CALIFORNIA ISO

CREDIT POLICY & PROCEDURES GUIDE

CALIFORNIA ISO FINANCE DEPARTMENT

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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.

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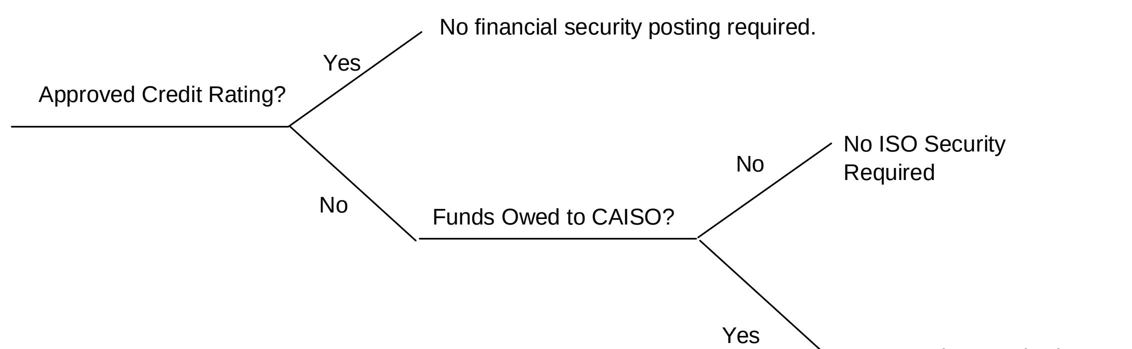
INTRODUCTION

This document discusses the credit related provisions of the ISO Tariff (See Appendix1). It is intended to:

- Summarize credit related provisions of the ISO Tariff; and
- Provide details about the implementation of the ISO Tariff credit provisions by the ISO.

In the event of conflicts between this document and the ISO Tariff, the ISO Tariff is the authoritative document.

Each Scheduling Coordinator (SC) must secure their financial transactions with the ISO either by maintaining an Approved Credit Rating or by posting an ISO Security Amount in order to participate in the ISO Markets (Tariff Sections 2.2.3.2 and 2.2.7.3)[1].



SIMPLIFIED OVERVIEW OF POSTING REQUIREMENTS

If the SC provides an ISO Security Amount, it is an amount “intended to cover the entity's outstanding and estimated liability for either (i) Grid Management Charge; and/or (ii) Imbalance Energy, Ancillary Services, Grid Operations Charge, Wheeling Access Charge, High Voltage Access Charge, Transition Charge, Usage Charges, and FERC Annual Charges (Tariff Section 2.2.7.3).

To determine the required level of the ISO Security Amount, the ISO’s financial security administration process requires the calculation of an SC’s Aggregate Liability Estimate (SCALE), and where applicable, monitoring of their current credit rating. (See Part C for SCALE overview).

There are various ISO Tariff provisions that obligate the ISO and SCs with respect to this credit policy. The ISO must monitor security postings and credit ratings, request additional security as necessary, provide notifications to SCs, and undertake

[1] Capitalized terms when used throughout this document shall have the meaning set forth in Appendix A, Master Definitions, of the ISO Tariff.

enforcement actions as necessary. SCs are obligated to maintain an adequate security posting or credit rating, and make adjustments to their posting as necessary.

The ISO intends to enforce the credit provisions equitably, consistently and strictly to uphold the confidence of sellers in the ISO markets and to further the ISO's goal of ensuring an adequate supply of power at a reasonable cost for California.

Transparency

The ISO recognizes that it is important that Tariff obligations, administrative processes and consequences for failure to meet the obligations be transparent to Market Participants. The ISO will post on its web site this policy, information on the process to administer the policy, the methodology used to calculate the Scheduling Coordinator Aggregate Liability Estimate, and consequences for failure to meet the obligations.

PART A: "Approved Credit Rating" Requirements

To comply with the ISO's credit standards, an SC, (and also used throughout this document as a generic reference to additional entities: Metered Subsystem, "MSS" and Utility Distribution Company, "UDC") must either post financial security to cover their outstanding obligations, or they may avoid this requirement (in full or in part) by maintaining an "Approved Credit Rating".

A-1. APPROVED CREDIT RATINGS

A-1.1 Definition of Approved Credit Rating

The definition of an Approved Credit Rating is found in the ISO Tariff Appendix A, Master Definitions Supplement:

http://www.caiso.com/docs/2002/04/10/200204101359527251.pdf

Except for entities whose obligations are backed by a sovereign (U.S. State or Federal Government), the Approved Credit Rating requires the maintenance of a third-party assigned credit rating (from Standard & Poors, Moody's, or Fitch.) The ISO does not perform credit scoring or maintain an in-house credit department to subjectively assess participant credit worthiness.

A-1.2 Overview of Ratings from Standard & Poor's and Moody's

The following chart illustrates Short-Term and Long-Term credit ratings of the Standard & Poor's and Moody's and minimum acceptable levels in accordance with the ISO Approved Credit Rating standard. Equivalent ratings from Fitch are also acceptable.

S&P			Moody's	
Short Term	**Long Term**		**Short Term**	**Long Term**
A- 1+ A-1	AAA		P1	Aaa
	AA +			Aa1
	AA			Aa2
	AA -			AA3
	A +			A1
A-2	A			A2
	A-		P2	A3
	BBB +			Baa1
A-3	BBB			Baa2
	BBB -		P3	Baa3
B	BB +			Ba1
	BB			Ba2
	BB -			Ba3

= GMC & Market approved credit rating, No security required

= Market only approved credit rating, GMC security required

= Unapproved credit rating, GMC & Market security required

(Note that either a short term or long term rating may be acceptable.)

(Correlation between Moody's and S&P ratings are not precise and are presented for indicative purposes only.)

A-1.3 Credit Rating Clarifications

A-1.3.1 Issuer Credit Rating

As stated in the definition of an Approved Credit Rating, "this rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement." Thus, an Approved Credit Rating requires a credit rating for the entity as a whole, on a stand-alone basis (without the benefit of third-party credit support that is not available to a creditor such as the ISO.) 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 market. 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.

A-1.3.2 Other Credit Ratings

The definition of an Approved Credit Rating also specifies that "Another Credit Rating Approved by the Board of Governors" can be used to meet the credit standard. ISO Management does not interpret this tariff provision as a means by which the ISO can waive posting financial security by considering SC specific factors (financial, operational, subjective, etc.) in the absence of a credit rating assigned by third party.

A-2. APPLYING CREDIT RATINGS TO SECURITY CALCULATIONS

A-2.1 Financial Security Posting Obligations for Each Credit Rating

In the absence of an Approved Credit Rating, each SC is responsible for posting security to cover their outstanding liabilities for the Grid Management Charge (GMC) and market related obligations. Because separate standards currently apply to GMC and market obligations[2], financial security may be avoided for both, one, or neither of these types of obligations.

To avoid having to post security altogether, an entity needs to either:
1) Have an approved Short Term, "ST", credit rating equivalent to an A-1 (S&P) or a P1 (Moody's) or tax-exempt equivalent in accordance with Section A-1.2.
2) Be a federal agency backed by the full faith and credit of the United States; or
3) Be a California state agency backed by the full faith and credit of the State of California.

To avoid having to post security for Market charges (and thus post security only for the GMC), as stated in Section A-1.2, an entity needs to either:
1) Have a Short Term credit rating equivalent to or greater than an A-2 (S&P) or a P2 (Moody's)
2) Have a Long Term, "LT", credit rating equivalent to or greater than an A- (S&P) or A3 (Moody's)

All other lesser credit ratings will require the entity to post security for both GMC and market charges.

Note: If the level of an entity's credit rating differs between sources, the best credit rating is used to determine their security posting requirements.

[2] When the ISO credit standard was revised in June 2000, relaxing the standard for the GMC would have required consent from ISO bond holders and creditors, and ISO Management believed that likely costs of obtaining this consent would have been outweighed by the benefits.

A-2.2 Guarantors

If an SC does not maintain an Approved Credit Rating, but has the ability to secure a guarantee of payment from another entity with an Approved Credit Rating, the ISO will accept this arrangement. To do this, the SC and guarantor issue a guarantee to the ISO for either a specific dollar amount (that equals or exceeds the SC's maximum financial liability to the ISO) or an unlimited amount. In this case, the guarantor's credit rating may be used to avoid financial security posting for the market obligations, GMC obligation, or both. The same criteria as discussed in Section A-1.2 are applied to determine which obligations the guarantee will cover.

A-2.3 FTR Auction Security Requirements

The credit rating standards used to determine security requirements for participation in the annual Firm Transmission Rights (FTR) Auction are the same as for SC market obligations. The requirements are set forth in the FTR Bidders Manual, published annually by the ISO. Participation in the FTR Auction without posting security requires a short-term rating of greater than or equal to an A-2 or P2 rating; or a long-term rating of greater than or equal to an A- or A3 rating. If an entity's credit rating is below this requirement, then they must post security for the FTR auction based on the amounts the SC intends to bid. A participant's maximum bids will be limited to the amount of security posted. The ISO has permitted SCs to use unused market obligation collateral capacity as collateral for the FTR auction.

Guarantors are considered in the same way as in Section A-2.2. If the Guarantor has a short-term credit rating greater than A-2 or P2; or a long-term credit rating of A- or A3, the ISO would consider that entity an acceptable guarantor. In order for the SC who is backed by an acceptable guarantor to have unlimited bidding capacity, the guaranty must not have a dollar amount limit or it must specify coverage for an unlimited amount.

A-3. ISO PROCEDURES FOR PERIODIC REVIEW OF ENTITY CREDIT RATINGS

A-3.1 SC's Responsibility

It is the responsibility of the SC per the ISO tariff to notify CAISO of any changes to their Approved Credit Rating status. However, the ISO does not solely rely on this self-reporting, and instead, checks compliance periodically.

A-3.2 Frequency

Credit ratings are reviewed and updated on at least a monthly basis for those SCs with an Approved Credit Rating. They are also reviewed as needed if questions arise regarding the SC's credit standing. Additionally, credit rating agency reports of downgrade/ upgrades are reviewed upon distribution by such rating agencies.

A-3.3 Sources

The sources used to research the latest credit ratings are as follows.

Standard and Poor's-
Standardandpoors.com under Credit Ratings Lists
S&P help line: (212) 438-2400
S&P daily Bulletin.

