created as a result of the analysis. If the user wishes to submit the request on OASIS for an actual evaluation, the user enters the information using the 'new TSR' Reservation Entry Form on OASIS.

User certification is required for access to the Scenario Analyzer.

9.2 Input files

From the monthly models, the Transmission Provider will also provide a subsystem file that defines all sources and sinks used for calculating AFC values, and such data will be posted by the ICT. User certification is required for access to this data.

The Transmission Provider also posts the following informational files related to AFC:

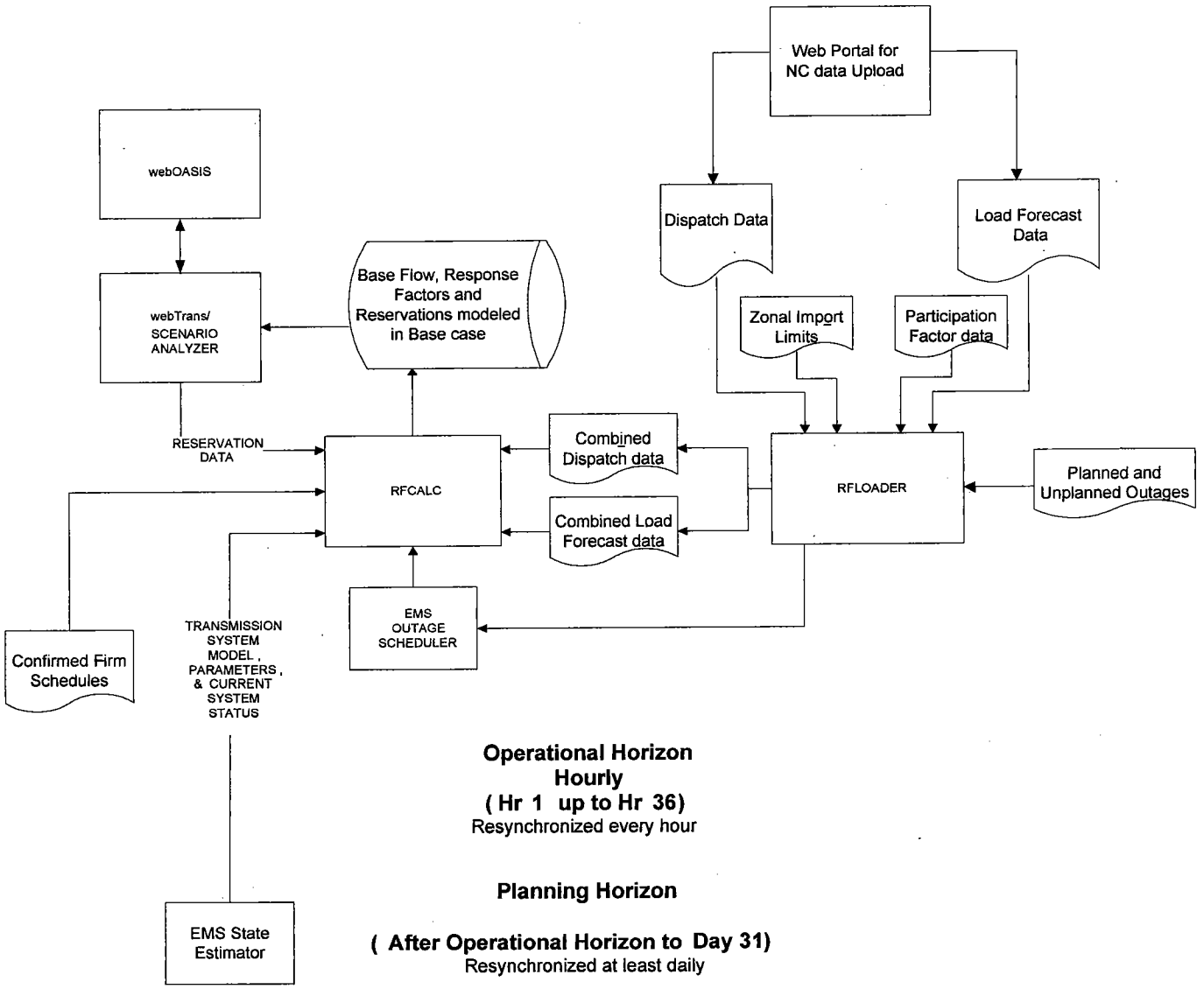
- A file containing response factors of the Most Limiting Flowgates per path and base flow for each flowgate for each time point. The file is refreshed with each resynchronization pursuant to section 5.2.
- A file containing the Effective ATC value of each path for each time point.
- A file containing the list of generators used as the Entergy Control Area sink for response factor calculation. The file also lists the participation factors for these generators.
- A subsystem files defining all sources and sinks used to calculate AFC.
- A list of flowgates with TTC and a revision log for all flowgate changes that are provided by the Transmission Provider and reviewed and posted by the ICT.

9.3 Transmission Outages

The Transmission Provider will post on its OASIS a list of all scheduled outages on transmission facilities on the Transmission System. The posting will include a daily posting for the Day 1 – 31 timeframe and a monthly posting for the Month 2 – 13 time frame.

There are two types of outage postings on the Entergy OASIS:

- The first type of outage posting is an *informational posting* of transmission outages, including outages outside of the Entergy Control Area that is provided to customers so that they may be aware of planned outages on the Transmission System. This list is entirely unrelated to the AFC process. It was developed for informational purposes and is not used for modeling purposes. This list is taken directly from Entergy's outage scheduling software, known as "TAORS."
- The second type of outage posting is the list of outages contained in the hourly AFC power flow models posted on OASIS. RFCalc imports these outages from TAORS and COS, but only uses those outages that are relevant for the particular time period being modeled. This ensures that RFCalc has updated outage information each time that RFCalc resyncs or calculates new AFC values. This outage list was not developed to provide customers with information regarding all planned outages during a particular month, and instead is used to model the system at a particular point in time.



