



TRO Standard
Processes and
Procedures

TITLE
Capacity Benefit Margin (CBM) - Usage
Procedure

TRO-BA-SPP-10.307
Rev. 0004
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Revision Log

Revision or Change Number	Effective Date	Affected Page Numbers	Description of Revision/Change
0000	03/15/2004		Initial
0001	02/06/2007	All	Change ESO to TRO, Control Area to Balancing Authority, Transmission Provider System Operator and Interchange Authority System Operator to Transmission and Interchange Services System Operator. Added TVA or the Load-Serving Entity's Transmission Service Provider is also experiencing Transmission Constraints relative to imports of energy on its transmission system. Added additional documentation requirement for the TSIO. Added Reference Section. Add reference TRO-BA-SOP-10.314 Energy Emergency Assistance for Power System Operations
0002	06/30/2008	1,2,4,6	Annual Review, Added requirements of NERC MOD-006-0 R1.1 in Scope of procedure section. Added requirements of NERC MOD-006-0 R.2 in Non-QA Records section. Minor sentence enhancements. Deleted Cinergy with respect to Bristol as a LSE. Changed from SOP to SPP.
0003	09/30/2009	All	Annual Review, Procedure enhancements, Added note to clarify that the BA functions as the LSE for TVA. Changed step & added note dealing with BA making the emergency purchase etag. Added references to MOD-006 & MOD-007 requirements.

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Revision Log

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0004	02/28/2009	All	Added steps to allow CBM to be used by PS&F Hourly Trader if authorized by the Senior BA System Operator. Added Transmission Service Numbers for CBM usage, Appendix A. Added Hourly Trader to the Scope. Minor enhancements

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1.0 PURPOSE

Capacity Benefit Margin (CBM) has been established to ensure that TVA retains enough transmission capacity to allow sufficient power to be imported to replace any generation resources that may not be available as planned to serve the native load of the system.

2.0 SCOPE

During the conditions indicated below, CBM can be used to import power by TVA for its native load customers and Load Serving Entities (LSE) within the TVA Balancing Authority (BA) and by Alabama Power Company and Georgia Power Company with respect to their network load in the TVA Balancing Authority Area. During conditions when resources are projected or anticipated to be insufficient to serve TVA's native load customers and such network customers (herein called a "Generation Shortage"), CBM may be used to import power on a firm basis to ensure the continued reliability of service to such loads.

The use of CBM is allowed when the following steps have been taken or the following conditions exist {MOD-006-0.1 R1}:

- All non-firm sales have been terminated.
- Direct-Control Load Management has been implemented.
- Customer interruptible demands have been interrupted
- A Generation Shortage has been declared by TVA BA or by the LSE
- TVA or the LSE's Transmission Service Provider is also experiencing Transmission Constraints relative to imports of energy on its transmission system.
- There is insufficient posted firm ATC on the interface over which power may be obtained to address the Generation Shortage.

This procedure applies to BA System Operator, system operators performing Asset Operations, or LSE, Transmission & Interchange Services Operator (TISO), Reliability Coordinator System Operator (RCSO) functions in Transmission and Reliability Organization and to the Hourly Trader function in Power Supply and Fuels (PS&F).

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3.0 PROCESS

NOTE

CBM may be used to re-establish Operating Reserves {MOD-0 R1.1}

NOTE

The BA System Operator is the LSE for TVA. The Power Supply & Fuels (PS&F) Hourly Trader will notify the BA System Operator if sufficient power cannot be imported due to insufficient posted firm ATC on the interface.

To use the CBM (provided the above noted conditions are met):

- A. The LSE experiencing a Generation Shortage shall notify the TVA BA System Operator that it has declared a Generation Shortage and that there is insufficient posted firm ATC on the interface over which power may be obtained to address the Generation Shortage.
- B. The TVA BA System Operator shall notify the TVA RCSO that the LSE has declared a Generation Shortage and request implementation of an Energy Emergency Alert (Level 1, 2, or 3 as appropriate). The TVA BA System Operator shall notify the TVA TISO that there is insufficient posted firm ATC on the interface over which power may be obtained to address the Generation Shortage.
- C. The TVA TISO will ensure that the CBM is made available and will make any curtailment necessary of non-firm schedules to provide the ATC on the CBM path.

