



April 30, 2009

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, D.C. 20426

**Re: California Independent System Operator Corporation
Docket No. OA09-17-_____**

Dear Secretary Bose:

The California Independent System Operator Corporation (“CAISO”) submits this filing to revise the CAISO Tariff,¹ Appendix L, Methodology to Assess Available Transfer Capability (“Appendix L”), in compliance the requirements of Order No. 890² and the Commission’s May 16, 2008³ and March 31, 2009 Orders.⁴ The CAISO requests that these revisions be approved by the Commission, without modification, suspension, or hearing and made effective on the earliest date allowed by law.

I. BACKGROUND

On February 16, 2007, the Commission issued Order No. 890, which required transmission providers to revise their Open Access Transmission Tariffs (“OATTs”) to include detailed provisions in Attachment C related to the determination of Available Transfer Capability (“ATC”). Specifically, the order directed each transmission provider to include the following provisions in Attachment C: (1) a clear identification of the methodologies of the North American Electric Reliability Corporation (“NERC”) that it employs; (2) a detailed

¹ Capitalized terms not otherwise defined have the same meaning set forth in the currently effective CAISO Tariff on file with the Commission.

² *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 72 Fed. Reg. 12,266 (March 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007), *order on reh’g*, Order No. 890-A, 73 Fed. Reg. 2984 (January 16, 2008, FERC Stats. & Regs. ¶ 31,261 (2007), *order on reh’g*, Order No. 890-B, 123 FERC ¶ 61,299 (2008) .

³ *California Independent System Operator Corporation*, 123 FERC ¶ 61,180 (2008)(“May 16 Order”).

⁴ *California Independent System Operator Corporation*, 123 FERC ¶ 61,316 (2009)(“March 31 Order”).

description of the specific mathematical algorithm it uses to calculate firm and non-firm ATC for the scheduling, operating, and planning horizons; (3) a process flow diagram that describes the various steps in its ATC calculation; (4) a definition of each ATC component and a detailed explanation of how each component is derived in both the operating and planning horizons;⁵ (5) documentation of its process for coordinating ATC calculations with neighboring systems; and (6) a narrative description detailing its capacity benefit margin practices.⁶ Order No. 890 also required transmission providers to include their current ATC calculation methodologies in the 210-day compliance filing, and then file a revised Attachment C sixty days after NERC and North American Energy Standards Board (“NAESB”) complete their processes to develop ATC standards.⁷

On October 11, 2007, the CAISO submitted its filing to comply with Order No. 890 in Docket No. OA08-12-000. In that filing, the CAISO proposed to include in the CAISO Tariff then in effect a new Appendix L⁸ to describe the CAISO’s methodology for calculating ATC and incorporate the requirements of Order No. 890.

On December 21, 2007, the CAISO filed in Docket Nos. ER06-615-000 and ER08-367-000 a comprehensive replacement version of the Market Redesign and Technology Upgrade Tariff (“MRTU Tariff”). Through this filing, the CAISO, *inter alia*, merged Appendix L of the effective CAISO Tariff into the MRTU Tariff.

The Commission’s May 16 Order accepted the CAISO’s October 11, 2007 compliance filing, with modifications. With respect to Appendix L of the CAISO Tariff, the May 16 Order directed the CAISO to revise the description of its ATC methodology to reflect additional detail regarding (1) the specific mathematical algorithms used for calculating ATC, and include a link to the location on the CAISO Website where the algorithms are posted;⁹ (2) the calculation methodology used to determine the transmission capacity set aside for native load and non-OATT customers;¹⁰ and (3) the calculation and use of a transmission reserve margin and capacity benefit margin.¹¹ The May 16 Order also recognized that the CAISO will reflect the ATC requirements of Order No. 890 by filing revisions to Appendix L of its MRTU Tariff prior to MRTU implementation.¹²

⁵ Order No. 890 at P 323.

⁶ *Id.* at P 337.

⁷ *Id.* at P 325.

⁸ The CAISO designated Appendix L to comply with Order No. 890, rather than Attachment C, because Appendix L was the next available Appendix/Attachment in the CAISO Tariff.

⁹ May 16 Order at P 49.

¹⁰ *Id.* at P 54.

¹¹ *Id.* at P 56, 60-61.

¹² *Id.* at P 48.

On June 16, 2008, the CAISO submitted its filing to comply with the May 16 Order. That compliance filing, in pertinent part, modified the effective CAISO Tariff, Appendix L, to add a narrative description of the ATC mathematical algorithm and provide a detailed explanation of the ATC components used by the CAISO.