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Vice President, Transmission

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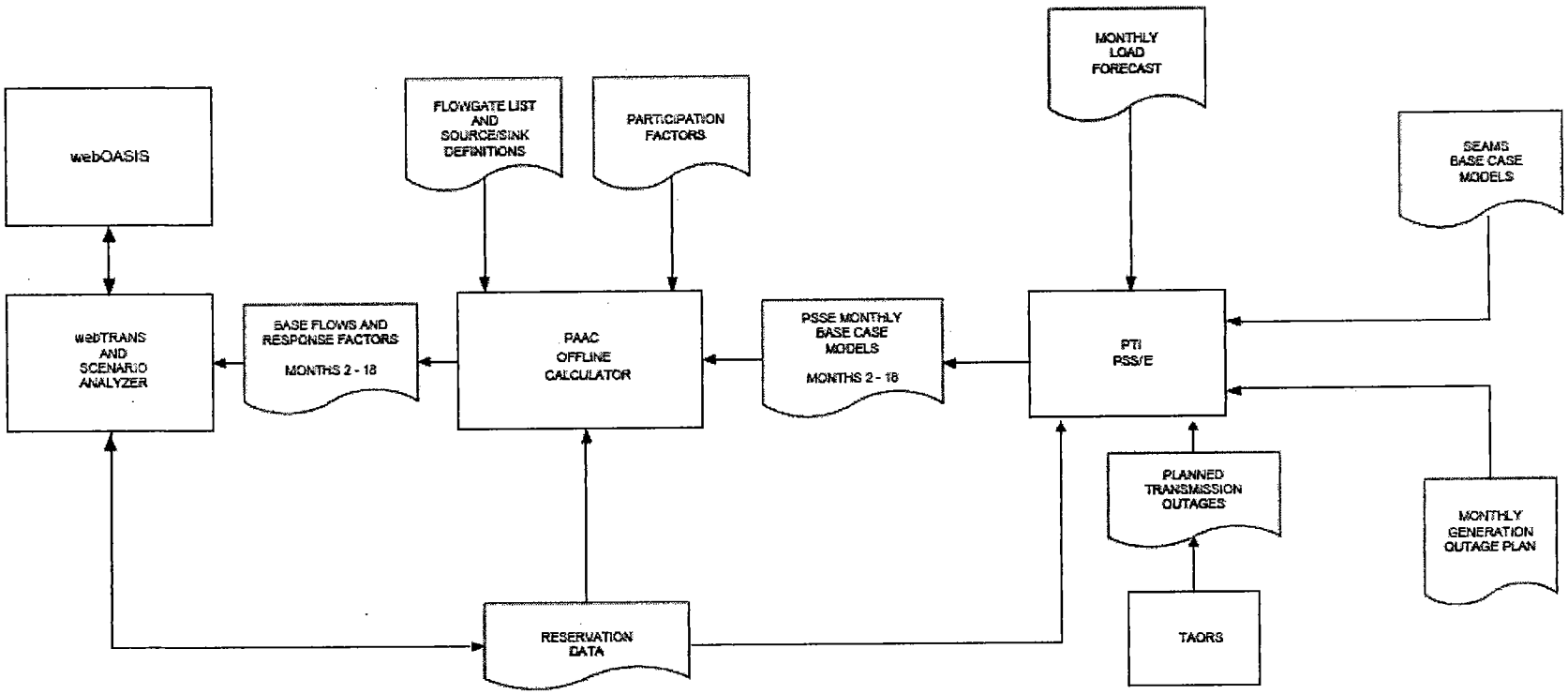

Study Horizon
Monthly
(Month 2 to Month 18)
Resynchronized at least once a month

Reserved For Future Use

Attachment 3

Redline Tariff Sheets Revising the Original June 1, 2009
Effective Date to September 28, 2009

$$\text{Firm AFC} = \text{Rating} - \text{TRM} - \text{ETC} - \text{CBM} - \text{Adjusted Base Flow}_{\text{FIRM}}$$

Where:

Firm AFC	=	the amount of firm transfer capability over that flowgate that remains available for additional transmission service reservations above and beyond existing uses of the transmission system
Rating	=	the capability of a flowgate in a time period
TRM	=	Transmission Reliability Margin
CBM	=	Capacity Benefit Margin
ETC	=	Existing Transmission Commitments (reservations) not included in the base flow calculation which are handled algebraically by webTrans
Adjusted Base Flow (Firm)	=	the expected firm power flow through a flowgate in a time period with all pertinent flows included in the power flow base case and adjusted for counterflow impacts

3.5 Resynchronization of AFC Values

AFC values will be resynchronized: (i) every hour during the Operating Horizon; (ii) at least every day for the Planning Horizon; (iii) and no less than every month during the Study Horizon. Resynchronizations may occur more frequently if necessary. 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. The ICT may also direct resynchronizations of AFC values pursuant to Section 8.3 of the Transmission Service Protocol.

For the Operating and Planning Horizons, RFCalc incorporates all the data inputs during the resynchronization process to develop power flow models that define each time point included in the Operating and Planning Horizons. During the resynchronization process, prior commitment and confirmed TSRs are modeled into the base case as discrete injections and withdrawals, and new base flows are determined from these models. Using the new base flow amounts and models, RFCalc recalculates the base flow value on each monitored flowgate in the Master List. For the Study Horizon, this process is performed by an off-line AFC calculator. When a new TSR is accepted between resynchronizations, the "Most Limiting Flowgates"[1] that are significantly impacted by that particular request will be updated in webTrans by algebraically decrementing the appropriate AFC values. At the time of the next resynchronization, the TSRs that have been confirmed since the last resynchronization will then be modeled as physical injections and withdrawals in the same manner of all other previously granted service requests.

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[1] Although the AFC process will monitor approximately 300-500 flowgates, webTrans will use a more limited set of flowgates, as determined by RFCalc or PAAC, to evaluate individual TSRs. The Most Limiting Flowgates are up to fifteen flowgates with the lowest effective ATC values for the TSR at issue that also have a response factor of at least 3%.

4. INPUTS TO BASE CASE MODELS AND THE AFC FORMULAS

4.1 Base Flow

The Base Flow calculation for Firm AFC values takes into account all existing firm Transmission Service, including capacity reserved for: (1) Firm Point-to-Point Transmission Service; (2) service to Network and Native Load customers; and (3) other firm Transmission Service, such as service under pre-Order No. 888 grandfathered agreements. The Base Flow calculation will also take into account any relevant counterflows.

Entergy models the output of QF/Cogeneration units to a level sufficient to meet any host load requirements. To the extent there is a firm or non-firm reservation from a QF, it will be handled the same as a firm or non-firm reservation from any other source on the Transmission System.

Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying the data inputs and information necessary for creating the hourly, daily and monthly base case models. RFCalc utilizes this data to create hourly and daily models, while the Transmission Provider creates monthly models for use with off-line power flow applications, such as PSSE/MUST. 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 shall obligate 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 (i) reasonably reflect the application and product of these modeling processes and (ii) are reasonably consistent with the current topology of the Transmission System.

To account for all existing firm uses of the Transmission System, assumptions must be made for the load forecast, unit commitment, scheduled outages, counterflows, and net interchange. The actual dispatch on the Transmission System may differ from the expected dispatch modeled in the AFC process due to uncertainties involving unplanned unit outages and unplanned derates, Qualified Facility puts, load forecasting, and short-term purchases by Network Customers.

4.2 Load Forecast

For the Operating Horizon and the Planning Horizon, Entergy's System Planning Organization (SPO) and all other AFC process participants will be provided with a secure Web-based portal to upload the load forecast data. Pursuant to Section 4.2.1, SPO and all Network Customers will be required to submit load forecast data for their respective loads through this portal. If a Network Customer does not supply load forecast data for a particular time period, historical data will be used to create a load forecast for purposes of calculating AFC values. SPO supplies a load forecast for the load served by Entergy. All other Network Customers supply a load forecast for their own load. To the extent that RFcalc must calculate a load for load areas not included in the SPO supplied load forecast, this is accomplished by assigning these non-forecasted areas a factor, and then applying the scaling factor to calculate the area load based on an assumed forecast area.

