

### **CREDIT POLICY & PROCEDURES GUIDE**

### CALIFORNIA ISO FINANCE DEPARTMENT August 1, 2007

PLEASE DIRECT COMMENTS AND QUESTIONS TO:

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### **REVISION HISTORY**

Revision No.	Date	Description	
1.0	4/4/2003	Original Draft	
2.0	8/13/2004	Second major revision – updated to include only the current credit policies and procedures.	
3.0	5/6/2005	Third major revision – updated to include proposed credit policy changes.	
4.0	3/6/2006	Fourth major revision – major restructuring and updating to support the new credit policy. Changes the method for determining a Market Participant's or FTR Bidder's unsecured credit limit from simply having an approved credit rating with one that bases unsecured credit as a percentage of Tangible Net Worth or Net Assets based on the type of entity and other	
4.1	6/26/2006	<ul> <li>quantitative and qualitative factors.</li> <li>Revision made to reflect necessary updates to the CPPG, in accordance with FERC's Notice of Extension of Time issued June 2, 2006, in Docket No. ER06-700-000.</li> <li>Revision to satisfy FERC Order Conditionally Accepting Tariff Revisions Governing Credit Policy issued May 12, 2006 115</li> <li>FERC ¶ 61,170. Modifications included:         <ul> <li>Deletion of Section A-1 describing the transition from the old "Approved Credit Rating Approach" and renumbering of the sections in Part A due to the passing of the transition period;</li> <li>The addition of Unsecured Credit Limit calculation examples for Unrated Public/Private Corporations, Rated Governmental Entities and Unrated Governmental Entities;</li> <li>Deletion of the reference to the ISO Board of Governor's ability to reduce the \$250M cap on Unsecured Credit Limits;</li> <li>Description of an Estimated Aggregate Liability calculation method in Section C-2, Section C-3, Section C-3.1 and Appendix 1A.</li> </ul> </li> </ul>	
5.0	5/31/2007	Revised to reflect compliance filing for FERC April 19, 2007 Order on CAISO credit.  • Delete references to SCALE application for calculating market participant obligations, and replace with the alternative EAL calculation method which has been used since the SCALE tool become unavailable in spring 2006. Changes have been made to Sections C-2, C-3, and Appendix 1 (previously entitled Appendix 1A)	
5.1	8/1/2007	Adjusted Aggregate Credit Limit utilization levels and actions in Section C-6.1 to coincide with Section 7.1 of the Business Practice Manual for Credit Management.	

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#### INTRODUCTION

All Market Participants and FTR Bidders requesting transmission services with the ISO will be subject to a financial review in accordance with the ISO standards for determining creditworthiness. Such review procedures are designed to protect Market Participants and FTR Bidders from undue exposure to default risk by other Market Participants and FTR Bidders.

This Credit Policy & Procedures Guide (CPPG) provides Market Participants and FTR Bidders further detailed information regarding credit-related provisions described in Section 12 of the ISO Tariff. By providing this information, the ISO hopes to provide Market Participants and FTR Bidders increased visibility into the standard, commercial credit review procedures that the ISO uses in evaluating a Market Participant's and FTR Bidder's ability to meet its financial obligations. Specifically, Market Participants and FTR Bidders will find in the CPPG:

- Information on the processes used to administer the credit policy;
- The methodology used to calculate Unsecured Credit Limits and Estimated Aggregate Liabilities;
- Acceptable forms of Financial Security and the associated processes for requesting, posting and administering Financial Security;
- Security requirements for FTR Bidders;
- Consequences for Market Participants' failure to meet their credit related obligations; and
- Other credit-related information.

#### **Principles**

The ISO's intent is to maintain the confidence of Market Participants and FTR Bidders in the ISO markets and to sustain the ISO's mission of ensuring an adequate supply of power at a reasonable cost, by equitably, consistently and strictly enforcing these credit procedures.

The ISO recognizes the importance to Market Participants and FTR Bidders that credit-related practices be transparent and comprehensive. The ISO will endeavor to maintain an accurate procedures guide that describes the methods used to conduct its credit analysis as well as other credit-related practices and administrative procedures on the ISO's Home Page.

#### **Definitions**

Any term defined in the Master Definitions Supplement to the ISO Tariff shall have the same meaning where used in this Guide. In any instances where a definition in this document conflicts with a definition in the ISO Tariff, the ISO Tariff definition will prevail. Section number references refer to sections of the CPPG unless specifically stated otherwise.

The following table defines terms used throughout this document and their associated meanings:

TERM	DEFINITION		
Affiliated Entities	Legally distinct business units that are Affiliates, as defined in the ISO Tariff.		
Aggregate Credit Limit (ACL)	The sum of a Market Participant's or FTR Bidder's Unsecured Credit Limit and its Financial Security Amount, as provided for in Section 12 of the ISO Tariff.		
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 the ISO to represent a Market Participant or a FTR Bidder. 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 A-2.2 of this CPPG.		
FTR Bidder	An entity that submits a bis in an FTR auction conducted by the ISO in accordance with Section 36.4 of the ISO Tariff.		
Collateral	See Financial Security.		
Combined Default Probability (CDP)	A Market Participant's or FTR Bidder'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.		
Estimated Aggregate Liability (EAL)	The sum of a Market Participant's or FTR Bidder's known and reasonably estimated potential liabilities for a specified time period arising from charges described in the ISO Tariff, as provided for in Section 12 of the ISO Tariff.		
Financial Security	Any of the types of financial instruments listed in Section 12 of the ISO Tariff that are posted by a Market Participant or FTR Bidder.		
Financial Security Amount	The level of Financial Security posted in accordance with Section 12 of the ISO Tariff by a Market Participant or FTR Bidder.		
Material Change in Financial	A change in or potential threat to the financial condition of a Market		
Condition	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:		
	<ul> <li>(a) A credit agency downgrade;</li> <li>(b) Being placed on a credit watch list by a major rating agency;</li> <li>(c) A bankruptcy filing;</li> <li>(d) Insolvency;</li> <li>(e) The filing of a material lawsuit that could significantly</li> </ul>		
	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	The Moody's KMV default probability determined in accordance with step 3 of Section A-2.2 of this CPPG.
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, defined as total assets 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 the ISO for the purposes of undertaking the functions specified in Section 4.5.3 of the ISO Tariff.
Scheduling Coordinator Identification Number (SCID)	A unique number assigned to each Scheduling Coordinator by the ISO.
Tangible Net Worth (TNW)	Total Assets minus Intangibles (e.g., Good Will) 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 or a FTR Bidder that is not secured by any form of Financial Security, as provided for in Section 12 of the ISO Tariff.

#### **Rules of Interpretation**

Unless the context otherwise requires, if the provisions of this Guide and the ISO Tariff conflict, the ISO Tariff will prevail to the extent of the inconsistency. The provisions of the ISO Tariff have been summarized or repeated in this Guide only to aid understanding.

A reference in this Guide to a given agreement, the ISO Guide or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made.

The captions and headings in this Guide are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Protocol.

A reference to a day or Trading Day is to a calendar day unless otherwise specified.

#### **PART A: UNSECURED CREDIT**

#### A-1. Credit Assessment Requirements

As provided in Section 12.1.1 of the ISO Tariff, an approved Application for Unsecured Credit must be on file with the ISO for those Market Participants and FTR Bidders seeking an Unsecured Credit Limit. A copy of the Application for Unsecured Credit can be found at the ISO Home Page. An Application for Unsecured Credit must only be filed once by a Market Participant or FTR Bidder. A Market Participant or FTR Bidder should subsequently inform the ISO of changes to contact or other relevant information contained in the Application.

As provided in Section 12.1 of the ISO Tariff, each Market Participant or FTR Bidder must secure its financial transactions with the ISO by maintaining an Unsecured Credit Limit (UCL) and/or by posting Financial Security. The combination of the UCL and the Financial Security Amount represents the Market Participant's or FTR Bidder's Aggregate Credit Limit (ACL). The ISO will periodically estimate a Market Participant's liabilities and will notify it in case its ACL needs to be increased through posting of additional Financial Security. It is the Market Participant's responsibility to maintain a sufficient ACL to meet all of their estimated financial obligations.