On January 15, 2009, the CAISO submitted a further compliance filing (“January 15 Compliance Filing”) in order to align Appendix L of the MRTU Tariff with the ATC requirements set forth in the Commission’s May 16 Order so that the appropriate and necessary tariff provisions would be in effect when MRTU was implemented. The modifications to Appendix L of the MRTU Tariff incorporated the same changes made in the CAISO’s June 16 compliance filing to the CAISO Tariff then in effect, as well as revisions to conform the procedures and defined terms to the ATC provisions in the MRTU Tariff.

On March 31, 2009, the Commission issued an order that accepted the January 15 Compliance Filing and directed the CAISO to file a further compliance filing to include in Appendix L a link to the CAISO’s website where the actual ATC mathematical algorithms are posted.¹³

II. COMPLIANCE DEMONSTRATION

The comprehensive replacement version of the MRTU Tariff that the CAISO filed on December 21, 2007 contained ATC provisions in Appendix L that were incorporated from, and virtually identical to, Appendix L of the CAISO Tariff then in effect. Subsequent to that filing, the Commission determined in its May 16 Order that CAISO Tariff, Appendix L, should be supplemented with additional description and detail about the CAISO’s ATC methodology. In the May 16 Order, the Commission directed the CAISO to revise Appendix L to add a description of the specific mathematical algorithms used to calculate ATC for its scheduling, operating, and planning horizons, and to provide a link to the location of the CAISO Website where the actual algorithms are posted.¹⁴ In compliance with this directive, the CAISO’s January 15 Compliance Filing proposed modifications to Appendix L of the MRTU Tariff so that it would present the CAISO’s ATC mathematical algorithm and provide a narrative description of the algorithm, and each of its components, as a measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above committed uses.

In compliance with the March 31 Order, the CAISO in this filing proposes to modify CAISO Tariff, Appendix L, to include five links to the CAISO’s Website where the actual ATC mathematical algorithms and related information are posted.

¹³ *California Independent System Operator Corporation*, 126 FERC ¶ 61,316 (2009)(“March 31 Order”).

¹⁴ *Id.* at P 49.

The first link connects to the location on the CAISO Website where the Operating Procedures for transmission are publicly posted. These Operating Procedures contain equations, rules, mathematical algorithms, and/or nomograms used to determine the Operating Transfer Capability and ATC on each tie. To the extent that certain designated transmission Operating Procedures are not publicly posted at this site, the CAISO will provide access to those Operating Procedures in accordance with CAISO Tariff Section 22.11.3, Requests for and Access to Nonpublic Operating Procedures.¹⁵ The non-public Operating Procedures are limited to those that contain information that is market sensitive, system sensitive or proprietary.

The second link is to the CAISO's Operating Procedure - Total Transfer Capability Methodology. The methodology describes the CAISO's criteria for calculating Total Transfer Capability and the procedures utilized to develop and update power flow base cases, perform contingency analysis, and employ methods to protect against violating operating limits.

The third link is to the CAISO's Operating Procedure - System Operating Limits Methodology for the Planning Horizon. This methodology describes how the CAISO determines the system operating limits within the CAISO's planning authority area for a planning horizon that typically exceeds one year but is less than ten years.

The fourth link connects to the Business Practice Manual ("BPM") for Market Operations posted on the CAISO Website. The BPM for Market Operations covers the rules, design, and operational elements of the CAISO Markets. The BPM is intended for those entities that expect to participate in the CAISO Markets, as well as those entities that expect to exchange Power with the CAISO Control Area. Section 5.2 of the BPM discusses the Available Transfer Capability Calculation.

The fifth link connects to the transmission page on the CAISO's OASIS site. This page displays and allows download of the ATC values in megawatts for each Transmission Interface in conjunction with the closing events for the CAISO Day-Ahead Market, Hour-Ahead Scheduling Process, and Real-Time Market.

The CAISO requests that the Commission accept these modifications and find revised Appendix L of the MRTU Tariff to be in full compliance with Order No. 890, the May 16 Order, and the March 31 Order.

¹⁵ Amendments to Tariff Section 22.11.3 to clarify the process for accessing are nonpublic Operating Procedures are currently pending before the Commission in Docket Nos. ER06-615-048 and ER08-367-005.

IV. COMMUNICATIONS

Communications regarding this filing should be addressed to the following individuals, whose names should be placed on the official service list established by the Secretary with respect to this submittal:

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V. ATTACHMENTS

The following documents, in addition to this transmittal letter, support the instant filing:

Attachment A	Revised tariff sheets for Appendix L of the MRTU Tariff to comply with Order No. 890 and the May 16 Order.
Attachment B	Revisions to Appendix L of the MRTU Tariff shown in black-line format.

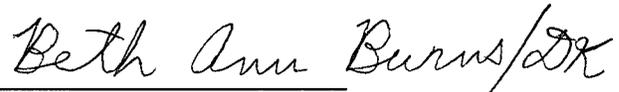
VI. SERVICE

The CAISO has served copies of this transmittal letter, and all attachments, on each party listed on the official service list for this proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2010. In addition, the CAISO is posting this transmittal letter and all attachments on the CAISO Website.