Moody's-
Moodys.com under the website's search function.
Analyst Telephone: (415) 274-1708

Fitch Ratings-
http://www.fitchratings.com/
Ratings and General Inquiries: (212) 908-0500

PART B: Approved Forms of Financial Security

As stated in ISO Tariff Section 2.2.3.2, those entities that do not maintain credit ratings as addressed in Part A, must provide sufficient security to cover their unpaid obligations to the ISO in one of the following forms:

- Irrevocable or unconditional letter of credit (LOC) confirmed by a bank or financial institution reasonably acceptable to the ISO;
- Irrevocable or unconditional surety bond posted by an insurance company reasonably acceptable to the ISO;
- Unconditional and irrevocable guarantee by a company which has and maintains an Approved Credit Rating;
- Cash deposit standing to the credit of an interest bearing escrow account maintained at a bank or financial institution designated by the ISO;
- Certificate of deposit in the name of the ISO from a financial institution designated by the ISO; or
- Payment bond certificate in the name of the ISO from a financial institution designated by the ISO.

Pro-forma templates for the most common forms of security from the above list are provided in Appendix 3. Those agreements represent acceptable forms of security. While the ISO is willing to review other proposed security agreements, the key terms should be substantially the same as contained in these pro-forma agreements. Significant departures may not be acceptable to the ISO.

SABP Section 6.1.2 of the ISO Tariff also permits Scheduling Coordinators to make a pre-payment of an upcoming bill due to the ISO. A prepayment may be used as a form of financial security. However, due to the additional administrative effort involved to track and provide interest on such prepayments, the use of this option is not encouraged.

PART C: SCALE and ISO Security Amount Calculation Methodology

C-1. Scheduling Coordinator Aggregate Liablity Estimate (SCALE) OVERVIEW

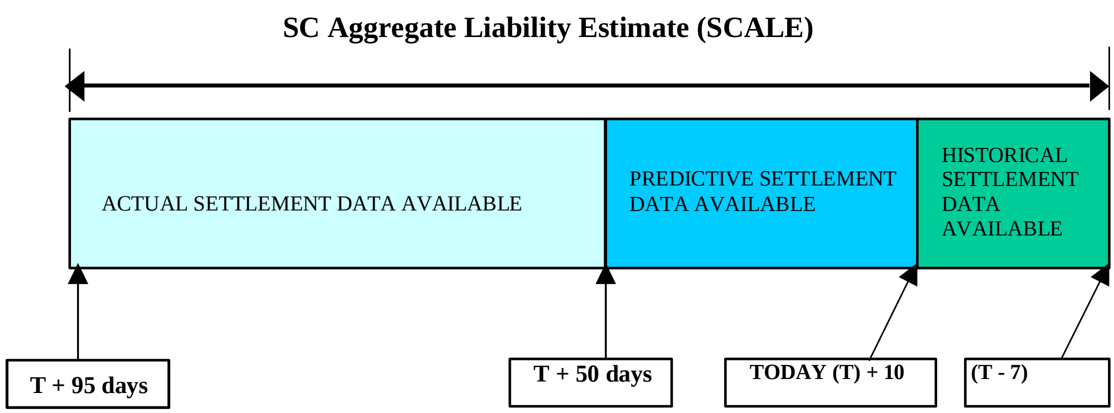
The Scheduling Coordinator Aggregate Liability Estimate (SCALE) represents an SC's estimated unpaid obligations for a specified time period arising from charges described in the ISO Tariff. The SCALE is the basis for determining an SC's required ISO Security Amount. The charges contributing to the SCALE calculation are all amounts that appear on an ISO settlement invoice, and are summarized in Section 2.2.7.3 of the ISO Tariff. An SC's financial security posting is intended to provide coverage of not less than 100% of the SCALE.

At any given time, the number of trade days of unpaid obligations to the ISO will be from 65-95, depending on the date of the last cash settlement. To avoid frequent changes to security postings during the month "Level Posting Period", which is the maximum number of days outstanding plus seven days for administrative purposes for a total of 102 days, is the basis for nearly all of the security posting requirements. The 102-day period begins immediately after a preliminary invoice payment, which is when approximately 98 percent of all market charges are paid, and ends 101 days later. For example, if the preliminary invoice payment for May 2004 was due and payable on July 30, 2004, the new Level Posting Period as of August 1, 2004 would cover all actual and estimated charges from June 1, 2004 through September 10, 2004. This period would remain constant until the June preliminary invoice was paid.

For those SCs that desire to match their security postings with the payment cycle, a "Weekly Posting Period" can be selected. The Weekly Posting Period allows SCs to receive a security refund as soon as a cash payment is made on outstanding invoices. Subsequently, as the SC's outstanding obligations start to ramp up, the SC is required to post security on a weekly basis to cover the increasing outstanding obligations. The ISO adds seven days of estimated liabilities to all Weekly Posting Period calculations for administrative purposes.

Although the Weekly Posting Period is an option, the ISO prefers that SCs strongly consider posting security to cover a Level Posting Period. Doing so will minimize the administration burden for both the SCs and the ISO.

The SCALE calculation incorporates outstanding obligations, actual settlement charges, predictive settlement obligations (definition follows) calculated between seven and ten days after the trade date, and average historical predictive settlement obligations. The illustration below provides a representative example of what periods the different obligation types cover in the SCALE calculation.



The Weekly Posting Period and Level Posting Period SCALEs are calculated as follows:

Weekly Posting Period SCALE - is calculated by aggregating all outstanding, actual settlement, predictive settlement and average historical predictive obligations through a specified calendar date. For example, in the SCALE analysis conducted on 8/1/2004 the Weekly Posting Period began on June 1, 2004 and ended on August 13, 2004. The following obligations were included in the Weekly analysis:

- Outstanding AR/AP Obligations – Any open AR/AP balances, excluding balances covered by bankruptcies.
- Final Invoice Obligation – Those obligations not paid on the preliminary invoice.
- Actual Settlement Obligations – June 1, 2004 to June 9, 2004.

- Predictive Settlement Obligations – June 10, 2004 through July 25, 2004 (note: where actual month end obligations do not exist predictive settlement obligations are utilized.)
- Historical Predictive Settlement Obligations – July 26, 2004 through August 13, 2004 based on the average predictive settlement obligations from July 11, 2004 through July 25, 2004.

Level Posting Period SCALE - is calculated by multiplying the Daily Average Obligation, which is the sum of the final Invoice, actual settlement, predictive settlement and historical predictive settlement obligations divided by the total number of days included in the Weekly calculation, by 102 days and then adding in any Outstanding AR/AP Obligations.

Predictive Settlement Obligations – The obligations calculated by the settlement system using estimated generation, load and intertie MWhs (see Appendix 2 for a description of the MWh estimation process).

C-2. SECURITY AMOUNT CALCULATION

C-2.1 Recommended Security Levels

The determination of a required/ recommended security amount is based on an SC's most recent ISO estimated SCALE. CAISO recommends that each SC maintain an amount of security such that their SCALE does not exceed 90 percent of their posted security. The calculation is as follows:

Recommended security amount = (Total SCALE) / (.90)

The 90 percent level is not currently specified in the ISO Tariff but is used as the basis for a recommended security amount by the ISO. An SC is not required to provide the security at this level, but it must recognize and accept the risk of the imposition of enforcement actions (including rejection of scheduling rights) if the SCALE exceeds their posted security. The methodology used to determine the Scheduling Coordinator Aggregate Liability Estimate does at times produce swings in security requirements, and to the extent that the SCALE exceeds security at any time and for any period, section 2.2.7.3 of the tariff provides that the SC shall not be entitled to submit a schedule and the ISO may reject any schedule submitted. Thus, the ISO recommends that SCs maintain a margin of security above their maximum anticipated SCALE.

C-2.2 Discrepancies between ISO and SC estimates of security requirements

The ISO calculated SCALE (as documented in Appendix 2) is used to determine security requirements and is to be used as the basis for requests of additional security, particularly when an SC's SCALE exceeds 90% of its security posting. While the ISO has in the past considered factors raised by SCs as relevant to the determination of their SCALE, the ISO intends to rely on the internal ISO SCALE calculation as the basis for requesting security increases for the following reasons:

- Ensure objectivity and consistency: The posting amount should be based on one, transparent calculation used consistently for all scheduling coordinators. If the posting amount is not based on a standard calculation, the ISO is placed in the position of trying to subjectively assess the reasonableness of other methods or data used to calculate the SCALE. It would be difficult to maintain consistency and fairness for all SCs if deviations from the standard calculation were permissible. Thus, the practice of the ISO will be to use the ISO internal SCALE calculation as the basis for security requests. (See Appeal Process in Section F.)

- Minimize exposure to under-secured entities: While the ISO recognizes that an SC may have information of value that could potentially provide a more accurate SCALE calculation, experience has shown that these discussions can be drawn out, and could leave the ISO market exposed to credit risk by that SC should the ISO's initial estimate prove to be correct (and the SC subsequently defaults). As the ISO is obligated to maintain the credit standards continuously for the benefit of creditors, it cannot defer requests for additional security while having ongoing discussions with an SC regarding the calculation. Within five business days, the SC must post the required security amount as calculated by the ISO's internal SCALE calculation. (See Appeal Process in Section F.)

C-2.3 Aggregating all SC IDs of an SC

The ISO permits a single legal entity to obtain multiple SC identification codes. Because a single SC agreement exists, a single legal entity is responsible for all charges for multiple SC IDs. The security posting requirement is determined by aggregating each such SC ID's SCALE resulting in a single posting requirement for the legal entity.

C-2.4 Determination of an Initial Security Posting Amount

The financial security posting requirement of a new Scheduling Coordinator (or an SC that has previously been inactive) is based on anticipated scheduling/trading practices and overall volumes. The ISO has prepared a simple template (See Appendix 4) that may be used to determine an initial posting requirement. The template is an Excel worksheet that will be provided upon request.

C-2.5 Maintenance of Security Posting After Termination as SC

ISO Tariff Section 2.2.4.5 permits the ISO to maintain an SC's security posting after termination of an SC agreement until being satisfied that no sums remain owing by the SC. This is necessary because of the possibility of retroactive charges accruing from settlement re-runs, which may result in charges billed in months after the cessation of active participation in ISO markets. The ISO will consider the following in determining the amount and length of time to maintain security:

- Whether the SC is terminating activities only in California, and maintaining a corporate existence elsewhere, or is being fully dissolving.

- Known settlement re-runs scheduled or planned by the ISO, and their potential magnitude.

- Other considerations.

C-2.5 Consideration of Past-Due Amounts Owed to SCs

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 SCALE 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.

