



CALIFORNIA ISO

Bidders' Policy and Procedures Manual

1999 Firm Transmission Rights

February 3, 1999

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Introduction

The California ISO (ISO) is planning to conduct an annual primary auction for Firm Transmission Rights (FTR) on March 15, 1999 and ending no later than March 17, 1999. Each FTR shall be issued in the denomination of 1 MW. All FTRs auctioned in 1999 will have a nine (9) month calendar-year term beginning at 12:00 a.m., on April 1, 1999 and ending at 12:00 p.m., on December 31, 1999.

The FTR auction will be a simultaneous, multi-round clearing price auction conducted separately and independently across up to fifty-two (52) of the ISO's inter-zonal interfaces.

The ISO makes no representation or warranty with respect to the present or future value of the FTRs to be issued as a result of this auction.

FTR Product Definition

Each FTR is defined by a transmission path across an inter-zonal interface, and is a right in one direction only across that interface. Each FTR holder is entitled to a share of the usage charges attributable to inter-zonal congestion across the inter-zonal interface.

FTR holders are also entitled to priority in the scheduling of energy in the ISO's day-ahead market subject to the circumstances and limitations specified in the ISO Tariff, section 9.7. If the ISO is unable to relieve the day-ahead inter-zonal congestion using adjustment bids submitted by Scheduling Coordinators, then the ISO will allocate day-ahead inter-zonal transmission capacity first to the schedules of Market Participants that are using existing contract rights that have a higher scheduling priority than converted rights capacity and second to Market Participants who hold FTRs and have indicated to the ISO that they wish to exercise their scheduling priority option. The ISO will allocate any remaining transmission capacity to remaining Market Participants' schedules pro rata. For a more detailed explanation of the FTR product, please refer to the *ISO tariff, section 9.0, Firm Transmission Rights* (<http://www.caiso.com/pubinfo/tariffs/> - scroll down to FTR Section 9).

Summary Detail of FTR Auction Design

Amount of FTRs to be Auctioned

For the 1999 FTR auction, the ISO will auction an amount of FTRs in each FTR market equal to twenty-five (25) percent of the maximum amount that may be issued on a given interface. For more details, please refer to the *ISO tariff, section 9.0, Firm Transmission Rights* (<http://www.caiso.com/pubinfo/tariffs/> - scroll down to FTR Section 9).

Starting Bid Price

The starting bid price in each FTR Market in the first round of the auction will be set at a level equal to the greater of (a) \$100 per MW-year; or (b) twenty (20) percent of the ratio of the net Usage Charges collected by the ISO for the most recent nine-month period for which data are available. For a more detailed explanation, please refer to the *ISO tariff, section 9.0, Firm Transmission Rights* (<http://www.caiso.com/pubinfo/tariffs/> - scroll down to FTR Section 9).

Bidding Procedure

- On or before the first round of the FTR auction, bidders must indicate whether they elect to be excluded from the allocation of FTRs in that FTR market in the last round.
- Bidders will indicate to the ISO the number of FTRs desired at the starting bid price (for all or some of the 52 total FTR products).
- The ISO will announce to all bidders the total demand at that starting bid price and the price increase based on the amount of excess demand.
- Bidders submit higher bids for equal or lesser amounts of FTRs in the next round.
- When demand is less than or equal to supply, the auction for that FTR market ends. If demand in the final round is less than supply, excess FTRs are allocated based on bids in the final two rounds (unless bidder elects to be excluded from allocation). Clearing price is the price in the next-to-last round.

Winning bidders must pay for all of their FTRs within ten (10) business days of receiving an invoice from the ISO.

For a more detailed explanation, please refer to Appendix IV, *Auction Rules for Increments*.

Training Registration Letter

To participate in the auction, all interested bidders must sign and return the attached *Training Registration Letter* (see Appendix I, *Training Registration Letter*) to the ISO by no later than 5:00 p.m. on February 1, 1999 via fax (916 351-2181), email (vkasarjian@caiso.com), or USPS to:

Vicken Kasarjian
California ISO
151 Blue Ravine Road
Folsom, CA 95630
(916) 351-2353

Auction Platform

This multi-round auction will be conducted electronically via the Internet using Trading Dynamics Universal Trading System™. In order to participate in the auction, bidders will need:

- Connectivity to the Internet¹ for the duration of the auction,
- One of the following Internet browsers:
 - NetScape Navigator browser, version 4.5 or higher; US version capable of performing 128 bit RC4 encryption
 - Microsoft Internet Explorer browser, version 4.01 or higher; US version capable of performing 128 bit RC4 encryption
- A digital certificate to be provided by ISO. The certificate and the associated private key must be accessible by the browser before the bidder can participate in the auction.

Financial Security Requirements

Each bidder must execute and post financial security in the amount of the cumulative value of their FTR bids three full business days prior to the start of the FTR auction. Given the current schedule, financial security must be posted by Tuesday, March 9, 1999. A bidder may not acquire FTRs with a total value in excess of their financial security amount.

Participants must sign a pro forma financial security agreement for the method of security of their choice. Please refer to Appendix V for the acceptable forms of financial security.

Please USPS or Fed-X your financial security agreement to Vicken Kasarjian by no later than 5:00 p.m., Tuesday, March 9, 1999.