VII. CONCLUSION

For the foregoing reasons, the CAISO requests that the Commission accept the instant filing as satisfying the CAISO's compliance obligations with respect to the ATC requirements of Order No. 890 and the May 16 Order. The CAISO requests that the Commission grant all necessary waivers consistent with the discussion herein.

Respectfully submitted,

Beth Ann Burns/DK

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Dated: April 30, 2009

Attachment A – Clean Sheets
Methodology to Assess Available Transfer Capability Compliance Filing
Fourth Replacement CAISO Tariff
April 30, 2009
OA08-12-____

The links to the CAISO Website where the actual ATC mathematical algorithms and other ATC calculational information are located are as follows:

Operating Procedures – Transmission

<http://www.caiso.com/thegrid/operations/opsdoc/transmon/index.html>

Operating Procedure - Total Transfer Capability Methodology

<http://www.caiso.com/1bfe/1bfe98134fa0.pdf>

Operating Procedure - System Operating Methodology

<http://www.caiso.com/1c13/1c1390d420810.pdf>

Business Practice Manual for Market Operations

<https://bpm.caiso.com/bpm/bpm/version/0000000000000005>

OASIS – Transmission Information

<http://oasis.caiso.com/mrtu-oasis>

Attachment B – Blacklines

Methodology to Assess Available Transfer Capability Compliance Filing

Fourth Replacement CAISO Tariff

April 30, 2009

OA08-12-____

* * *

CAISO TARIFF APPENDIX L

Methodology to Assess Available Transfer Capability

METHODOLOGY TO ASSESS AVAILABLE TRANSFER CAPABILITY

* * *

L.2 ATC Algorithm

The ATC algorithm is a calculation used to determine the transfer capability remaining in the physical transmission network and available for further commercial activity over and above already committed uses. The CAISO posts the ATC values in megawatts (MW) to OASIS in conjunction with the closing events for the Day-Ahead Market and HASP Real-Time Market process.

The following OASIS ATC algorithms are used to implement the CAISO ATC calculation for the ATC rated path (Transmission Interface):

$$\text{OTC} = \text{TTC} - \text{CBM} - \text{TRM} - \text{Operating Constraints}$$

ATC Calculation For Imports:

$$\text{ATC} = \text{OTC} - \text{AS from Imports} - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity.}$$

ATC Calculation For Exports:

$$\text{ATC} = \text{OTC} - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity.}$$

ATC Calculation For Internal Paths 15 and 26:

$$\text{ATC} = \text{OTC} - \text{Net Energy Flow}$$

The specific data points used in the ATC calculation are each described in the following table.

ATC	ATC MW	Available Transfer Capability, in MW, per Transmission Interface and path direction.
Hourly Unused TR Capacity	USAGE_MW	The sum of any unscheduled existing transmission commitments (scheduled transmission rights capacity for ETC or TOR), in MW, per path direction.
Scheduled Net Energy from Imports/Exports (Net Energy Flow)	ENE_IMPORT MW	Total hourly net Energy flow for a specified Transmission Interface.
AS from Imports	AS_IMPORT MW	Ancillary Services scheduled, in MW, as imports over a specified Transmission Interface.
OTC	OTC MW	Hourly Operating Transfer Capability of a specified Transmission Interface, per path direction, with consideration given to known Constraints and operating limitations.
Constraint	Constraint MW	Hourly transmission Constraints, in MW, for a specific Transmission Interface and path direction.

CBM	CBM MW	Hourly Capacity Benefit Margin, in MW, for a specified Transmission Interface, per Path Direction.
TRM	TRM MW	Hourly Transmission Reliability Margin, in MW, for a specified Transmission Interface, per path direction.
TTC	TTC MW	Hourly Total Transfer Capability, in MW, of a specified Transmission Interface, per path direction.

The links to the CAISO Website where the actual ATC mathematical algorithms and other ATC calculational information are located are as follows:

Operating Procedures – Transmission

<http://www.caiso.com/thegrid/operations/opsdoc/transmon/index.html>

Operating Procedure - Total Transfer Capability Methodology

<http://www.caiso.com/1bfe/1bfe98134fa0.pdf>

Operating Procedure - System Operating Methodology

<http://www.caiso.com/1c13/1c1390d420810.pdf>

Business Practice Manual for Market Operations

<https://bpm.caiso.com/bpm/bpm/version/0000000000000005>

OASIS – Transmission Information

<http://oasis.caiso.com/mrtu-oasis>

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CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the entities that are described in that document as receiving service, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 30th day of April, 2009.


Beth Ann Burns
Beth Ann Burns