If this were permitted, any disruption in a single month due to non-payment could have a cascading effect on future months, and result in an ongoing disruption of the payment system.

C-3. CHANGES IN SECURITY POSTING LEVELS

Security posting amounts may be changed at the request of the ISO or an SC. The primary responsibility of maintaining an appropriate level of security posting lies with the SC, per ISO Tariff section 2.2.7.3 (and Section 2.2.3.2). According to this provision, the SC may increase their security postings at any time, and requests for reductions in the security amount may be made by an SC with a notice of 15 days. For those SCs who are over-collateralized, the ISO will, at a minimum, notify them of their excess security upon review of their security's expiration date (at least annually).

The ISO has an obligation to monitor SC's SCALE to determine if SCs are adequately secured. The following sections relate to proposed changes to an SC's security posting amount initiated by the ISO.

C-3.1 Request for Security Changes

The Estimated Aggregate Liability (SCALE) is updated weekly for each SC and, in conjunction with the entity's credit rating, is used to determine if additional security needs to be posted. Based on an SC's security utilization level (which is the percentage of SCALE divided by posted security), the following actions must be taken at each security utilization level listed:

Security Utilization %	**Action**
< 50%.	No notice or action taken.
>50% and < 70%	SC notified for information only.
≥70% and < 90%	SC notified of a ***recommended*** security increase. The ISO recommends, but does not require, that an additional posting is made to maintain the SCALE at or below 70%.
> 90%	The ISO ***requests*** that an SC increase the posting amount within five business days so that the security utilization does not exceed 90 percent. If the SC takes no action in response to the recommendation to post additional security, upon reaching 100 percent security utilization, they will be subject to the enforcement provisions of the ISO Tariff as described in Section D, Enforcement, including potential rejection of schedules.

C-3.2 Communications

Each week, ISO Finance calculates each SC's SCALE and notifies the ISO's Account Managers of the liability amount and any recommended increases in ISO financial security. These communications contain specific information regarding the amount each SC needs to post in order to maintain the recommended 90 percent SCALE to security posting ratio as well as the absolute minimum amount needed to return to 100 percent if their SCALE exceeds their ISO Security Amount.

The ISO Account Manager is to contact within one business day any SC for which an increase in ISO Financial Security is recommended or required. The Account Manager should copy the ISO Finance and Compliance Departments on all security related client correspondence. ISO Account Managers will work with ISO Finance and clients to address questions related to the request.

A required increase in the ISO Security Amount is to be resolved within five business days. SCs not in compliance with the security requirements are subject to enforcement procedures as described in Section D.

C-3.3 Frequency of Security Changes

The ISO will calculate each SC's SCALE weekly and notify them as specified in the previous sections of this document. As discussed in Appendix 2, the SCALE can fluctuate from period to period, based on changes in an SC's activity level, and other factors such as retroactive settlement charges included in the SCALE. To the extent that an SC wishes to avoid frequent changes in posting requirements, the SC may choose to provide a security posting in excess of the recommended level. Alternatively, an SC may choose to maintain a level of security closer to the recommended 90 percent level, which could potentially require making more frequent adjustments to the posting amount. In either case, the security posting must exceed the SCALE at all times.

C-3.4 ISO Internal Financial Security Administration

Each SC's security posting amount is supported in hard copy files as well as in a secure database. Files and database information are reviewed on an on-going basis for approaching expiration dates, updated security amounts, and changing business conditions. As the expiration date approaches for Letters of Credit, CDs, and other forms of security, a notice will be sent to the SC if they need to update their security prior to expiration. As security amounts are increased and decreased, the SC's file is maintained with their current security balance and supporting documentation for any changes. The ISO will maintain a copy of all security documents, even those returned to the client after expiration or replacement with another form of security.

PART D: Enforcement

SCs that fail to maintain adequate security are subject to the enforcement actions as described below.

D-1. ENFORCEMENT MECHANISMS CURRENTLY AVAILABLE WITHIN ISO TARIFF

D-1.1 Refusal to Accept Schedules

ISO Tariff Section 2.2.7.3 provides that an entity that is not in compliance with the credit standards shall not be entitled to submit a schedule, and the ISO may reject any such schedule submitted. However, for entities serving load, this alternative will not necessarily achieve the objective of limiting suppliers to further financial exposure of such an entity, as that entity could continue to be served through the imbalance energy market, unless the ISO discontinues service to the Load Serving Entity (LSE). ISO Tariff Section 2.2.7.5 also provides that the ISO may restrict or suspend an SC's right to schedule if its liability for Imbalance Energy is determined by the ISO to be excessive.

D-1.2 Termination of SC Agreement

The ISO also has the option to terminate an SC Agreement by giving written notice of a default with a 7 day cure period (for payment defaults), or a 30 day cure period for other defaults. The ISO must also notify other SCs that may be required to accept defaulting SC's End-Use Customers as well as provide a filing to FERC.

D-1.3 Maintenance of Security for One Year

An entity that has defaulted or delayed in its payment obligations can be required to maintain a security posting for a period of up to one year after any such default, whether or not they would otherwise meet the ISO's Approved Credit Rating definition. (ISO Tariff Section 2.2.3.3)

D-1.4 Withholding of Market Payment Distributions to Cover Outstanding Financial Security Requests

In most instances, an SC with a positive SCALE that is required to post security will be a debtor for ISO trade months pending cash settlement (and would accordingly not be due funds from the ISO.) In some instances, however, an SC with a positive SCALE that is required to post security can be a creditor for a trade month pending settlement. In such cases, if that SC does not have sufficient collateral posted to cover their current SCALE, the ISO may withhold payments that would otherwise be distributed to the SC and apply such payments to their ISO Security Amount. Such authority is provided by SABP 6.10.2, which provides the ISO with the right to offset any amounts that would otherwise be distributed to an SC but for that SC's payment default. The ISO considers an SC that does not maintain adequate security to cover its outstanding SCALE in default of the payment related terms of the ISO Tariff. In the event the ISO exercises this right, any amounts withheld would be treated as a prepayment per SABP 6.1.2.

PART E: Reporting

ISO market creditors seek assurance that they will be paid for the energy and related products they supply through the ISO markets. This assurance can be provided through the establishment and maintenance of an effective credit management program by the ISO. Suppliers are particularly concerned about the ongoing effective application of procedures to prevent non-creditworthy parties from participating in the ISO markets without adequate financial security. Suppliers desire ongoing, timely insight into the ISO's application of the credit procedures.

E-1. CURRENT CREDIT RELATED REPORTS

Currently, the ISO monthly financial reports include a chart which compares aggregate obligations vs. security postings, but this report does not provide an indication of the extent to which a single party's obligations may exceed their security posting.

As provided are ISO Settlement Certification statements issued after the cash settlement for each trade month. These certifications are provided to creditors to the ISO market, and provide detail about the overall market settlement and any payment defaults. As these reports are issued after the cash clearing for a trade month, they do not provide current information about creditor funds currently pending payment through the normal course of the ISO payment schedule.

PART F: APPEAL PROCEDURES

F-1. APPEAL PROCEDURES FOR APPLICATION OF ISO SCALE CALCULATION

As discussed in the previous section and in Section C, the ISO's SCALE calculation is to be used as the basis for determining a minimum acceptable security posting. While the ISO would prefer to consistently enforce the policy of using only the ISO internal SCALE calculation as the means for which all SC's security requirements are determined, an appeal procedure is provided in limited circumstances.

In such limited circumstances, the ISO will be willing to accommodate requests to review the results of the SCALE calculation, and as a result, possibly accept a lower financial security posting amount. In such instances, the following are required:

1. Request by SC to review ISO calculation.
2. Reasonable and compelling situation presented, as determined by ISO client representative.
3. Documentation of facts and circumstances that evidence that the ISO's SCALE calculation produces as excessive and unwarranted 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 calculation of SCALE.
4. Approval by ISO Manager and/or Director of Client Relations and approval by ISO Treasurer.
5. No demonstrated security shortfalls in past 12 months (security posting in place for each month adequate to cover prior 3 months invoices.)

In no such case shall an ISO request for increased security remain outstanding for more than five business days. Either the above process is to be completed within five business days from the ISO request for additional security, or the SC is to post additional security within the five days and continue this process, which may result in a return of posted security back to the SC if successful.

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 SC is under-secured and defaults, against the desire not to impose additional potentially unwarranted costs on an SC.
- Equity and consistency of treatment of SCs in the appeal procedure.

- The evidentiary value of the information provided by the SC's in the appeal procedure.

APPENDIX 1: Tariff References

This APPENDIX contains a summary of applicable tariff sections and full text of applicable tariff sections.

SUMMARIES OF APPLICABLE TARIFF SECTIONS:

The following section provides a summary of applicable tariff sections related to SC security, liability, and approved credit rating. The ISO's current Tariff can be found on the ISO's web page at: http://www.caiso.com/pubinfo/tariffs/

Approved Credit Rating

Each Scheduling Coordinator must maintain an Approved Credit Rating (as listed in the ISO Tariff Appendix A, Master Definitions Supplement for "Approved Credit Rating") or post security in favor of the ISO as specified in ISO Tariff Section 2.2.3.2. The financial security posting requirement is summarized as follows.

Financial security posting obligations			
Short -Term Credit Rating	**Long - Term Credit Rating**		
	>A- or >A3	**<A- or <A3**	**No LT**
A1 or P1	None	None	None
A2 or P2	GMC only	GMC only	GMC only
<A2 or <P2	GMC only	GMC & Market	GMC & Market
No ST	GMC only	GMC & Market	GMC & Market

Review of Credit Worthiness

The ISO may review the creditworthiness of any SC who defaults payments due and as a result may require them to provide security as specified in ISO Tariff Section 2.2.3.3.

Termination of Service Agreement

The ISO may terminate an SC's scheduling agreement if an they no longer meet eligibility requirements, fail to pay any sum under the ISO Tariff and fail to remedy such a default within a period of seven (7) days after written notification by the ISO, or any other defaults under the ISO tariff as specified in Section 2.2.4.5.

Additionally, the ISO may retain an SC's security deposit until all obligations are settled outstanding obligations are settled the ISO.

"The ISO shall, following termination of an SC Agreement and within thirty (30) days of being satisfied that no sums remain owing the Security Coordinator under the ISO Tariff, return or release the Scheduling Coordinator, as appropriate, any money or credit support provided by such Scheduling Coordinator to the ISO under ISO Tariff Section 2.2.3.2."

