Credit Policy Enhancements

Final Draft Proposal

Business Practice Manual for Credit Management

Version ~~1.2~~2

Last Revised: ~~November 19, 2007~~November 10, 2008

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Approval History

Approval Date:

Effective Date:

BPM Owner: Philip Leiber

BPM Owner's Title: Treasurer / Director, Financial Planning

Revision History

Version	Date	Description
4	MM-DD-YYYY	
3	MM-DD-YYYY	
2	11-10-2008	Revisions required to implement proposed credit policy enhancements: • Unsecured credit limit calculation (Sections 1.3, 3.3, 4.3.1.1 – 4.3.1.3, 4.3.2, 4.3.3.1 – 4.3.3.3, 4.4.1, 4.4.1.1) • Definition of Tangible Net Worth (Sections 1.3, 4.3.1.3, 4.3.2) • Maximum Unsecured Credit Limit (Sections 4.1, 4.2, 4.4.2) • Foreign Guarantees (new Sections 5.4, 5.5) • Affiliate Guarantees (Section 5.6) • Time to post additional Financial Security (Sections 7.1, 9.1, 10.2) • Available credit for CRR auctions (Section 7.4.2) • Enforcement actions for late payments (Section 8.2) • Enforcement actions for late posting of Financial Security (Section 8.3) In addition, a modification was made to add Affiliate disclosure to the list of Other Qualitative and Quantitative Credit Strength Indicators (Section 3.4) to bring in line with the current CAISO Tariff.
1.2	11-19-2007	Addresses situations where Moodys KMV EDF is not available

Version	Date	Description
		or is not reasonably applicable in determining a Market Participant's Unsecured Credit Limit. Updated sections include Section 4.2 (1 and 2), 4.3.1.2, 4.3.2 and 4.3.3.1.
1.1	09-12-2007	Revised Section 6.2.2 and 7.4.3.1 to reflect FERC's 8/28/2007 order on the valuation of Long Term CRRs. Removed "DRAFT" from posted copy of this BPM.
1	06-06-2007	Initial Version Release. This BPM is based on the Credit Policy and Procedures Guide that was last updated May 31, 2007. The updated Credit Policy & Procedures Guide was revised to reflect CAISO's complance filing for FERC's April 19, 2007 order on CAISO's June 2006 credit filing. This BPM reflects the following changes from the May 31, 2007 Credit Policy & Procedures Guide: • Conform to BPM section numbering format. • Add CRR provisions (affecting Section 6, 7, 8, 9) • Revise EAL calculation to include CRRs, availability of estimated settlements data in CAISO's Settlements system, elimination of the "level posting period". Add provisions for WAC prepayment for Out of Control Area Load Serving Entities to the EAL calculation and as described in 6.2.4 • List RMR financial requirements in Section 11 • For new SCs, require 45 days of initial security rather than 14. • Reorganize Section 3-Unsecured Credit Limits. • Change references to "ISO" to "CAISO" • Provide for a transition period to the new EAL calculation, described in Section 6.4. • Added to Enforcement Actions (Section 8) limit on transfer of CRRs through SRS for undersecured Market Participants. • Described in Section 9.3 credit information published monthly in CAISO's monthly financial report.

TABLE OF CONTENTS

1. Introduction

Welcome to the CAISO *BPM for Credit Management*. In this Introduction you will find the following information:

- The purpose of CAISO BPMs
- What you can expect from this CAISO BPM
- Other CAISO BPMs or documents that provide related or additional information

1.1 Purpose of California ISO Business Practice Manuals

The Business Practice Manuals (BPMs) developed by CAISO are intended to contain implementation detail, consistent with and supported by the CAISO Tariff, including: instructions, rules, procedures, examples, and guidelines for the administration, operation, planning, and accounting requirements of CAISO and the markets. Exhibit 1-1 lists CAISO BPMs.

Exhibit 1-1: CAISO BPMs

Title
BPM for Market Operations
BPM for Market Instruments
BPM for Settlements & Billing
BPM for Scheduling Coordinator Certification & Termination
BPM for Congestion Revenue Rights
BPM for Candidate CRR Holder Registration
BPM for Managing Full Network Model
BPM for Rules of Conduct Administration
BPM for Outage Management
BPM for Metering
BPM for Reliability Requirements
BPM for Credit Management
BPM for Compliance Monitoring
BPM for Definitions & Acronyms
BPM for BPM Change Management

1.2 Purpose of this Business Practice Manual

The *BPM for Credit Management* describes the credit-related policies and processes used at CAISO to protect the financial integrity and effectiveness of the CAISO markets. This BPM complements and further describes credit provisions primarily contained in Section 12 of the Tariff.

In this BPM you will find:

- The purpose of the credit management policy at CAISO
- How unsecured credit is granted by CAISO
- Forms of financial security (collateral) CAISO accepts
- How a market participant's net position is determined and how this position is compared against their credit limit.
- Procedures CAISO uses to request additional financial security
- Enforcement procedures CAISO may use if a market participant fails to comply with the credit policy

The provisions of this BPM are intended to be consistent with the CAISO Tariff. If the provisions of this BPM nevertheless conflict with the CAISO Tariff, the CAISO is bound to operate in accordance with the CAISO Tariff. Any provision of the CAISO Tariff that may have been summarized or repeated in this BPM is only to aid understanding. Even though every effort will be made by CAISO to update the information contained in this BPM and to notify Market Participants of changes, it is the responsibility of each Market Participant to ensure that he or she is using the most recent version of this BPM and to comply with all applicable provision of the CAISO Tariff.

A reference in this BPM to the CAISO Tariff, a given agreement, any other BPM or instrument, is intended to refer to the CAISO Tariff, that agreement, BPM or instrument as modified, amended, supplemented or restated.

Section number references refer to sections of this BPM unless specifically stated otherwise. The captions and headings in this BPM are intended solely to facilitate reference and not to have any bearing on the meaning of any of the terms and conditions of this BPM.

1.3 References

Note to Reader: The definition of acronyms and words beginning with capitalized letters are provided in the *BPM for Definitions & Acronyms*, and in the following table.

TERM	DEFINITION
Affiliated Entities	Legally distinct business units that are Affiliates, as defined in the CAISO Tariff.
Aggregate Credit Limit (ACL)	The sum of a Market Participant's Unsecured Credit Limit and its Financial Security Amount, as provided for in Section 12 of the CAISO Tariff.
Available Credit	The amount of collateral available for a CRR Auction; calculated as: (Aggregate Credit Limit less Estimated Aggregate Liability) times 90%
~~Average Rating Default Probability (ARDP)~~	~~The sum of Credit Rating Default Probabilities divided by the total number of Credit Rating Default Probabilities used.~~
Business Association Identification Number (BAID)	An identification code used by CAISO to represent a Market Participant. A Market Participant may have more than one BAID.
~~Credit Rating Default Probability~~	~~The 5 Year Median Default Probability based on a rating agency's credit rating as listed in the Credit Rating Default Probability table in Section 4.3.1.3 of this BPM.~~
Day or Trading Day	A reference to a day or Trading Day is to a calendar day unless otherwise specified.
Collateral	See Financial Security.
~~Combined Default Probability (CDP)~~	~~A Market Participant's blended probability of default based on credit agencies' Average Rating Default Probability and MKMV Default Probability according to rules established for different entity types.~~
Credit Margin	The quantity equal to Expected CRR Congestion Revenue minus Fifth Percentile CRR Congestion Revenue. Credit Margin is used as a component of the value of each CRR in a CRR portfolio.
CRR Auction Price	The price paid for a CRR at auction.
Estimated Aggregate Liability (EAL)	The sum of a Market Participant's known and reasonably estimated potential liabilities for a specified time period arising from charges described in the CAISO Tariff, as provided for in Section 12 of the CAISO Tariff.
Expected CRR Congestion	The amount of expected Congestion revenue associated with a

Revenue	CRR, as calculated by CAISO.
Fifth Percentile CRR Congestion Revenue	The amount of Congestion revenue associated with a CRR that performs at the fifth percentile level with regard to a probabilistic determination of value for that CRR, as calculated by CAISO.
Financial Security	Any of the types of financial instruments listed in Section 12 of the CAISO Tariff that may be posted by a Market Participant.
Financial Security Amount	The level of Financial Security posted in accordance with Section 12 of the CAISO Tariff by a Market Participant.
Material Change in Financial Condition	A change in or potential threat to the financial condition of a Market Participant that increases the risk that the Market Participant will be unlikely to meet some or all of its financial obligations. The types of Material Change in Financial Condition include but are not limited to the following: (a) A credit agency downgrade; (b) Being placed on a credit watch list by a major rating agency; (c) A bankruptcy filing; (d) Insolvency; (e) The filing of a material lawsuit that could significantly adversely affect past, current or future financial results; or any change in the financial condition of the Market Participant which exceeds a five percent (5%) reduction in the Market Participant's tangible net worth for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.
~~MKMV Default Probability~~ Moody's KMV equivalent rating	~~The Moody's KMV default probability determined in accordance with step 3 of Section 4.3.2 of this BPM.~~ Moody's KMV credit category that effectively translates a Moody's KMV Estimated Default Frequency (EDF) into a comparable credit agency rating. The credit category may be referred to as the Moody's KMV Spot Credit Rating (CreditEdge Plus™) or Bond Default Rate Mapping or Dynamic Rating (RiskCalc®) or some similar name established by Moody's KMV for this purpose.
Nationally Recognized Statistical Rating Organizations (NRSRO)	National credit rating agencies as designated by the U.S. Securities & Exchange Commission.
Net Assets (NA)	For governmental or not-for-profit entities~~,~~. For purposes of setting an entity's Unsecured Credit Limit, defined as total assets minus assets (net of any matching liabilities assuming the result is a positive value) the CAISO reasonably believes to be restrictive or potentially unavailable to settle a claim in the event of a default (examples include restricted assets) minus ~~less~~ total liabilities.
Rated Governmental Entity	A municipal utility or state or federal agency that holds an issuer, counterparty or underlying credit rating by a Nationally Recognized Statistical Rating Organization.
Rated Public/Private Corporation	An investor owned or privately held entity that holds an issuer, counterparty or underlying credit rating by a Nationally

	Recognized Statistical Rating Organization.
Scheduling Coordinator	An entity certified by CAISO for the purposes of undertaking the functions specified in Section 4.5.3 of the CAISO Tariff.
Scheduling Coordinator Identification Number (SCID)	A unique number assigned to each Scheduling Coordinator by CAISO.
Tangible Net Worth (TNW)	~~Total Assets minus Intangibles (e.g., Good Will) minus Total Liabilities.~~ For purposes of setting an entity's Unsecured Credit Limit, Tangible Net Worth equals total assets minus assets (net of any matching liabilities assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default (examples include restricted assets and affiliate assets) minus intangible assets (i.e., those assets not having a physical existence such as patents, trademarks, franchises, intellectual property and goodwill) minus derivative assets (net of any matching liabilities assuming the result is a positive value) minus total liabilities.
Unrated Governmental Entity	A municipal utility or state or federal agency that does not hold an issuer, counterparty or underlying credit rating by a Nationally Recognized Statistical Rating Organization.
Unrated Public/Private Corporation	An investor owned or privately held entity that does not hold an issuer, counterparty or underlying credit rating by a Nationally Recognized Statistical Rating Organization.
Unsecured Credit Limit (UCL)	The level of credit established for a Market Participant that is not secured by any form of Financial Security, as provided for in Section 12 of the CAISO Tariff.

Any term defined in the Master Definitions Supplement to the CAISO Tariff shall have the same meaning where used in this BPM. In any instances where a definition in this document conflicts with a definition in the CAISO Tariff, CAISO Tariff definition will prevail.

In addition to the CAISO FERC Electric Tariff and other CAISO BPMs, the following references are related to this BPM:

- Other CAISO BPMs
- CAISO FERC Electric Tariff, Amended and Restated Second Replacement

Current versions of these documents are posted on the CAISO Website.

2. Credit Policy Overview

In this section you will find the following information:

- Who is subject to the credit policy and the goal of the policy
- The principles of credit policy operation
- Who to contact with questions on the credit policy
- An overview of the sections of this BPM

2.1 Credit Policy Applicability and Goal

All Market Participants requesting transmission services with CAISO are subject to the credit policy as documented in Section 12 of the CAISO Tariff, and as further detailed in this BPM. The credit policy is designed to protect Market Participants from undue exposure to default risk by other Market Participants.

Each Market Participant is to maintain an Aggregate Credit Limit (Unsecured Credit Limit ("UCL" – See Section 4) plus Financial Security Amount (see Section 5)) in excess of its Estimated Aggregate Liability (see Section 6).

2.2 Principles

CAISO intends to maintain the confidence of Market Participants in the CAISO Markets and to sustain CAISO's mission of ensuring an adequate supply of power at a reasonable cost, by equitably, consistently and strictly enforcing these credit procedures.

CAISO recognizes that Market Participants want credit-related practices that are appropriate and transparent. CAISO endeavors to maintain an accurate Business Process Manual that describes credit-related practices and administrative procedures. CAISO invites and appreciates feedback of Market Participants to further improve the efficiency and effectiveness of CAISO's credit policy.

2.3 Contacts

Please direct comments and inquiries about CAISO's credit policy to:

KEVIN KING: SR. FINANCIAL ANALYST / CREDIT MANAGER.
PHONE: (916) 608-1247 ♦ EMAIL: kking@caiso.com

PHILIP LEIBER: CFO & TREASURER ~~& DIRECTOR OF FINANCIAL PLANNING~~
PHONE: (916) 351-2168 ♦ EMAIL: pleiber@caiso.com

2.4 Overview of this BPM

- **Section 3: Unsecured Credit**
  Provides an overview of the CAISO procedures for determining Unsecured Credit Limits for new and existing Market Participants.

- **Section 4: Unsecured Credit Calculation**
  Provides an overview of the calculation of Unsecured Credit Limit for Rated/Unrated Public/Private Corporations and for Rated/Unrated Governmental Entities.

- **Section 5: Approved Forms of Financial Security Instruments**
  Provides information about each of the seven different types of financial instruments that may be used to provide Financial Security.

- **Section 6: Estimated Aggregate Liability Calculation**
  Provides an overview how the CAISO calculates the outstanding position of each Market Participant.

- **Section 7: Comparison of Estimated Aggregate Liability to Credit Limits and Requests for Additional Financial Security**
  Describes the process for determining when additional Financial Security is required and how requests for additional Financial Security are communicated to Market Participants.

- **Section 8: Credit Policy Enforcement**
  Describes the actions that may be taken by the CAISO when a Market Participant's Estimated Aggregate Liability exceeds its Aggregate Credit Limit.