For the Study Horizon, the load forecast is based on inputs received from SPO for the Entergy Control Area. For Network Customers and Control Areas that are embedded in footprint of the Transmission System, the Transmission Provider uses load forecast data to the extent it is supplied by the host entity. If no such data is available, the Transmission Provider defines the load level for these Control Areas/Network Customers based on a scaling factor using the peak load forecast as reference. External Control Area

will first dispatch the AGC generators in the Control Area where the customer load resides. These generators can be dispatched up to their MW max limit. If after this step the load has still not been met, RFcalc will change the NI of the Control Area where the customer load resides to meet the load. If changing the NI also does not meet the load the Powerflow for that timepoint may diverge. For customers who are full or partial requirement customers of SPO, their unbalanced load will be balanced by using SPO resources.

4.2.2.1 Treatment of Excess Reservations for Network/Native Load

Under the procedures described above in Section 4.2.1.1, there will be instances where reservations that have been confirmed are not modeled or "dispatched" in the base case. These reservations are referred to as "Excess Reservations." To prevent overselling, RFcalc will algebraically decrement the impact of Excess Reservations on the two proxy flowgates (PMAX and TIECAP). For those reservations that are partially dispatched in the base case model (*i.e.,* not at full output), the un-modeled impact of those reservations will be decremented against these two flowgates also. The impact of Excess Reservations would *not* be decremented against the other flowgates included in the list of the Most Limiting Flowgates.

4.2.2.2 Modeling Point-to-Point Service

RFcalc will model most firm point-to-point reservations (imports and exports) at their respective reservation levels. There are some customers that serve load using grandfathered point-to-point reservations. For these specific point-to-point reservations that sink to Network Load, RFcalc will utilize the process described in Section 4.2.2.1.

4.2.2.3 Modeling Unconfirmed Reservations

WebTrans will algebraically decrement the top 15 flowagtes for Reservations (both Point-to-Point and new Network Resources) that are in accepted mode and counteroffered. They will not be modeled in base flows after resynchronization. Reservations that are in accepted or counter offer mode will be algebraically decremented against the top fifteen flowgates. The decrementation will be on the proxy flowgates (PMAX and TIECAP) and the remaining flowgates until such time as they are withdrawn, rejected or confirmed. All reservations that are in study mode will be algebraically decremented against the top fifteen flowgates. Once an accepted request is confirmed, it will only be modeled if included in the customer's dispatch files or until such time as RFcalc requires modeling of those reservations to meet the customer's load. When an accepted request is confirmed in between resynchronizations, it will continue to be algebraically decremented until such time there is an RFCalc and webTrans resync. Confirmed reservations for Network Resources that are not modeled by RFcalc will be treated as Excess Reservations and will be decremented against the proxy flowgates (PMAX and TIECAP) but not the remaining top-fifteen flowgates.

4.2.3 Unit Commitment and Dispatch – Planning Horizon and Study Horizon

Unit commitment and dispatch is based on information provided by SPO and other Network Customers. For the Entergy Operating Companies serving Entergy native load, the Network Resources of the Entergy Operating Companies are set to meet Entergy's native load based in part on information provided by the entity responsible for serving that load, *i.e.,* Entergy's SPO group. This information varies depending on the time horizon in question. Additional information from other sources that is used to determine unit commitment includes updated data regarding Network Resources, purchases and sale transactions, and

Provider will provide the ICT with an updated Master List and the ICT will post such updated Master List to the Entergy OASIS.

As indicated in 2.2.2.4, the 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 on the Transmission System.

3. CALCULATION OF AFC VALUES

3.1 Base Case Models

The AFC process generates a base case model that simulates anticipated system conditions. The base system conditions include projected load, generation dispatch, system configuration/outages, and base flow transactions. RFCalc produces power flow models representing the two distinct time periods: (1) hourly models in the Operating and Planning Horizons for Hour 1 to Hour 168; (2) daily models in the Planning Horizon for Day 8 to Day 31. An off-line planning model process using PSS/E produces monthly power flow models for Month 2 to Month 18 of the Study Horizon. 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 calculate AFC values, and serves as the interface to web OASIS.

The power flow model used to determine constrained facility base flow and Response Factors for the Operating and Planning Horizons is based on the Transmission Provider's EMS and a state estimator snapshot of the real-time system. The power flow model for the Study Horizon uses off-line power flow studies, such as PSS/E and MUST. During the resynchronization process, the base case models are modified to reflect additional transactions as discrete injections and withdrawals. Using these models as the starting point, RFCalc applies the formulas described below to compute the AFC value on each monitored flowgate. Under Sections 6 and 8 of the Transmission Service Protocol, the Transmission Provider is responsible for supplying data inputs and information necessary for creating hourly, daily and monthly base case models. The ICT will be 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" shall mean that the ICT will take reasonable steps to ensure that the data inputs are properly loaded and reflected in either RFCalc or the Transmission Provider's modeling processes and that the resultant AFC values (i) reasonably reflect the application and product of RFCalc or the Transmission Provider's modeling processes and (ii) are reasonably consistent with the current topology of the Transmission System.

3.2 AFC Formula for Non-firm Transmission Service Requests

WebTrans computes Non-Firm AFC for the Operating, Planning and Study Horizons. Non-Firm AFC is the capacity that remains on a constrained facility after subtracting power flows for service to Native Load Customers, Network Customers, Firm Point-to-Point Customers, Non-Firm Point-to-Point Customers and other firm and non-firm transactions. Non-Firm AFC is computed in the Planning Horizon using the same power flow solution as used for Firm AFC, with the exception that the effects of non-firm reservations will not be removed from base flows by webTrans. After the power flow model has been solved for a time segment, RFcalc and PAAC take the base flows of constrained facilities and adjust them to remove a percentage of the counter-flows from both firm and non-firm reservations. After

adjusting base flows for the effects of counterflow, webTrans uses the following formula to determine Non-Firm AFC:

$$\text{Non-Firm AFC} = \text{Rating} - \text{TRM} - \text{ETC} - \text{Adjusted Base Flow}_{\text{NON-FIRM}}$$

Where:

Non-Firm AFC	=	the amount of non-firm transfer capability over that flowgate that remains available for additional transmission service reservations above and beyond existing uses of the transmission system
Rating	=	the capability of a flowgate in a time period
TRM	=	Transmission Reliability Margin
ETC	=	Existing Transmission Commitments (reservations) not included in the base flow calculation which are handled algebraically by webTrans
Adjusted Base Flow (Non-Firm)	=	the expected firm and non-firm power flow through a Flowgate in a time period with all pertinent flows included in the power flow base case and adjusted for counterflow impacts

3.3 AFC Calculation Horizons

AFC values are calculated for three different time periods: (1) the Operating Horizon, which includes all hours of the current day (Day 1) and, after 12:00 p.m., all hours of the next day (Day 2); (2) the Planning Horizon, which extends from the end of the Operating Horizon through the thirty-first day (Day 31); and (3) the Study Horizon, which extends from the end of the Planning Horizon through the eighteenth month (Month 18).