Implications if Credit Rating Not Maintained

An SC who does not maintain an approved credit rating shall be subject to the limitations on trading as set out in ISO Tariff Section 2.2.7.3 of the tariff which provides that a scheduling coordinator shall not be entitled to submit a schedule if their estimated aggregate liability exceeds their security posting.

Implications if Excess Liability

The ISO has an obligation to monitor actual balances against the security posting and to request changes as necessary. An SC whose security amount is exceeded by their SCALE shall not be entitled to submit a schedule and the ISO may reject any schedule if the SC's as specified in ISO Tariff Section 2.2.7.3.

Also, the ISO may restrict, or suspend a Scheduling Coordinator's right to Schedule or require the Scheduling Coordinator to increase its ISO Security Amount if at any time such Scheduling Coordinator's liability for Imbalance Energy is determined by the ISO to be excessive by comparison with the likely cost of the amount of Energy scheduled by the Scheduling Coordinator as specified in ISO Tariff Section 2.2.7.5

SCALE Calculations Provision

The ISO shall notify the SC if at any time such outstanding liabilities exceed 90% of the relevant portion of security. The estimate shall include outstanding charges for Trading Days for which Settlement data is available and an estimate of charges for Trading Days for which Settlement data is not yet available. For the estimate for which Settlement data is not available, ISO will consider available historical data appropriately adjusted to reflect recent market prices or trends or other available information for individual Scheduling Coordinators as specified in ISO Tariff Section 2.2.7.3.

SC's Responsibility to Post Security

The ISO tariff provides that the SC has the primary responsibility to determine an initial financial security posting amount to be provided for the benefit of the ISO, and to update the amount as necessary. (ISO Tariff Section 2.2.3.2 and Section 2.2.7.3)

Limitations on Trading

ISO Tariff Section 2.2.7.3 Limitation on Trading provides the following:

"Each Scheduling Coordinator, UDC, or MSS required to provide an ISO Security Amount under Section 2.2.3.2 shall notify the ISO of the initial ISO Security Amount (separated into amounts security payment of the Grid Management Charge and amounts securing payments of other charges) that it wishes to provide at least fifteen (15) days in advance and shall ensure that the ISO has received such ISO Security Amount prior to the date the Scheduling Coordinator commences trading or the UDC or MSS commences receiving bills for the High Voltage Access Charge and Transition Charge."

Utilizing posted Security for Defaulting Scheduling Coordinator

In accordance with SABP 6.7.1, the ISO shall make reasonable endeavors to enforce the defaulting Scheduling Coordinator's Security (if any) to the extent necessary to pay the Default Amount.

In accordance with SABP 6.7.3, shall as soon as possible after taking action under SABP 6.7.2 take any steps it deems appropriate against the defaulting Scheduling Coordinator to recover the Default Amount (and any default interest as set out in SABP 6.10.5) including enforcing any Security pursuant to Section 11.14 of the ISO Tariff, exercising its rights of recouping or offsetting pursuant to SABP 6.10.2 and/or bringing proceedings against the defaulting Scheduling Coordinator pursuant to Section 11.20.1 of the ISO Tariff.

FULL TEXT OF ISO TARIFF SECTIONS RELATED TO CREDIT:

PRIMARY TARIFF SECTIONS

2.2.3.2 (Maintaining an Approved Credit Rating or Posting Security).

Each Scheduling Coordinator, UDC or MSS shall either maintain an Approved Credit Rating **(which may differ for different types of transactions with the ISO)** or provide in favor of the ISO one of the following forms of security for an amount to be determined by the Scheduling Coordinator, UDC or MSS and notified to the ISO under Section 2.2.7.3:

(a) an irrevocable and unconditional letter of credit confirmed by a bank or financial institution reasonably acceptable to the ISO;
(b) an irrevocable and unconditional surety bond posted by an insurance company reasonably acceptable to the ISO;
(c) an unconditional and irrevocable guarantee by a company which has and maintains an Approved Credit Rating;
(d) a cash deposit standing to the credit of an interest bearing escrow account maintained at a bank or financial institution designated by the ISO;
(e) a certificate of deposit in the name of the ISO from a financial institution designated by the ISO; or
(f) a payment bond certificate in the name of the ISO from a financial institution designated by the ISO.

Letters of credit, guarantees, surety bonds, payment bond certificates, escrow agreements and certificates of deposit shall be in such form as the ISO may reasonably require from time to time by notice to Scheduling Coordinators, UDCs or MSSs. A Scheduling Coordinator, UDC or MSS which does not maintain an Approved Credit Rating shall be subject to the limitations on trading set out in Section 2.2.7.3. Until March 3, 2001, and notwithstanding anything to the contrary in the ISO Tariff, a Scheduling Coordinator or UDC that –

(1) has an Approved Credit Rating on January 3, 2001; and
(2) is an Original Participating Transmission Owner or is a Scheduling Coordinator for an Original Participating Transmission Owner;

shall not be subject to the limitations on trading set forth in Section 2.2.7.3 for the Trading Day if, by 8:30 a.m. on the day prior to the Trading Day, the ISO posts notice on the ISO Home Page that such trading limitations will not apply.

2.2.3.3 Review of Creditworthiness.

The ISO may review the creditworthiness of any Scheduling Coordinator, UDC or MSS which delays or defaults in making payments due under the ISO Tariff and, as a consequence of that review, may require such Scheduling Coordinator, UDC or MSS, whether or not it has (or is deemed to have) an Approved Credit Rating, to provide credit support in the form of:

(a) an irrevocable and unconditional letter of credit by a bank or financial institution reasonably acceptable to the ISO;
(b) a cash deposit standing to the credit of an interest-bearing escrow account maintained at a bank or financial institution designated by the ISO;
(c) an irrevocable and unconditional surety bond posted by an insurance company reasonably acceptable to the ISO; or
(d) a payment bond certificate in the name of the ISO from a financial institution designated by the ISO.

The ISO may require the Scheduling Coordinator, UDC or MSS to maintain such credit support for at least one (1) year from the date of such delay or default.

2.2.4.5 Termination of Service Agreement.

(a) A Scheduling Coordinator's SC Agreement may be terminated by the ISO on written notice to the Scheduling Coordinator:

(i) if the Scheduling Coordinator no longer meets the requirements for eligibility set out in Section 2.2.3 and fails to remedy the default within a period of seven (7) days after the ISO has given written notice of the default;

(ii) if the Scheduling Coordinator fails to pay any sum under this ISO Tariff and fails to remedy the default within a period of seven (7) days after the ISO has given written notice of the default; or
(iii) if the Scheduling Coordinator commits any other default under this ISO Tariff or any of the ISO Protocols which, if capable of being remedied, is not remedied within thirty (30) days after the ISO has given it written notice of the default; or

(b) by the Scheduling Coordinator on sixty (60) days written notice to the ISO, provided that such notice shall not be effective to terminate the SC Agreement until the Scheduling Coordinator has complied with all applicable requirements of Section 2.2.5.

The ISO shall, following termination of an SC Agreement and within thirty (30) days of being satisfied that no sums remain owing by the Scheduling Coordinator under the ISO Tariff, return or release to the

Scheduling Coordinator, as appropriate, any money or credit support provided by such Scheduling Coordinator to the ISO under Section 2.2.3.2.

2.2.4.5.1 (Suspending certification).

Pending acceptance of termination of service pursuant to Section 2.2.4.6.1 by FERC, the ISO will suspend the certification of a Scheduling Coordinator which has received a notice of termination under Section 2.2.4.5(a) and the Scheduling Coordinator will not be eligible to submit schedules and bids for Energy and Ancillary Services to the ISO.

2.2.4.6 Notification of Termination.

The ISO shall, promptly after providing written notice of default to a Scheduling Coordinator as specified in Section 2.2.4.5(a), notify the Scheduling Coordinators that could be required to represent End Use Eligible Customers of the Scheduling Coordinator under Section 2.2.4.7.2 if the default is not cured. The ISO shall, as soon as reasonably practicable following the occurrence of any of the events specified in Section 2.2.4.5, notify the Scheduling Coordinator and the Scheduling Coordinators that could be required to represent End Use Eligible Customers of the defaulting Scheduling Coordinator, and the UDCs, and shall as soon as reasonably practicable after the issuance of such notice of termination post such notice on the ISO Home Page. Termination of the SC Agreement will automatically remove the Scheduling Coordinator’s certification under Section 2.2.4 and Section 2.5.6.

2.2.4.6.1 Filing of Notice of Termination.

Any notice of termination given pursuant to Section 2.2.4.5 shall also be filed by the ISO with FERC.

2.2.6 Responsibilities of a Scheduling Coordinator.

Each Scheduling Coordinator shall be responsible for:

2.2.6.1 Obligation to Pay. Paying the ISO’s charges in accordance with this ISO Tariff;

2.2.7.3 Limitation on Trading.

A Scheduling Coordinator, UDC or MSS that does not maintain an Approved Credit Rating, as defined with respect to either payment of the Grid Management Charge, or payment of other charges, shall maintain security in accordance with Section 2.2.3.2. For the avoidance of doubt, the ISO Security Amount is intended to cover the entity's outstanding and estimated liability for either (i) Grid Management Charge; and/or (ii) Imbalance Energy, Ancillary Services, Grid Operations Charge, Wheeling Access Charge, High Voltage Access Charge, Transition Charge, Usage Charges, and FERC Annual Charges. Each Scheduling Coordinator, UDC or MSS required to provide an ISO Security Amount under Section 2.2.3.2 shall notify the ISO of the initial ISO Security Amount (separated into amounts securing payment of the Grid Management Charge and amounts securing payments of other charges) that it wishes to provide at least fifteen (15) days in advance and shall ensure that the ISO has received such ISO Security Amount prior to the date the Scheduling Coordinator commences trading or the UDC or MSS commences receiving bills for the High Voltage Access Charge and Transition Charge. A Scheduling Coordinator, UDC or MSS may at any time increase its ISO Security Amount by providing additional guarantees or credit support in accordance with Section 2.2.3.2. A Scheduling Coordinator, UDC or MSS may reduce its ISO Security Amount by giving the ISO not less than fifteen (15) days notice of the reduction, provided that the Scheduling Coordinator, UDC or MSS is not then in breach of this Section 2.2.7.3. The ISO shall release, or permit a reduction in the amount of, such guarantees or other credit support required to give effect to a permitted reduction in the ISO Security Amount as the Scheduling Coordinator, UDC or MSS may select.