As provided in Sections 12.1.1, 12.1.5 and 12.4 of the ISO Tariff, each Market Participant and FTR Bidder requesting or having unsecured credit is required to submit to the ISO or its agent financial statements and other information related to the overall financial health of the Market Participant or FTR Bidder that will be used in determining the Market Participant's or and FTR Bidder's creditworthiness and ability to meet its financial obligations. Market Participants and FTR Bidders 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 the ISO to conduct its evaluation. The ISO 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 the ISO Tariff, as a result of the credit evaluation, a Market Participant or FTR Bidder may be denied an Unsecured Credit Limit with the ISO. Market Participants or FTR Bidders who have been denied an Unsecured Credit Limit may submit other forms of Financial Security acceptable to the ISO (see Part B) sufficient to cover their Estimated Aggregate Liabilities.

#### A-1.1. Financial Statements

As provided in Section 12.1.1 of the ISO Tariff, Market Participants and FTR Bidders requesting unsecured credit are required to provide financial statements so that a credit review can be completed.

Based on availability, the Market Participant or FTR Bidder 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 or FTR Bidder, if shorter, to the ISO or the ISO'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 or FTR Bidder as a fair representation of the financial condition of the Market Participant or FTR Bidder 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 guarterly 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 or FTR Bidder may indicate in written or electronic communication where such statements are located for retrieval by the ISO or the ISO's designee.

#### A-1.2. Rating Agency Reports

Rating agency reports and credit ratings are utilized from those entities designated by the U.S. Securities & Exchange Commission - <a href="http://www.sec.gov/answers/nrsro.htm">http://www.sec.gov/answers/nrsro.htm</a>. The ratings utilized are to be long-term credit ratings for the entity as a whole, on a stand-alone basis without the benefit of third party credit support (also known as "issuer" or "underlying" ratings). Project financing ratings or insured bond ratings do not qualify, since such credit ratings are based on the availability of revenue streams or third-party funding available to bond holders but not necessarily available to trade creditors such as the suppliers to the ISO markets. Moreover, the ISO has been advised by the credit rating agencies that these projects 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 or FTR Bidder has only a "senior long-term unsecured rating" instead of an issuer rating, the rating will be deemed acceptable; however, for the Unsecured Credit Limit calculation, the rating will be lowered by one rating level to account for the risk of obligations to the ISO having a lower claim priority.

If a Market Participant or FTR Bidder has only a "short-term rating" instead of an issuer rating, the ISO will utilize an equivalent long-term rating based on the highlighted rating in the following long-and short-term rating correlation table:

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

A-2	A-/ <b>BBB+</b> /BBB	P3	Baa3/Ba1/ <b>Ba2</b> /Ba3
A-3	ввв/ <b>ВВВ-</b>	NP	B1/B2/B3/Caa1/ <b>Caa2</b> / Caa3/Ca/C
В	BB+/ <b>BB</b> /BB-		
С	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, the ISO will use the lowest long-term equivalent rating in the range for its assessment.

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.

#### A-1.3. Other Qualitative and Quantitative Credit Strength Indicators

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

- 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.

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 A-2.2. A Market Participant or FTR Bidder, upon request, will be provided a written analysis as to how the provisions of Section A-2.2 were applied in setting its Unsecured Credit Limit.

<sup>&</sup>lt;sup>1</sup> "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), at footnote 13.

Notwithstanding the considerations described above, Market Participants and FTR Bidders are obligated to provide the ISO 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;
- 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 or FTR Bidder that exceeds a five percent (5%) reduction in the Market Participant's or FTR Bidder's Tangible Net Worth or Net Assets for the Market Participant's or FTR Bidder's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

#### A-2. Unsecured Credit Limit Calculation

An Unsecured Credit Limit (UCL) for each Public/Private Corporation or Governmental Entity that requests an unsecured limit is calculated as follows:

- 1. Rated Public/Private Corporations the UCL is the lesser of \$250 million or an amount equal to the Market Participant's or FTR Bidder's Tangible Net Worth (TNW) multiplied by a calculated percentage of TNW. The TNW percentage is comprised of 50 percent (50%) of the Market Participant's or FTR Bidder's Credit Rating Default Probability and 50 percent (50%) of the MKMV Default Probability.
- **2. Unrated Public/Private Corporations** the UCL is the lesser of \$250 million or an amount equal to the Market Participant's or FTR Bidder's Tangible Net Worth (TNW) multiplied by a calculated percentage of TNW. The TNW percentage is comprised of 100 percent of the MKMV Default Probability.
- **3.** Rated Governmental Entities the UCL is the lesser of \$250 million or an amount equal to the Market Participant's or FTR Bidder's Net Assets (NA) multiplied by a calculated percentage of NA. The NA percentage is comprised of 100 percent of the Market Participant's or FTR Bidder's Credit Rating Default Probability.
- **4. Unrated Governmental Entities** the UCL is the lesser of \$250 million or an amount equal to a given percentage of the Market Participant's or FTR Bidder's Net Assets if the Market Participant or FTR Bidder 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 specified minimums.

The \$250 million hard cap on UCLs specified in the ISO Tariff has been set with respect to the length of the current ISO payment calendar, i.e., a maximum of 95 days of charges outstanding. Upon implementation of Payment Acceleration (scheduled for 2008), we expect to recommend a reduction in the \$250 million hard cap. Any changes to the \$250 million cap will require FERC approval of an amendment to the applicable provisions of the ISO Tariff.

#### A-2.1. Maximum Percentage of TNW and NA

For Rated and Unrated Public/Private Corporations or Rated Governmental Entities, the maximum percentage of TNW or NA is 7.5 percent (7.5%) if the Market Participant's or FTR Bidder's Combined Default Probability is less than or equal to 0.06 percent (0.06%).

The Maximum Allowable Percentage of 7.5% is for the highest quality firms; that is, those Market Participants and FTR Bidders with a CDP of 0.06 percent or less. The TNWP or NAP that a Market Participant or FTR Bidder qualifies for will be reduced as its credit risk increases.

For Unrated Governmental Entities, the ISO may provide an Unsecured Credit Limit of up to 5 percent (5%) of NA.

With respect to either of these potential maximum percentages, a lesser amount of unsecured credit may be granted if the ISO 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.

#### A-2.2. Unsecured Credit Limit Calculation Steps

An eight-step process is used to determine Unsecured Credit Limits for Market Participants and FTR Bidders that are Rated Public/Private Corporations, Unrated Public/Private Corporations and Rated Governmental Entities. Criteria for Unsecured Credit Limits for Unrated Governmental Entities is discussed in Section A-2.3.

**Step 1 –** If the Market Participant or FTR Bidder has a credit rating(s) from one or more of the "Nationally Recognized Statistical Rating Organizations" (NRSRO), verify the rating(s) with the appropriate NRSRO.

**Step 2** - Calculate the Market Participant's or FTR Bidder's Average Rating Default Probability (ARDP).

- **a.** ARDP is the sum of Credit Rating Default Probabilities divided by the total number of Credit Rating Default Probabilities used.
- **b.** The following table shows the median default probability calculated by Moody's KMV (i.e., MKMV) for Standard & Poor's and Moody's long-term credit rating classes. Default probabilities are available from each NRSRO.
- **c.** The example presented below uses the following table to derive the ARDP.

### **CREDIT RATING DEFAULT PROBABILITIES (DP)**

Based on 5 year historical median of Moody's KMV EDF's (Indicative Table \*)

Maximum Allowable Percentage)
Base Default Probability

7.50% 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%	Α	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%	В	3.338%	0.00%
В3	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%
С	20.000%	0.00%	С	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/2005/06/14/200506141656326466.html

**Step 3** – Using MKMV's CreditEdge or RiskCalc software, obtain the Market Participant's or FTR Bidder's MKMV Default Probability (MKDP).

**a.** Since MKMV calculates default probabilities directly, the MKMV Default Probability will be used without any mapping.