- **Section 9: Notifications**
  Summarizes credit notifications from CAISO to Market Participants and vice-versa.

- **Section 10: Dispute Procedures**
  Describes the process for Market Participants to dispute Financial Security requests related to CAISO's comparison of the Estimated Aggregate Liability with their Aggregate Credit Limit.

- **Section 11: Financial Responsibility Related to RMR Contracts**
  Describes the financial requirements related to RMR contracts.

3. Unsecured Credit

In this section you will find the following information:

- A description of the information that is needed to apply for unsecured credit
- A discussion of the Financial Statements that are needed for unsecured credit evaluation
- A discussion of the Rating Agency reports that are needed for unsecured credit evaluation
- A description of the other credit strength indications needed for unsecured credit evaluation

3.1 Unsecured Credit Assessment Requirements

As provided in Section 12.1.1 of CAISO Tariff, an approved Application for Unsecured Credit must be on file with CAISO for those Market Participants seeking an Unsecured Credit Limit ("UCL") with CAISO. Market Participants must only file an Application for Unsecured Credit once. A Market Participant should subsequently inform CAISO of changes to their contact or other relevant information contained in the Application. A copy of the Application for Unsecured Credit can be found at the CAISO Website as follows: Operations Center/Markets/Settlements/Credit Policy/CAISO Credit Application or at the following URL: http://www.caiso.com/17b3/17b371e06a2b0.doc.

As provided in Section 12.1 of CAISO Tariff, each Market Participant must cover its outstanding financial obligations to the CAISO market by maintaining a UCL and/or by posting Financial Security. The combination of the UCL and the Financial Security Amount represents the Market Participant's Aggregate Credit Limit ("ACL"). CAISO periodically calculates a Market Participant's liabilities and notifies it in the event its ACL needs to be increased through posting of additional Financial Security (Section 7 of this BPM). It is the Market Participant's responsibility to maintain a sufficient ACL to cover its estimated financial obligations.

As provided in Section 12.1.1, 12.1.5 and 12.4 of CAISO Tariff, each Market Participant requesting or having unsecured credit is required to submit to CAISO or its designee financial statements and other information related to the overall financial health of the Market Participant. These are reviewed by CAISO or its agent in determining the Market Participant's creditworthiness and its ability to meet its financial obligations. Market Participants are responsible for the timely submission of their latest financial statements either directly or by indicating where the material can be located on their company website and/or on the U.S. Security Exchange Commission's website as well as other information that may be reasonably necessary for CAISO to conduct its evaluation. CAISO may also rely on financial reporting agencies and the financial press as part of the credit evaluation process.

As provided in Sections 12.1.1 and 12.1.2 of CAISO Tariff, a Market Participant may be denied a UCL with CAISO as a result of the credit evaluation. Market Participants who are denied a UCL may submit other forms of Financial Security acceptable to CAISO that are sufficient to cover their Estimated Aggregate Liabilities (EAL). See Section 5, Approved Forms of Financial Security Instruments, for more information.

3.2 Financial Statements

As provided in Section 12.1.1 of the CAISO Tariff, Market Participants requesting unsecured credit are required to provide financial statements to be used by CAISO in its credit assessment process.

Based on availability, the Market Participant must submit a financial statement for the most recent financial quarter, as well as audited financial statements for the most recent three fiscal years, or the period of existence of the Market Participant, if shorter, to CAISO or CAISO's designee. If audited financial statements are not available, financial statements, as described below, should be submitted, signed and attested to by an officer of the Market Participant as a fair representation of the financial condition of the Market Participant in accordance with generally accepted accounting principles.

The information should include, but is not limited to, the following:

a. If publicly traded:
    i. Annual and quarterly reports on Form 10-K and Form 10-Q, respectively
    ii. Form 8-K reports, if any
b. If privately held or governmentally owned:
    i. Management's Discussion & Analysis (if available)
    ii. Report of Independent Accountants (if available)
    iii. Financial Statements, including:
        - Balance Sheet
        - Income Statement
        - Statement of Cash Flows
        - Statement of Stockholder's Equity
    iv. Notes to Financial Statements

If the above information is available electronically on the Internet, the Market Participant may indicate in written or electronic communication where such statements are located for retrieval by CAISO or CAISO's designee.

3.3 Rating Agency Reports

Rating agency reports and credit ratings are utilized from those entities designated by the U.S. Securities & Exchange Commission as Nationally Recognized Statistical Rating Organizations (NRSROs) on their website: http://www.sec.gov/divisions/marketreg/ratingagency.htm.

The current NRSRO entities are:

- A.M. Best Company, Inc. (A.M. Best)
- Dominion Bond Rating Service Limited (DBRS)
- Fitch, Inc. (Fitch)
- Moody's Investors Service Inc. (Moody's)
- Standard & Poor's Division of the McGraw Hill Companies, Inc. (S&P)

The ratings utilized are the long-term credit ratings for the entity as a whole, on a stand-alone basis. These ratings are known as "issuer" or "underlying" ratings, and are without the benefit of third-party credit support.

Project financing ratings or insured bond ratings are not utilized, since those credit ratings are based on revenue streams or third-party funding available to bond holders but not necessarily available to trade creditors such as the suppliers to the CAISO Markets. Moreover, CAISO is advised by the credit rating agencies that these project financing ratings or insured bond ratings cannot be considered as valid measures of an entity's ability to meet its non-bond obligations.

If a Market Participant has only a "senior long-term unsecured rating" instead of an issuer rating, the rating is deemed acceptable. However, for the UCL calculation, this rating is lowered by one rating level to account for the risk that the obligations to CAISO have a lower claim priority.

If a Market Participant has only a "short-term rating" instead of an issuer rating, CAISO utilizes an equivalent long-term rating based on the ~~highlighted~~ lowest rating in the long- and short-term rating correlation table, Exhibit 3-1: Long-Term - Short-Term Equivalency Ratings.

S&P		**Moody's**	
Short Term Rating	Equivalent Long Term Ratings	Short Term Rating	Equivalent Long Term Ratings
A-1+	~~AAA/AA+/**AA**/AA-/A+~~ AAA/AA+/AA/AA-/**A+**	P1	~~Aaa/Aa1/Aa2/**AA3**/A1/A2/A3~~ Aaa/Aa1/Aa2/AA3/A1/A2/**A3**
A-1	~~A+/**A**/A-~~	P2	~~A3/Baa1/**Baa2**/Baa3~~

	A+/A/**A-**		A3/Baa1/Baa2/**Baa3**
A-2	~~A-/**BBB+**/BBB~~ A-/BBB+/**BBB**	P3	~~Baa3/Ba1/**Ba2**/Ba3~~ Baa3/Ba1/Ba2/**Ba3**
A-3	BBB/**BBB-**	NP	~~B1/B2/B3/Caa1/**Caa2**/ Caa3/Ca/C~~ B1/B2/B3/Caa1/Caa2/ Caa3/Ca/**C**
B	~~BB+/**BB**/BB-~~ BB+/BB/**BB-**		
C	~~B+ / B / B- / CCC+ / **CCC** / CCC- / CC / C~~ B+ / B / B- / CCC+ / CCC / CCC- / CC / **C**		
D	**D**		

~~The highlighted rating represents a mid-range rating in the rating agencies' long- and short-term rating correlation table.~~ Equivalent ratings from other rating agencies may also be considered. If the short-term rating is noted as being under a credit watch with negative implications, CAISO will use the next lowest long-term equivalent rating ~~in the range~~ for its assessment. For example, if a Market Participant has a Moody's short-term rating of P1 and is under credit watch with negative implications, an equivalent long-term rating of Baa1 will be used for the assessment; i.e., the next lowest long-term equivalent rating.

Rating agency reports, particularly credit ratings, are reviewed and updated minimally on a quarterly basis for those Market Participants with an Unsecured Credit Limit. They are also reviewed as needed if questions arise as to changes to a Market Participant's financial health and/or credit standing. Additionally, credit rating agency reports of downgrade/upgrades are reviewed upon notice from a rating agency to determine if the Unsecured Credit Limit should be correspondingly decreased/increased.

3.4 Other Qualitative and Quantitative Credit Strength Indicators

As provided in Section 12.1.1 of the CAISO Tariff, CAISO may rely on information gathered from financial reporting agencies, the general/financial/energy press, and provided by the Market Participant to assess an entity's overall financial health and its ability to meet its financial obligations. Information considered by CAISO in this process may include the qualitative factors noted in FERC's Policy Statement on Electric Creditworthiness[1] :

a) Applicant's history;

b) Nature of organization and operating environment;

c) Management;

d) Contractual obligations;

e) Governance policies;

f) Financial and accounting policies;

g) Risk management and credit policies;

h) Market risk including price exposures, credit exposures and operational exposures;

i) Event risk; ~~and~~

j) The state or local regulatory environment~~.~~; and

k) Affiliate disclosure information provided pursuant to Section 39.9 of the CAISO Tariff.

Material negative information in these areas may result in a reduction of up to 100% in the Unsecured Credit Limit that would otherwise be granted based on the methodology described in Section 4 of this BPM. A Market Participant, upon request, will be provided a written analysis as to how the provisions of Section 3.4 were applied in setting its Unsecured Credit Limit.

Notwithstanding the considerations described above, Market Participants are obligated to provide CAISO timely information regarding any Material Change in Financial Condition, i.e., an adverse change that could affect its or one of its affiliated entities ability to pay its debt or meet its Financial Security obligations as they become due. Examples of Material Changes in Financial Condition may include but are not limited to:

a) Credit agency downgrades;

b) Being placed on a credit watch list by a major rating agency;

c) A bankruptcy filing;

[1] [1] *Footnote 13 of "Policy Statement on Credit Related Issues for Electric OATT Transmission Providers, Independent System Operators and Regional Transmission Organizations" (Order E-40, Docket PL05-3-000, November 19, 2004).*

d) Insolvency;

e) The filing of a material lawsuit that could significantly and adversely affect past, current or future financial results; or

f) Any change in the financial condition of the Market Participant that exceeds a five percent (5%) reduction in the Market Participant's Tangible Net Worth or Net Assets for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

4. Unsecured Credit Limit Calculation

In this section you will find the following information:

- The purpose of the Unsecured Credit Limit
- A description of the components of the Unsecured Credit Limit calculation
- An explanation of the Unsecured Credit Limit calculation for each category of Market Participant

4.1 Purpose of Unsecured Credit Limit

The UCL is the level of credit established for a Market Participant that is not secured by any form of Financial Security. A maximum UCL of ~~$250~~ $150 million has been specified in CAISO Tariff. The purpose of this limit is to protect CAISO and its participants from undue exposure caused by the default of an individual Market Participant. This limit has been set based on a maximum of 95 days of charges outstanding according to the current CAISO payment calendar.[2]

4.2 Classes of Entities That May Be Eligible for Unsecured Credit

The calculation of a Market Participant's UCL depends on the entity's classification:

- **1. Rated Public/Private Corporation** - the UCL is the lesser of ~~$250~~$150 million or an amount equal to the Market Participant's Tangible Net Worth multiplied by a calculated percentage of Tangible Net Worth. The Tangible Net Worth percentage is comprised of fifty percent (50%) of the Market Participant's ~~Credit Rating Default Probability~~lowest credit agency issuer rating and fifty percent (50%) of the MKMV ~~Default Probability~~equivalent rating. If a ~~MKMV Default Probability~~Moody's KMV equivalent rating is not reasonably applicable, the Tangible Net Worth percentage is comprised of one hundred percent (100%) of the Market Participant's ~~Credit Rating Default Probability~~lowest credit agency issuer rating. See Section 4.3.2.

- **2. Unrated Public/Private Corporation** - the UCL is the lesser of ~~$250~~$150 million or an amount equal to the Market Participant's Tangible Net Worth multiplied by a calculated percentage of Tangible Net Worth. The Tangible Net Worth percentage is

[2] With the implementation of Payment Acceleration ~~(scheduled for late 2008)~~, CAISO ~~expects to propose a reduction in the~~will further reduce the ~~$250~~$150 million limit on a pro-rata basis. ~~Any changes to the $250 million limit will require FERC approval of an amendment to the applicable provisions of CAISO Tariff.~~

comprised of one hundred percent (100%) of the ~~MKMV Default Probability~~Moody's KMV equivalent rating. See Section 4.3.2.

- **3. Rated Governmental Entity** - the UCL is the lesser of ~~$250~~$150 million or an amount equal to the Market Participant's Net Assets multiplied by a calculated percentage of Net Assets. The Net Asset percentage is comprised of one hundred percent (100%) of the Market Participant's ~~Credit Rating Default Probability~~lowest credit agency issuer rating. See Section 4.3.2.

4. (a) Unrated Governmental Entities Other Than Those that Receive Appropriations from the Federal Government or a State Government – The Unsecured Credit Limit is the lesser of ~~$250~~ $150 million or an amount equal to a specified percentage of the Market Participant's Net Assets if the Market Participant has a minimum of $25 million in Net Assets and its Times Interest Earned, Debt Service Coverage and Equity to Assets ratios meet or exceed minimums specified in the Section 4.4 of this BPM.

(b) Unrated Governmental Entities that Receive Appropriations from the Federal Government or a State Government – The Unsecured Credit Limit is the lesser of ~~$250~~$150 million dollars or the amount appropriated by the federal or relevant state government for the purpose of procuring energy and energy-related products and services for the applicable fiscal year. The Unrated Governmental Entity seeking to establish an Unsecured Credit Limit pursuant to this section shall provide documentation establishing its annual appropriations.

5. Local Publicly Owned Electric Utilities – A Local Publicly Owned Electric Utility with a governing body having ratemaking authority that has submitted an application for an Unsecured Credit Limit shall be entitled to an Unsecured Credit Limit of $1 million dollars without regard to its Net Assets. Additional details of this provision are provided in Section 4.5 of this BPM.

Unsecured Credit Limits established pursuant to this Section shall be subject to CAISO's consideration of the same qualitative factors that apply to all Market Participants as set forth in Section 3.4 and, accordingly, CAISO may adjust a Market Participant's Unsecured Credit Limits pursuant to Section 3.4.

4.3 Unsecured Credit Limit Calculation for Rated and Unrated Public/Private Corporations and Rated Governmental Entities

This section documents the procedures used to set unsecured credit limits for the entities in classes 1, 2, 3 as listed in Section 4.2.