Following the date on which a Scheduling Coordinator commences trading, the Scheduling Coordinator shall not be entitled to submit a Schedule to the ISO and the ISO may reject any Schedule submitted if, at the time of submission, the Scheduling Coordinator's ISO Security Amount is exceeded by the Scheduling Coordinator's estimated aggregate liability for (i) Grid Management Charge and/or Imbalance Energy, Ancillary Services, Grid Operations Charge, Wheeling Access Charge, Usage Charges, and FERC Annual Charges on each Trading Day for which Settlement has not yet been made in accordance with Section 11.3.1 and the Scheduling Coordinator's estimated liability for High Voltage Access Charge and Transition Charge for which Settlement has not yet been made in accordance with Section 11.3. The ISO shall notify a Scheduling Coordinator if at any time such outstanding liabilities exceed 90% of the relevant portion of the ISO Security Amount. For the purposes of calculating the Scheduling Coordinator's estimated aggregate liability, the estimate shall include (1) outstanding charges for Trading Days for which Settlement data is available, and (2) an estimate of charges for Trading Days for which Settlement data is not yet available. To estimate charges for Trading Days for which Settlement data is not yet available, the ISO will consider available historical Settlement data, appropriately adjusted to reflect recent market prices and trends, or other available information for individual Scheduling Coordinators.

Following the date on which a UDC or MSS commences operation, the UDC's or MSS's Scheduling Coordinator shall not be entitled to submit a Schedule to the ISO and the ISO may reject any Schedule submitted if, at the time of submission, the UDC's or MSS's ISO Security Amount is exceeded by the UDC's or MSS's estimated aggregate liability for Grid Management Charge, and/or High Voltage Access Charges and Transition Charges for which Settlement has not yet been made in accordance with Section 11.3. The ISO shall notify a UDC or MSS if at any time such outstanding liabilities exceed 90% of the relevant portion of the ISO Security Amount. For the purposes of estimating the UDC's or MSS's aggregate liability for High Voltage Access Charges and Transition Charges, the UDC's or MSS's liability shall be equal to the billed Load (in MWh) for a month in the UDC's or MSS's Service Area (including exports from the Service Area) multiplied by the ISO's estimated High Voltage Access Charge and Transition Charge for that month, as such estimated cost is notified by the ISO to UDCs and MSSs from time to time.

2.2.7.4 (Notifying SC if Schedule is Rejected).

The ISO shall notify the relevant Scheduling Coordinator if it rejects a Schedule under Section 2.2.7.3 in which event the Scheduling Coordinator shall not be entitled to submit any further Schedules until it has demonstrated to the ISO's satisfaction that its ISO Security Amount has been increased sufficiently to avoid the limit on trading imposed under Section 2.2.7.3 from being exceeded.

2.2.7.5 (Suspending SC's Rights to Schedule).

The ISO may restrict, or suspend a Scheduling Coordinator's right to Schedule or require the Scheduling Coordinator to increase its ISO Security Amount if at any time such Scheduling Coordinator's liability for Imbalance Energy is determined by the ISO to be excessive by comparison with the likely cost of the amount of Energy scheduled by the Scheduling Coordinator.

MASTER DEFINITIONS SUPPLEMENT: "APPROVED CREDIT RATING"

With respect to whether security must be posted for payment of the Grid Management Charge:

(a) A short-term taxable commercial paper debt rating of not less than any one of the following: (i) A1 by Standard and Poor's Corporation; (ii) D1 by Duff & Phelps Credit Rating Agency; (iii) F1 by Fitch IBCA Incorporated; or (iv) P1 by Moody's Investors Service. This rating shall be an issuer, or counterpart rating, without the benefit of credit enhancement.

(b) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (I) A1 by Standard and Poor's Corporation; (ii) V1 by Fitch IBCA Incorporated; or (iii) VMIG1 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.

With respect to whether security must be posted for payment of all charges other than the Grid Management Charge:

(c) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A2 by Standard and Poor’s Corporation; (ii) D2 by Duff & Phelps Credit Rating Agency; (iii) F2 by Fitch IBCA Incorporated; or (iv) P2 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.
(d) A short-term tax exempt commercial paper debt rating of not less than any one of the following: (i) A2 by Standard and Poor’s Corporation; (ii) V2 by Fitch IBCA Incorporated; or (iii) VMIG2 by Moody’s Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.
(e) A long-term debt rating of not less than any one of the following: (i) A- by Standard and Poor's Corporation; (ii) A- by Duff & Phelps Credit Rating Agency; (iii) A- by Fitch IBCA Incorporated; or (iv) A3 by Moody's Investors Service. This rating shall be an issuer, or counterparty rating, without the benefit of credit enhancement.

With respect to whether security must be posted for payment of all charges:

(f) A federal agency shall be deemed to have an Approved Credit Rating if its financial obligations under the ISO Tariff are backed by the full faith and credit of the United States.
(g) A California state agency shall be deemed to have an Approved Credit Rating if its financial obligations under the ISO Tariff are backed by the full faith and credit of the State of California.
(h) Another credit rating approved by the ISO Board of Governors.

SETTLEMENTS AND BILLING PROTOCOLS:

SABP 6.1.2 Prepayments

(a) A Scheduling Coordinator may choose to pay at an earlier date than the Payment Date specified in the ISO Payments Calendar by way of prepayment provided it notifies the ISO by electronic means before submitting its prepayment.
(b) Prepayment notifications must specify the dollar amount prepaid.
(c) Prepayments must be made by Scheduling Coordinators via Fed-Wire into their ISO prepayment account designated by the ISO. The relevant Scheduling Coordinator shall grant the ISO a security interest on all funds in its ISO prepayment account.
(d) On any Payment Date the ISO shall be entitled to cause funds from the relevant Scheduling Coordinator’s ISO prepayment account to be transferred to the ISO Clearing Account in such amounts as may be necessary to discharge in full that Scheduling Coordinator’s payment obligation arising in relation to that Payment Date.
(e) Any funds held in the relevant Scheduling Coordinator’s ISO prepayment account shall be treated as part of that Scheduling Coordinator’s Security.
(f) Interest (or other income) accruing on the relevant Scheduling Coordinator’s ISO prepayment account shall inure to the benefit of that Scheduling Coordinator and shall be added to the balance of its ISO prepayment account on a monthly basis.
(g) Funds held in an ISO prepayment account by a Scheduling Coordinator may be recouped, offset or applied by the ISO to any outstanding financial obligations of that Scheduling Coordinator to the ISO or to other Scheduling Coordinators under this Protocol.

SABP 6.7.1 Enforcing the Security of a Defaulting Scheduling Coordinator

Subject to SABP 6.8 the ISO shall make reasonable endeavors to enforce the defaulting Scheduling Coordinator's Security (if any) to the extent necessary to pay the Default Amount. If it is not practicable to obtain clear funds in time to effect payment to ISO Creditors on the same day the ISO shall proceed in accordance with SABP 6.7.2 or 6.7.4 as applicable.

SABP 6.7.2 Use of ISO Reserve Account

If there are funds standing to the credit of the ISO Reserve Account (including the proceeds of drawings under banking facilities described in SABP 2.2.5) the ISO shall debit the ISO Reserve Account with the Default Amount in order to clear the ISO Clearing Account and effect payment to the ISO Creditors.

SABP 6.7.3 Action against a Defaulting Scheduling Coordinator

The ISO shall as soon as possible after taking action under SABP 6.7.2 take any steps it deems appropriate against the defaulting Scheduling Coordinator to recover the Default Amount (and any default interest as set out in SABP 6.10.5) including enforcing any Security pursuant to Section 11.14 of the ISO Tariff, exercising its rights of recoupment or set-off pursuant to SABP 6.10.2 and/or bringing proceedings against the defaulting Scheduling Coordinator pursuant to Section 11.20.1 of the ISO Tariff.

SABP 6.10 Application of Funds Received

Amounts credited to the ISO Clearing Account in payment of a Default Amount (as set out in SABP 6.9(a)) or as a result of enforcing the defaulting ISO Debtor's Security shall be applied to the ISO Reserve Account pursuant to SABP 6.9 to reduce amounts outstanding under any ISO banking facilities used to fund the ISO Reserve Account on the relevant Payment Date and the balance (if any) shall be applied to reimburse pro rata any ISO Creditors whose payments were reduced pursuant to SABP 6.7.4.

SABP 6.10.1 Termination of SC Agreement and Limitation on Trading

The provisions of Section 2.2.4.5 and 2.2.7.3 of the ISO Tariff shall apply.

APPENDIX 2 : Scheduling Coordinator Liability Estimate Measurement File Development Process

Appendix 2 INTRODUCTION

The following information provides background and overview of how the predictive settlement process was initiated and how the measurement file development process works to develop missing meter data so that the predictive settlement system can be utilized to estimate current liabilities based on operational data.

Appendix 2 DEVELOPMENT PROCESS

Defined Terms

EMS Utility Distribution Control Area (UDC) Load – ISO control area load MWhs aggregated at the PG&E, SCE and SDG&E level.

Generation Deviation Allocation Flag – The generation deviation allocation flag denotes which MP load profiles are allocated generation deviation / UFE MWhs.

Load Profiles

Annual Load Profile – Load profile developed from actual meter MWhs for the period of Trade Date (T) + 50 to T+415.
Current Load Profile – Load profile developed from actual meter MWhs for period of T+50 to T+80.
Schedule Load Profile – Load profile developed from scheduled meter MWhs for the period of T+1 to T+49.
Seasonal Load Profile – Load profile developed from actual meter MWhs for the prior season.
Short-Term Schedule Load Profile - Load profile developed from scheduled meter MWhs for the period of T+1 to T+14.

Load Profile Adjustment Percentage – The load profile adjustment percentage is calculated as the percentage variance between actual metered load and allocated EMS UDC Load. This percentage is utilized to develop actual metered load, utilized by the settlement system, from allocated EMS UDC Load.

Meter Load to Scheduled Load Adjustment Percentage – The meter l oad to scheduled load adjustment percentage is calculated as the variance between actual meter load and scheduled load. The percentage is utilized to create representative meter load from scheduled load.

Off-Peak – This term represents the day of the week to which a load profile corresponds. The Off-Peak days of the week include: Saturday, Sunday and Holidays.

On-Peak –This term represents the day of the week to which a load profile corresponds. The On-Peak days of the week include: Monday, Tuesday, Wednesday, Thursday and Friday.