**Step 4** – Calculate a Combined Default Probability (CDP) based on one of the following methodologies:

**a.** CDP for Rated Public/Private Corporations = (ARDP \* 50%) + (MKDP \* 50%)

**d.** Issuer ratings without the benefit of credit enhancement would be used in this assessment. Such ratings are also known as "counterparty" or "underlying" ratings.

- **b.** CDP for Unrated Public/Private Corporations = MKDP \* 100%
- **c.** CDP for Rated Governmentally Owned Utilities = ARDP \* 100%

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

- a. TNWP = MAP \* BDP / CDP for Rated/Unrated Public/Private Corporations
- b. NAP = MAP \* BDP / CDP for Rated Governmental Entities

#### Where:

MAP = Maximum Allowable Percentage;

BDP = Base Default Probability;

CDP = see Step 4 above; and

If the SC's CDP > 0.5%, the TNWP or NAP equals 0%

**Step 6** – Calculate the Market Participant's or FTR Bidder's Tangible Net Worth or Net Assets.

- a. TNW for Rated/Unrated Public/Private Corporations = Assets minus Intangibles (e.g., Good Will) minus Liabilities
- b. NA for Rated Governmental Entities = Total Assets minus Total Liabilities

**Step 7** – Calculate the Market Participant's or FTR Bidder's Unsecured Credit Limit.

- c. UCL = TNW \* TNWP for Rated/Unrated Public/Private Corporations
- d. UCL = NA \* NAP for Rated Governmental Entities

**Step 8** – Adjust Unsecured Credit Limit Downward, if warranted based on the ISO's review of factors in Section A-1.3.

a. Final UCL = UCL from Step 7 \* (0 - 100%)

#### A-2.3. Unsecured Credit Limit Calculation for Unrated Governmental Entities

The UCL for an Unrated Governmental Entity is based on the financial ratios defined in the following table:

Ratio Calculation		Minimum Accepted Value
Times Interest Earned	(Long-Term Debt Interest Expense + Change in	1.05
(TIER)	Net Assets) / Long-Term Debt Interest Expense	
Debt Service	(Depreciation & Amortization Expense + Long	1.00
Coverage (DSC)	Term Debt Interest Expense + Change in Net	

	Assets) / Debt Service Billed (Debt Service Interest and Principal).	
Equity to Assets	Total Equity / Total Assets	0.15

For those Municipals that meet all of the above criteria, initial unsecured credit will be calculated as five percent (5%) of Net Assets (i.e., Total Assets minus Total Liabilities). That percentage may be adjusted downward by up to 100% if the ISO becomes aware of significant negative information regarding the Market Participant's or FTR Bidder's operations as determined through trade publications and/or the financial press.

#### A-2.4. Unsecured Credit Limit Calculation Examples

#### Rated Public/Private Corporations

## Step 1 – Step 2: Calculate the Market Participant's or FTR Bidder's Average Rating Default Probability

If a Market Participant or FTR Bidder 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 (0.230% + 0.200%) / 2 = 0.215%.

#### Step 3 – Step 4: Calculate a Combined Default Probability

If the Market Participant or FTR Bidder has a 0.240% MKMV Default Probability, its Combined Default Probability would be (50% \* 0.215%) + (50% \* 0.240%) = 0.228%

### Step 5: Calculate the Market Participant's or FTR Bidder's Allowable Tangible Net Worth Percentage

TNWP =  $7.5\% \times 0.06\% / 0.228\% = 1.97\%$ 

### Step 6 – Step 8: Calculate the Market Participant's or FTR Bidder's Tangible Net Worth and Unsecured Credit Limit

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

	Tangible Assets (i.e., Total Assets less Goodwill)	TNW \$154,100,000	UCL \$3,036,000
	\$192,100,000	times	times
	minus	TNWP 1.97%	Adjustment factor based on
1.97%	Total Liabilities \$38,000,000	equals	qualitative factors as specified in section A-1.3. 80%
	equals	UCL \$3,036,000	equals
	TNW \$154,100,000		Final UCL \$2,429,000

#### **Unrated Public/Private Corporations**

## Step 1 – Step 2: Calculate the Market Participant's or FTR Bidder's Average Rating Default Probability

These steps would not be applicable for unrated public/private corporations.

#### Step 3 – Step 4: Calculate a Combined Default Probability

If the Market Participant or FTR Bidder has a 0.240% MKMV Default Probability, its Combined Default Probability would be 100% \* 0.240% = 0.240%

## Step 5: Calculate the Market Participant's or FTR Bidder's Allowable Tangible Net Worth Percentage

TNWP =  $7.5\% \times 0.06\% / 0.240\% = 1.88\%$ 

## Step 6 – Step 8: Calculate the Market Participant's or FTR Bidder's Tangible Net Worth and Unsecured Credit Limit

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

	Tangible Assets (i.e., Total Assets less Goodwill)	TNW \$154,100,000	UCL \$2,897,000
	\$192,100,000	times	times
	minus	TNWP	Adjustment factor based on
1.88%	Total Liabilities \$38,000,000	1.88%	qualitative factors as specified in section A-1.3.
	ψ30,000,000	equals	50%
	equals	UCL	equals
	TNW \$154,100,000	\$2,897,000	Final UCL
	φ134,100,000		\$1,449,000

#### Rated Governmental Entities

## Step 1 – Step 2: Calculate the Market Participant's or FTR Bidder's Average Rating Default Probability

If a Market Participant or FTR Bidder 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 (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 would be 100% \* 0.070% = 0.070%

## Step 5: Calculate the Market Participant's or FTR Bidder's Allowable Net Asset Percentage

NAP =  $7.5\% \times 0.06\% / 0.070\% = 6.43\%$ 

### Step 6 – Step 8: Calculate the Market Participant's or FTR Bidder's Net Assets and Unsecured Credit Limit

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

		Net Assets	UCL
	Total Assets	\$154,100,000	\$9,909,000
	\$192,100,000		
		times	times
	minus		
		NAP	Adjustment factor based on
6.43%	Total Liabilities	6.43%	qualitative factors as
0.43%	\$38,000,000		specified in section A-1.3.
		equals	100%
	equals		
	·	UCL	equals
	Net Assets	\$9,909,000	·
	\$154,100,000	·	Final UCL
	·		\$9,909,000
			·

#### **Unrated Governmental Entities**

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 Total Liabilities = \$232,500,000 Total Equity = Total Assets - Total Liabilities = \$51,100,000

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 & 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 ratios exceeding the minimum accepted value, the Unsecured Credit Limit = Net Assets \* 5% = \$51,100,000 \* 0.05 = \$2,555,000

#### A-3. Unsecured Credit Limit Issues for Affiliated Entities

As provided in Section 12.1.1.1 of the ISO Tariff, if any Market Participant or FTR Bidder requesting or maintaining an Unsecured Credit Limit is affiliated with one or more other entities subject to the credit requirements of Section 12 of the ISO Tariff, the ISO may consider the overall creditworthiness and financial condition of such Affiliates when determining the applicable Unsecured Credit Limit. The ISO may determine that the maximum Unsecured Credit Limit calculated in accordance with Section A-2 of this document applies to the combined activity of such Affiliates.

#### PART B: APPROVED FORMS OF FINANCIAL SECURITY

In accordance with Section 12.1.2 of the ISO Tariff, a Market Participant or FTR Bidder, at its own expense, may submit one or more of the following forms of Financial Security to meet its posting requirement (proforma templates are located at http://www.caiso.com/docs/2005/06/14/200506141656326466.html):

- An irrevocable and unconditional letter of credit issued by a bank or financial institution that is reasonably acceptable to the ISO;
- An irrevocable and unconditional surety bond issued by an insurance company that is reasonably acceptable to the ISO;
- An unconditional guaranty issued by a company that is reasonably acceptable to the ISO;
- A cash deposit in an escrow account maintained at a bank or financial institution that is reasonably acceptable to the ISO;
- A certificate of deposit in the name of the ISO issued by a bank or financial institution that is reasonably acceptable to the ISO;
- A payment bond certificate issued by a bank or financial institution that is reasonably acceptable to the ISO; or
- A prepayment to the ISO.