4.3.1 Definitions ~~and Variables~~ Used in ~~These Calculations~~Calculating Unsecured Credit Limits

4.3.1.1 Maximum Percentage of Tangible Net Worth or Net Assets

For Rated and Unrated Public/Private Corporations or Rated Governmental Entities, the maximum percentage of Tangible Net Worth or Net Assets is seven and a half percent (7.5%) for the highest quality entities; that is, those Market Participant's ~~whose Combined Default Probability is less than or equal to six hundredths percent (0.06%)~~who maintain the highest Moody's KMV equivalent rating and/or credit agency issuer ratings. The percentage a Market Participant qualifies for will be reduced as its credit risk increases as determined by having a lower Moody's KMV equivalent rating and/or credit agency issuer rating.

A lesser amount of unsecured credit may be granted if CAISO becomes aware of information related to a Material Change in Financial Condition or other significant information that presents a significant risk to the creditworthiness of the entity. For more information, see Section 3.4, Other Qualitative and Quantitative Credit Strength Indicators.

4.3.1.2 ~~Combined Default Probability~~Determining the Percent of Tangible Net Worth or Net Assets

The calculation of UCL is based in part on ~~the~~ determining the percent of Tangible Net Worth (TNW) or Net Assets (NA) for an entity. ~~'s Combined Default Probability (CDP)~~. ~~CDP is a Market Participant's blended probability of default based on Average Rating Default Probability (ARDP) and MKMV Default Probability (MKDP)~~This involves the blending of an entity's Moody's KMV equivalent rating and the lowest credit agency issuer rating according to the following rules established for different entity types:

- ~~CDP~~ Percent of Tangible Net Worth for Rated Public/Private Corporations = (~~ARDP~~ Percent of TNW or NA for the lowest credit agency issuer rating * 50%) + (~~MKDP~~ Percent of TNW or NA for the Moody's KMV equivalent rating * 50%) or (~~ARDP~~ Percent of TNW or NA for the lowest credit agency issuer rating * 100%) if the ~~MKDP~~ Moody's KMV equivalent rating is not reasonably applicable.

- ~~CDP~~ Percent of Tangible Net Worth for Unrated Public/Private Corporations = ~~MKDP~~ Percent of TNW or NA for the Moody's KMV equivalent rating * 100%

- ~~CDP~~ Percent of Net Assets for Rated Governmental Entities = ~~ARDP~~ Percent of TNW or NA for the lowest credit agency issuer rating * 100%

- The calculation of UCL for Unrated Governmental Entities does not involve ~~CDP~~the use of Moody's KMV equivalent ratings or credit agency issuer ratings

4.3.1.3 ~~Average Rating Default Probability~~Determining an Entity's Tangible Net Worth or Net Assets

~~The Average Rating Default Probability (ARDP) used in the calculation of CDP is the sum of Credit Rating Default Probabilities divided by the total number of Credit Rating Default Probabilities available. Credit Rating Default Probabilities are updated periodically, and the current figures will be posted on the CAISO website under the heading "Credit Rating Default Probabilities -- Used in Unsecured Credit Limit Calculation" in the following location: http://www.caiso.com/1bd8/1bd8b09916e50.html~~

~~The following illustrative table shows the Credit Rating Default Probabilities (labeled "5 Year Median Default Probability") from Moody's KMV (a subsidiary of Moody's Investors Service Inc.), that are determined as a function of issuer ratings (without the benefit of credit enhancement) from two of the NRSROs (Moody's and S&P). These ARDPs are based on the five-year historical median of Moody's KMV EDF™ (Expected Default Frequency).~~

~~Credit Rating Default Probabilities table follows…~~

For purposes of setting an entity's Unsecured Credit Limit, Tangible Net Worth is defined as equaling total assets minus assets (net of any matching liabilities assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default (examples include restricted assets and affiliate assets) minus intangible assets (i.e., those assets not having a physical existence such as patents, trademarks, franchises, intellectual property and goodwill) minus derivative assets (net of any matching liabilities assuming the result is a positive value) minus total liabilities.

Net Assets are used for governmental and not-for-profit entities instead of Tangible Net Worth. For purposes of setting an entity's Unsecured Credit Limit, Net Assets are defined as total assets minus assets (net of any matching liabilities assuming the result is a positive value) the CAISO reasonably believes to be restrictive or potentially unavailable to settle a claim in the event of a default (examples include restricted assets) minus total liabilities.

Because the assets being excluded from the Tangible Net Worth or Net Assets calculation can vary substantially from one financial reporting period to the next – sometimes making the difference of an entity receiving unsecured credit one reporting period and not the next – the CAISO may also exercise its good, prudent business judgment in reducing an entity's UCL as a result of assessing Other Qualitative and Quantitative Credit Strength Indicators (Step 6 of the six-step process) as described in Section 3.4 of this BPM.

~~**CREDIT RATING DEFAULT PROBABILITIES (DP)**~~					
~~**Based on 5 year historical median of Moody's KMV EDF's**~~					
~~-~~	~~-~~	~~**(Indicative Table *)**~~ ~~-~~		~~-~~	~~-~~
~~**Maximum Allowable Percentage)**~~				~~**7.50%**~~	~~-~~
~~**Base Default Probability**~~				~~**0.06%**~~	~~-~~
~~**Moody's**~~	~~**5 Year Median Default Probability**~~	~~**Tangible Net Worth or Net Asset Percentage**~~	~~**S&P**~~	~~**5 Year Median Default Probability**~~	~~**Tangible Net Worth or Net Asset Percentage**~~
~~Aaa~~	~~0.020%~~	~~7.50%~~	~~AAA~~	~~0.020%~~	~~7.50%~~
~~Aa1~~	~~0.032%~~	~~7.50%~~	~~AA+~~	~~0.033%~~	~~7.50%~~
~~Aa2~~	~~0.040%~~	~~7.50%~~	~~AA~~	~~0.042%~~	~~7.50%~~
~~Aa3~~	~~0.056%~~	~~7.50%~~	~~AA-~~	~~0.059%~~	~~7.50%~~
~~A1~~	~~0.080%~~	~~5.60%~~	~~A+~~	~~0.084%~~	~~5.38%~~
~~A2~~	~~0.114%~~	~~3.94%~~	~~A~~	~~0.119%~~	~~3.80%~~
~~A3~~	~~0.144%~~	~~3.12%~~	~~A-~~	~~0.154%~~	~~2.92%~~
~~Baa1~~	~~0.182%~~	~~2.47%~~	~~BBB+~~	~~0.200%~~	~~2.25%~~
~~Baa2~~	~~0.230%~~	~~1.95%~~	~~BBB~~	~~0.259%~~	~~1.73%~~
~~Baa3~~	~~0.307%~~	~~1.47%~~	~~BBB-~~	~~0.367%~~	~~1.23%~~
~~Ba1~~	~~0.408%~~	~~1.10%~~	~~BB+~~	~~0.518%~~	~~0.00%~~
~~Ba2~~	~~0.544%~~	~~0.00%~~	~~BB~~	~~0.733%~~	~~0.00%~~
~~Ba3~~	~~0.848%~~	~~0.00%~~	~~BB-~~	~~1.215%~~	~~0.00%~~
~~B1~~	~~1.323%~~	~~0.00%~~	~~B+~~	~~2.014%~~	~~0.00%~~
~~B2~~	~~2.064%~~	~~0.00%~~	~~B~~	~~3.338%~~	~~0.00%~~
~~B3~~	~~4.168%~~	~~0.00%~~	~~B-~~	~~5.384%~~	~~0.00%~~
~~Caa1~~	~~8.418%~~	~~0.00%~~	~~CCC+~~	~~8.682%~~	~~0.00%~~
~~Caa2~~	~~17.000%~~	~~0.00%~~	~~CCC~~	~~14.000%~~	~~0.00%~~
~~Caa3~~	~~17.946%~~	~~0.00%~~	~~CCC-~~	~~14.936%~~	~~0.00%~~
~~Ca~~	~~20.000%~~	~~0.00%~~	~~CC~~	~~17.000%~~	~~0.00%~~
~~C~~	~~20.000%~~	~~0.00%~~	~~C~~	~~18.250%~~	~~0.00%~~
~~-~~	~~-~~	~~-~~	~~D~~	~~20.000%~~	~~0.00%~~
~~* Table is subject to update on a monthly basis. Current table will be on CAISO credit webpage: http://www.caiso.com/docs/2005/06/14/2005061416563266466.html~~					

Grade	Moody's KMV Equivalent Rating*	Credit Agency Issuer Rating			Percent of TNW or Net Assets
		Moody's	S&P	Fitch	
Investment Grade	Aaa	Aaa	AAA	AAA	7.50
	Aa1	Aa1	AA+	AA+	7.50
	Aa2	Aa2	AA	AA	7.00
	Aa3	Aa3	AA-	AA-	7.00
	A1	A1	A+	A+	6.00
	A2	A2	A	A	5.00
	A3	A3	A-	A-	4.00
	Baa1	Baa1	BBB+	BBB+	3.00
	Baa2	Baa2	BBB	BBB	2.00
	Baa3	Baa3	BBB-	BBB-	1.00
Speculative Grade	Ba1	Ba1	BB+	BB+	0.00
	Ba2	Ba2	BB	BB	0.00
	Ba3	Ba3	BB-	BB-	0.00
	B1	B1	B+	B+	0.00
	B2	B2	B	B	0.00
	B3	B3	B-	B-	0.00
	Caa1	Caa1	CCC+	CCC+	0.00
	Caa2	Caa2	CCC	CCC	0.00
	Caa3	Caa3	CCC-	CCC-	0.00
	Ca	Ca	CC	CC	0.00
	D	D	C	C	0.00
	_		D	D	0.00

* Moody's KMV equivalent rating is derived by Moody's KMV from the Moody's KMV Estimated Default Frequency (EDF) that effectively translates an EDF into a comparable credit agency rating. The equivalent rating may be referred to as the Moody's KMV Spot Credit Rating (CreditEdge Plus™) or Bond Default Rate Mapping or Dynamic Rating (RiskCalc®) or some comparable name established by Moody's KMV for this purpose.

~~4.3.1.4 Moody's KMV Default Probability~~

~~The Moody's KMV Default Probability (MKDP) utilized in the calculation of CDP is obtained using one of Moody's KMV products: CreditEdge Plus™ or RiskCalc®.~~

4.3.2 Unsecured Credit Limit Calculation for Rated/Unrated Public/Private Corporations and Rated Governmental Entities

A~~n~~ ~~eight~~six-step process is used to determine Unsecured Credit Limits for Market Participant's UCL that are Rated Public/Private Corporations, Unrated Public/Private Corporations and Rated Governmental Entities.

Step 1 – If the Market Participant has an issuer rating (also known as "counterparty" of "underlying" rating) from one or more of the NRSROs, verify the rating(s) with the appropriate NRSRO. If issuer ratings are unavailable, see Section 3.3 for alternative ratings that may be used. Regardless of the number of ratings available, the lowest rating will be used for purposes of determining the percent of TNW or NA.

~~**Step 2** – Calculate the Market Participant's Average Rating Default Probability (ARDP). ARDP is the sum of Credit Rating Default Probabilities from Exhibit 4-1 divided by the total number of Credit Rating Default Probabilities available.~~

Step 2~~3~~ – Using Moody's KMV CreditEdge™ software for Rated Public/Private Corporations for which securities are publicly traded or RiskCalc® software for subsidiaries of Rated Public/Private Corporations for which securities are publicly traded and Unrated Public/Private Corporations (if reasonably applicable), obtain the Market Participant's Moody's KMV ~~Default Probability (MKDP)~~ equivalent rating. RiskCalc was not designed for some types of Market Participants and the CAISO will consult with Moody's KMV as to its applicability for a particular entity type. Accordingly, a ~~MKDP~~ Moody's KMV equivalent rating may not be available for certain CAISO Market Participants.

Step 3~~4~~ – Calculate ~~a Combined Default Probability (CDP)~~the percent of TNW or NA based on the type of entity as described in Section 4.3.1.2.

~~**Step 5** – Calculate the Market Participant's Tangible Net Worth Percentage (TNWP) or Net Assets Percentage (NAP):~~

~~TNWP = MAP * BDP / CDP for Rated and Unrated Public/Private Corporations~~

~~NAP = MAP * BDP / CDP for Rated Governmental Entities~~

~~Where:~~

~~MAP = Maximum allowable percentage from Exhibit 4-1~~

~~BDP = Base default probability from Exhibit 4-1~~

~~CDP = Combined Default Probability from Step 4 above.~~

~~**NOTE: TNWP or NAP equals zero percent (0%) if the entities CDP is greater than 0.5%.**~~

Step 4~~6~~ – Calculate the Market Participant's Tangible Net Worth or Net Assets:

1. Tangible Net Worth (TNW) for Rated or Unrated Public/Private Corporations equals ~~Total Assets minus Total Liabilities minus Intangible Assets. Examples of Intangible Assets include Good Will, etc.~~ total assets minus assets (net of any matching liabilities assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default (examples include restricted assets and affiliate assets) minus intangible assets (i.e., those assets not having a physical existence such as patents, trademarks, franchises, intellectual property and goodwill) minus derivative assets (net of any matching liabilities assuming the result is a positive value) minus total liabilities.

2. Net Assets (NA) for Rated Governmental Entities ~~equals Total Assets minus Total Liabilities~~equals total assets minus assets (net of any matching liabilities assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default (examples include restricted assets) minus total liabilities.

Step 5~~7~~ – Calculate the Market Participant's intermediate UCL:

1. Intermediate UCL = TNW (from Step 4) * ~~TNWP~~ percent of TNW (from Step 3) for Rated or Unrated Public/Private Corporations

2. Intermediate UCL = NA (from Step 4) * ~~NAP~~ percent of NA (from Step 3) for Rated Governmental Entities.

Step ~~6~~8 – Adjust the intermediate UCL downward, if warranted based on CAISO's review of factors described in Section 3.4, Other Qualitative and Quantitative Credit Strength Indicators:

Final UCL = intermediate UCL from Step ~~7~~ 5 * adjustment factor (0 - 100%)

Where the adjustment factor is determined by the CAISO Finance Department based on the qualitative and quantitative credit strength indicators discussed in Section 3.4.

4.3.3 Example Unsecured Credit Limit Calculations for Rated/Unrated Public/Private Corporations and Rated Governmental Entities

This section provides example UCL calculations for each of these entity types.