Other Adjustment Percentage – For those MP where the load profiles and adjustment percentages do not reflect a participant's load, the other adjustment percentage approach is utilized. This approach is only rarely used.

Use Meter Load to Scheduled Load Adjustment Percentage Flag – This flag identifies those calculated MP load profiles that are subsequently adjusted by the meter load to scheduled load adjustment percentage.

Use Scheduled Load Flag – This flag identifies those MPs where ` utilization of scheduled load a proxy for metered load is appropriate.

Market Participant Liability Estimations

In FY2003, the focus of Scheduling Coordinator Liability Estimation (SCALE) project was on the development of settlement statements seven days after the trade date using a system that is essentially a copy of the settlement system with missing load, generation and intertie data derived from a combination of meter, telemetry and estimated data from other systems. In order for SCALE to effectively and accurately calculate participant liabilities, three essential data inputs are needed: load, generation and intertie MWhs. It was determined that 75 to 80 percent of generation and intertie MWhs are derived from CAISO polled meter data stored in the CAISO's Data Warehouse, however the load MWhs were not available until 45 days after the trade date. Thus, the main focus of the SCALE project team's efforts to was on the estimation of load data. The analysis conducted produced the following findings:

1. Utilization of current actual meter load profiles, which are based on meter data that is 50 to 80 days old, to allocate EMS UDC Load did not alone accurately reflect a market participant's current position in the market. For example, a MP's load profile based on past data would not accurately reflect a situation where it has transferred its load/customers to another MP.

2. Utilization of annual load profiles to allocate EMS UDC Load in many instances did not reflect load increases or decreases that appear over time. For example, since September 2001, certain MPs have acquired a substantial amount of load from other MPs, but the annual load profiles generated did not reflect this load shift.
3. Utilization of schedules to estimate system load and to derive participant liabilities did not reflect the actual daily system load or participant imbalances. This was mainly due to a participant's ability to schedule whatever amount of load that they choose. Analysis of participant scheduling patterns has shown that many participant's schedules are closely related to their actual metered quantities, however participant scheduling practices may not be consistent.

4. After conducting an analysis of the load estimation methodologies above, it was determined that all three methods should be combined to provide for a more accurate load estimate. The methodology, outlined below, includes the information gathered through the liability estimation process.

Additional areas that the SCALE team worked on were the estimation of the remaining 15 to 25 percent of missing generation and intertie MWhs. The team developed a methodology to estimate the remaining generation and intertie MWhs, and an explanation of the methodology is outlined below.

Load Estimation Methodology

As mentioned in the previous section, three approaches were considered to estimate load MWhs and each had significant shortcomings that precluded them from being utilized exclusively. By utilizing each of the methodologies in conjunction with each other, a proxy for metered load was developed that more closely represented each participant's position in the market. The following are the steps created to develop a market participant's load estimate.

1. **Develop Load Profiles** - Development of each MP's "On Peak" (Monday through Friday) and "Off Peak" (Saturday, Sunday and Holidays) hourly load profiles by UDC area. The load profiles developed consist of:

   - Annual Load Profiles,
   - Seasonal Load Profiles,
   - Current Load Profiles,
   - Scheduled Load Profiles, and
   - Short-Term Scheduled Load Profiles.

2. **Select Load Profile** – Once the load profiles are developed for a given time period, the next step in the load estimation process is to determine which load profile (Annual, Seasonal, Current etc) most closely reflects a

MP's actual position in the market. For example, the EMS UDC Load from 12/16/2002 to 1/15/2003 is allocated to each of the load profiles listed above. Next, the allocated MWhs for each set of profiles is compared against the actual metered MWhs for the same time period 12/16/2002 to 1/15/2003. The load profile that best represents a MPs actual meter MWhs is utilized for subsequent load allocations.

3. **Calculate / Select Load Profile Adjustment Percentages and Load Profile Application Flags** – The following adjustment percentages and load profile application flags, which are defined above, are calculated or selected to be utilized in subsequent calculations:

   - Load Profile Adjustment Percentage,
   - Meter Load to Scheduled Load Adjustment Percentage,
   - Other Adjustment Percentage,
   - Use Meter Load to Scheduled Load Adjustment Percentage Flag, and
   - Use Scheduled Load Flag.

   (note: the results of steps 1 thru 3 are utilized for a designated period, such as 30 days)

4. **Validate EMS UDC Load** – EMS UDC Load validation for each trade date is conducted to ensure that the data derived from EMS does not include significant outlier MWhs. The calculation includes comparing an historical EMS load profile (T+1 to T+50) to the current trade date load profile. Where the current load profile MWh does not meet the 15 percent tolerance level ,the current EMS MWh value is adjusted to within tolerance.

5. **Allocate EMS UDC Load** – Next, the ISO will utilizes the selected load profile for determining the MP's hourly load to allocate EMS UDC Load. The following steps are required for the allocation of EMS UDC Load:

   i. The EMS UDC Load is allocated to MP's based on the following formula (all calculations are conducted on an hourly basis):

      - Where Use Schedule Load Flag = "True"; Scheduled Load * (1+Meter Load to Scheduled Load Adjustment Percentage)

      - Where Use Schedule Load Flag = "False" and Use Meter Load to Scheduled Load Adjustment Percentage Flag = "True", EMS UDC Load * Selected Load Profile / 1000 * (1+ Load Profile Adjustment Percentage) * (1+ Other Adjustment (what is this? Percentage)*(1+ Meter Load to Scheduled Load Adjustment Percentage),

- Else, EMS UDC Load * Selected Load Profile / 1000 * (1+ Load Profile Adjustment Percentage) * (1+ Other Adjustment Percentage)

ii. The value of Hourly EMS UDC Load * Selected Load Profile is divided by 1000 because the hourly load profile percentages derived are multiplied by 1000 for data representation purposes.

6. **Calculate Generation Deviation / Unaccounted for Energy (UFE) Quantity by UDC** - For each UDC, a Generation Deviation / UFE calculation is completed, which provides a residual amount of Load MWhs that are allocated to designated MPs on a *pro rata* basis. The purpose of the calculation and load MWh allocation is to minimize Charge Type 406 UFE charges. The UFE calculation is outlined in the settlement and billing protocols under CT 406. The allocation process is as follows (all calculations are conducted on an hourly basis):

   i. Where Generation Deviation Allocation Flag = "False", MP Load + (UDC UFE *MP Load / Total UDC Load where Generation Deviation Allocation Flag = "False").

7. **Load Distribution and Upload** – Upon deriving the load MWhs to be utilized in the settlement statement calculation, the MWhs are distributed to each MP's valid resources IDs in the following manner and then uploaded into SCALE.

   i. Development of a list of valid metered and scheduled resources utilized by each MP over a given time period (T+1 to T+80).

   ii. Allocate the estimated load to the valid resources on a weighted basis by hour. For all resources that have both metered quantities and scheduled quantities, metered quantities will be utilized for weighting purposes. Resources that have scheduled quantities and no metered quantities are assumed to be recently utilized resources and scheduled quantities will be used for weighting purposes.

   iii. Allocate the resource quantities calculated above evenly across the six sub-hour interval levels for upload into the measurements table in SCALE.

Generation Estimation Methodology

As mentioned above, at T+7 approximately 15 to 25 percent of generation meter data is not available. The following is an explanation of the methodology utilized to develop a proxy for the missing generation meter data.

The ISO determined that the missing generation data consists of the following:

1. ISO polled unit MWhs thatwere either not available at T+7 or were being worked on by the metering department at the time of the T+7 data push, and

2. Qualifying Facility (QF) unit and other non-polled unit MWhs.

The process for determining the remaining generation data is based on EMS and schedule data.

1. **Download T+7 Meter Data Acquisition System (MDAS) Generation Data** – For the trade date being worked on, all generation data available in the T+7 measurement table is downloaded for analysis purposes.

2. **Download Scheduled Generation Data** – From Market Operation's Scheduling Infrastructure (SI) database, download hourly scheduled generation by resource ID.

3. **Download Real Time (RT) Dispatch Data** – From Market Operation's SI database, download hourly real time dispatched data by resource ID.

4. **Download EMS Data from Plant Information (PI)** – A table has been developed from information provided by Market Operations that contains approximately 800 generation resource IDs mapped to the appropriate PI tags. Using the PI tags, generation unit hourly EMS MWhs are downloaded from PI.

5. **Download Actual Meter & Schedule Data** – From the Data Warehouse, download actual metered and scheduled quantities for a period of T+50 to T+80 for analysis purposes.

6. **Utilization of T+7 MDAS Generation Data** – Where T+7 MDAS generation data exists for a particular resource, even if the measurement quantity is zero, use this value. (Between 75 and 85 percent of all generation MWhs)

7. **Utilization of EMS Generation Data** – Where MDAS data is not available and Dispatched Generation MWh >0 and EMS MWh >0, use EMS MWhs. (Approximately 18.75 percent of all generation MWhs)

    a. Dispatched Generation MWh = Scheduled Generation MWh + RT Dispatched Generation MWh

b. Where the EMS MWh * 1.15 is greater than the maximum generation capacity of the unit utilize the maximum generation capacity of the unit.

8. **Utilization of Dispatched / Scheduled Generation MWhs** – Where MDAS data is not available and Dispatched Generation MWh >0 and EMS MWh = 0, use Adjusted Dispatched / Scheduled Generation MWh. (Approximately 6.25 percent of all generation MWhs)

    a. Adjusted Dispatched Generation MWh =

        i. For all Dispatched / Scheduled Generation MWhs >=1 MWh, Dispatched / Scheduled Generation MWhs* 1+(Hourly Metered vs Scheduled Generation Variance Percentage).

    b. Resource Historical Metered vs. Scheduled Variance Percentage (T+50 to T+80) = (average hourly metered MWh – average hourly scheduled MWh) / average hourly scheduled MWh

9. **Upload the Developed MWhs to SCALE** - Allocate the resource quantities calculated above evenly across the six sub-hour interval levels for upload into the measurements table in SCALE.

Intertie / Intratie (TIE) Estimation Methodology

Currently, 75 to 80 percent of the TIE data is available from ISO polled meters. The process for determining the remaining intertie MWhs is based on the utilization of EMS data and allocated load MWhs derived in the Load Estimation Methodology for various intraties.

1. **Download T+7 MDAS Intertie Data** – For the trade date being estimated, all TIE data available in the T+7 measurement table is downloaded for analysis purposes.

2. **Download EMS Data from PI** – A table has been developed from information provided by Market Operations that contains TIE resource IDs mapped to the appropriate PI tags. Using the PI tags, TIE hourly EMS MWhs are downloaded from PI.