3.3.1 Operating Horizon

In the Operating Horizon, the Non-Firm AFC values for each flowgate are calculated by webTrans, which uses Response Factors and base flow calculated by RFCalc. The topology for the base case model for the first three hours in the Operating Horizon is generated by Entergy's State Estimator. The relevant unit commitment and load forecast inputs are incorporated into the model. Beyond the first three hours, RFCalc creates the base case model using Entergy's EMS as modified to take into account outages, unit commitment, load forecasts and other system conditions. Using the power flow models and Non-Firm AFC formula discussed above, webTrans calculates Non-Firm AFC values for all hours of Day 1 and, after 12:00 p.m., all hours of Day 2. This calculation is performed for Non-firm AFC values only. Firm AFC values are not calculated for the Operating Horizon because requests for firm Transmission Service must be submitted by 12:00 p.m. on the day prior to commencement of such service. Because firm service cannot be requested during the Operating Horizon, only Non-Firm AFCs are calculated for that horizon. All Non-Firm AFC values and Response Factors for the Operating Horizon are calculated and updated at least on an hourly basis to reflect changing system conditions, including additional confirmed Transmission Service reservations and schedules. 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.

3.3.2 Planning Horizon

In the Planning Horizon, Firm and Non-Firm AFC values for each flowgate are calculated by webTrans, which uses Response Factors and base flow calculated by RFCalc. The base case model is generated by RFCalc using data from Entergy's EMS as modified to take into account outages, unit commitment, load forecasts and other system conditions. WebTrans calculates hourly Firm and Non-Firm AFC values for each flowgate for Day 2 through Day 7 and daily Firm and Non-Firm AFC values for Day 3 to Day 31. WebTrans updates both Firm AFC and Non-Firm AFC values for the Planning Horizon at least every day to reflect changing system conditions, including additional confirmed Transmission Service reservations. In between such updates, Non-Firm and Firm AFC values are decremented algebraically to reflect subsequent Transmission Service reservations.

3.3.3 Study Horizon

In the Study Horizon, the ICT, using data inputs and power flow models developed by the Transmission Provider and reviewed and validated by the ICT, calculates monthly Response Factors and AFC values by conducting off-line power flow studies, such as PSS/E and MUST. The off-line planning models are developed on a rolling eighteen-month basis and are representative of monthly peak-hour conditions. webTrans calculates both Firm and Non-Firm AFC values for the Study Horizon and updates those value at least on a monthly basis to reflect changing system conditions and additional confirmed transmission reservations. In between such updates, Non-Firm and Firm AFC values are decremented algebraically to reflect subsequent Transmission Service reservations.

3.4 AFC Formula for Firm Transmission Service Requests

WebTrans computes Firm AFC for the Planning and Study Horizons. Firm AFC is not available for the Operating Horizon, and therefore, is not computed for this time frame. Firm AFC is the capacity that remains on the constrained facility after subtracting power flows for service to Native Load Customers, Network Customers, Firm Point-to-Point Customers and other firm transactions.

For the Planning Horizon, Firm AFC will be determined at least once a day during the daily resynchronization by solving a power flow model that includes both firm and non-firm transmission reservation and is based on data from the Transmission Provider's Energy Management System (EMS). For the Study Horizon, Firm AFC will be determined on a monthly basis by solving off-line power flow models that include firm transmission reservations. In the Study Horizon, the impact of Non-Firm reservations will be algebraically decremented by webTrans and not included in the base flow. The flows on constrained facilities should represent base flows that serve Native Load Customers, Network Customers, Firm Point-to-Point Customers and other firm transactions.

After the power flow model has been solved for a time segment for the Planning Horizon, webTrans takes the base flows of constrained facilities and adjusts them to remove the effects of non-firm reservations from the most limiting facilities that were evaluated in the power flow model. RFcalc and PAAC also take the base flows of constrained facilities and adjusts them to remove a percentage of the counter-flows from firm reservations (subject to Section 4.6) for the Planning Horizon and the Study Horizon. WebTrans uses the following formula to determine Firm AFC:

shape of load curve. Load forecasts for external areas other than those listed above are derived by using a scaling factor.

Subsystem files for hourly models only include units that are online and have an assigned participation factor. Therefore, these units are the only participants in the transfer because RFCalc specifically uses units that are online in the calculation of response factors.

Transmission outages, both planned and unplanned, for facilities with voltage levels 115 kV or more, are included in AFC operating and planning models. Outages of bus breakers and power transformers are manually inserted into the models.

4.3.2 Study Horizon

Pursuant to Section 6.2 of the Transmission Service Protocol, the Transmission Provider provides to the ICT and other modeling group participants such data and information as may be necessary to prepare and update the monthly models used in the Study Horizon. The Transmission Provider creates the monthly models used in the Study subject to the ICT's review and validation pursuant to Sections 6.1 and 6.2 of the Transmission Service Protocol. The ICT reviews and validates the data inputs provided by the Transmission Provider to ensure that the data inputs and resulting models are consistent with the Transmission Provider's criteria.

When developing generation dispatch data inputs for monthly models, the Transmission Provider assumes IPP units in the Study Horizon models are dispatched to the level of the reservations that are active for that facility. The Transmission Provider also assumes QF/cogeneration units are dispatched to the level of the load at the facility. If there are any reservations from the QF/cogeneration units, such reservations are added to the units dispatch level. In the absence of any OASIS reservations, the net injection from the QF is zero MWs. Network Resource units are dispatched economically using the ECDI function of PSS/E to create a least-cost dispatch for each case. When necessary to enforce zonal import limits, the case is dispatched by zones rather than by area. When this occurs, an IDEV file that recreates the dispatch is saved.

When developing topology data inputs for monthly models, the Transmission Provider assumes all 500kV lines that are scheduled out of service for one day are modeled out of service for the entire month, and all 115kV – 230kV lines that are scheduled out of service for at least five days are modeled out of service for the entire month. The Transmission Provider schedules multiple lines as out of service when the outages overlap or when non-overlapping outages have no impact on one another. The Transmission Provider also models critical lines as out of service even if the lines are not out of service for the required time frame but should be modeled out of service to better reflect the system conditions for the month. The Transmission Provider updates line outages in models at least once a month and the ICT posts the updates on OASIS. OASIS Study Horizon model postings are updated once a week with new creation times, but newly retrieved line outages information is not included in this update.