4.3.3.1 Rated Public/Private Corporations

~~**Step 1 – Step 2**: Calculate the Market Participant's Average Rating Default Probability.~~

~~If a Market Participant has a Moody's long-term rating of Baa2 and a Standard & Poor's long-term rating of BBB+, its Average Rating Default Probability is calculated as follows:~~

~~ARDP = (0.230% + 0.200%) / 2 = 0.215%.~~

~~**Step 3 – Step 4**: Calculate a Combined Default Probability.~~

~~If the Market Participant has a 0.240% Moody's KMV default probability, its Combined Default Probability is calculated as follows:~~

~~CDP = (50% x 0.215%) + (50% x 0.240%) = 0.228%. If a Moody's KMV Default Probability is not reasonably applicable, CDP = (100% x 0.215%) =0.215%.~~

~~**Step 5**: Calculate the Market Participant's Tangible Net Worth Percentage.~~

~~The Tangible Net Worth Percentage is calculated as follows:~~

~~TNWP = 7.5% x 0.06% / 0.228% = 1.97% (or TNWP = 7.5% x 0.06% / 0.215% = 2.093% for an entity for which a Moody's KMV Default Probability is not reasonably applicable).~~

~~**Step 6 – Step 8**: Calculate the Market Participant's Tangible Net Worth and UCL. Exhibit 4-3: Sample Calculation of UCL for a Rated Public/Private Corporation shows the steps for completing the UCL calculation.~~

~~**Sample Calculation of UCL for a Rated Public/Private Corporation**~~

~~Step 5.~~ ~~Tangible Net Worth Percentage (TNWP)~~	~~Step 6.~~ ~~Tangible Net Worth (TNW)~~	~~Step 7.~~ ~~Unsecured Credit Limit (UCL)~~	~~Step 8.~~ ~~Adjust UCL Based on Qualitative Factors~~
~~1.97%~~	~~Tangible Assets (i.e., Total Assets less Goodwill)~~ ~~$192,100,000~~ ~~minus~~ ~~Total Liabilities~~ ~~$38,000,000~~ ~~equals~~ ~~TNW~~ ~~$154,100,000~~	~~TNW~~ ~~$154,100,000~~ ~~times~~ ~~TNWP~~ ~~1.97% (or 2.093% if the MKMV EDF is not reasonable applicable)~~ ~~equals~~ ~~UCL~~ ~~$3,036,000 (or $3,225,313 if the MKMV EDF is not reasonably applicable)~~	~~UCL~~ ~~$3,036,000 (or $3,225,313 if the MKMV EDF is not reasonably applicable)~~ ~~times~~ ~~Adjustment Factor based on qualitative factors as specified in Section 3.4.~~ ~~80%~~ ~~equals~~ ~~Adjusted UCL~~ ~~$2,429,000 (or $2,580,250 if the MKMV EDF is not reasonably applicable)~~

Example 1:

A Rated Public/Private Corporation has a Moody's issuer rating of "A2", an S&P issuer rating of "BBB+", a Fitch issuer rating of "A" and a Moody's KMV equivalent rating of "Baa2". In addition, the Rated Public/Private Corporation's latest financial report states:

- Total assets = $10,000,000,000
- Restricted assets (less matching liabilities) = $1,000,000,000
- Intangible assets = $500,000,000
- Derivative assets (less matching liabilities) = $2,500,000,000
- Total liabilities = $2,000,000,000

CAISO would calculate the Unsecured Credit Limit as follows:

Step 1: Lowest agency credit rating: S&P issuer rating of "BBB+"

Step 2: Moody's KMV equivalent rating of "Baa2"

Step 3: Percent of TNW = (Percent of TNW or NA for the Moody's KMV equivalent rating * 50%) + (Percent of TNW or NA for the lowest credit agency issuer rating * 50%) = (2.00% * 50%) + (3.00% * 50%) = 1.00% + 1.50% = 2.50%

Step 4: TNW = total assets minus restricted assets minus intangible assets minus derivative assets minus total liabilities = $10,000,000,000 - $1,000,000,000 - $500,000,000 - $2,500,000,000 - $2,000,000,000 = $4,000,000,000

Step 5: Intermediate UCL = TNW times Percent of TNW = $4,000,000,000 * 2.50% = $100,000,000

Step 6: Final UCL = intermediate UCL times a factor of 0% - 100% based on other qualitative and quantitative credit strength indicators = $100,000,000 * 100% = $100,000,000

Example 2:

Same as Example 1 except a Moody's KMV equivalent rating does not exist or is not judged by the CAISO to be reasonably applicable:

Step 1: Lowest agency credit rating: S&P issuer rating of "BBB+"

Step 2: Moody's KMV equivalent rating not available or not reasonable applicable

Step 3: Percent of TNW = (Percent of TNW or NA for the lowest credit agency issuer rating * 100%) = (3.00% * 100%) = 3.00%

Step 4: TNW = total assets minus restricted assets minus intangible assets minus derivative assets minus total liabilities = $10,000,000,000 -

$1,000,000,000 - $500,000,000 - $2,500,000,000 - $2,000,000,000 = $4,000,000,000

Step 5: Intermediate UCL = TNW times Percent of TNW = $4,000,000,000 * 2.50% = $120,000,000

Step 6: Final UCL = intermediate UCL times a factor of 0% - 100% based on other qualitative and quantitative credit strength indicators = $120,000,000 * 100% = $120,000,000

4.3.3.2 Unrated Public/Private Corporations

An Unrated Public/Private Corporation has a Moody's KMV equivalent rating of "Baa2". In addition, the Unrated Public/Private Corporation's latest financial report states:

Total assets = $10,000,000,000

Restricted assets (less matching liabilities) = $1,000,000,000

Intangible assets = $500,000,000

Derivative assets (less matching liabilities) = $2,500,000,000

Total liabilities = $2,000,000,000

CAISO would calculate the Unsecured Credit Limit as follows:

Step 1: Not applicable for an Unrated Public/Private Corporation

Step 2: Moody's KMV equivalent rating of "Baa2"

Step 3: Percent of TNW = (Percent of TNW or NA for the Moody's KMV equivalent rating * 100%) = (2.00% * 100%) = 2.00%

Step 4: TNW = total assets minus restricted assets minus intangible assets minus derivative assets minus total liabilities = $10,000,000,000 - $1,000,000,000 - $500,000,000 - $2,500,000,000 - $2,000,000,000 = $4,000,000,000

Step 5: Intermediate UCL = TNW times Percent of TNW = $4,000,000,000 * 2.00% = $80,000,000

Step 6: Final UCL = intermediate UCL times a factor of 0% - 100% based on other qualitative and quantitative credit strength indicators = $80,000,000 * 100% = $80,000,000

~~**Step 1 – Step 2**: Calculate the Market Participant's Average Rating Default Probability~~

~~These steps would not be applicable for an Unrated Public/Private Corporation.~~

~~**Step 3 – Step 4**: Calculate a Combined Default Probability~~

~~If the Market Participant has a 0.240% MKMV Default Probability, its Combined Default Probability is calculated as follows:~~

~~CDP = 100% * 0.240% = 0.240%~~

~~**Step 5**: Calculate the Market Participant's Allowable Tangible Net Worth Percentage.~~

~~The Tangible Net Worth Percentage is calculated as follows:~~

~~TNWP = 7.5% x 0.06% / 0.240% = 1.88%~~

~~**Step 6 – Step 8**: Calculate the Market Participant's Tangible Net Worth and Unsecured Credit Limit. Exhibit 4-4: Sample Calculation of UCL for an Unrated Public/Private Corporation shows the steps for completing the UCL calculation.~~

~~**Sample Calculation of UCL for an Unrated Public/Private Corporation**~~

~~Step 5.~~ ~~Tangible Net Worth Percentage (TNWP)~~	~~Step 6.~~ ~~Tangible Net Worth (TNW)~~	~~Step 7.~~ ~~Unsecured Credit Limit (UCL)~~	~~Step 8.~~ ~~Adjust UCL Based on Qualitative Factors~~

~~1.88%~~	~~Tangible Assets (i.e., Total Assets less Goodwill)~~ ~~$192,100,000~~ ~~minus~~ ~~Total Liabilities~~ ~~$38,000,000~~ ~~equals~~ ~~TNW~~ ~~$154,100,000~~	~~TNW~~ ~~$154,100,000~~ ~~times~~ ~~TNWP~~ ~~1.88%~~ ~~equals~~ ~~UCL~~ ~~$2,897,000~~	~~UCL~~ ~~$2,897,000~~ ~~times~~ ~~Adjustment factor based on qualitative factors as specified in section A-1.3.~~ ~~50%~~ ~~equals~~ ~~Adjusted UCL~~ ~~$1,449,000~~

4.3.3.3 Rated Governmental Entities

A Rated Governmental Entity has a Moody's issuer rating of "A2", an S&P issuer rating of "BBB+", a Fitch issuer rating of "A". In addition, the Rated Governmental Entity's latest financial report states:

Total assets = $10,000,000,000

Restricted assets (less matching liabilities) = $1,000,000,000

Total liabilities = $2,000,000,000

CAISO would calculate the Unsecured Credit Limit as follows:

Step 1: Lowest agency credit rating: S&P issuer rating of "BBB+"

Step 2: Moody's KMV equivalent ratings are not available for governmental entities

Step 3: Percent of TNW = (Percent of TNW or NA for the lowest credit agency issuer rating * 100%) = (3.00% * 100%) = 3.00%

Step 4: TNW = total assets minus restricted assets minus total liabilities = $10,000,000,000 - $1,000,000,000 - $2,000,000,000 = $7,000,000,000

Step 5: Intermediate UCL = TNW times Percent of TNW = $7,000,000,000 * 3.00% = $210,000,000 which is reduced to $150,000,000 so as not to exceed the maximum amount of unsecured credit allowed

Step 6: Final UCL = intermediate UCL times a factor of 0% - 100% based on other qualitative and quantitative credit strength indicators = $150,000,000 * 100% = $150,000,000

~~**Step 1 – Step 2**: Calculate the Market Participant's Average Rating Default Probability~~

~~If the Market Participant has a Moody's long-term rating of A1 and a Standard & Poor's long-term rating of AA-, its Average Rating Default Probability is calculated as follows:~~

~~ARDP = (0.080% + 0.059%) / 2 = 0.070%~~

~~**Step 3 – Step 4**: Calculate a Combined Default Probability~~

~~MKMV Default Probabilities are not available for Rated Governmental Entities. Therefore, the Combined Default Probability is calculated as follows:~~

~~CDP = 100% * 0.070% = 0.070%~~

~~**Step 5**: Calculate the Market Participant's Allowable Net Asset Percentage.~~

~~The Net Asset Percentage is calculated as follows:~~

~~NAP = 7.5% x 0.06% / 0.070% = 6.43%~~

~~**Step 6 – Step 8**: Calculate the Market Participant's Net Assets and Unsecured Credit Limit. Exhibit 4-5: Sample Calculation of UCL for a Rated Governmental Entity shows the steps for completing the UCL calculation.~~

~~**Sample Calculation of UCL for a Rated Governmental Entity**~~

~~Step 5.~~	~~Step 6.~~	~~Step 7.~~	~~Step 8.~~
~~Net Assets Percentage (NAP)~~	~~Net Assets~~	~~Unsecured Credit Limit (UCL)~~	~~Adjust UCL Based on Qualitative Factors~~

~~6.43%~~	~~Total Assets~~ ~~$192,100,000~~ ~~minus~~ ~~Total Liabilities~~ ~~$38,000,000~~ ~~equals~~ ~~Net Assets~~ ~~$154,100,000~~	~~Net Assets~~ ~~$154,100,000~~ ~~times~~ ~~NAP~~ ~~6.43%~~ ~~equals~~ ~~UCL~~ ~~$9,909,000~~	~~UCL~~ ~~$9,909,000~~ ~~times~~ ~~Adjustment factor based on qualitative factors as specified in section A-1.3.~~ ~~100%~~ ~~equals~~ ~~Adjusted UCL~~ ~~$9,909,000~~

4.4 Unsecured Credit Limit Calculation for Unrated Governmental Entities

4.4.1 Criteria for Unsecured Credit for Unrated Governmental Entities Other Than Those that Receive Appropriations from the Federal Government or a State Government

An Unrated Governmental Entity is eligible for Unsecured Credit if it meets the requirements set forth in the Table below.

Financial Metric	**Calculation**	**Minimum Accepted Value**
Net Assets	Total Assets – Restricted Assets – Total Liabilities	$25 million
Times Interest Earned	(Long-Term Debt Interest Expense + Change in Net Assets) / Long-Term Debt Interest Expense	1.05
Debt Service Coverage	(Depreciation & Amortization Expense + Long Term Debt Interest Expense + Change in Net Assets) / Debt Service Billed (Debt Service Interest and Principal).	1.00
Equity to Assets	Total Equity / Total Assets	0.15

For those Unrated Governmental Entities that meet all of the above criteria, the maximum amount of unsecured credit is calculated as five percent (5%) of Net Assets (i.e., five percent of ~~T~~total ~~A~~assets minus restricted assets (less any matching liabilities if the result is greater than zero) minus ~~T~~total ~~L~~liabilities). That percentage may be adjusted downward by up to 100% if CAISO becomes aware of significant negative information regarding the Market Participant's operations as determined through trade publications and/or the financial press.

4.4.1.1 Example Unsecured Credit Limit Calculations for Unrated Governmental Entities Other Than Those that Receive Appropriations from the Federal Government or a State Government

The UCL calculation for an Unrated Governmental Entity not receiving appropriations requires financial data as set forth in the table above. Assume the following for purposes of this example:

Long-Term Debt Interest Expense = $7,900,000

Change in Net Assets = $4,100,000

Depreciation & Amortization Expense = $5,900,000

Debt Service Billed = $9,900,000

Total Assets = $283,600,000

Restricted assets (less matching liabilities if greater than zero) = ($1,000,000) (since this value is less than zero, zero will be used in the calculation)

Total Liabilities = $232,500,000

Based on the above information, the following financial metrics are calculated to determine if a UCL can be granted:

Net Assets = Total Equity = Total Assets – Restricted Assets – Total Liabilities = $51,100,000 (***Acceptable)***

Times Interest Earned = (Long-Term Debt Interest Expense + Change in Net Assets) / Long-Term Debt Interest Expense = ($7,900,000 + $4,100,000) / $7,900,000 = 1.52 ***(Acceptable)***

Debt Service Coverage = (Depreciation and Amortization Expense + Long-Term Debt Interest Expense + Change in Net Assets) / Debt Service Billed = ($5,900,000 + $7,900,000 + $4,100,000) / $9,900,000 = 1.81 ***(Acceptable)***

Equity to Assets = Total Equity / Total Assets = $51,100,000 / $283,600,000 = 0.18 ***(Acceptable)***

Based on each of the financial metrics exceeding the Minimum Accepted Value as defined in Section 4.4.1, the UCL is calculated as follows:

Intermediate UCL = Net Assets * 5% = $51,100,000 * 0.05 = $2,555,000

~~Adjusted~~ UCL = intermediate UCL * adjustment factor based on qualitative factors = $2,555,000 * 100% = $2,555,000

It should be noted that the adjustment factor based on qualitative factors can vary between 0 – 100% based on the same qualitative factors used to assess other entity types. These qualitative factors are further described in Section 3.4 of this BPM. In addition, the entity would not be eligible for a UCL if any of the above financial metrics had not met the Minimum Accepted Value as defined in Section 4.4.1.