3. **Utilization of T+7 MDAS Intertie Data** – Where T+7 MDAS TIE data exists, use MDAS data. (Approximately 84 percent of all TIE MWhs)

4. **Utilization of EMS Intertie Data** – Where MDAS data is not available use the EMS data. (Approximately 13 percent of all TIE MWhs)

5. **Utilization of Load Data** – For intratie IDs, utilize the amount calculated as load as the intratie MWhs where appropriate. (Approximately 3 percent of all TIE MWhs)

6. **Upload the Developed MWhs to SCALE** - Allocate the resource quantities calculated above evenly across the six sub-hour interval levels for upload into the measurements table in SCALE.

SCALE Data Development Conclusion

The above steps are a high level overview of how missing meter MWh data is developed for an estimated T+7 settlement run. Further enhancements to this process may be forthcoming as the process is transitioned to a permanent software tool.

APPENDIX 3 : Pro-Forma Financial Security Forms

Pro-forma versions of selected financial security instruments are contained in this Appendix.

- ☑ Irrevocable or unconditional letter of credit (LOC) confirmed by a bank or financial institution reasonably acceptable to the ISO;
- ☐ Irrevocable or unconditional surety bond posted by an insurance company reasonably acceptable to the ISO;
- ☑ Unconditional and irrevocable guarantee by a company which has and maintains an Approved Credit Rating;
- ☑ Cash deposit standing to the credit of an interest bearing escrow account maintained at a bank or financial institution designated by the ISO;
- ☐ Certificate of deposit in the name of the ISO from a financial institution designated by the ISO; or
- ☐ Payment bond certificate in the name of the ISO from a financial institution designated by the ISO.

Form for surety bonds, CDs, payment bonds are not included here, and are to be negotiated.

LETTER OF CREDIT

Irrevocable Standby Letter of Credit No. ________

BANK ADDRESS HERE

Attention: Standby Letter of Credit section

Date:

BENEFICIARY
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
151 Blue Ravine Road
Folsom, California 95630

APPLICANT
ADDRESS HERE

Currency	:	USD
Amount	:	______
Available by	:	______
Final Expiry Date	:	______

Ladies/Gentlemen:

We hereby issue our Irrevocable Unconditional (except as expressly set forth herein) Standby Letter of Credit ("Letter of Credit") in your favor. This Letter of Credit is available by sight payment with ourselves only against presentation to this office at the above address of the following documentation.

1. A sight draft drawn on us purportedly signed by an authorized representative or officer of the Beneficiary marked: "**Drawn under BANK NAME, Irrevocable Standby Letter of Credit No.________ , dated_______ .**"

2. A dated statement purportedly signed by an authorized representative or officer of the Beneficiary stating:

"The undersigned being a duly authorized representative of officer of California Independent System Operator Corporation hereby represents and warrants that the amount of the accompanying draft represents and covers payment due and owing to California Independent System Operator Corporation which has not been paid by **APPLICANT NAME HERE.**"

Partial Drawings are permitted.

The term “Beneficiary” includes any successor by operation of law of the named Beneficiary including, without limitation, any liquidator, any rehabilitator, receiver or conservator.

This Letter of Credit shall finally expire on **DATE**.

The date this Letter of Credit expires in accordance with the above provision is the “Final Expiry Date”. Upon the occurrence of the Final Expiry Date this Letter of Credit shall fully and finally expire and no presentations made under this Letter of Credit after such date shall be honored.

This Letter of Credit sets forth is full the terms of our undertaking, and such terms shall not be modified, amended or amplified by any document, instrument or agreement referred to in this Letter of Credit, in which this Letter of Credit is referred to or to which this Letter of Credit relates.

All demands for payment shall be made by presentation of original appropriate documents prior to 1:00p.m., California time, on a Business Day at our office (the “Bank’s Office”) at:

BANK ADDRESS HERE

Attention: Standby Letter of Credit Section,

or

by facsimile transmission at _______, telephone _______, Attention: Standby Letter of Credit Section with originals to follow by overnight mail; provided, however, the Bank will determine honor or dishonor on the basis of presentation by facsimile alone, and will not examine the originals.

Payment against conforming presentations hereunder shall be made by Bank during normal business hours of the Bank’s Office on the next Business Day after presentation.

Except as stated herein, this Letter of Credit is not subject of any condition or qualification and is our individual obligation which is in no way contingent upon reimbursement.

SPECIAL INSTRUCTIONS:
The original of this Letter of Credit must be presented together with the above documents in order to endorse the amount of each drawing on the reverse side.

Payment will be made to the Beneficiary at the above address. If requested by you, payment under this Letter of Credit may be made by wire transfer of Federal Reserve Bank of San Francisco funds to the account of the Beneficiary at a bank on the Federal Reserve wire system.

All banking charges under this Letter of Credit, except as noted herein, are for the account of the Applicant.

An interbank transfer fee of USD_____ charged to the Applicant if settlement is to be remitted to an account at another bank.

We hereby agree with you that drafts drawn under and in compliance with the terms of this Letter of Credit will be duly honored upon presentation and delivery to BANK NAME, at the address above. Documents are to be sent in one lot by courier service, overnight mail or hand delivery.

The original Letter of Credit together with all amendments must be returned to us, without necessity of demand on our part, clearly signed and dated by you "Canceled", within five (5) business days of the occurrence of the earlier of the following:

(1) when the Letter of Credit has been full and finally drawn.

or

(2) upon the occurrence of the final expiry date of this Letter of Credit.

Except as otherwise expressly stated herein, this Letter of Credit is subject to and governed by the "Uniform Customs and Practice for Documentary Credits (1993 Revision)", International Chamber of Commerce Publication No. 500, except that in the event we are closed on the date of expiration for reasons specified in Article 17 thereof, we hereby specifically agree that drafts drawn under and in compliance with the terms of this credit will be duly honored upon presentation and delivery to BANK NAME, at the address above, if presented within thirty (30) days after the resumption of business.

BANK NAME
DEPARTMENT

____
Authorized Signature

ESCROW AGREEMENT

This Escrow Agreement is made as of [date]____________________, by and among:

(1) California Independent System Operator Corporation ("ISO"), a nonprofit public benefit corporation having its principal place of business located in Folsom, California;

(2) [Legal Name]________________________________ ("Scheduling Coordinator") having its principal place of business located in [city & state]_______, and

(3) ____ ("California Bank or Financial Institution" or "Bank"),

all of whom collectively may be referred to hereafter as the "Parties".

WHEREAS:

1. Scheduling Coordinator desires to schedule energy and ancillary services on the ISO Controlled Grid, and
2. It must therefore maintain an appropriate amount of security, $__________________ (the "Escrow Amount") to cover its transactions with the ISO.
3. Scheduling Coordinator and the ISO desire California Bank or Financial Institution to hold the Escrow Amount as a California Bank or Financial Institution during the term of business between Scheduling Coordinator and the ISO.

NOW, THEREFORE, in consideration of the above premises and the mutual promises contained herein, and intending to be legally bound, the Parties hereto agree as follows:

Article 1
Escrow Account

1.1 Scheduling Coordinator shall deposit the Escrow Amount with California Bank or Financial Institution by a Fed-wire transfer of immediately available funds to [bank name]____. The deposit shall form the Escrow Account; the name of the Escrow Account shall reflect that it is for the benefit of the ISO. Upon receipt of the Escrow Amount, California Bank or Financial Institution shall notify the ISO that the Escrow Amount has been deposited with California Bank or Financial institution. Upon receipt of such notice the ISO shall allow Scheduling Coordinator in accordance with the ISO Tariff and ISO Protocols to begin scheduling energy and ancillary services with ISO. Attachment 1 sets forth the necessary details required to establish the Escrow Account and make payments.

1.2 Scheduling Coordinator shall pay all fees, charges and costs to establish, maintain and close the Escrow Account with the California Bank or Financial Institution, including but not limited to, processing fees, transaction fees and maintenance fees. Bank or Financial Institution will pay interest on balances in the Escrow Account at such rate as the bank pays from time to time on demand deposits. Scheduling Coordinator shall pay all taxes on interest income generated by the Escrow Account and receive all related tax information and forms from California Bank or Financial Institution.

Article 2
Payment of Escrowed Funds

2.1 California Bank or Financial Institution shall pay the funds from the Escrow Account to the ISO and/or Scheduling Coordinator under the following circumstances:

(a) Upon receipt by California Bank or Financial Institution of a Default Notice signed by an authorized signatory of the ISO, who is identified in this Escrow Agreement, or in a notice thereto designating a different authorized signatory, that Scheduling Coordinator is in default of payment, the Escrow Amount or a portion of the Escrow Amount shall be paid to ISO as provided in such Default Notice;

(b) Upon receipt by the California Bank or Financial Institution of a written notice signed by both Scheduling Coordinator and ISO that Scheduling Coordinator is terminating its participation with the ISO Controlled Grid and has paid all outstanding amounts, Escrow Amount shall be paid to Scheduling Coordinator as provided in such written direction. In the event of such termination, ISO shall be entitled to utilize funds credited to the Escrow Account in satisfaction of any amount owed by the Scheduling Coordinator to the ISO under the ISO Tariff. Upon such termination, ISO agrees that once the Scheduling Coordinator no longer has actual or contingent liabilities under the ISO Tariff, to release all remaining amounts to the Scheduling Coordinator.

(c) Upon receipt by the California Bank or Financial Institution of a written notice by the Scheduling Coordinator, stating that in the Escrow Amount in the Escrow Account exceeds the amount of money that Scheduling Coordinator is required to maintain in the Escrow Account as security to cover its Transactions, and signed by an Authorized Signatory of Scheduling Coordinator and countersigned by an ISO representative as identified in Section 6.1 of this Escrow Agreement, the amount specified in such certification shall be paid to the Scheduling Coordinator.

2.2 Scheduling Coordinator may not unilaterally withdraw funds from the Escrow Account without ISO written approval.

2.3 All disbursements shall be made by Fed-wire transfer within two business days of receipt of written instructions as set forth in 2.1.

2.4 California Bank or Financial Institution shall send monthly statements to the ISO and Scheduling Coordinator or upon demand and shall notify the Parties of any Escrow Account activity (i.e.: withdraws and deposits).

2.5 No changes in these instructions are permitted other than with the written agreement of the Scheduling Coordinator, except that the ISO may change its authorized signatories by giving notice to the California Bank or Financial Institution.