When developing load data inputs for monthly models, the Transmission Provider assumes Entergy's load for each month is the peak value forecasted by SPO for the month. Cogeneration, industrial, and auxiliary load is assumed to be constant for every month. LAGN, SMEPA, ETEC, MDEA, SRMPA, and TVA embedded loads are added to the case based on either a load forecast, or monthly factors of the peak value. DENL's load is scaled for each month based on load forecast. CLECO, LAGN, and DERS loads in the non-peak models for each season are scaled by a factor. The LAFA load is modeled based on the load forecast data for each month.

There are no assumptions with respect to imports in the monthly models except for the Amite South import limit, which is held to a value of approximately 2000 MW.

When developing transaction data inputs for monthly models, the Transmission Provider models all monthly transactions in the appropriate month. Transactions which serve embedded loads, such as LAGN, SMEPA, ETEC, SRMPA, TVA, and MDEA, will match the value of the embedded load for the month. Transactions between CLECO and LAFA are adjusted so that the Bonin generator only generates 1 MW. Transactions which serve DENL match the load in DENL minus 20 MW of their own generation. Transactions which serve DERS match the load in the Control Area. Long term firm contracts are assumed to expire if not renewed one year prior to the end date of the contract. If the date of the monthly model creation is greater than one year before the end of the contract, rollover rights are assumed. If the date of the monthly model creation is within one year of the transaction end date, and a renewal has not been confirmed, the transaction is removed from the models representing the months after the end date of the contract. Transaction data and all other topology in models are updated and posted on OASIS at least once a month. Transaction data is typically updated weekly in models. Thus, the posting dates on OASIS typically change weekly for Study Horizon models.

When developing unit commitment data inputs for monthly models, the Transmission Provider assumes all units that are offline for at least two weeks are out of service for the entire month. However, if two units in the same region are out of service at non-overlapping intervals during the month, only one unit is modeled offline. IPP units that have reservations are placed on-line, but if the facility has multiple units at one station, only the units that are required to meet the level of reservations are set on-line.

The Transmission Provider models Sterlington 7, Patterson 3 & 4, Moses, Lynch, Monroe, Mabelvale, Ritchie, and Lake Catherine 1, 2, & 3 units as out of service at all times if there is already a sufficient amount of generation. The Natchez unit is also modeled offline.

The formula for determining the amount of generation in the base case is only used for IPPs/QF and base loaded units of Entergy. The value is calculated by adding the MW of base case to the MW of transmission reserved to the MW of transmission scheduled. All other data inputs match the respective models.

There are three separate types of units modeled in the monthly loadflow models (Study Horizon) and the unit commitment and dispatch process varies with each type of unit. The three unit types are IPP units, cogeneration units, and Network Resource units (all other units). The IPP units are dispatched to the level of the reservations that are active for that facility. Cogeneration units are dispatched to the level of the load at the facility so that the host load is served entirely by the cogeneration unit. If there are any reservations from the units, those are added to the dispatch level of the units. In the absence of any OASIS reservations, the net injection from the cogeneration unit into the Entergy system is zero MW. The third type of unit is the Network Resource unit, which utilizes some PSS/E software logic in determining dispatch levels. The Network Resource units are dispatched economically using the ECDI function of PSS/E. An ECDI file containing heat rate and fuel cost information is passed to PSS/E and PSS/E sets the level of generation according to the economic information, so that the case achieves a least cost dispatch.

4.4 TRM

Transmission Reliability Margin (TRM) is 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 AFC calculation, and the need for operating flexibility to ensure reliable system operation as system conditions change. The current value of TRM used by Entergy for the purposes of short-term AFC calculations for eighteen months or less is zero.

4.5 Capacity Benefit Margin

Capacity Benefit Margin (CBM) is the amount of firm transmission transfer capability preserved by the transmission provider for Load-Serving Entities (LSEs), whose loads are located on that Transmission Service Provider's system, to enable access by the LSEs to generation from interconnected systems to meet generation reliability requirements. Preservation of CBM for an LSE allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements. The transmission transfer capability preserved as CBM is intended to be used by the LSE only in times of emergency generation deficiencies. A CBM value of "zero" will be used in calculating AFC values and in reviewing TSRs on the Transmission System, unless Entergy submits a Section 205 filing for a higher value.

4.6 Counter-Flows

RFCalc adjusts the base flow associated with a particular flowgate by removing a percentage of counterflow impacts in the calculation of AFC values. Transmission Provider includes 100% of counterflows created by firm and non-firm reservations when evaluating TSRs in the Operating, Planning and Study Horizons. In the Operating and Planning Horizon, Entergy will include 100% of counterflows created by firm schedules when evaluating TSRs in the Operating Horizon.

The Transmission Provider will review scheduling data and other operational experience on a bi-annual basis to determine the viability of the established counterflow percentages and will provide to the ICT all studies, analysis and research conducted in connection with any proposed change to the counterflow calculation. The ICT will independently review and validate, and shall post on OASIS notice of, any such change prior to effectiveness. For purposes of this Section 4.6, the responsibility of the ICT to "review and validate" shall mean that the ICT will review the inputs and results of any study or analysis provided by the Transmission Provider and shall confirm that the results reasonably reflect the application and product of such studies and analyses.

The formula used for adjusting base flows to take into account counterflows is described below:

$$Adjusted\ Base\ Flow_{\ Flowgate1} = Original\ Base\ Flow_{Flowgate1} + (CF_1 * X')$$

Where,

X = Positive Flow

X' = CounterFlow

$$Original\ Base\ Flow_{Flowgate1} = X - X'$$

CF_1 = Counter Flow factor

circuit elements owned by them and will coordinate the rating of the tie line with the co-owner such that it utilizes the lowest rating between the two systems.

Entergy may have a contractual interest in a joint ownership transmission line whereby the capacity of the line is allocated among the owners. The allocated capacity may be based upon the thermal capacity of the line or other considerations. Entergy will follow this criteria to rate the circuit elements owned by them and will coordinate the rating of the tie line with the co-owner such that it utilizes the lowest rating between the two systems.

There may be instances when a derating of a transmission line element is required due to damaged equipment. The limit may be caused by such factors as broken strands, damaged connectors, failed cooling fans, or other damage reducing the thermal capability.

5. RESPONSE FACTORS

5.1 Introduction to Response Factors

Response Factors measure the impact that each source-to-sink transaction has on a monitored flowgate. Response Factors are calculated on a transaction-specific and flowgate-specific basis. To implement transaction-specific Response Factors, Response Factors are calculated for each generator that is directly interconnected with the Transmission System, including all generators within the Entergy Control Area, regardless of ownership or affiliation. Response Factors are also calculated, on an as needed basis, for other generators that are located in such close electric proximity to the Transmission System that they have a specific impact on the Transmission System. Response Factors are also calculated, on an as needed basis, for Control Areas that are directly interconnected to the Transmission System and are applied to TSRs from generators that do not have specific Response Factors. The RFCalc software utilizes state estimator models to calculate Response Factors in the Operations and Planning Horizons, while the ICT uses off-line planning models developed by the Transmission Provider and commercial power flow applications, such as PSS/E and MUST, to calculate Response Factors in the Study Horizon.