4.4.2 Unsecured Credit Limit for an Unrated Governmental Entity That Receives Appropriations from the Federal Government or a State Government

An Unrated Governmental Entity that receives appropriations from the federal government or a state government that has submitted an Application for Unsecured Credit shall be entitled to an Unsecured Credit Limit of the lower of the cap of ~~250~~ $150 million ~~dollars ($250,000,000)~~ or the amount appropriated by the federal or relevant state government for the purpose of procuring energy and energy-related products and services for the applicable fiscal year. The Unrated Governmental Entity seeking to establish an Unsecured Credit limit pursuant to this section shall provide documentation establishing its annual appropriations. Unsecured Credit Limits established pursuant to this section or through Section 12.1.1 of the CAISO Tariff shall be subject to CAISO's consideration of the same qualitative factors that apply to all other Market Participants and, accordingly, CAISO may adjust their Unsecured Credit Limits pursuant to Section 12.1.1 of the CAISO Tariff.

4.5 Unsecured Credit Limit Calculation for Local Publicly Owned Electric Utilities

A Local Publicly Owned Electric Utility with a governing body having ratemaking authority that has submitted an application for an Unsecured Credit Limit shall be entitled to an Unsecured Credit Limit of $1 million dollars without regard to its Net Assets.

Such Local Publicly Owned Electric Utility shall be entitled to request an Unsecured Credit Limit based on Net Assets as provided in Section 4.3 or 4.4 of this BPM (corresponding to Tariff Section 12.1.1.A(3) or 12.1.1A(4)) in order to establish an Unsecured Credit Limit as the greater of $1 million dollars or the amount determined as provided in this Section (tariff Reference 12.1.1A(5)).

A public entity that is not a Local Publicly Owned Electric Utility is not entitled to an Unsecured Credit Limit of $1 million dollars under this Section 12.1.1A(5) but may seek to establish an Unsecured Credit Limit as provided in any other provision of the CAISO Tariff that may apply.

4.5.1 Public Entities Operating Through Joint Power Agreements

Public entities, including Local Publicly Owned Electric Utilities, that operate through a Joint Powers Agreement, or a similar agreement acceptable to CAISO with the same legal force and effect, shall be entitled to aggregate or assign their Unsecured Credit Limits subject to the following limitations and requirements. A public entity that is a party to a Joint Powers Agreement or similar agreement and that is also participating independently in CAISO's markets with an established Unsecured Credit Limit shall not be entitled to assign or aggregate any portion of its Unsecured Credit Limit that the public entity is using to support financial liabilities associated with its individual participation in CAISO's markets. A Local Publicly Owned Electric Utility that operates through a Joint Powers Agreement or similar agreement that desires to aggregate a portion of its Unsecured Credit Limit that is equal to or less than $1 million dollars with one or more other Local Publicly Owned Electric Utilities that operate through that Joint Powers Agreement or similar agreement or to assign a portion of its Unsecured Credit Limit that is equal to or less than $1 million dollars to the Joint Powers Authority shall be entitled to do so. A Local Publicly Owned Electric Utility that operates through a Joint Powers Agreement or similar agreement that desires to aggregate its Unsecured Credit Limit with one or more other Local Publicly Owned Electric Utilities that operate through that Joint Powers Agreement or similar agreement or to assign a portion of its Unsecured Credit Limit to the Joint Powers Authority that exceeds $1 million dollars, and any public entity that is not a Local Publicly Owned Electric Utility that operates through a Joint Powers Agreement or similar agreement that desires to aggregate its Unsecured Credit Limit with one or more other Local Publicly Owned Electric Utilities that operate through that Joint Powers Agreement or similar agreement or to assign any portion of its Unsecured Credit Limit to the Joint Powers Authority, shall provide documentation that is acceptable to CAISO and that demonstrates the Local Publicly Owned Electric Utility or public entity will assume responsibility for the financial liabilities of the Joint Powers Agency associated with the assigned or aggregated portion of the

Unsecured Credit Limit. Such documentation may include a guaranty or similar instrument acceptable to CAISO.

4.6 Unsecured Credit Limit Issues for Affiliated Entities

As provided in Section 12.1.1.1 of CAISO Tariff, if any Market Participant requesting or maintaining a UCL is affiliated with one or more other entities subject to the credit requirements of Section 12 of the CAISO Tariff, CAISO may consider the overall creditworthiness and financial condition of these Affiliated Entities when determining the applicable UCL. CAISO may determine that the maximum UCL calculated in accordance with Section 4 of this BPM applies to the combined activity of these Affiliated Entities.

5. Approved Forms of Financial Security Instruments

In this section you will find information on the following topics:

- A list of the forms of Financial Security instruments CAISO accepts
- How CAISO uses the standard and non-standard forms
- A description of the acceptable debt ratings of issuing banks, financial institutions and insurance companies
- How CAISO uses Credit from Affiliates
- Issues related to prepayments
- Responsibility for losses of funds held by CAISO as a prepayment
- How CAISO treats the expiration of financial instruments

5.1 Forms of Financial Security

In accordance with Section 12.1.2 of CAISO Tariff, a Market Participant at its own expense, may submit one or more forms of Financial Security to meet or increase its Financial Security posting requirement. Pro-forma templates for each category of Financial Security may be found at the following CAISO website location:

http://www.caiso.com/docs/2005/06/14/200506141656326466.html

The forms of Financial Security are titled as follows:

a) An irrevocable and unconditional letter of credit issued by a bank or financial institution that is reasonably acceptable to CAISO (listed as "CAISO Form Letter of Credit" on the CAISO website)

b) An irrevocable and unconditional surety bond issued by an insurance company that is reasonably acceptable to CAISO (listed as "CAISO Form Surety Bond" on the CAISO website)

c) An unconditional guaranty issued by a company that is reasonably acceptable to CAISO (listed as "CAISO Form Guaranty" on the CAISO website)

d) A cash deposit in an escrow account maintained at a bank or financial institution that is reasonably acceptable to CAISO (listed as “CAISO Form Escrow Agreement” on the CAISO website)

e) A certificate of deposit in the name of CAISO issued by a bank or financial institution that is reasonably acceptable to CAISO (listed as “CAISO Form Certificate of Deposit” on the CAISO website)

f) A payment bond certificate issued by a bank or financial institution that is reasonably acceptable to CAISO (not on the CAISO website)

g) A prepayment to CAISO (a specific agreement related to a prepayment is not required. Prepayments are governed by Section 11.3.3 of the CAISO Tariff)

5.2 Standard & Non-Standard Forms

CAISO maintains standard agreement forms related to the types of Financial Security listed in Section 5.1, Forms of Financial Security. In accordance with Section 12.1.2.1 of CAISO Tariff, CAISO evaluates non-standard agreement forms for these types of Financial Security on a case-by-case basis. For those Market Participants that propose the use of a non-standard agreement form, the form is subject to review and approval by CAISO Finance and Legal Departments. A Market Participant is required to justify any proposed departures from CAISO standard agreement form.

Within ten (10) Business Days from receipt of any form of Financial Security, CAISO evaluates it and determines whether it is reasonably acceptable and approved. Significant departures from CAISO standard agreement forms may not be accepted. The request is denied if CAISO does not respond within ten (10) Business Days. If the need to post additional Financial Security is prompted by an additional Financial Security request based upon the latest Estimated Aggregate Liability (EAL) calculation, the review process does not defer the Market Participant’s obligation to post additional Financial Security.

5.3 Minimum Debt Ratings

The standard that CAISO uses in establishing reasonable acceptability for issuing banks, financial institutions or insurance companies is that the institution has and maintains a minimum corporate debt rating of an “A-“ by S&P, “A3” by Moody’s, “A-“ by Duff & Phelps, “A-“ by Fitch or an equivalent short-term debt rating by any of these agencies.

5.4 Foreign Guarantees

A Foreign Guaranty is a Guaranty that is provided by an Affiliate entity that is domiciled in a country other than the United States or Canada. The entity providing a Foreign Guaranty on behalf of a Market Participant is a Foreign Guarantor. A Market Participant may provide a Foreign Guaranty in satisfaction of part of its obligations to the CAISO provided that all of the following conditions are met. The CAISO reserves the right to deny, reject, or terminate acceptance of any Foreign Guaranty at any time, including for material adverse circumstances or occurrences.

a. A Foreign Guaranty:

i. Must contain provisions equivalent to those contained in CAISO's standard form Guaranty with any modifications subject to review and approval by CAISO;

ii. Must be denominated in US currency;

iii. Must be written and executed solely in English, including any duplicate originals; and

iv. Will not be accepted towards an Market Participant's Unsecured Credit Limit for more than the following limits, depending on the Foreign Guarantor's credit rating:

Rating of Foreign Guarantor (S&P/Moody's Rating)	Maximum Guaranty Amount
AA+/Aa1 or above	US $25 million
AA/Aa2 to AA-/Aa3	US $15 million
A+/A1 to A-/A3	US $5 million
BBB+/Baa1 or below	None

b. A Foreign Guarantor:

i. Must satisfy all provisions of CAISO's Credit Policy applicable to domestic Guarantors;

ii. Must be an Affiliate of the Market Participant;

iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the State of California, absent legal constraint;

iv. Must be rated by at least one of the Nationally Recognized Statistical Rating Organizations; the credit strength of a Foreign Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well;

v. Must have an issuer rating (or equivalent, in CAISO's sole discretion) rating of A- or greater by any and all agencies that provide rating coverage of the entity;

vi. Must provide CAISO financials in GAAP format or using international accounting standards with clear representation of net worth, intangible assets, and any other information CAISO may require in order to determine the entity's Tangible Net Worth;

vii. Must provide a Secretary's Certificate certifying the adoption of Corporate Resolutions:

    1. Authorizing and approving the Guaranty; and

    2. Authorizing the Officers to execute and deliver the Guaranty on behalf of the Guarantor;

viii. Must be domiciled in a country with a minimum long-term sovereign (or equivalent) rating of AA+/Aa1, with the following conditions:

    1. Sovereign ratings must be available from at least two of the Nationally Recognized Statistical Rating Organizations;

    2. Each agency's sovereign rating for the domicile will be considered to be the lowest of: country ceiling, senior unsecured government debt, long-term foreign currency sovereign rating, long-term local currency sovereign rating, or other equivalent measures, at CAISO's sole discretion; and

    3. Whether ratings are available from two or three agencies, the lowest of the two or three will be used;

ix. Must be domiciled in a country that recognizes and enforces judgments of US courts;

x. Must demonstrate financial commitment to activity in the United States as evidenced by one of the following:

    1. American Depository Receipts (ADR) are traded on the New York Stock Exchange, American Stock Exchange, or NASDAQ; and

    2. Equity ownership worth over US $100,000,000 in wholly owned or majority owned subsidiaries in the United States;

xi. Must satisfy all other applicable provisions of the CAISO Tariff and this Credit Policy;

xii. Must pay for all expenses incurred by CAISO related to reviewing and accepting a foreign guaranty beyond nominal in-house credit and legal review; and

xiii. Must, at its own cost, provide CAISO with independent legal opinion from an attorney/solicitor of CAISO's choosing and licensed to practice law in the United States and/or Guarantor's domicile, in form and substance acceptable to CAISO in its sole discretion, confirming the enforceability of the Foreign

Guaranty, the Guarantor's legal authorization to grant the Guaranty, the conformance of the Guaranty, Guarantor, and Guarantor's domicile to all of these requirements, and such other matters as CAISO may require in its sole discretion.

5.5 Canadian Guarantees

A Canadian Guaranty is a Corporate Guaranty that is provided by an Affiliate entity that is domiciled in Canada and satisfies all of the provisions below. The entity providing a Canadian Guaranty on behalf of a Market Participant is a Canadian Guarantor. A Market Participant may provide a Canadian Guaranty in satisfaction of its obligations to the CAISO provided that all of the following conditions are met. The CAISO reserves the right to deny, reject, or terminate acceptance of any Canadian Guaranty at any time for reasonable cause, including adverse material circumstances.

a. A Canadian Guaranty:

i. Must contain provisions equivalent to those contained in CAISO's standard form Guaranty with any modifications subject to review and approval by CAISO;

ii. Must be denominated in US currency; and

iii. Must be written and executed solely in English, including any duplicate originals.

b. A Canadian Guarantor:

i. Must satisfy all provisions of the CAISO Credit Policy applicable to domestic Guarantors;

ii. Must be an Affiliate of the Market Participant;

iii. Must maintain an agent for acceptance of service of process in the United States; such agent shall be situated in the State of California, absent legal constraint;

iv. That is a provincial utility must waive any claims of sovereign immunity and submit to the jurisdiction of U.S. courts;

v. Must be rated by at least one of the Nationally Recognized Statistical Rating Organizations; the credit strength of a Canadian Guarantor may not be determined based on an evaluation of its financials without an actual credit rating as well;

vi. Must provide financials in GAAP format or other format acceptable to CAISO with clear representation of net worth, intangible assets, and any other information CAISO may require in order to determine the entity's Tangible Net Worth; and

vii. Must satisfy all other applicable provisions of the CAISO Tariff and this Credit Policy.

~~5.4~~5.6 Financial Security through Affiliates

In those cases where a Market Participant is a subsidiary or affiliate of another entity and prefers to utilize the consolidated financial statements and other relevant financial information of that entity for obtaining credit, a signed corporate guaranty is required. A guarantor is considered reasonably acceptable and a corresponding Financial Security Amount is set based on the guarantor's credit evaluation according to the same procedures that a Market Participant undergoes as described in Section 3.1, Unsecured Credit Assessment Requirements. If the guarantor has two or more subsidiaries or affiliates participating in the CAISO market, the guaranty must back the obligations of each subsidiary or affiliate by executing a variation of CAISO's form Guaranty, referred to as an Affiliate Guaranty.

~~5.5~~5.7 Prepayments as Financial Security

The CAISO Tariff (Section 11.3.3) also permits Market Participants to make a prepayment of an upcoming bill due to CAISO. A prepayment may be used as a form of Financial Security. Prepayments are held in an interest-bearing account. Interest accrues to the Market Participant's benefit and is added to the Market Participant's prepayment account on a monthly basis. Should a Market Participant become delinquent in payments, the Market Participant's outstanding account balance is satisfied using the prepayment. The Market Participant must take care to replenish used funds to ensure that it maintains a suitable level of cash to meet future financial obligations. Due to the additional administrative effort involved in tracking and posting interest on prepayments, the prepayment option is not encouraged.