The ISO will maintain standard agreement forms related to the above types of Financial Security. In accordance with Section 12.1.2.1 of the ISO Tariff, the ISO will evaluate non-standard agreement forms for these types of Financial Security on a case-by-case basis. For those Market Participants or FTR Bidders that propose the use of a non-standard agreement form, the form would be subject to review and approval by the ISO Finance and Legal Departments. A Market Participant or FTR Bidder will be required to justify any proposed departures from the standard agreement form. The ISO shall have ten (10) Business Days from receipt of such form of Financial Security to evaluate it and determine whether it will be approved as reasonably acceptable. Significant departures from the standard agreement forms may not be accepted. The request is deemed denied if the ISO does not respond within ten (10) Business Days. It should be noted that if the need to post additional Financial Security was prompted by an additional Financial Security request based upon the latest Estimated Aggregate Liability calculation, the review process does not defer the Market Participant's obligation to post.

The standard that the ISO will use in establishing reasonable acceptability for issuing banks, financial institutions or insurance companies is that the institution have and maintain 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.

In those cases where a Market Participant or FTR Bidder is a subsidiary or affiliate of another entity and would like to utilize the consolidated financial statements and other relevant information of that entity for obtaining credit, a signed corporate guaranty is required. A guarantor would be considered reasonably acceptable and a corresponding Financial Security Amount would be set based on the guarantor's credit evaluation according to the same procedures that a Market Participant or FTR Bidder would undergo as described in Section A-1.

Cash deposits held in escrow will be maintained in an interest bearing account. Interest will accrue to the Market Participant's or FTR Bidder's benefit and will be added to the Market Participant's or FTR Bidder's prepayment account on a monthly basis. Should a Market Participant or FTR Bidder become delinquent in payments, the Market Participant's or FTR Bidder's outstanding account balance will be satisfied using deposited funds. The Market Participant or FTR Bidder must take care to replenish used funds to ensure that it maintains a suitable level of cash to meet future financial obligations.

The ISO Tariff also permits Market Participants to make a prepayment of an upcoming bill due to the ISO. A prepayment may be used as a form of Financial Security. Prepayments to the ISO will be held in an interest-bearing account or another investment acceptable to the Market Participant and the ISO, and interest on the investment will accrue at the rate as provided for in the investment. Interest will accrue to the Market

Participant's benefit and will be added to the Market Participant's prepayment account on a monthly basis. Due to the additional administrative effort involved in tracking and posting interest on such prepayments, the use of this option is not encouraged.

As provided in Section 12.1.2.3 of the ISO Tariff, the ISO shall not be held liable for any losses of funds held and invested by the ISO on the Market Participant's or FTR Bidder's behalf. Market Participants and FTR Bidders agree to bear any risk of loss of principal and/or interest of such funds. Funds will only be invested in bank accounts, high-quality money market funds or U.S. Government securities according to the ISO investment policy, unless otherwise agreed to by the Market Participant or FTR Bidder and the ISO.

In accordance with Section 12.1.2.2 of the ISO Tariff, each Market Participant or FTR Bidder shall ensure that the financial instruments it uses for the purpose of providing Financial Security will not expire and thereby cause the Market Participant's or FTR Bidder's Aggregate Credit Limit to fall below the Market Participant's or FTR Bidder's Estimated Aggregate Liability. The ISO will treat a financial instrument that does not have an automatic renewal provision and that is not renewed or replaced within seven (7) days of its date of expiration as being out of compliance with the standards for Financial Security and will deem the value of such financial instrument to be zero, and will draw upon such Financial Security prior to its stated expiration if deemed necessary by the ISO.

#### PART C: ESTIMATED AGGREGATE LIABILITY CALCULATION

This section describes the approach used by the ISO to determine the Financial Security posting requirements for Market Participants. Different approaches are used for new Market Participants (those without experience data with the ISO or who have been previously inactive) and for Market Participants with such data.

#### C-1. New Market Participants

A new Market Participant (or a Market Participant that has previously been inactive) is required to post an initial Financial Security Amount to cover a minimum of 14 days of estimated obligations as well as additional Financial Security as obligations are incurred.

This posting requirement is based on anticipated scheduling/trading practices and overall volumes. The ISO has prepared a simple template (Appendix 2) 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 <a href="http://www.caiso.com/docs/2005/06/14/200506141656326466.html">http://www.caiso.com/docs/2005/06/14/200506141656326466.html</a>.

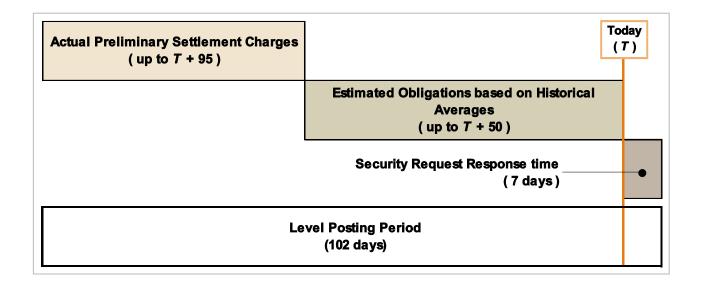
The ISO will monitor a Market Participant's ongoing security requirement by comparing actual obligations against the estimated obligations to determine if an additional Financial Security Amount is required using the method described in Section C.2. This approach permits a Market Participant to increase its Financial Security Amount as often as weekly until the time elapsed from initial participation equals the length of the ISO payment cycle. At that time, the Financial Security Amount should be sufficient to cover 102 days transactions on an ongoing basis (The "Level Posting Period", as described in the subsequent section).

#### C-2. Other Market Participants - Estimated Aggregate Liability (EAL) Overview

The ISO 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 ISO Tariff.

A Market Participant's Aggregate Credit Limit (the sum of Unsecured Credit Limit and Financial Security Amount) is intended to provide coverage of not less than 100% of its Estimated Aggregate Liability. For a Market Participant that must post Financial Security because its Unsecured Credit Limit is not equal to or greater than its Estimated Aggregate Liability, the figures generated in determining the Estimated Aggregate Liability are normally the basis for determining each Market Participant's Financial Security posting requirement.

The Estimated Aggregate Liability calculation incorporates outstanding/past-due obligations, actual settlement charges, and estimated settlement charges (based on average historical settlement charges described below). At any given time, the number of trade days of unpaid obligations to the ISO, based on the preliminary statement payment calendar, will be from 60-95 days, depending on the date of the last cash settlement. 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. The illustration below provides a representative example of what periods the different settlement charges cover in the Estimated Aggregate Liability calculation.



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.

#### C-3. Calculation of Estimated Aggregate Liability Using Available Settlements Data

The 102-day Level Posting Period is utilized in the EAL to result in an estimate of outstanding obligations that does not fluctuate based on the date the EAL is calculated within the ISO's payment calendar. Depending on when the latest Preliminary and Final invoices were paid, there will be between about 8 and 40 days of unpaid actual Preliminary Statements. There can be an additional 8 to 40 days of unpaid Final statements as well, though those days are not counted toward the 102-day total because they are only incremental and are not representative of a complete day of activity.

As noted in Section C-2, the Estimated Aggregate Liability amount is made up of trade days for which actual settlement charges are available and other trade days for which actual settlements charges are not yet available. Trade days for which actual settlements data is available include the following:

- Outstanding obligations Any past-due open balances of amounts payable by and amounts receivable from the Market Participant, including unpaid FERC Annual Charge balances and excluding balances covered by bankruptcies.
- Invoice obligations Obligations from either a preliminary or a final invoice that has been issued but not yet paid.
- Actual Settlement Obligations The Market Participant's preliminary and final Settlement obligations up to the date of the latest Preliminary Settlement Statement.

The remainder of days in the 102-day Level Posting Period for which unpaid Preliminary Statements are not available, must be estimated. The estimate is calculated by deriving a daily average of published, actual charges and multiplying by the number of remaining days in the Level Posting Period. The daily average is based on all outstanding unpaid Preliminary and Final activity and an additional amount of days (as described below) of historical Final Statement activity. Due to the difficulty and pitfalls of gauging "blind spot" activity on historical statements, any of three methods may be utilized, varying only by the number of historical months used in the derivation of daily-average amounts.