5.2 Updating Response Factors

Response Factors are resynchronized on the same basis as AFC values, *i.e.,* every hour during the Operating Horizon, at least every day (four times a day) for the Planning Horizon, and no less than every month during the Study Horizon. Resynchronizations may occur more frequently if necessary. 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.

5.3 Response Factors for Generators Outside of the Entergy Control Area

For generators outside of the Entergy Control Area, Response Factors will be calculated for the non-Entergy Control Areas. These Response Factors will be used to evaluate service requests from each generator in the non-Entergy Control Area, unless a generator-specific Response Factor has been calculated for a border generating unit.

For transactions that source in a non-Entergy Control Area, Response Factors will be calculated for the non-Entergy Control Area by ramping up available generating facilities in the non-Entergy Control Area on a modified *pro rata* basis, such that all generating facilities reach their rated maximum outputs (P_{max}) simultaneously. For transactions that sink in a non-Entergy Control Area, Response Factors will be

calculated for the non-Entergy Control Area by ramping down available generating facilities in the non-Entergy Control Area on a modified *pro rata* basis, such that all generating facilities reach their rated minimum outputs (P_{min}) simultaneously.

Generator-specific Response Factors will be calculated on an as needed basis for border generating units, *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 unit consistent with the criteria provided below. Response Factor proposals offered by the Transmission Provider will be subject to review and validation by the ICT and shall be accompanied by any studies, analysis and research conducted by the Transmission Provider. For purposes of this Section 5.3, the review and validation responsibility of the ICT shall mean that the ICT will review 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 border generating facilities, two criteria are applied. First, the generator will have to be in close electric proximity to the Transmission System such that the generator 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 busses of the Transmission System. Second, there will have to be a significant discrepancy between the Response Factors for all other generators in the non-Entergy Control Area and the Response Factors for the specific border generating facility in question.

5.4 Response Factor Cutoff

In order to evaluate whether a particular service request will use all, some, or none of the AFC for a particular flowgate, RFCalc, State Estimator models and off-line planning models are used to calculate Response Factors. The Response Factors generated by Transmission Provider's AFC process measures the power flow impact that each source-to-sink transaction has on each flowgate for the post-contingency configuration of the system. If the power flow impact of particular TSR has an insignificant impact on a flowgate, that flowgate is not monitored when evaluating the request. To determine whether a flowgate is significantly impacted by a particular TSR, a Response Factor threshold of 3% is applied. Only flowgates with Response Factors at or above the 3% threshold will be considered when determining whether to approve the TSR. Thus, if the Response Factor for a particular flowgate is less than 3%, then the AFC process will not consider the flowgate when determining whether service should be granted. If the Response Factor for a particular flowgate is equal to or greater than 3%, and the AFC value indicates that the flowgate is one of the Most Limiting Flowgates for that transaction, then the flowgate will be evaluated to determine whether the particular TSR should be granted.

5.5 Modified Response Factor Cutoff

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, then the Transmission Provider will reevaluate this threshold with notice to ICT. All changes to the Response Factor threshold will be filed with FERC.

6. WEBTRANS AND EVALUATING TSRs

webTrans automatically processes requests for Transmission Service using a flow-based approach to determine AFC for monitored flowgates webTrans is integrated with Transmission Provider's EMS and State Estimator, and uses power flow models developed from both RFCalc and the Transmission Provider's

off-line planning models used in the Study Horizon. WebTrans will be used as the link between the AFC calculation process and the reserving and scheduling of Transmission Service under the Tariff. As individual TSRs are received, webTrans applies the applicable Response Factors to determine the impact new requests will have on the relevant flowgates and approves or denies the request based on that impact. The ICT determines the final status of each TSR based on the information provided by webTrans.

6.1 Flowgates Used to Evaluate Requests

Although the AFC process will monitor approximately 300-500 flowgates, webTrans will use a more limited set of flowgates, as determined by RFCalc, to evaluate individual service requests. When evaluating individual service requests, webTrans will only consider those flowgates that are: (1) "significantly impacted" by the request at issue, *i.e.*, those flowgates with a Response Factor equal to or greater than 3%; and (2) the Most Limiting Flowgates. Thus, to determine which flowgates should be evaluated for a particular source-sink combination, RFCalc will: (1) ignore all flowgates with a Response Factor of less than the Response Factor cutoff of 3%; and (2) will select from the remaining flowgates the fifteen flowgates with the lowest effective ATC values. The list of flowgates used to evaluate a particular service request will be redetermined during each resynchronization.

6.2 Approving and Denying Service

As individual transmission requests are submitted over OASIS, webTrans will apply the appropriate Response Factors to each request in order to evaluate the impact of the request on the most-limiting, significantly-affected flowgates. The amount of capacity requested will be multiplied by the Response Factor for a particular flowgate. The product of the requested capacity and the Response Factor will represent the additional loading impact of the new service on the flowgate and will be subtracted from the AFC value for that flowgate. As discussed above, this process will be applied to the Most Limiting Flowgates. If the AFC for all the flowgates remains positive or equal to zero after being reduced to account for the new transaction, the request will be approved. If the AFC value on any of the flowgates becomes negative or otherwise exceeds the rated capability of the facilities in question, then the request will be denied, unless service of a lower priority may be preempted to bring the AFC value back to zero or positive. The preempting of service with a lower priority will be conducted pursuant to governing FERC policies.

6.3 Pmax and Interface Limits

Regardless of the applicable AFC values, accepted TSRs from a particular generator shall not exceed the maximum output of that generator. Additionally, the amount of Transmission Service available across a Control Area interface can not exceed the total interface rating between the two Control Areas. Consistent with NERC Operating Policies 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 neighboring Control Area. Both the Pmax and Interface limits will be honored in the AFC process through a proxy flowgate. To the extent that the service request exceeds either the Pmax or interface limit, the proxy flowgate will appear as one of the Most Limiting Flowgates for that particular transaction.

6.4 Redirect Requests

Requests to redirect all or a portion of a firm transmission reservation from an alternate point-of-receipt (source) or to an alternative point-of-delivery (sink) on a firm basis is evaluated in the following manner. First, the Most Limiting Flowgates by each request (the original request and the redirect request) are identified. Next, the AFC values are used to separate the flowgates into two groups. Group 1 includes flowgates that have an AFC value that is less than or equal to zero *and* are common to both requests.