~~5.5.1~~5.7.1 Risk of Loss for Prepayments

CAISO is not held liable for any losses of funds held and invested by CAISO on the Market Participant's behalf. Market Participants agree to bear any risk of loss of principal and/or interest of these funds. Funds are only invested in bank accounts, high-quality money market funds or U.S. Government securities according to the Board approved CAISO investment policy, unless otherwise agreed to by the Market Participant and CAISO.

~~5.6~~5.8 Expiration of Financial Instruments

Each Market Participant must ensure that the financial instruments it uses for the purpose of providing Financial Security do not expire and thereby cause the Market Participant's Aggregate Credit Limit to fall below the Market Participant's EAL. CAISO may treat a financial instrument that does not have an automatic renewal provision and that is not renewed or replaced within seven calendar days of its date of expiration as being out of compliance with the standards for

Financial Security, will deem the value of that financial instrument to be zero, and may draw upon the Financial Security prior to its stated expiration if deemed necessary by CAISO.

6. Estimated Aggregate Liability Calculation

In this section you will find the following information:

- A description of the Estimated Aggregate Liability calculation
- How the Estimated Aggregate Liability is determined for existing Market Participants
- How the Estimated Aggregate Liability is determined for new Market Participants
- How CRRs are valued in the Estimated Aggregate Liability calculation

This section describes the approach used by CAISO to determine the outstanding position of each Market Participant, known as the Estimated Aggregate Liability. The charges CAISO shall use to calculate Estimated Aggregate Liability shall be charges described or referenced in the CAISO Tariff. Market Participants must maintain an Aggregate Credit Limit in excess of their Estimated Aggregate Liability at all times. The process CAISO uses to make this comparison is described in the Section 7 of this BPM.

6.1 Estimated Aggregate Liability (EAL) Overview

CAISO will calculate a Market Participant's Estimated Aggregate Liability which is the estimate of unpaid obligations for a specified time period arising from charges described in the CAISO Tariff. The Estimated Aggregate Liability calculation includes invoiced amounts (that are current but outstanding or past-due), settlement charges on statements that have been issued but not invoiced, and estimated settlement charges for trade days that are not yet on statements, and the prospective value of CRR obligations (if negative).

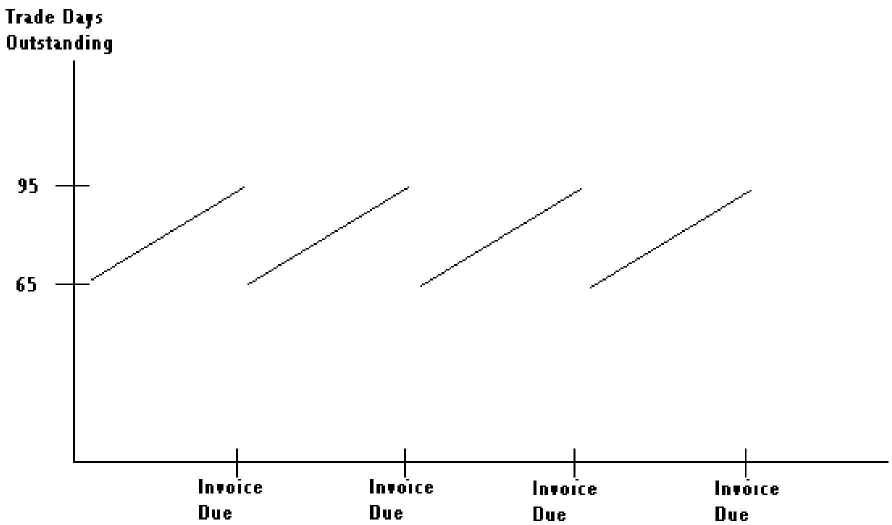
Based on the published CAISO payment calendar, there are at any given time approximately 65-95 trade days of unpaid obligations to CAISO depending on the date of the last cash settlement[3]. The EAL calculation will also include an additional 7 days of extrapolated

[3] Prior to the effectiveness of MRTU, CAISO used a "Level Posting Period". The "Level Posting Period" was equal to 102 days (95 for the maximum length of the number of days transactions outstanding per the payment calendar plus 5 business days to allow a sufficient cushion of coverage given the allowed five-day response time for Market Participants to post additional Financial Security). This was used to limit frequent fluctuations in the EAL that were based on imperfect projections of available settlements data over the "blind spot" where settlements data was not

transactions (in EAL Component #4) to provide appropriate credit coverage in recognition of the five business days that Market Participants have to post any additional required Financial Security under Section 7 of this BPM (corresponding to Section 12.4 of the Tariff).

The fluctuating nature of the EAL is illustrated as follows:

- Assume a Market Participant has very stable requirements resulting in level daily obligations to CAISO of $10.
- Based on the payment calendar, as few as 65 and as many as 95 days of transactions may be outstanding (unpaid) at a given time.
- The EAL for this market participant would vary between $720 and $1020. (65 days + 7 days times $10 = $720 and 95 days + 7 days times $10 = $1,020



The market participant would need an Aggregate Credit Limit of at least $1,133 ($1,020 divided by .9 see Section 7.1 of this BPM) to avoid calls for additional Financial Security by CAISO throughout this period.

CAISO's EAL calculation under MRTU will produce a liability estimate reflective of the payment calendar i.e. the EAL will fluctuate depending on the date of the calculation is made versus the payment cycle. Market Participants will typically elect to maintain an Aggregate Credit Limit sufficient to cover their EAL obligations as calculated during the peak of the payment cycle (with the highest number of days outstanding) to avoid the need for frequent calls for collateral by CAISO.

yet available, and to avoid the need for frequent adjustments to posted security based on the date of the EAL calculation within the payment cycle.

6.2 Estimated Aggregate Liability Components

CAISO shall calculate the Estimated Aggregate Liability for each Market Participant by aggregating the following obligations:

EAL Component #	Short Description	Description
1	Invoiced	Includes any published but unpaid Invoices, either preliminary or final, that are not yet due.
2	Published	Trade days for which either Preliminary (Initial) or Final (Recalculation) Settlements statements have been issued but not invoiced. The number of Trade Days contained in this component ranges from 7 to 57 days.
3	Estimated	Trade days for which settlement statements have not been issued up to T+7. Activity for these days is estimated by the Settlements System using any and all available operational data. For days with no data, the system will estimate operation levels based on historical measurements. Using available data, settlement amounts will be created for every Charge Code.
4	Extrapolated	Trade days for which settlements statements have not yet been issued. The amounts are estimated on a Charge Code by Charge Code basis by deriving daily averages for each and multiplying by the number of days between the latest published Preliminary (Initial) Settlements statement (T+38 business days) and the date of the EAL calculation plus 7 days. The Charge Code daily averages are generally based on activity over the last 60 days of published Settlement activity, although CAISO may use one month or one year of charges if deemed appropriate by CAISO
5	Value of CRR Portfolio	Prospective value of the CRR portfolio, if negative. The CRR obligation is valued as described in Section 6.2.2 of this BPM (and Section 12.6.3 of the Tariff)
6	CRR Bidding Reservation	At the start of a CRR auction, the CRR software obtains from the credit system a maximum bid amount for a CRR auction participant. This maximum bid amount will be defined as: Aggregate Credit Limit * 90% less EAL (excluding CRR Bidding Reservation). That amount is then added as a new component of the EAL entitled "CRR Bidding Reservation". That amount is retained as a component of the EAL until the end of the CRR auction. At the completion of the CRR auction, the CRR Bidding Reservation is reversed, and replaced with the "CRR Winning Bid Liability".

7	CRR Winning Bid Liability (prior to invoicing)	A Market Participant's winning bids at the completion of the CRR auction, but prior to invoicing (if there is a time lag). A market participant's winning bid amount becomes an invoiced amount. Invoiced amounts for CRRs are included in EAL Component 1.
8	Past-due	Any unpaid/past due invoices, if the Market Participant is a debtor for such invoices. This treatment is necessary if the CAISO is to maintain the integrity of the overall settlement system, which requires that each month be settled separately. Each trade month consists of creditors and debtors whose receivables and obligations vary over time. To the extent that amounts owed to an SC related to defaults in previous months are included in the liability estimation calculation and permitted to reduce that SC's current posting requirements, CAISO will have no means to enforce the payment obligation of that SC to pay current invoices rather than refuse payment in an attempt to recoup previous past-due amounts owed to them.
9	Annual FERC Fees	FERC fees for participants that have elected to pay such amounts on an annual basis that are owed and outstanding which are not included in EAL Components 1-4.
10	WAC-current	WAC Prepayment-current year, as specified in Tariff Section 36.9.2 Prepayment of Wheeling Access Charges
11	WAC-future	WAC Prepayment-subsequent year, as specified in Tariff Section 36.9.2 Prepayment of Wheeling Access Charges
12	EAL Adjustments	EAL Adjustments that may be necessary for a Market Participant based on an analysis performed by CAISO or as a result of a dispute by a Market Participant according to Section 10 of this BPM.
13	Extraordinary Settlements Adjustments	Adjustments to CAISO settlements amounts related to FERC proceedings, if known and estimated by CAISO.

6.2.1 EAL Is Calculated For A Market Participant on an Aggregate Basis

For a Market Participant that maintains multiple BAID numbers, the Estimated Aggregate Liability of the Market Participant as a legal entity will be calculated by summing the Estimated Aggregate Liabilities for all such BAID numbers and comparing the sum of the Estimated Aggregate Liabilities to the Aggregate Credit Limit of the Market Participant.

6.2.2 Valuation of a Market Participant's CRR Portfolio

This section provides additional detail related to the calculation of item 5 in the table above. The value of a Market Participant's CRR portfolio, if negative, is a component of the EAL. Each CRR in the portfolio is valued separately, but netting is allowed within the portfolio—i.e. the value of a positive CRR may offset the value of a negative CRR within the portfolio. Short-term and longer term CRRs are valued in a similar manner:

1. **Valuation of CRRs with a Term of One Year or Less.** Such CRRs are valued as the negative of the most recent CRR Auction Price for such CRR plus the Credit Margin for such CRR.

2. **Valuation of Long Term CRRs (Term of more than one year).** Such CRRs are valued as the negative of the most recent Auction Price of a CRR with the same source and sink as the Long Term CRR but with only a one year term, plus (ii) the Credit Margin calculated for the one year CRR. If there is less than one year remaining in the term of a Long Term CRR, the credit requirement shall be determined pursuant to Section 12.6.3.2.

Credit Margin for CRRs will be calculated based on the probability distribution of Congestion revenues as follows: Expected CRR Congestion Revenue minus Fifth Percentile CRR Congestion Revenue. Expected CRR Congestion Revenue and Fifth Percentile CRR Congestion Revenue will be based on historical LMP data, when available, and proxy values, including LMP study data, until such time as historical LMP data is available, with the details of such calculation published in a Business Practice Manual. CAISO may reassess its determinations regarding Expected CRR Congestion Revenue and Fifth Percentile CRR Congestion Revenue at any time and as a result, recalculate the CRR valuations in the EAL.

6.2.3 Estimated Aggregate Liability Adjustments

When CAISO or a Market Participant observes that the EAL calculation may be producing a liability estimate that appears to be inaccurate, CAISO may review and revise the calculation generally, and/or manually adjust the results for specific Market Participants to reflect known issues. Adjustments to a specific Market Participant's EAL are a component of the EAL as shown in the Table in Section 6.2, in row 12.

Other situations where CAISO may also adjust the EAL calculation for a specific Market Participant include the occurrence of a Market Participant bankruptcy where a new Business Association Identification Number (BAID) is established. In that case, the available settlements data for the previous BAID may be representative of ongoing activities levels, but this data is not normally accessible to the EAL calculation to estimate liabilities for the new post-bankruptcy BAID.

Market Participants may also recommend changes to their liability estimates through the dispute procedure noted in Section 10, Dispute Procedures.

6.2.4 WAC Prepayment

This section describes components 10 and 11 of the EAL components shown in Section 6.2 of this BPM. This EAL component is discussed in Tariff section 36.9.2.

Out-of-Control Area Load Serving Entities (OCALSE) who are allocated short-term CRRs will be subject to the same credit requirements for holding short-term CRRs as other market participants. Additionally, OCALSE will be required to maintain one year of credit coverage for their Wheeling Access Charge (WAC) commitment beyond the current period. Subsequently, they will be required to prepay the WAC on a monthly basis in advance of the trade month, consistent with the FERC April 20, 2007 Order.

Component 10 of the EAL shown in Section 6.2 of this BPM is the current year credit requirement that decreases with the passing of each month. During the current year, when the CRRs are allocated for the subsequent year, an additional one year of WAC requirements is added to the EAL, as shown in Component 11 of the EAL shown in Section 6.2 of this BPM.

This treatment applies to short-term CRRs allocated to OCALSE, however, CAISO expects to apply similar (or the same) treatment to long-term CRRs allocated to OCALSEs, but is awaiting FERC's ruling on long-term CRRs as of the date of the publication of this BPM.

6.2.5 Ordinary and Extraordinary Settlements Adjustments

CAISO's goal is to ensure that active as well as inactive Market Participants maintain an Aggregate Credit Limit sufficient to cover all known and reasonably estimated potential liabilities. Various charges sometimes arise which require special consideration in the EAL calculation. CAISO intends to include the following charges in the Estimated Aggregate Liability calculation, if and when such data is available, and will require Market Participants to post Financial Security accordingly.

The following two types of adjustments will be included in normal settlements statements as contained in components 1 and 2 of the EAL calculation shown in Section 6.2

- **Daily Adjustments and Disputes** – Charges associated with daily adjustments and disputes that are regularly calculated by the settlement system will be included in the liability estimation calculations as the charges are calculated.

There should generally be no need to attempt to forecast these amounts since they are typically relatively small and usually affect many Market Participants.

- **Good Faith Negotiations** – In general, Good Faith Negotiations (GFN) tend to affect the transactions of an individual Market Participant, which in turn may affect a few or many other Market Participants. Transactions associated with GFNs will be handled in the same manner as transactions associated with Refund Orders.

The following type of adjustment will may be known to CAISO prior to being included in components 1 and 2 of the EAL calculation shown in Section 6.2. CAISO may include such amounts as a separate component of the EAL calculation, as shown in component 13 of the EAL calculation shown in Section 6.2.