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The three methods that may be used rely on the same outstanding charges (i.e., available Preliminary and Final activity) but will also consider a total of one, two, or twelve months of historical data. The ISO will typically use the calculation based on two months of historical data as the basis for any collateral request, unless another method is likely to provide a more accurate estimate based on a review of the historical settlements data for the Market. ISO staff aims to select the method that best represents Market Participant activity for which settlements data is not yet available. The process of estimation is a relatively simple one, though each Market Participant's activity must be separated into Daily Market, Monthly Market, and GMC activity and estimated separately due to the difference in charge frequency. Appendix 1 contains additional details and an example calculation.

Once a daily average amount is derived for each market type (Daily, Monthly, GMC) the daily average amounts will be multiplied by the number of days remaining to fill the 102-day Level Posting Period. tThe resulting amount is then added to the other three components listed above and the sum will be divided by 0.9 in order to account for the ISO's stated policy for Financial Security of not more than a 90% utilization rate. Any shortfall between the 90% utilization amount of the EAL and the posted Financial Security will be considered as a potential request for additional Financial Security.

#### C-4. Special Circumstances

The ISO's goal is to ensure that active as well as inactive Market Participants (to the extent they are not covered by their Unsecured Credit Limits) post adequate Financial Security to cover all known and reasonably estimated potential liabilities. Various charges and collateral issues sometimes arise which require special consideration.

The ISO 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 ISO's planned Settlement and Market Clearing system upgrade is scheduled for implementation in November 2007, at which time improved data for certain of these transactions is anticipated to be available.

- 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.
- Refund Orders The ISO will assess its ability to reasonably calculate the charges associated with a refund before the ISO's settlement system is rerun. If the ISO can reasonably apportion the refund to specific Market Participants, it will include the amounts in the liability estimation process and request security accordingly. If the ISO 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, the ISO will make available an aggregate forecast of the refund liabilities, if at all possible, to Market Participants for informational purposes only.
- 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.

Other special circumstances include:

• Debtor/Creditor Market Participants leaving the market or incurring substantial activity level changes – Those Market Participants that are exiting the ISO markets, or that have changed their business practices resulting in substantially reduced participation in the ISO markets, will be required to maintain a Financial Security Amount 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. The ISO will use this Financial Security posting requirement 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 Financial Security posting 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).

• Past due amounts owed to SCs are not considered part of an SC's security posting. This treatment is necessary if the ISO 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, the ISO 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.

#### C-5. Estimated Aggregate Liability Review

As provided in Section 12.4 of the ISO Tariff, Estimated Aggregate Liability is used to determine Financial Security posting requirements and is to be used as the basis for additional Financial Security requests, particularly when a Market Participant's calculated liability estimate exceeds 90% of its Estimated Aggregate Liability.

A Market Participant has five (5) business days to review the request for additional Financial Security and submit proposed changes that must be agreed to by the ISO. Within the five (5) business days, the Market Participant must either demonstrate to the ISO's satisfaction that the ISO's Financial Security request is all or partially unnecessary, or post the required Financial Security Amount calculated by the ISO. If the ISO and Market Participant are unable to agree on the appropriate level of Financial Security during the five (5) business day review period, the Market Participant must post the additional Financial Security and continue the dispute procedure as described in Part E. Any excess Financial Security amounts will be returned to the Market Participant if the dispute process finds in favor of the Market Participant.

#### C-6. Financial Security Posting Requirements

This section describes the process for determining when additional Financial Security is required and how the request for additional Financial Security is communicated to the Market Participant.

#### C-6.1. Financial Security Requests

As described above, to the extent a Market Participant's Unsecured Credit Limit is less than its Estimated Aggregate Liability, the Market Participant must post a Financial Security Amount. The determination of a required/recommended Financial Security Amount is based on a Market Participant's most recent ISO Estimated Aggregate Liability calculation. The ISO recommends that each Market Participant maintain an Aggregate Credit Limit such that its Estimated Aggregate Liability does not exceed 90% of its Aggregate Credit Limit. The calculation is as follows:

Recommended Aggregate Credit Limit = (Estimated Aggregate Liability) / (0.90)

The 90% level is specified in the ISO Tariff and is used as the basis for the Financial Security Amount recommended by the ISO. A Market Participant must provide an additional Financial Security Amount when its obligations reach 100 percent of its Aggregate Credit Limit. However, the ISO recommends providing additional Financial Security at the 90% level, because when a Market Participant's Estimated Aggregate Liability exceeds 100% of its Aggregate Credit Limit, the ISO may be required to impose enforcement actions.

The Estimated Aggregate Liability calculated by the ISO 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 including not being entitled to submit a schedule to the ISO. Thus, the ISO recommends that Market Participants maintain a margin of Aggregate Credit Limit above their maximum anticipated Estimated Aggregate Liability.

The Estimated Aggregate Liability is updated weekly for each Market Participant and is used to determine if additional Financial Security needs to be posted. 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	<u>Action</u>
≥70% and < 90%	Market Participant notified of a <u>recommended</u> 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%	CAISO requests that a Market Participant increase the posting amount within five Business Days so that the security utilization does not exceed 90 percent.
≥100%	The Market Participant is subject to any of the credit related enforcement provisions of the CAISO Tariff Section 12.5 described in Part D of this CPPG.

#### C-6.2. Financial Security Requests Communication

Each week the ISO Finance calculates each Market Participant's Estimated Aggregate Liability and notifies the ISO's customer service representatives of the Estimated Aggregate Liability amount and any recommended increases in the Market Participant's Financial Security Amount. These communications contain specific information regarding the amount each Market Participant needs to post Financial Security in order to maintain the recommended 90% ratio described above as well as the minimum amount needed so that the Market Participant's Estimated Aggregate Liability does not exceed its Aggregate Credit Limit.

The ISO customer service representative is to contact any Market Participant for which an increase in Financial Security is recommended or required within one (1) business day.

The customer service representative should copy ISO Finance on all security related client correspondence. The ISO customer service representatives will communicate with the ISO Finance and Market Participants to address questions related to the request.

A required increase in the Financial Security Amount is to be resolved within five (5) business days. Each Market Participant not in compliance with the requirement that its Estimated Aggregate Liability be less than its Aggregate Credit Limit is subject to enforcement procedures as described in Part D.

#### C-6.3. FTR Auction Financial Security Requirements

The credit requirements related to participation in the ISO's annual Firm Transmission Rights (FTR) are the same as those for other market obligations. Auction requirements are set forth in the FTR Bidders Manual published annually by the ISO. A FTR Bidder's ACL must be sufficient to not only cover ongoing estimated liabilities but also the liabilities resulting from potential winning bids. Each FTR Bidder may choose to designate a portion of their UCL and/or posted Financial Security

specifically for the FTR auction by notifying the ISO of the FTR Bidder's intent. Alternatively, the FTR Bidder may choose to post additional Financial Security solely to cover their participation in the FTR auction by notifying the ISO of the purpose for the additional Financial Security.

#### PART D. ENFORCEMENT

Following the date on which a Market Participant commences trading, if a Market Participant's Estimated Aggregate Liability, as calculated by the ISO, at any time exceeds its Aggregate Credit Limit, the ISO may take any or all of the following actions in accordance with Section 12.5 of the ISO Tariff:

- (a) The ISO may withhold a pending payment distribution.
- (b) The ISO may limit trading, which may include rejection of Schedules and/or limiting other ISO market activity. In such case, the ISO shall notify the Market Participant of its action and the Market Participant shall not be entitled to submit further Schedules to the ISO 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) The ISO may require the Market Participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.
- (d) The ISO may restrict, suspend, or terminate a Market Participant's Service Agreement.