NOTE

The E-Tag will be created by the PS&F Hourly Trader for a normal power purchase or by the BA for an Emergency Power Purchase. The Emergency Power Purchase Templates found in OATI webTrans have the transaction number for reserved CBM identified on the template.

If PS&F Hourly Trader is able to purchase power through normal channels but has to use CBM, the transaction numbers will be the same as for an Emergency Power Purchase.

- D. **IF** power is available for purchase outside the Emergency Power Purchase Agreement, **THEN** the Senior BA will authorize PS&F Hourly Trader to purchase available power via the CBM path(s).
- E. **IF** power is not available for purchase on the power market, **THEN** the BA shall submit an E-Tag using the appropriate transaction number for reserved CBM. (Reference TRO-BA-SOP-10.314 Energy Emergency Assistance for Power System Operation)
- F. The TVA TISO approves the request.

When not being used, TVA makes CBM available on a non-firm basis to all transmission customers using the standard ATC posting for non-firm. If CBM is needed for existing native load, those non-firm reservations on the specific path will be subject to curtailment following existing procedures.

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4.0 ROLES AND RESPONSIBILITIES

NOTE

At TVA the LSE function is performed by the Balancing Authority.

Load Serving Entity (LSE)

Notifies the BA System Operator that it has declared a Generation Shortage (EEA) as described above. Example reference: SOCO

Asset Operator (AO)

If sufficient notice is available (day ahead), the AO would notify the BA of the impending need for the use of CBM.

Balancing Authority (BA) System Operator

Notifies the RSCO that the LSE has declared a Generation Shortage and requests implementation of an EEA indicating the anticipated length of time CBM will be required.

Reliability Coordinator System Operator (RSCO)

Implements Energy Emergency Alert (EEA) as requested.

Transmission & Interchange Services Operator (TISO)

Takes steps as necessary to ensure there is sufficient ATC to be used for CBM, including curtailment of non-firm schedules on a particular path.

Approves the interchange transaction for the use of CBM.

Posts an after-the-fact disclosure of the use of CBM on OASIS.

Document in shift operator's log evidence of posting.

Senior BA System Operator

Authorizes the use of CBM by the PS&F Hourly Trader if power is available to purchase but ATC is not available.

Hourly Trader

Utilizes CBM as authorized by the Senior BA System Operator.

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5.0 DOCUMENTATION & REPORTING REQUIREMENTS

TISO shall post within 15 calendar days of use an after-the-fact disclosure that energy was scheduled against a CBM reservation (for purposes other than making CBM available on a non-firm basis) on OASIS. The posting shall include circumstances, duration, and amount of CBM used. {MOD-007-0 R2}

TISO will document in the shift operator's log the energy scheduled against CBM reservation (for purposes other than making CBM available on a non-firm basis). The documentation shall include time of posting on OASIS, circumstances, duration and amount of CBM used. CBM usage must also be documented in accordance with TRO-BA-SOP-10.314 Energy Emergency Assistance for Power System Operations.

6.0 RECORDS

Documentation of the use of CBM shall be included in the operators' eSOMs log. The log should indicate the positions authorizing the use of CBM, reason for the authorization, the resource that was lost (if this is the reason), and the expected length of time CBM will be used in each instance.

CBM - Usage Procedure shall be posted on OASIS in accordance with NERC Standard MOD-006-0.

7.0 REFERENCE

NERC Standard MOD-006-0 Procedure for the Use of CBM Values

NERC Standard MOD-007-0 Documentation of the Use of CBM

TRO-BA-SPP-10.328 CBM Methodology

TRO-BA-SOP-10.314 Energy Emergency Assistance for Power System Operations

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**Appendix A
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Transmission Service Numbers (TSN) for CBM Usage

CBM Numbers are for use only with the approval of the Senior BA to supply Network Native Load during a declared Energy Emergency Alert (EEA)

Applicable documents:

NERC Standard EOP-02-2

TVA SPP TRO-BA-SOP-10.307

TVA SPP TRO-BA-SOP-10.314

POR	Amount	CBM#
AECI	50MWs	227
AMMO	250MWs	230
BREC	50MWs	574
CPLW	50MWs	229
DUK	50MWs	234
EES	300MWs	233
EKPC	50MWs	232
LGEE	200MWs	236
PJM	500MWs	228
SOCO	400MWs	237
EEI	0	
SME	0	
AMIL	0	

Transmission Owner is TVA