- **Refund Orders** – CAISO will assess its ability to reasonably calculate the charges associated with a refund before CAISO's settlement system is rerun. If CAISO can reasonably apportion the refund to specific Market Participants, it will include the amounts in the liability estimation process and request security accordingly. If CAISO deems that complexities of a refund order preclude it from reasonably assessing the liabilities, it will not make a security request until the refund is processed through the settlement system. However, CAISO will make available an aggregate forecast of the refund liabilities, if at all possible, to Market Participants for informational purposes only.

6.3 Calculation of the EAL for New Market Participants

Each new Market Participant (and each Market Participant that has previously been inactive) is required to establish an initial Aggregate Credit Limit sufficient to cover a minimum of 45 Trading Days of estimated obligations. The Market Participant may then establish additional Aggregate Credit as obligations are incurred. This initial credit requirement is based on anticipated scheduling/trading practices and overall volumes, and shall be considered by CAISO to be equal to the Market Participant's Estimated Aggregate Liability until CAISO obtains data from its automated EAL calculation as described in Section 6.2.

Until the amount of time elapsed from such Market Participant's initial participation in CAISO's Market equals the maximum length of the CAISO payment cycle (i.e., 95 Trading Days), CAISO shall monitor the Market Participant's Estimated Aggregate Liability (upon the availability of Settlements data) against its Aggregate Credit Limit to determine if the Market Participant must post additional Financial Security. At all times during this initial period, the Market Participant has an obligation to maintain an Aggregate Credit Limit in excess of its Estimated Aggregate Liability.

Once the amount of time elapsed from the Market Participant's initial participation in the CAISO Market equals 95 Trading Days, CAISO shall begin calculating the Market Participant's Estimated Aggregate Liability pursuant to the procedures used for ongoing Market Participants.

CAISO has prepared a template that may be used to determine an initial posting requirement. The template is an Excel worksheet located at the New Market Participant Security Calculation link http://www.caiso.com/docs/2005/06/14/200506141656326466.html.

6.4 Transition to the EAL Calculation Shown in Section 6.2

The EAL components described in Section 6.2 of this document will be effective upon the cutover to MRTU and the availability of CAISO's Settlements and Market Clearing System. Prior to that date, the EAL components shown in Section 6.2 of this BPM will be modified as follows:

~~3~~	~~Estimated~~	~~Trade days for which settlement statements have not been issued up to T+7. Activity for these days is estimated by the Settlements System using any and all available operational data. For days with no data, the system will estimate operation levels based on historical measurements. Using available data, settlement amounts will be created for every Charge Code.~~
4	Extrapolated	Estimated obligations: Estimated charges for the Market Participant for the balance of the Level Posting Period. CAISO shall calculate estimated obligations for the Market Participant by multiplying (i) a daily average of published, actual Settlement charges for the Market Participant by (ii) the number of days remaining in the Level Posting Period for which actual Settlement data is unavailable. In calculating (i), above, CAISO shall separate the Market Participant's Settlement activity into daily market activity, monthly market activity, and Grid Management Charge activity, and shall determine the daily average of charges for each such type of activity separately based on the different frequencies with which charges for these types of activities are assessed. The daily average charges used in (i), above, shall normally be based on two months of available historical Settlement data for the Market Participant. CAISO may review the trend of Market Participant historical charges and determine that an alternative of one month or twelve months of historical charges would result in a more accurate estimate, and may use such data to calculate the daily average charges.

Further, prior to MRTU effectiveness, the EAL will be calculated assuming 102 trade days outstanding, using the "Level Posting Period" as described in CAISO's previous "Credit Policy and Procedures Guide"[4].

[4] "To avoid frequent changes to Financial Security posting requirements during the payment cycle, and to allow a sufficient cushion of coverage given the allowed five-day response time for Market Participants to post additional Financial Security, a "Level Posting Period" equal to 102 days (95 + 5 business days) is used as the basis for all Financial Security posting requirements."

7. Comparison of Estimated Aggregate Liability to Credit Limits and Requests for Additional Financial Security

In this section you will find the following information:

- How the CAISO compares the Estimated Aggregate Liability to the Aggregate Credit Limit for each Market Participant is determined for existing Market Participants
- Actions CAISO takes if the EAL approaches or exceeds the Aggregate Credit Limit of a Market Participant
- Credit requirements for CRRs

7.1 Comparison of EAL to Aggregate Credit Limits

CAISO calculates the EAL for each Market Participant weekly, and compares the EAL to each Market Participant's Aggregate Credit Limits. This comparison is performed by aggregating the balances of each individual BAID if a Market Participant maintains multiple accounts with CAISO. If the Estimated Aggregate Liability exceeds a Market Participant's Aggregate Credit Limit, the Market Participant must post additional Financial Security.

A Market Participant must provide additional Financial Security when its obligations reach 100% of its Aggregate Credit Limit. However, CAISO requests additional Financial Security at the 90% level. The Estimated Aggregate Liability calculated by CAISO for a Market Participant may fluctuate, and at times this may result in swings in Financial Security posting requirements. To the extent that the Estimated Aggregate Liability exceeds the Aggregate Credit Limit at any time, a Market Participant may be subject to enforcement actions as described in Section 8 of this BPM. Thus CAISO recommends that Market Participants maintain some excess Available Credit (Aggregate Credit Limit above their maximum anticipated Estimated Aggregate Liability) to avoid the enforcement actions noted in Section 8 of this BPM.

Based on a Market Participant's Aggregate Credit Limit utilization level (which is the EAL divided by Aggregate Credit Limit), the following actions will be taken at each level listed:

EAL/Aggregate Credit Limit	Action
≥70% and < 90%	Market Participant may be notified of a *recommended* security increase. CAISO recommends, but does not require, that an additional posting is made to maintain the EAL/Aggregate Credit ratio at or below 70%.
≥90% and < 100%	CAISO requests that a Market Participant increase the posting amount within ~~five~~ three (3) Business Days so that the security utilization does not exceed 90 percent. Failure to post within the prescribed posting period will lead to enforcement actions as described in Section 8.3 of this BPM.
≥100%	The Market Participant is subject to any of the credit related enforcement provisions of the CAISO Tariff Section 12.5 described in Section 8 of this BPM.

7.2 Reducing the Amount of Financial Security

A Market Participant may request a reduction in its Financial Security by giving CAISO not less than fifteen calendar days notice of the reduction, provided that the Market Participant is not then in breach of Section 12.3 of the CAISO Tariff. CAISO then releases, or permits a reduction in, the amount of Financial Security.

7.2.1 Debtor/Creditor Market Participants Leaving the Market or Incurring Substantial Activity Level Changes

Those Market Participants that are exiting CAISO markets, or that have changed their business practices resulting in substantially reduced participation in CAISO markets, will be required to maintain an Aggregate Credit Limit at least equal to five percent (5%) of the absolute value of the peak monthly net charges from their beginning participation date to their last participation date or the date the substantial change occurred. CAISO will consider this 5% figure as a base amount and reserves the right to increase or decrease the base amount depending on the number of settlement reruns in the queue and the estimated value of those settlement reruns. The five percent (5%) residual Aggregate Credit Limit amount will be retained for a period of one year, unless specific circumstances warrant a change in this retention period (e.g., pending FERC ordered adjustments).

7.3 Required Market Participant Response to Financial Security Requests

CAISO's EAL calculation is used to determine Financial Security posting requirements and adjustments in a Market Participant's posted Financial Security. Within five Business Days of a CAISO Financial Security request, a Market Participant must either:

a) Post the required Financial Security Amount calculated by CAISO.

b) Demonstrate to CAISO's satisfaction that CAISO's Financial Security request is all or partially unnecessary through the dispute procedure in Section 10 of this BPM.

7.4 CRR Holder & Candidate CRR Holder Financial Security Requirements

The credit requirements related to holding CRRs are the same as for other obligations to the CAISO market. Specifically, a Market Participant must maintain an Aggregate Credit Limit in excess of their Estimated Aggregate Liability. CRR obligations are a component of the EAL calculation, as specified in Section 6.1 of this BPM.

An entity that intends to acquire CRRs (a Candidate CRR Holder) is to demonstrate prior to acquiring the CRRs that they are capable of meeting the ongoing credit requirements for holding CRRs. The entity may choose to designate a portion of their UCL and/or posted Financial Security specifically for CRR-related activities by notifying CAISO of the Candidate CRR Holder's intent, or they may post additional Financial Security to cover their participation in CRR-related activities.

7.4.1 Credit Requirements for CRR Allocations.

Subject to applicable requirements of Section 36.9.2 concerning the prepayment of Wheeling Access Charges, Load-Serving Entities eligible to participate in any CRR Allocation are not required to provide additional Financial Security in advance of a CRR Allocation.

7.4.2 Credit Requirements for CRR Auctions.

To establish available credit for participating in any CRR Auction, each Candidate CRR Holder must have an Unsecured Credit Limit or have provided Financial Security in a form consistent with Section 5 of this BPM (Section 12.1.2 of the Tariff). The greater of $500,000 or the sum of the absolute values of all of a Candidate CRR Holder's bids for

CRRs submitted in the relevant CRR Auction is required to participate in a CRR Auction. The amount of Available Credit for a CRR Auction is calculated as follows:

(Aggregate Credit Limit minus Estimated Aggregate Liability) times 90%

~~Each Candidate CRR Holder that participates in a CRR Auction shall ensure that its Aggregate Credit Limit in excess of its Estimated Aggregate Liability is the greater of $500,000 or the sum of the absolute values of all of its bids for CRRs submitted in the relevant CRR Auction. A Candidate CRR Holder that fails to satisfy this requirement shall not be permitted to participate in the relevant CRR Auction.~~

A Market Participant that maintains multiple BAIDs with CAISO and that wishes to participate in the CRR auction will need to instruct CAISO how to allocate its Available Credit to individual BAIDs. CAISO's CRR software will limit bids per BAID to the amount of Available Credit for such BAID.

7.4.3 Credit Requirements for Holding CRRs.

7.4.3.1 Credit Requirements Generally.

Each CRR Holder, whether it obtains CRRs through a CRR Allocation or a CRR Auction, must meet the ongoing credit requirements for holding CRRs. Each CRR Holder shall be required to ensure that its Aggregate Credit Limit is in excess of its Estimated Aggregate Liability including the value of the CRR portfolio.

CRRs are evaluated on a portfolio basis as follows. If a CRR Holder owns more than one CRR, such CRR Holder shall be subject to an overall credit requirement that is equal to the sum of the individual credit requirements applicable to each of the CRRs held by such CRR Holder. If this sum is positive, the amount will be added to the CRR Holder's Estimated Aggregate Liability. However, if the sum is negative, the CRR Holder's Estimated Aggregate Liability shall not be reduced.

CAISO shall revalue the CRR portfolio not less than annually. CAISO may adjust the credit requirements for holding CRRs with terms of one year or less more frequently than annually at CAISO's discretion to account for changes in auction prices for CRRs in monthly auctions[5]. CAISO may adjust the value of long-term CRRs included in the EAL calculation not less than annually to reflect:

[5] CAISO aims to use monthly auction data to revalue the CRRs, and is studying the feasibility of this, and will build the software for this if viable.

a) changes in auction prices of one-year CRRs in annual auctions, and;
b) updates to Credit Margins based on actual Locational Marginal Price data derived from market operations

7.4.3.2 Credit Check on Proposed Transfers of CRRs

As provided for in Section 12.6.2 of the Tariff, ~~iIn~~ in cases where the ownership of a CRR is to be transferred through either the Secondary Registration System or through load migration, CAISO shall, if necessary, evaluate and adjust the credit requirements for both the current owner of the CRR and the prospective owner of the CRR as appropriate.

Accordingly, prior to implementing the transfer, CAISO will check to ensure:

a) that the transferor has an EAL excluding the CRR to be transferred less than its Aggregate Credit Limit
b) that the transferee has an EAL including the CRR to be transferred less than its Aggregate Credit Limit

If these conditions are not met, CAISO will not process the transfer until the conditions are met. CAISO will contact the appropriate party (transferor or transferee, or both) to post sufficient additional Financial Security. CAISO will then process the transfer when the conditions above are met.

8. Credit Policy Enforcement

In this section you will find the following information:

- Actions that may be taken if Aggregate Credit Limits are exceeded
- Enforcement actions for late payments
- Enforcement actions for failure to post additional Financial Security within the posting period

8.1 Enforcement Actions

Following the date on which a Market Participant commences trading or participates in CRR activities, if a Market Participant's Estimated Aggregate Liability, as calculated by CAISO, at any time exceeds its Aggregate Credit Limit, CAISO may take any or all of the following actions:

(a) CAISO may withhold a pending payment distribution.

(b) CAISO may limit trading, which may include rejection of Bids or the unbalanced portion of ETC Self-Schedules and/or limiting other CAISO market activity, including limiting eligibility to participate in a CRR Allocation or CRR Auction. In that case, CAISO shall notify the Market Participant of its action and the Market Participant is not entitled to submit further Bids or unbalanced ETC Self-Schedules to CAISO or otherwise participate in CAISO's markets until the Market Participant posts an additional Financial Security Amount that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability.

(c) CAISO may restrict, suspend, or terminate the Market Participant's Service Agreement, including CRR agreements.

(d) CAISO may require the Market Participant to post an additional Financial Security Amount in lieu of a UCL for at least one year.

(e) CAISO may resell a CRR Holder's CRRs in whole or in part, including any Long Term CRRs, in a subsequent CRR Auction or bilateral transaction, as appropriate.

(f) CAISO will not implement the transfer of a CRR if the transferee or transferor has an Estimated Aggregate Liability in excess of their Aggregate Credit Limit.

In addition, CAISO may restrict or suspend a Market Participant's right to Bid or require the Market Participant to increase its Financial Security Amount if at any time the Market Participant's potential additional liability for Imbalance Energy and other CAISO charges is determined by CAISO to be excessive by comparison with the likely cost of the amount of Energy scheduled by the Market Participant.

With respect to item (c) and (f) above, CAISO would provide a cure period prior to the termination of a Service Agreement or CRR Agreement, or the reselling of a CRR portfolio.

8.2 Enforcement Actions for Late Payments

Market Participants who are late in paying an invoice will be subject to disciplinary action including possible revocation of any unsecured credit for a period of twelve months or more. Specific elements of the progressive discipline program for late payments include:

- Monitoring Market Participants who miss the payment deadline, regardless of amount owed, during a rolling 12-month period based on CAISO's published late payment report;
- Assessing interest based on the number of days the invoice is past due and distributing the interest to net creditors in the case of an actual payment default as provided for in Section 11.12.1 of the CAISO Tariff;
- Sending a delinquent Market Participant two warning letters for the first two instances of missing the payment deadline;
- Revoking a Market Participant's Unsecured Credit Limit if they are late in paying a third time in a rolling twelve (12) month period and requiring the Market Participant to post cash in lieu of unsecured credit or any other form of Financial Security to secure their obligations for a period of twelve (12) months of timely payments (i.e., subsequent late payments would result in extending the number of months that a delinquent Market Participant would have to post cash and may result in other enforcement actions as described in the CAISO Tariff and Section 8.1 of this BPM); and
- Accepting other forms of Financial Security and evaluating reinstating a UCL only upon completing twelve (12) months of on-time payments.