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

#### **PART E. DISPUTE PROCEDURES**

The ISO provides Market Participants the ability to dispute the Estimated Aggregate Liability calculated by the ISO and, as a result, the ISO may reduce or cancel a requested Financial Security adjustment. The following steps are required for a Market Participant to dispute a Financial Security request resulting from the ISO's calculation of Estimated Aggregate Liability:

- 1. Request by the Market Participant to review the ISO calculation.
- 2. Reasonable and compelling situation presented, as determined by the Market Participant's ISO client representative.
- 3. Documentation of facts and circumstances that evidence that the ISO's calculation of Estimated Aggregate Liability results in an excessive and unwarranted Financial Security posting requirement.
  - a. Examples include:
    - i. Issues related to non-recurring retroactive charges.
    - ii. Demonstrable changes in expected obligations as a result of physical changes (new capacity, loss of customers).
    - iii. Other issues.
  - b. Presentation of a reasonable alternative Estimated Aggregate Liability.
- 4. Approval by the ISO Manager and/or Director of Customer Services and Industry Affairs and approval by the ISO Treasurer.
- 5. The ISO may decline to adjust the initial Estimated Aggregate Liability, as calculated by the ISO, 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 Aggregate Credit Limit at times during the preceding 12 months has been insufficient to cover the Market Participant's Estimated Aggregate Liability).

In no such case shall an ISO request for increased Financial Security remain outstanding for more than five (5) business days. Either the above process is to be completed within five (5) business days from the date of the ISO request for additional Financial Security, or the Market Participant is to post additional Financial Security within the five (5) business days and continue this process, which may result in a return of posted Financial Security back to the Market Participant if the results of the dispute process are found to favor the Market Participant.

Factors for consideration in the event these procedures are utilized include:

- 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 a Market Participant.
- Equity and consistency of treatment of Market Participants in the dispute procedure.
- The evidentiary value of the information provided by the Market Participant's in the dispute procedure.

#### **APPENDIX 1: ESTIMATED AGGREGATE LIABILITY CALCULATION**

To assist Market Participants in understanding and verifying the ISO's EAL calculation, the following section provides additional details and an example calculation. As described in Section C-3.1, the ISO initially evaluates a Market Participant's liability by deriving three estimates which vary only by the number of months used in derivation of the daily average liability amounts. ISO Staff review the preliminary estimates to determine which appears to be most representative of the likely actual liability, and may request additional collateral based on that estimate. A summary report detailing the EAL calculation will be provided to any Market Participant requested to post additional security, or at any time when requested by the Market Participant. The report will highlight only the method that is deemed by the ISO to be most representative of the Market Participant's liability, however all three methods are available upon request as well.

This Estimated Aggregate Liability (EAL) Report presents most of the details of the calculation, which should be verifiable by the Market Participant using published Settlements Statements. Adding all outstanding, unpaid, published Settlements activity to an estimate of the remaining liability in the 102-day period results in the Level Posting Period EAL.

For example, assume that the EAL is calculated on Friday, June 16, 2006. On this day there are 23 days of published Preliminary Statements along with 4 days of Final Statements for the month of April. All of this activity will be summed for April and will account for 23 days out of the required 102 days. The Preliminary Statement has been paid for March; therefore no days in March will be counted in the Level Posting Period. However, there are still incremental charges in March on Final Statements that have been invoiced but not paid, and therefore will be included in the liability amount.

Now an estimate must be derived for the remaining seven days of April, along with an additional 72 days that make up the Level Posting Period (23+7+72=102). The estimate is based on a calculated daily average amount for all Charge Types. For simplicity, the Charge Types are aggregated into three categories: Daily Market (Imbalance Energy, Ancillary Services, etc.), Monthly Market (Wheeling, Transmission, etc), and GMC. The following table entitled "**Charge Type Category List"** lists all Charge Types and their category designation.

The averages for all three categories will be calculated using the same time period, based on either one, two or twelve months of historical Settlements data. In the one-month method, the time-period for derivation of daily averages will include 23 days of April published data, 30 days of March published data (because the month is still open), and one additional month of previously paid Settlement activity, specifically the month of February. For purposes of our example, assume that all outstanding, published obligations net to a total of \$7.000.

To derive a daily average amount for the category of 'Daily Market' charge types, sum all charge type amounts in this category (see attached table) from February 1 to April 23 and divide by 82 (28+31+23). Assume the result is \$100 per day.

To derive the daily average of 'Monthly Market' charges, sum all charge type amounts in this category from February 1 to March 31. Due to the fact that these charge types accrue only on the last day of the month, there is no reason to consider the range of April 1 to April 23 at this time. Divide the amount by 60 days for the two-month period. Assume the result is \$50 per day.

Lastly, derive the 'GMC' category charges in the same manner as the 'Monthly Market' charges and divide by 60. Assume the result is \$25.

Now combine the results and calculate 102-day Liability.

**Invoice & Actual Settlement obligations:** calculated above for the 23 days of April Prelims and 30 days of March Finals, includes 'Daily Market', 'Monthly Market' (incremental Final), and 'GMC' (incremental Final)

**\$ 7,000** (23 days)

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'Daily Market' Estimate: 7 days in April, 31 days in May, 30 days in June, 11 days in July

\$ 100 \* (7+31+30+11) = \$ **7,900** (79 days)

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'Monthly Market' Estimate: 30 days in April, 31 days in May, 30 days in June, 11 days in July

50 \* (30+31+30+11) = 5,100 (102 days)

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'GMC' Estimate: 30 days in April, 31 days in May, 30 days in June, 11 days in July

\$ 25 \* (30+31+30+11) = **\$ 2,550** (102 days)

#### Total 102-day Level Posting Period EAL:

\$ 7,000 + \$ 7,900 + \$ 5,100 + \$ 2,550

= \$ 22,550

This example assumes there are no outstanding past-due balances.

The other two methods are calculated in the same manner while adding additional months of historical Settlements data.

### **Charge Type Category List:**

Frequency	Charge Type	Charge Type Description	Service Type
Daily	1	Day-Ahead Spinning Reserve due SC	Ancillary Services
Daily	2	Day-Ahead Non-Spinning Reserve due SC	Ancillary Services
Daily	3	Day-Ahead AGC/Regulation due SC	Ancillary Services
Daily	4	Day-Ahead Replacement Reserve due SC	Ancillary Services
Daily	5	Day-Ahead Regulation Up due SC	Ancillary Services
Daily	6	Day Ahead Regulation Down due SC	Ancillary Services
Daily	24	Dispatched Replacemnt Res (Bid-in) Capacity Withhold	Ancillary Services
Daily	51	Hour-Ahead Spinning Reserve due SC	Ancillary Services
Daily	52	Hour-Ahead Non-Spinning Reserve due SC	Ancillary Services
Daily	53	Hour-Ahead AGC/Regulation due SC	Ancillary Services
Daily	54	Hour-Ahead Replacement Reserve due SC	Ancillary Services
Daily	55	Hour Ahead AGC/Regulation Up due SC	Ancillary Services
Daily	56	Hour AHead AGC/Regulation Down due SC	Ancillary Services
Daily	61	Hour-Ahead RMR Preempted Spinning Reserve	RMR
Daily	62	Hour-Ahead RMR Preempted Non-Spinning Reserve	RMR
Daily	64	Hour-Ahead RMR Preempted Replacement Reserve	RMR
Daily	65	Hour-Ahead RMR Preempted Regulation Up	RMR
Daily	66	Hour-Ahead RMR Preempted Regulation Down	RMR
Daily	71	Real Time RMR Preempted Spin Reserve (DA Price)	RMR
Daily	72	Real Time RMR Preempted Non-Spin Reserve (DA Price)	RMR
Daily	74	Real Time RMR Preempted Replacement Reserve (DA Price)	RMR
Daily	75	Real Time RMR Preempted Regulation Up (DA Price)	RMR
Daily	76	Real Time RMR Preempted Regulation Down (DA Price)	RMR
Daily	81	Real Time RMR Preempted Spin Reserve (HA Price)	RMR
Daily	82	Real Time RMR Preempted Non-Spin Reserve (HA Price)	RMR
Daily	84	Real Time RMR Preempted Replacement Reserve (HA Price)	RMR
Daily	85	Real Time RMR Preempted Regulation Up (HA Price)	RMR
Daily	86	Real Time RMR Preempted Regulation Down (HA Price)	RMR
Daily	101	Day-Ahead Spinning Reserve due ISO	Ancillary Services
Daily	102	Day-Ahead Non-Spinning Reserve due ISO	Ancillary Services
Daily	103	Day-Ahead AGC/Regulation due ISO	Ancillary Services
Daily	111	Spinning Reserve due ISO	Ancillary Services
Daily	112	Non-spinning Reserve due ISo	Ancillary Services
Daily	114	Replacement Reserve due ISO	Ancillary Services
Daily	115	Regulation Up due ISO	Ancillary Services
Daily	116	Regulation Down due ISO	Ancillary Services