2.6 California Bank or Financial Institution shall have no right to set off credit balances in the Escrow Account against amounts owed to the California Bank or Financial Institution by the ISO or the Scheduling Coordinator.

2.7 The California Bank or Financial Institution is expressly permitted to act on payment instructions given by the authorized signatory of the ISO without inquiring as to their propriety, provided that a request to pay funds withdrawn from the Escrow Account may be paid only into an account that is designated as an ISO trust account.

Article 3
Indemnification

3.1 Scheduling Coordinator and ISO hereby agree to indemnify California Bank or Financial Institution against and hold California Bank or Financial Institution harmless from all cost, liability, damages, claims, suits and expenses (including attorney's fees and costs) arising from or related to California Bank or Financial Institution acting as California Bank or Financial Institution under this Agreement, except to the extent a court of law of competent jurisdiction determines that such cost, liability, damage, claim, suit or expense resulted from California Bank or Financial Institution's negligence or willful misconduct.

Article 4
Disputed Amounts

4.1 If any portion of the amount specified in the Demand is in dispute with the Scheduling Coordinator, the California Bank or Financial Institution shall pay the full amount in accordance with the ISO Tariff. The disputed amount shall be addressed under the terms of the ISO Tariff.

Article 5
Notices

5.1 All notices entitled or required to be given under this Agreement shall be in writing and shall be sent by (a) United States certified mail, return receipt requested, postage paid or (b) commercial courier service guaranteeing next business day delivery and requiring receipt of delivery (such as Federal Express) to the following addresses:

If to California Bank or Financial Institution:

Contact Person: ______________________________

Address: ______________________________

____

e-mail address: ______________________________

Phone: ______________________________

Fax: ______________________________

If to Scheduling Coordinator:

Contact Person: ______________________________

Address: ______________________________

____

e-mail address: ______________________________

Phone: ______________________________

Fax: ______________________________

If to ISO:

Contact Person:	Philip Leiber, Treasurer
Address:	151 Blue Ravine Road, Folsom, CA 95630
e-mail address:	pleiber@caiso.com
Phone:	(916) 351-2168
Fax:	(916) 351-2259

Article 6
ISO Authorized Signatories

6.1 The Authorized Signatories for the ISO are:

ISO, President and Chief Executive Officer, and William J. Regan Jr., Chief Financial Officer.

Article 7
Status of California Bank or Financial Institution

7.1 California Bank or Financial Institution shall act only as the holder of the Escrow Account and shall not have any fiduciary duty to the ISO or Scheduling Coordinator. California Bank or Financial Institution shall be entitled to rely on any writing signed by the ISO that it reasonably believes to be genuine and shall not be required to investigate the legitimacy of such writing or the authority of any person that executed such writing.

Article 8
Entire Agreement

8.1 This Agreement constitutes the entire agreement between the Parties with respect to the subject matter hereof and supersedes all prior and contemporaneous agreements, whether written or oral. This Agreement may only be amended or modified by a written agreement signed by all of the Parties hereto.

Article 9
Governing Law

9.1 This Agreement shall be governed by and construed under the laws of the State of California without giving effect to the law or principles of conflict of laws.

Article 10
Assignments

10.1 Parties may assign any or all of their obligations and rights under this Agreement with the other two Parties' prior written consent. Such consent shall not be unreasonably withheld.

Article 11
Confidentiality

11.1 Parties shall not disclose the amount of the Escrow Account or associated financial information on Attachment 1 to any third party. If California Bank or Financial Institution receives a subpoena or other order of a court or judicial tribunal pertaining to the disclosure or release of the Escrow Account, California Bank or Financial Institution will immediately notify the other Parties to this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first above written.

ISO By ____

Title ____

Scheduling Coordinator By ____

Title ____

California Bank
or Financial Institution By ____

Title ____

ESCROW AGREEMENT

Attachment I

Scheduling Coordinator shall deposit Escrow Amount on or before the __ day of ___________ 200__ at 5:00 p.m. to __[California bank or financial institution]_.

The following is a breakdown of the Escrow Amount plus costs:

__________________ Deposit

__________________ Processing Fee

__________________ Misc. ____________________________________

__________________ California Bank or Financial Institution Fee

__________________ TOTAL

FED-WIRE INFORMATION

California Bank or Financial Institution:

ABA Routing #:
Bank:
Address

Phone:
Fax:
Bank Contact:
Account #:

Scheduling Coordinator:

ABA Routing #:
Bank:
Address
150

Phone:
Fax:
Bank Contact:
Account #:

ISO:

ABA Routing #: 1210 00358
Bank: Bank of America
Address : 555 Capital Mall, Suite

Sacramento, CA 95624
Phone: (916) 321-4834
Fax: (916) 321-4640
Bank Contact: Diane Melson
Account #: 12336-26208

GUARANTEE AGREEMENT

In consideration of the Independent System Operator Corporation ("ISO") accepting / retaining ______________________ as a Scheduling Coordinator, __________________________ (Guarantor), hereby guarantees to the ISO the due and punctual payment of all obligations to the ISO arising out of accounts cleared by Scheduling Coordinator (the "Obligations"). The aggregate obligation of the Guarantor with respect to the Obligations and any other costs or expenses under this guarantee shall not exceed at any one time the sum of U.S. $________________; provided, however, that Guarantor acknowledges and agrees that if Scheduling Coordinator's obligations exceed $__________________ at any time, the ISO (I) shall provide notice to the Scheduling Coordinator and Guarantor of such fact and (ii) may require that, if service to the Scheduling Coordinator is to continue, the amount of Obligations guaranteed hereby be increased to an amount deemed reasonable necessary by the ISO..

This guarantee shall not subject Guarantor to the jurisdiction of the ISO or to any tariff provisions or protocols of the ISO other than as such jurisdiction; tariff provisions or protocols may apply to Guarantor apart from this guarantee.

Subject to the limit described above, Guarantor unconditionally guarantees and promises payment of all indebtedness which Scheduling Coordinator may now or in the future owe with respect to the Obligations covered by this guarantee including, but not limited to, the payment of usage charges, grid management charges, grid operations charge, ancillary services fees, congestion management fees and wheeling charges pursuant to ISO Tariff. The ISO will attempt to notify Guarantor by telephone of any default by Scheduling Coordinator in the performance of an obligation covered by this guarantee, and will thereafter confirm such notice in writing, but the liability of Guarantor to the ISO pursuant to this agreement shall become due and payable immediately upon any such default by Scheduling Coordinator. Address and telephone and facsimile numbers for notice purposes are:

California ISO

Philip Leiber, Treasurer
151 Blue Ravine Road
Folsom CA 95630
(916) 351-2168
(916) 351-2259

Scheduling Coordinator:

____
____
____
____

Guarantor's liability shall be enforced without notice to Guarantor and without first proceeding against Scheduling Coordinator or resorting to any collateral, security or other guarantors or obligors, if any, or pursuing any other remedy. Any collateral, security or obligations of any other guarantors or obligors, if any, may be sold, released, surrendered, exchanged, settled, compromised, waived, subordinated or modified, in each case without consideration and on any terms or conditions, without notice to or further assent from Guarantor. Guarantor's liability is several and independent of any other guarantees in effect with respect to any part of the above obligations and may be enforced regardless of the existence of any other guarantees.

Notwithstanding any other provision in this agreement, this unconditional guarantee shall continue in effect or shall be reinstated if at any time payment, or any part thereof, by Scheduling Coordinator to the ISO with respect to any of the above obligations is rescinded, or must otherwise be repaid by the ISO as a result of bankruptcy or reorganization of Scheduling Coordinator.

No payment by Guarantor shall entitle Guarantor, by subrogation or otherwise, to any right against Scheduling Coordinator, including any payment by Scheduling Coordinator or out of property of Scheduling Coordinator, except after the full payment and discharge of all of the above obligations. All remedies, rights, powers and privileges granted to the ISO pursuant to this agreement are cumulative and not alternative. The exercise of any or all such rights by the ISO shall not reduce, limit, impair, discharge, terminate, or otherwise affect the liability of Guarantor. No failure or delay by the ISO in exercising any remedy, right, power or privilege pursuant to this agreement shall operate as a waiver, and any such remedy, right, power or privilege may be exercised by the ISO at any time. No partial exercise of any such rights shall preclude further exercise or the exercise of any other remedy, right, power or privilege.

No modification of this guarantee or waiver shall be valid unless in writing and signed by the ISO and then only to the extent specifically set forth in such writing. No notice or demand by the ISO upon Guarantor or any other guarantor of the above Obligations shall preclude the ISO from taking further action without notice or demand.

The original term of this Guarantee shall be for a period of [   ] years, commencing on the date set forth below. Thereafter, this Guarantee shall be renewed for successive [   ] year terms, unless Guarantor gives written notice by registered mail delivered to the ISO at the address listed above at least 60 days prior to the end of the original term, or a subsequent renewal term, that this Guarantee is not being renewed and will expire at the end of such original or renewal term.

Notwithstanding the foregoing, this agreement may be terminated by Guarantor at any time by a notification of termination given by Guarantor to the ISO and the receipt and acceptance by the ISO of such notification of termination. Such acceptance of termination shall not be unreasonably withheld. Guarantor acknowledges that this

Guarantee applies to all Obligations covered by this Guarantee arising prior to termination of the Guarantee, whether by notification of termination, or by expiration of the original term or any subsequent renewal term.

This guarantee shall bind the heirs, personal representatives, successors and assigns of Guarantor and shall inure to the benefit of the ISO, its successors and assigns. The ISO hereby agrees to give Guarantor notice of any such assignment by the ISO.

This guarantee shall be governed by, and constructed in accordance with, the laws of the State of California. Any action or litigation of any kind initiated by Guarantor, Scheduling Coordinator or a representative of the ISO in connection with this guarantee shall be adjudicated in the appropriate courts located in California or a Federal court with jurisdiction. Guarantor, Scheduling Coordinator and the ISO hereby consent to the jurisdiction of such courts solely in connection with this guarantee and to service of process by any means authorized by California or federal law, and hereby waive the right to transfer the venue of any such litigation.

Guarantor: ______________________________Date: ______________

By: _______________________________________

Title: ____________________________________

Attest: ___________________________________

Title:_______________________________________

APPENDIX 4 : Template for Determination of an Initial Financial Security Posting Amount

California ISO
Simplified Calculation of Initial Security Amount

Average Hourly Load	4.0	MWh	<------INPUT
Average Hourly Generation	5.4	MWh	<------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.