In addition to the progressive discipline program described above, a Market Participant will be subject to financial penalties for two or more late payments[6]. A Market Participant who pays late two or more times in a rolling twelve (12) month period will be assessed a monetary penalty not to exceed $20,000 calculated as the greater of 2% of the invoiced amount but not less than $1,000. Any penalties assessed as part of this enforcement measure would fund the Market Reserve Account up to a limit of $5,000,000. Any financial penalties in excess of $5,000,000 (and with a Market Reserve Balance of that amount or more) would be used as a credit toward the GMC revenue requirement in the subsequent year. Should the CAISO have to draw on the Market Reserve Account in the case of a payment default, the Market Reserve Account would be replenished to the established limit of $5,000,000 before excess funds would be used to reduce the GMC revenue requirement.

[6] The final design and implementation of financial penalties for late payments cannot occur until after the release of MRTU.

8.3 Enforcement Actions for Late Posting of Financial Security

Market Participants who are late in posting additional Financial Security will be subject to disciplinary action including having to post as much as their highest EAL from the preceding twelve (12) month period for a period of twelve (12) months or more. Specific elements of the progressive discipline program for late postings of Financial Security include:

- Monitoring Market Participants who fail to post additional Financial Security within the prescribed posting period during a rolling 12-month period;
- Sending a delinquent Market Participant two warning letters for the first two instances of failing to post on time;
- Requiring a delinquent Market Participant to post as much as their highest EAL from the preceding twelve (12) months on the third instance of posting late. This amount will be held for a period no less than 12 months following the late posting. Subsequent late postings would result in extending the number of months that a delinquent Market Participant would have to sustain the higher level of collateral and could result in other enforcement actions as described in the CAISO Tariff and Section 8.1 of this BPM; and
- Evaluating the return of excess collateral upon completing twelve (12) months of on-time Financial Security posting.

In addition to the progressive discipline program described above, a Market Participant will be subject to financial penalties for failing to post Financial Security within the prescribed posting period on the third and subsequent occurrences[7]. Market Participants who fail to post additional Financial Security within the prescribed posting period will be assessed a monetary penalty not to exceed $20,000 calculated as the greater of 2% of the collateral amount or $1,000 on the third, and each subsequent occurrence in a rolling 12 month period. Any penalties assessed as part of this enforcement measure would fund the Market Reserve Account up to a limit of $5,000,000. Any financial penalties in excess of $5,000,000 (and with a Market Reserve Account balance of $5,000,000 or more) would be applied as a credit toward the following year's GMC revenue requirement. Should the CAISO have to draw on the Market Reserve Account in the case of a payment default, the Market Reserve Account would be replenished to the established limit of $5,000,000 before excess funds would be used to reduce the GMC.

[7] The final design and implementation of financial penalties for late Financial Security posting cannot occur until after the release of MRTU.

9. Notifications

In this section you will find the following information:

- A summary of the credit notifications exchanged between CAISO and Market Participants

9.1 Notifications Related to EAL vs. Aggregate Credit Limit Comparison

As described in Section 7.1 of this BPM, CAISO periodically calculates the EAL for each Market Participant and communicates this information to the Market Participant. This communication includes the following information:

- The EAL amount and any recommended increase in the Financial Security amount. The severity of the situation depends upon the ACL utilization level (EAL divided by ACL).

ACL Utilization Level	Purpose of Notice
≥~~>~~70% and ≤~~<~~ 90%	CAISO may recommend~~s~~ increasing Financial Security
≥~~>~~90% and ≤~~<~~ 100%	CAISO requests an increase in Financial Security within ~~5~~ three (3) Business Days. Failure to post within the prescribed posting period will lead to enforcement actions as described in Section 8.3 of this BPM.
≥~~>~~100%	CAISO requires an increase in Financial Security. Possible enforcement actions as shown in Section 8.1 of this BPM

- The amount of Financial Security each Market Participant must post in order to remain below the recommended 90% utilization level described in Section 7.1 of this BPM.
- The minimum amount of Financial Security that the Market Participant must post so that its EAL does not exceed its ACL.

The CAISO customer representative also communicates with Market Participants to address questions related to the notification. Any required increase in the Financial Security Amount must be resolved within five Business Days from the date of contact. Furthermore, any Market

Participant that is not in compliance with the requirement that its EAL be less than its ACL is subject to enforcement procedures as described in Section 8.

9.2 Communications with CRR Holders or Candidate CRR Holders

A CRR Holder or Candidate CRR Holder may notify its CAISO customer service representative when it wishes to:

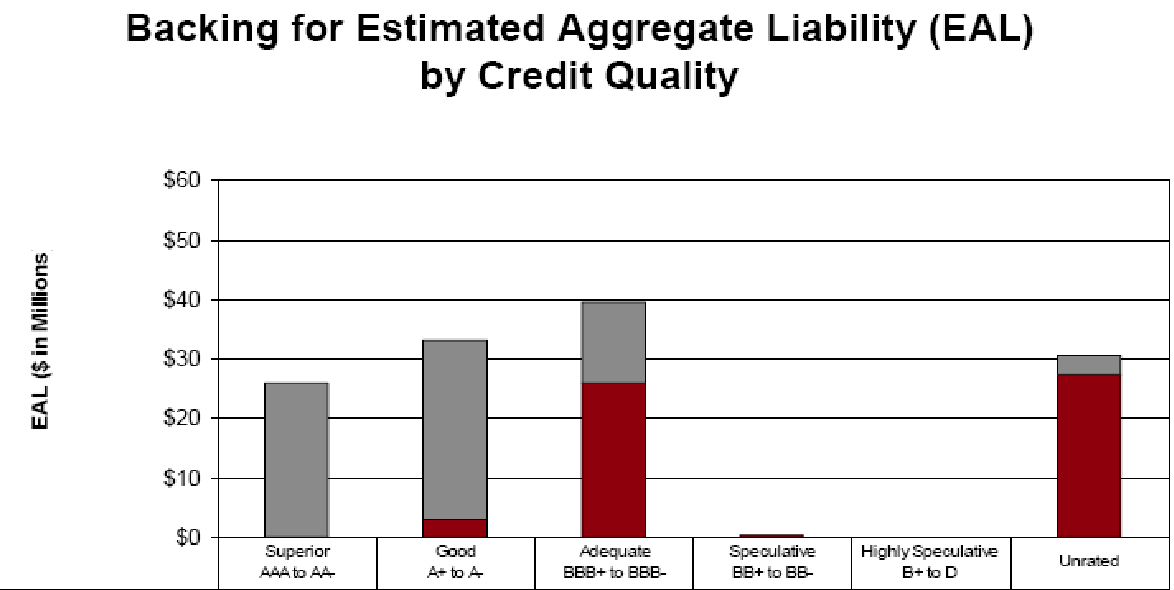
- Designate a portion of its Available Credit (UCL and/or posted Financial Security) specifically for CRR-related activities, and assign this available credits to individual BAIDs if applicable. (See Section 7.4.2 of this BPM)
- Post additional Financial Security solely to cover its participation in CRR-related activities.

CAISO will inform CRR Holders or Candidate CRR Holders proposing to transfer CRRs of the need for additional Financial Security if one or both parties has insufficient Available Credit for CAISO to allow the transfer to take place (see Section 7.4.3.1 of this BPM).

9.3 Credit Related Information Published by CAISO

CAISO publishes in its monthly financial statements[8] information of relevance to credit analysts for creditors of the CAISO market. CAISO reports monthly on the total outstanding obligations of Market Participants, the credit backing of such obligations (whether supported by Financial Security or Unsecured Credit Limits/Guaranties), or the extent to which such obligations are in excess of a Market Participant's Aggregate Credit Limit.

[8] Monthly financial reports are posted for Board of Governors meetings with documented archived here: http://caiso.com/pubinfo/BOG/documents/other/index.html



	Superior AAA to AA-	Good A+ to A-	Adequate BBB+ to BBB-	Speculative BB+ to BB-	Highly Speculative B+ to D	Unrated
# Backed by UCL or GRN	10	14	6	0	0	1
$ Backed by UCL or GRN	$26.08	$30.16	$13.44	$0.00	$0.00	$3.25
# backed by security	0	3	2	1	1	24
$ backed by security	$0.00	$2.89	$26.03	$0.40	$0.03	$27.27
# Outstanding requests	0	0	0	0	0	0
$ Outstanding requests	0	0	0	0	0	0

Credit Quality

10. Dispute Procedures

In this section you will find the following information:

- The steps to use to dispute the EAL amount determined by CAISO

CAISO provides Market Participants the ability to dispute the EAL calculated by CAISO and, as a result, CAISO may reduce or cancel a requested Financial Security adjustment.

10.1 Estimated Aggregate Liability Calculation Dispute Process

The following steps are required for a Market Participant to dispute a Financial Security request resulting from CAISO's calculation of EAL:

1. Request by the Market Participant to review the CAISO's EAL calculation.
2. Present a reasonable and compelling situation, as determined by the Market Participant's CAISO client representative.
3. Document the facts and circumstances that evidence that the CAISO's calculation of EAL results in an excessive and unwarranted Financial Security posting requirement.
    a) Examples of facts and circumstances include:
        i) Issues related to non-recurring retroactive charges
        ii) Demonstrable changes in expected obligations as a result of physical changes (e.g., new capacity or loss of customers).
    b) Present a reasonable alternative calculation of the EAL.
4. In response to the dispute request, CAISO will determine whether the request for the adjustment to the EAL is warranted. Review of the request to determine validity based on facts and circumstances presented shall include consideration of:
    a) Weighing the risk of using the lower figure to the potential detriment of market creditors, if the Market Participant is under-secured and defaults, against the

desire not to impose additional potentially unwarranted costs on that Market Participant

b) Equity and consistency of treatment of Market Participants in the dispute procedure

c) The evidentiary value of the information provided by the Market Participant in the dispute procedure

d) CAISO may decline to adjust the initial EAL amount if the Market Participant has had Financial Security shortfalls in the past 12 months (i.e., it has been shown that the Market Participant's ACL at times during the preceding 12 months has been insufficient to cover its EAL).

5. Approval of the EAL adjustment and reduction or elimination of the Financial Security request shall require the approval of the CAISO Manager and/or Director of Customer Services and Industry Affairs and the CAISO Treasurer.

10.2 Timing for Dispute Procedure

Within the ~~five~~ three (~~5~~3) business days of the request for Financial Security by CAISO, the Market Participant must either demonstrate to CAISO's satisfaction that the Financial Security request is all or partially unnecessary, or post the required Financial Security Amount calculated by the CAISO.

If CAISO and Market Participant are unable to agree on the appropriate level of Financial Security during the ~~five~~ three (~~5~~3) business day review period, the Market Participant must post the additional Financial Security and continue the dispute procedure as described in Section 10.1 of this BPM. Any excess Financial Security amounts will be returned to the Market Participant if the dispute process finds in favor of the Market Participant.

Failure to abide by the provisions of this section may lead to enforcement measures as described in Section 8.3 of this BPM.

11. Financial Responsibility Related to RMR Contracts

In this section you will find information on the following topics:

- Financial Requirements for new Responsible Utilities for RMR costs
- Financial Requirements for RMR owners

11.1 Responsibility for RMR Costs by New Responsible Utilities

The credit obligations for Reliability Must-Run Contracts are independent of the credit responsibilities for other CAISO activities. If a Responsible Utility first executed a Transmission Control Agreement after April 1, 1998 (a "New Responsible Utility") and if:

- The senior unsecured debt of the New Responsible Utility is rated or becomes rated at less than A- from S&P or A3 from Moody's, and
- Its rating does not improve to A- or better from S&P or A3 or better from Moody's within 60 calendar days,

then the following credit responsibilities must be observed by the New Responsible Utility:

1. The New Responsible Utility must provide to CAISO an irrevocable and unconditional letter of credit in an amount equal to three times the highest monthly payment invoiced by CAISO to the New Responsible Utility (or the prior Responsible Utility) in connection with services under Reliability Must-Run Contracts in the last three months for which invoices have been issued.
2. The letter of credit must be issued by a bank or other financial institution whose senior unsecured debt rating is not less than A from S&P and A2 from Moody's.
3. The letter of credit must be in the form that CAISO may reasonably require from time to time by notice to the New Responsible Utility and authorize CAISO or the RMR Owner to draw on the letter of credit for deposit solely into the RMR Owner Facility Trust Account in an amount equal to any amount on the CAISO invoice due and not paid by the Responsible Utility.

The security provided by the New Responsible Utility under this section is intended to cover the New Responsible Utility's outstanding liability for payments it is liable to make to CAISO under this section, including monthly payments, any reimbursement for capital improvement, termination fees and any other payments to which CAISO is liable under Reliability Must-Run Contracts. These Financial Security requirements are separate from those required for other CAISO activities.

11.2 Financial Responsibility by RMR Contract Holders

Section 12.7 of the pro-forma RMR agreement[9] provides that RMR owners shall meet certain financial requirements throughout the term of the RMR agreement. The purpose of these requirements is to provide reasonable assurance the that RMR owner has adequate financial resources to meet its obligations throughout the RMR term. RMR Owner Financial Requirements include:

(a) Through the term of the Agreement, Owner shall maintain an investment grade rating by Moody's or Standard and Poor's or provide documentation from a financial institution or corporate owner acceptable to CAISO that there is an equity position described below. CAISO shall not unreasonably withhold acceptance of the documentation.

(i) An equity to debt ratio of at least 30%, or
(ii) An equity to total asset ratio of at least 30% or
(iii) Demonstrate to CAISO's reasonable satisfaction that other factors, including, without limitations, commercial financing arrangements, and working capital positions, mitigate the risk of Owner failing to meet the performance requirements under this Agreement.

(b) If the Owner does not possess and maintain an investment grade rating, an equity position or make other arrangements as described in Section 12.7 (a), then it must provide one of the following:

(i) Proof of insurance to cover the financial exposure to CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses; or
(ii) Security to cover the financial exposure to CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses in one of the following forms:
    (A) standby letter of credit;
    (B) corporate guarantee;
    (C) cash deposit; or
    (D) security bond.

[9] http://www.caiso.com/docs/2000/08/24/200008241130162783.pdf