Frequency	uency Charge Charge Type Description		Service Type
Daily	124	Dispatched Replace Res (Self-Prov.) Capacity Withhold	Ancillary Services
Daily	130	Insufficient Energy in Response to ISO Instructions	Misc
Daily	131	Reduct. in Avail. Cap. due to Uninst. Dev. due ISO	Misc
Daily	141	No Pay Charge - Spinning Reserve	No Pay
Daily	142	No Pay Charge - Non-Spinning Reserve	No Pay
Daily	144	No Pay Charge - Replacement Reserve	No Pay
Daily	145	No Pay Charge - Regulation Up	No Pay
Daily	146	No Pay Charge - Regulation Down	No Pay
Daily	151	Hour-Ahead Spinning Reserve due ISO	Ancillary Services
Daily	152	Hour-Ahead Non-Spinning Reserve due ISO	Ancillary Services
Daily	153	Hour-Ahead AGC/Regulation due ISO	Ancillary Services
Daily	201	Day-Ahead Intra-Zonal Congestion Incs/Decs Settlement	Congestion
Daily	202	Day-Ahead Intra-Zonal Congestion Charge Refund	Congestion
Daily	203	Day-Ahead Inter-Zonal Congestion Settlement due SC	Congestion
Daily	204	Day-Ahead Inter-Zonal Congestion Settlement due TO	Congestion
Daily	251	Hour-Ahead Intra-Zonal Congestion Settlement	Congestion
Daily	252	Hour-Ahead Intra-Zonal Congestion Charge Refund	Congestion
Daily	253	Hour-Ahead Inter-Zonal Congestion Settlement due SC	Congestion
Daily	254	Hour-Ahead Inter-Zonal Congestion Settlement due TO	Congestion
Daily	255	Hour-Ahead Inter-Zonal Congestion Debit to TOs	Congestion
Daily	256	Hour-Ahead Inter-Zonal Congestion Debit due SC	Congestion
Daily	271	Real-time Intra-zonal Congestion INC/DEC Settlement	Imbalance Energy
Daily	272	Real-time Above MCP Costs for Non-Market Dispatches	Excess Costs
Daily	301	Supplemental and A/S Energy	Reliability
Daily	303	Ex-Post Replacement Reserve due ISO (Dispatched)	Ancillary Services
Daily	304	Ex-Post Replacement Reserve due ISO (Undispatched)	Ancillary Services
Daily	353	Contracted Black Start due SC	Reliability
Daily	401	Instructed Energy	Imbalance Energy
Daily	402	Generation Deviation Settlement	Imbalance Energy
Daily	403	Load Deviation Settlement	Imbalance Energy
Daily	404	Export Deviation Settlement	Imbalance Energy
Daily	405	Import Deviation Settlement	Imbalance Energy
Daily	406	UFE Settlement	Imbalance Energy
Daily	407	Uninstructed Energy	Imbalance Energy
Daily	410	Unscheduled RMR Energy	Imbalance Energy
Daily	451	Real-Time Intra-Zonal Congestion Incs/Decs Settlement	Congestion
Daily	452	Real-Time Intra-Zonal Congestion Charge/Refund	Congestion
Daily	481	Excess Cost for Instructed Energy	Imbalance Energy
Daily	485	Insufficient Response to AWE Instruction	Penalties
Daily	487	Allocation of Excess Cost for Instructed Energy	Imbalance Energy

Frequency	Charge Type	Charge Type Description	Service Type
Daily	499	Interest due SC	Misc
Daily	502	Generation Deviation Effective Price	Imbalance Energy
Daily	503	Load Deviation Effective Price	Imbalance Energy
Daily	505	Import Deviation Effective Price	Imbalance Energy
Daily	547	Uninstructed Deviation Penalty Charges Due ISO	Penalties
Daily	1003	Regulation Energy Payment Adjustment	Adjustments
Daily	1004	Over-Generation Payment Due SC	Reliability
Daily	1010	Neutrality Adjustment Charge/Refund	Imbalance Energy
Daily	1011	Ancillary Service Rational Buyer Adjustment	Ancillary Services
Daily	1012	RMR Preemption Revenue Allocation	RMR
Daily	1013	REPA Cash Neutrality Charge	Reliability
Daily	1030	No Pay Provision Market Refund	No Pay
Daily	1061	Distribution of Preempted Spinning Reserve	RMR
Daily	1062	Distribution of Preempted Non-Spinning Reserve	RMR
Daily	1064	Distribution of Preempted Replacement Reserve	RMR
Daily	1065	Distribution of Preempted Regulation Up	Ancillary Services
Daily	1066	Distribution of Preempted Regulation Down	Ancillary Services
Daily	1104	Over-Generation Payment Due ISO	Reliability
Daily	1210	Existing Contracts Cash Neutrality Charge/Refund	Misc
Daily	1277	Real-time Intra-zonal Congestion Charge/Refund	Imbalance Energy
Daily	1278	Alloc of AboveMCP Cost for Real-Time Non-Mkt Dsptch	Excess Costs
Daily	1303	Supplemental Reactive Energy due ISO	Reliability
Daily	1401	Imbalance Energy Offset	Imbalance Energy
Daily	1407	Deviation Penalty for Positive Uninstructed Deviation	Penalties
Daily	1470	Neutrality Charge for UDP Penalties	Penalties
Daily	1471	Excess Cost Neutrality Settlement	Excess Costs
Daily	1481	Excess Cost Allocation - Neutrality Adjustment	Excess Costs
Daily	1487	Energy Exchange Program Neutrality Adjustment	Adjustments
Daily	1680	Allocation of Bid Cost Recovery	Reliability
Daily	1999	Rounding Charge/Refund	Misc
Daily	2009	ISO/SC Distribution/Allocation	Misc
Daily	2010	Finance Charges	Misc
Daily	2020	Must Run due ISO	Misc
Daily	2407	Deviation Penalty for Negative Uninstructed Deviation	Penalties
Daily	2900	CONTINGENCY-Net Manual Market Invoice	Misc
Daily	4141	No Pay Settlement for Spin Capacity	No Pay
Daily	4142	No Pay Settlement for Non Spin Capacity	No Pay
Daily	4144	No Pay Settlement for Replacement Reserve Capacity	No Pay
Daily	4271	Reliability Excess Cost Settlement - Due SC	Imbalance Energy
Daily	4272	OOM Congestion Excess Cost Settlement - Due SC	Imbalance Energy
Daily	4401	Instructed Energy Settlement	Imbalance Energy
Daily	4406	Settlement of Unaccounted for Energy	Imbalance Energy
Daily	4407	Uninstructed Energy Settlement	Imbalance Energy
Daily	4410	Unscheduled RMR Energy	Imbalance Energy
Daily	4450	Transmission Loss Settlement	Imbalance Energy