Group 2 includes the remaining flowgates identified in the list of the Most Limiting Flowgates by the redirect request. Next, the current impact of the original request is removed from the AFC value of the flowgates in both groups (the AFC value is increased by the capacity of the request multiplied by the response factor of each flowgate). Note that the current impact of the original request may differ from the impact originally evaluated because power flows may have changed since the original request was accepted. The impact of the redirect request is then calculated and evaluated as follows:

- If the impact of the redirect request causes the AFC of any flowgate in Group 1 to decrease, the redirect request will be denied.
- If the AFC value of any flowgate in group 2 is less than or equal to zero, before applying the impact of the redirect request, the redirect will be denied.
- If the impact of the redirect request causes the AFC of any flowgate in Group 2 to drop below zero, a counteroffer may be made for a MW amount equal to the MWs that would cause the AFC of the most limited flowgate (*i.e.*, the flowgate with the largest negative AFC value) in Group 2 to equal zero.
- In all other circumstances, the redirect request will be accepted.

7. SCENARIO ANALYZER

7.1 Introduction

The Scenario Analyzer allows transmission customers to evaluate transfer capability without actually submitting an OASIS request. The Scenario Analyzer provides customers with an immediate response by performing the same flow-based review that is used by webTrans to determine whether actual service requests can be accommodated. The Scenario Analyzer notifies the customer whether or not the evaluation passes the AFC check and provides an evaluation identification number (SA###). The Customer can then query the request evaluation within OASIS and is provided the following information associated with the request; the timepoints of the request, the amount of flowgate capacity available, the response factor, and the transfer capability that is available. However, because the Scenario Analyzer does not submit an actual service request over OASIS, it does not decrement flowgate AFC. The Scenario Analyzer uses the same flow-based engine as webTrans.

There are two evaluation options under the Scenario Analyzer related to Queue position. The 'Last' Queue Position provides customers with AFC information that reflects all queued requests with a status of Confirmed, Accepted, Counteroffer, and Study taken into account. The 'First' Queue Position option provides customers with AFC results (i.e. decrements to the AFC) based only on confirmed reservations. There are also two report format options under the Scenario Analyzer. The 'Brief' Report Format will create a report with the limiting flowgate information. The 'Full' Report Format will create a report containing the flowgate information for all of the impacted flowgates (up to the top fifteen).

7.2 How to use the Scenario Analyzer

The Scenario Analyzer is an OASIS module that allows Transmission Customers to evaluate availability on certain designated constrained facilities for the Source and Sink pair, but does not decrement ATC since no request has been submitted. The Scenario Analyzer and the Request Evaluation module can be found on the Revervations tab of the webOASIS by checking the AFC/Flowgate Reports box. The Information that is entered on the Scenario Analyzer Entry Form is:

Provider
Source name
Sink name
POR name
POD name
Transmission Service
Start time (for each time segment)
Stop time (for each time segment)
Capacity value (for each time segment)

After entering information in the Scenario Analyzer form on OASIS, 'Enter Scenario' is selected to enter into the Scenario Entry Submission window. From there the user can choose the 'Queue Position' to be used and the 'Report Format' to be used. The user would then select the 'Check AFC' button at the top of the Submission window to view the afc Pass/Fail and the evaluation id. The user can return to the Request Evaluation module and enter the evaluation id from the Scenario Analyzer to view the report that was created as a result of the analysis. If the user wishes to submit the request on OASIS for an actual evaluation, the user enters the information using the 'new TSR' Reservation Entry Form on OASIS.

User certification is required for access to the Scenario Analyzer.

9.2 Input files

From the monthly models, the Transmission Provider will also provide a subsystem file that defines all sources and sinks used for calculating AFC values, and such data will be posted by the ICT. User certification is required for access to this data.

The Transmission Provider also posts the following informational files related to AFC:

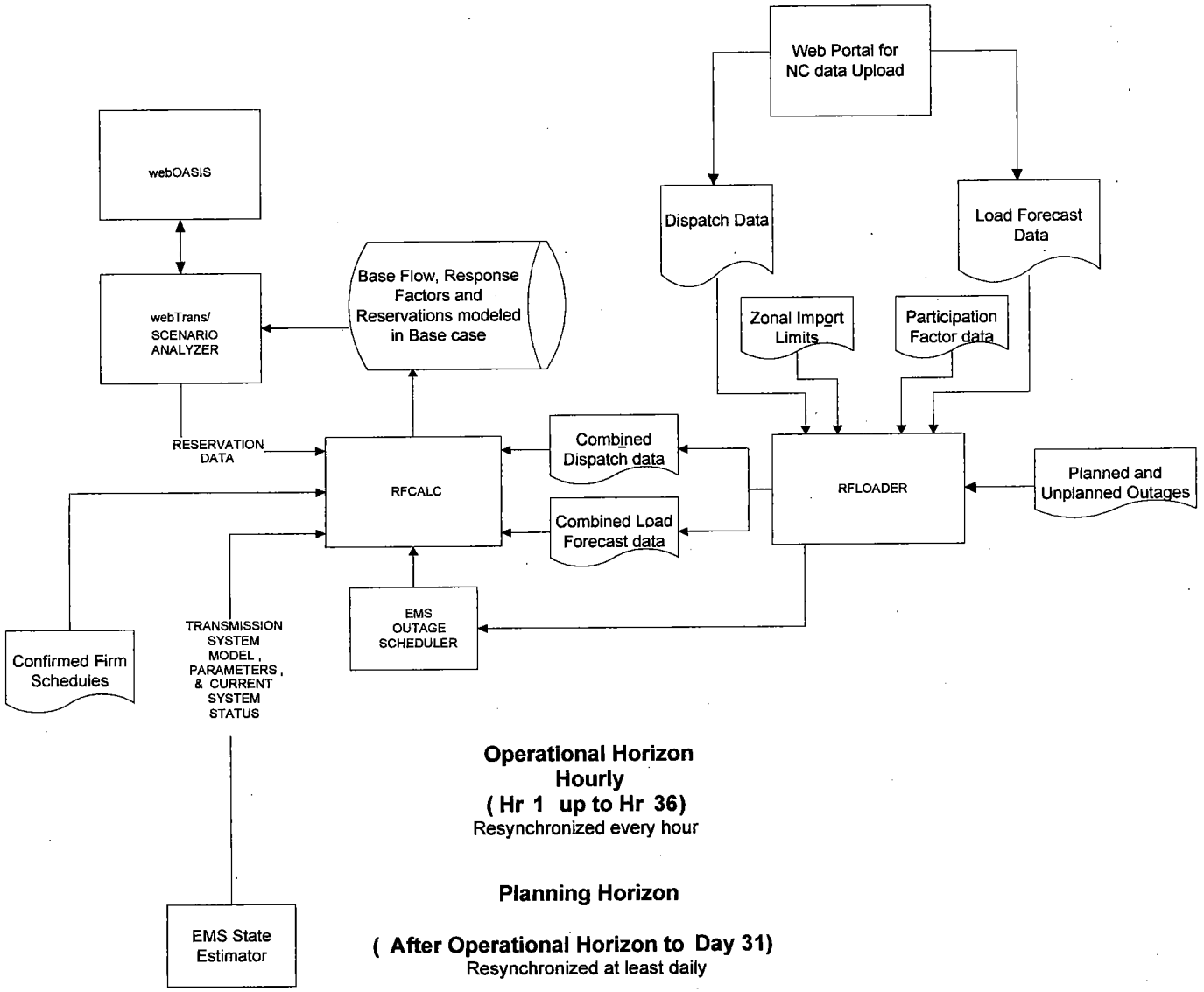
- A file containing response factors of the Most Limiting Flowgates per path and base flow for each flowgate for each time point. The file is refreshed with each resynchronization pursuant to section 5.2.
- A file containing the Effective ATC value of each path for each time point.
- A file containing the list of generators used as the Entergy Control Area sink for response factor calculation. The file also lists the participation factors for these generators.
- A subsystem files defining all sources and sinks used to calculate AFC.
- A list of flowgates with TTC and a revision log for all flowgate changes that are provided by the Transmission Provider and reviewed and posted by the ICT.

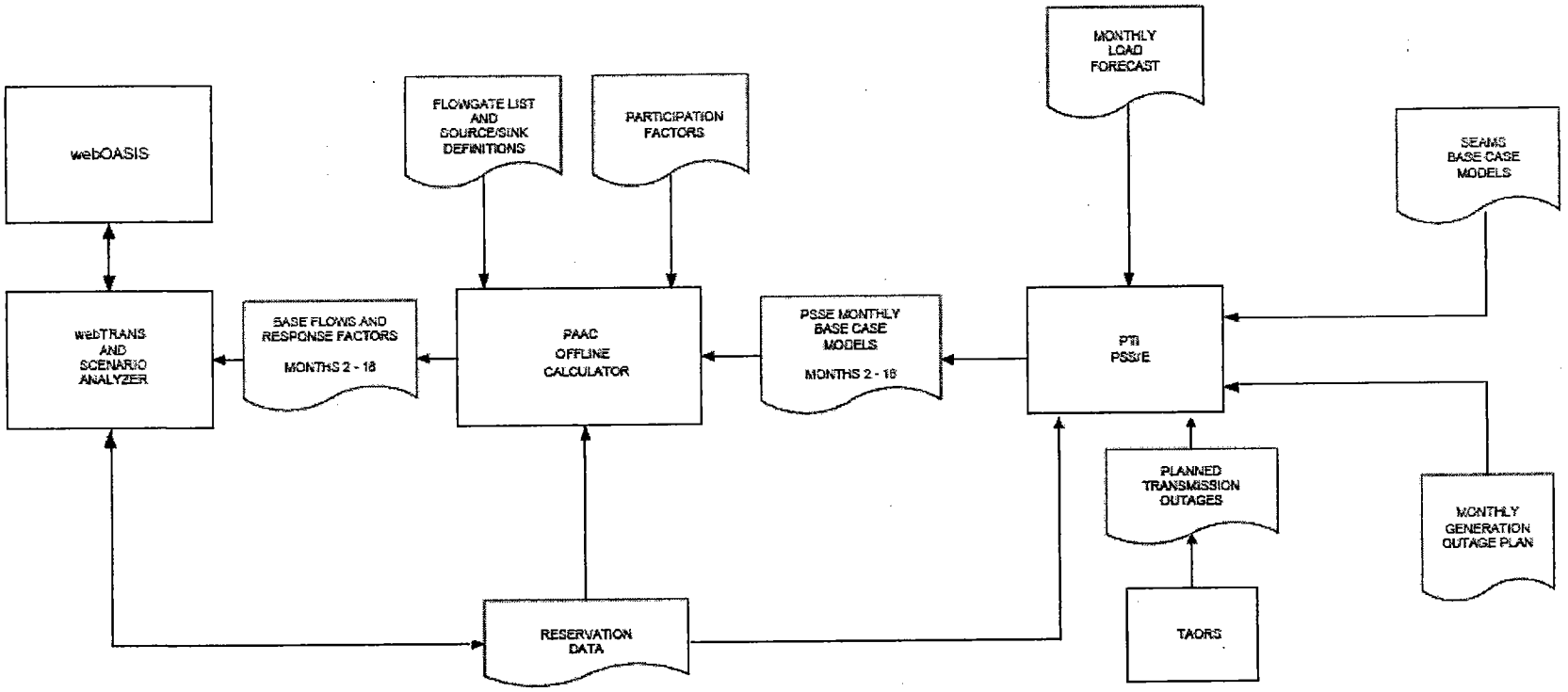
9.3 Transmission Outages

The Transmission Provider will post on its OASIS a list of all scheduled outages on transmission facilities on the Transmission System. The posting will include a daily posting for the Day 1 – 31 timeframe and a monthly posting for the Month 2 – 13 time frame.

There are two types of outage postings on the Entergy OASIS:

- The first type of outage posting is an *informational posting* of transmission outages, including outages outside of the Entergy Control Area that is provided to customers so that they may be aware of planned outages on the Transmission System. This list is entirely unrelated to the AFC process. It was developed for informational purposes and is not used for modeling purposes. This list is taken directly from Entergy's outage scheduling software, known as "TAORS."
- The second type of outage posting is the list of outages contained in the hourly AFC power flow models posted on OASIS. RFCalc imports these outages from TAORS and COS, but only uses those outages that are relevant for the particular time period being modeled. This ensures that RFCalc has updated outage information each time that RFCalc resyncs or calculates new AFC values. This outage list was not developed to provide customers with information regarding all planned outages during a particular month, and instead is used to model the system at a particular point in time.


Web Portal for NC data Upload
webOASIS
Dispatch Data
Load Forecast Data
Base Flow, Response Factors and Reservations modeled in Base case
webTrans/ SCENARIO ANALYZER
Zonal Import Limits
Participation Factor data
RESERVATION DATA
Combined Dispatch data
RFCALC
RFLOADER
Planned and Unplanned Outages
Combined Load Forecast data
EMS OUTAGE SCHEDULER
Confirmed Firm Schedules
TRANSMISSION SYSTEM MODEL, PARAMETERS, & CURRENT SYSTEM STATUS
Operational Horizon
Hourly
(Hr 1 up to Hr 36)
Resynchronized every hour
Planning Horizon
(After Operational Horizon to Day 31)
Resynchronized at least daily
EMS State Estimator



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

APPENDIX A: Historical Reservation Data used for Determination of Counterflows

	Percentage of Reservations Scheduled in Real Time					
	Firm PTP	Firm Network	Firm total	Non-Firm PTP	Non-Firm Network	Non-Firm total
January-2003	35	24	28	102	67	78
February-2003	31	22	26	108	69	78
March-2003	30	21	24	92	61	71
April-2003	27	24	26	99	51	58
May-2003	28	27	27	86	54	60
June-2003	29	23	24	113	55	62
July-2003	33	29	30	87	54	60
August-2003	39	29	31	80	54	60
September-2003	39	25	27	98	70	75
October-2003	43	22	25	96	72	75
November-2003	43	20	24	100	83	86
December-2003	46	21	25	101	69	75
TOTAL	35	24	27	95	62	69

Reserved For Future Use