Frequency	Charge Type	Charge Type Description	Service Type
Daily	4470	Negative Uninstructed Deviation Penalty	Penalties
Daily	4480	Positive Uninstructed Deviation Penalty	Penalties
Daily	4481	Settlement of Excess Cost - Due SC	Imbalance Energy
Daily	4487	Allocation of Excess Cost - Due ISO	Imbalance Energy
Daily	4660	Hrly Pre Dispatch Bid Cost Recovery Settlement	Excess Costs
Daily	4680	Settlement of Bid Cost Recovery	Excess Costs
Daily	4999	Neutrality Adjustment	Adjustments
Daily	5900	Shortfall Receipt	Misc
Daily	5910	Shortfall Allocation	Misc
Daily	5999	FERC Interest	Misc
Daily	6601	Communication Fees	Misc
Daily	6602	Training Fees	Misc
Daily	6603	Miscellaneous Fees	Misc
Daily	6604	OSAT Training Revenues	Misc
Daily	6605	Metering Training Revenues	Misc
Daily	6606	WSCC Revenues	Misc
Daily	6607	Detailed Wheeling Spreadsheet Fees	Misc
Daily	6608	Archived Settlement Statements Retrieval Fee	Misc
Daily	6609	Station Power Fee	Misc
Daily	6610	Station Power Fee Allocation	Misc
Daily	6611	Security Refund	Misc
Daily	6612	ISO Services for GCP	Misc
Daily	6616	FTR Auction	Misc
Daily	6701	Market Invoice	Misc
Daily	6702	GMC Invoice	Misc
Daily	6703	FERC Invoice	Misc
Monthly	7	Demand Relief Monthly Payment	Misc
Monthly	117	Demand Relief Monthly Charge	Misc
Monthly	302	Ex-Post Supplemental Reactive Power due TO	Reliability
Monthly	354	Wheeling Refund due TO	Wheeling
Monthly	372	High Voltage Access Charge due ISO	TAC
Monthly	374	High Voltage Access Revenue due PTO	TAC
Monthly	382	High Voltage Wheeling Charge due ISO	Wheeling
Monthly	383	Low Voltage Wheeling Charge due ISO	Wheeling
Monthly	384	High Voltage Wheeling Revenue due TO	Wheeling
Monthly	385	Low Voltage Wheeling Revenue due TO	Wheeling
Monthly	550	FERC Fees	FERC Fees
Monthly	591	Emissions Cost Recovery	Uplift Fees
Monthly	592	Start-Up Cost Recovery	Uplift Fees
Monthly	593	Emissions Cost Due Trustee	Uplift Fees
Monthly	594	Start-Up Costs Due Trustee	Uplift Fees
Monthly	595	Minimum Load Cost Allocation Due ISO	Reliability
Monthly	691	Emission Cost Payment	Uplift Fees
Monthly	692	Startup Cost Payment	Uplift Fees
Monthly	695	Minimum Load Cost Compensation Due SC	Reliability
Monthly	701	Forecasting Service Fee	Misc
Monthly	701	Forecasting Service Fee Allocation	Misc
Monthly	711	Intermittent Resources Net Deviations	Imbalance Energy
Monthly	721	Intermittent Resources Net Deviation Alloc Charge	Imbalance Energ

Frequency	Charge Type	Charge Type Description	Service Type
Monthly	731	Intermittent Resources Uninstructed Deviation	Imbalance Energy
Monthly	790	Market Transaction Bill Period Adjustment	Adjustments
Monthly	791	Grid Management Charge Bill Period Adjustment	Adjustments
Monthly	792	FERC Fee Bill Period Adjustment	Adjustments
Monthly	793	Transmission Access Charge Refund Bill Period Adj	Adjustments
Monthly	1001	Black start due BA	Reliability
Monthly	1101	Black Start Capacity due ISO	Reliability
Monthly	1120	Est. Summer Reliab. Contract Capacity Pymt/Charge	Reliability
Monthly	1121	Act. Summer Reliab. Contract Capacity Pymt/Charge	Reliability
Monthly	1302	Long Term Voltage Support Contract due ISO	Reliability
Monthly	1353	Black Start Energy due ISO	Reliability
Monthly	1591	EP Penalty Charge, due CAISO trustee	Penalties
Monthly	1592	EP Penalty Allocation Payment	Penalties
Monthly	1593	EP Penalty/Alloc for under/over	Penalties
Monthly	1691	MLCC Neutrality Allocation	Reliability
Monthly	1697	MLCC Tier 1 Allocation	Reliability
Monthly	1698	MLCC Reliability Service Cost Allocation	Reliability
Monthly	1699	MLCC Inter-Zonal Congestion Allocation	Reliability
Monthly	2999	Interest due SC	Misc
Monthly	3010	Termination Fee	Adjustments
Monthly	3020	Termination Fee	Adjustments
Monthly	3101	Black Start Capacity due BA	Reliability
Monthly	3302	Supplemental Reactive Energy due SC	Reliability
Monthly	3303	Long Term Voltage Support due BA	Reliability
Monthly	3351	Grid Management Charge Adjustment Charge/Refund	Adjustments
Monthly	3372	High Voltage Access Charge Adj - Due ISO	Adjustments
Monthly	3374	High Voltage Access Charge Adj - Due PTO	Adjustments
Monthly	3382	High Voltage Wheeling Access Charge Adj - Due ISO	Adjustments
Monthly	3383	Low Voltage Wheeling Access Charge Adj - Due ISO	Adjustments
Monthly	3384	High Voltage Wheeling Access Charge Adj - Due PTO	Adjustments
Monthly	3385	Low Voltage Wheeling Access Charge Adj - Due PTO	Adjustments
Monthly	3472	Demand Relief Energy Payment	Misc
Monthly	3473	Discretionary Load Curtailment Payment	Misc
Monthly	3482	Demand Relief Energy Charge	Misc
Monthly	3483	Discretionary Load Curtailment Charge	Misc
Monthly	3999	Interest and Penalty	Misc
Monthly	4695	Settlement of Minimum Load Cost Comp - Due SC	Reliability
GMC	4501	Core Reliability Services Non-Coincident Peak	GMC
GMC	4502	Core Reliability Services Non-Coincident Off-Peak	GMC
GMC	4503	Core Reliability Services Exports	GMC
GMC	4504	Core Reliability Svcs/Energy Trans Svcs Mojave	GMC
GMC	4505	Energy Transmission Services Net Energy	GMC
GMC	4506	Energy Transmission Services Deviations	GMC

Frequency	Charge Type	Charge Type Description	Service Type
GMC	4511	Forward Scheduling	GMC
GMC	4512	Forward Scheduling Inter-SC Trades	GMC
GMC	4513	Forward Scheduling Path 15 Inter SC Trades	GMC
GMC	4522	Congestion Management	GMC
GMC	4534	Market Usage Ancillary Services	GMC
GMC	4535	Market Usage Instructed energy	GMC
GMC	4536	Market Usage Uninstructed Energy	GMC
GMC	4575	Settlements, Metering, Client Relations	GMC

# APPENDIX 2: TEMPLATE FOR DETERMINATION OF AN INITIAL FINANCIAL SECURITY POSTING AMOUNT

(CAISO posts the latest available version of this file on the credit policy web-page under the heading "New Participant Security Calculation" see: http://www.caiso.com/docs/2005/06/14/200506141656326466.html)

# California ISO Simplified Calculation of Initial Security Amount

		_	
Average Hourly Load	4.0	MWh	<input< td=""></input<>
Average Hourly Generation	5.4	MWh	<input< td=""></input<>
Total Daily Load / Generation	96.0		
		~'	

	Billable MWh	Price	Total
Ancillary Services	5	\$ 9.764	\$ 47
FERC Fee	96	\$ 0.038	\$ 4
Grid Management Charge	165	\$ 0.743	\$ 123
Imbalance Energy	(25)	\$ 44.233	\$ (1,087)
Interzonal Congestion	40	\$ 0.672	\$ 27
Reliability / Minimum Load Cost Compensation	96	\$ 0.765	\$ 73
Reliability Must Run Generation	96	\$ 0.004	\$ 0
Uplift Charges	96	\$ 0.042	\$ 4
Wheeling Charges	96	\$ 0.101	\$ 10
Total Daily Charges / Daily Security Deposit			\$ (800)
Level Period 102 day Security Deposit Posting Requirement			\$ (81,579)

Assumptions:		
MWh Percentages		
A/S % of Load	5.02%	
Net Imbalance Energy Percentage	4.00%	
Congestion % of Load	41.25%	
Per MWh Costs		
Ancillary Services	\$ 9.764	
FERC Fee	\$ 0.038	
Grid Management Charge	\$ 0.743	
Imbalance Energy	\$ 44.233	
Interzonal Congestion	\$ 0.672	
Reliability / Minimum Load Cost Compensation	\$ 0.765	
Reliability Must Run Generation	\$ 0.004	
Uplift Charges	\$ 0.042	
Wheeling Charges	\$ 0.101	

#### Note:

Settlement calendar longest number of outstanding days is 95.

The ISO adds 7 days to the estimation to allow for administrative needs and communications to / from SC.