Mr. Vicken Kasarjian
California ISO
P.O. Box 639014
Folsom, CA 95630-9014

EDI/Fed-Wire Capability

An Electronic Data Interchange (EDI) and Fedwire connection *is mandatory* unless a primary auction winner plans to trade **ALL** of their FTRs in the secondary market and has no intention to schedule or financially settle with the ISO. However, the ISO is willing to financially settle the primary auction (but not future market settlements) via EDI/Fedwire OR via paper invoice and check. Please inform, me, John Goodin, by March 9, 1999 if you plan NOT to financially settle the primary auction via EDI/Fedwire.

¹ ISO is not responsible for the reliability or the speed of the bidder's connection to the Internet.

All ISO certified Scheduling Coordinators have already fulfilled the EDI/Fedwire requirement for the FTR auction.

If a FTR auction participant does not have an EDI/Fed-Wire connection with the ISO and would like to settle the primary auction electronically, then this participant must establish and test their connection by no later than March 9, 1999. The ISO's EDI Implementation Guide can be found in Appendix II. EDI questions should be directed to Gerry Abad of the ISO at (916) 351-2139. The EDI and Fed-Wire test conducted by the ISO will demonstrate the market participant's ability:

1. to receive an ISO invoice via EDI
2. to transmit functional acknowledgements to the ISO confirming receipt of invoices
3. to send funds to ISO bank account with valid invoice identification
4. to receive, reconcile and identify funds received from the ISO

Please contact Gerry Abad at (916) 351-2139 to initiate an EDI/Fed-Wire test with the ISO.

Also, please fill out the Financial Information Form in Appendix III and mail or fax to John Goodin at the ISO before conducting the EDI/Fed-Wire test (not required if participant already has an EDI/Fedwire connection to the ISO):

Mr. John Goodin
California ISO
P.O. Box 639014
Folsom, CA 95630-9014
Fax: (916) 351-2263

FTR Auction Training

Market participants will be trained on how to participate in the FTR auction, including "hands-on" experience learning the look and feel of Trading Dynamics Universal Trading System™.

The ISO is planning three one-day training sessions for bidders at the ISO in Folsom. The training course is free, but is limited to two (2) participants from each bidding entity. Interested bidders are required to attend one of these training sessions. Depending on the interest level, training will be offered on February 8, 9, and 10, 1999 from 8:00 a.m. to 5:00 p.m. Twenty (20) bidders will be allowed per class on a first come, first served basis. Please reserve your seat with Tonya Demos via email (TDemos@caiso.com) or phone (916 351-2296). Please provide Tonya your name, the company you represent, phone number, fax number, email address and which session you plan to attend by no later than close of business February 1, 1999.

Hardware/Software Requirements

- A system with equivalent or better performance than a Pentium 266 MHZ with 64 MB memory running a windows operating system (Win95, Win98, or NT)
- A digital certificate issued by the ISO
- One of the following internet browsers:
 - NetScape Navigator browser, version 4.5 or higher; US version capable of performing 128 bit RC4 encryption
 - Microsoft Internet Explorer browser, version 4.01, Service Pack 1 or higher; US version capable of performing 128 bit RC4 encryption
- Connection to the Internet

Becoming an ISO Registered FTR Bidder

To become an FTR registered bidder with the ISO, please do the following:

- Sign and return the ISO's Training Registration Letter
- Execute an ISO approved financial security agreement
- Post financial security with the ISO
- Establish EDI/Fedwire Connection with the ISO*
- Attend bidder training session at the ISO in Folsom
- Obtain a digital certificate from the ISO

** Not mandatory if FTR participant plans to sell ALL of their FTRs in the secondary market and has no intention to schedule or financially settle with the ISO. ISO Certified scheduling coordinators have already fulfilled this requirement.*

Once approved, registered bidders will receive a digital certificate and a password to access Trading Dynamics Universal Trading System™ before the commencement of the FTR auction.

FTR Auction Contact

For questions regarding this auction, please contact:

John Goodin
California ISO
151 Blue Ravine Road
Folsom, CA 95630
(916) 351-2304
jgoodin@caiso.com

Key Dates

Training registration letter due to ISO; <i>(Appendix I)</i>	February 1, 1999
Return Financial Information Form; <i>(Appendix III)</i>	March 9, 1999
Execute financial security agreement; <i>(Appendix VI)</i>	March 9, 1999
Post financial security with ISO	March 9, 1999
Attend FTR auction training session and receive Digital Certificate	February 8, 9, or 10, 1999
FTR auction dry run	To Be Announced
ISO plans to Begin FTR auction on And End no later than-	March 15, 1999 March 17, 1999
*Establish and test EDI/Fedwire connection with the ISO by no later than- <i>(Appendix II)</i>	March 9, 1999
Payment due for FTRs from winning bidders	Ten (10) business days after receiving an invoice from the ISO
Initiate FTRs in the market	Day-Ahead market for April 1, 1999

** Not mandatory if FTR participant plans to sell ALL of their FTRs in the secondary market and has no intention to schedule or financially settle with the ISO. ISO Certified scheduling coordinators have already fulfilled this requirement.*

Appendix I
Training Registration Letter

Training Registration Letter

To participate in the auction, all interested bidders must sign and return, **no later than 5:00 p.m. on February 1, 1999**, the following *Training Registration Letter* to Vickie Kasarjian via fax (916 351-2181), or USPS to:

Vickie Kasarjian
California ISO
151 Blue Ravine Road
Folsom, CA 95630
(916) 351-2353

Training Registration Letter

[Date]

Vickie Kasarjian
California Independent System Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630
(916) 351-2353

RE: Training Registration

Dear Mr. Kasarjian:

Entity Name – "ABC" hereby registers for the training necessary to participate in the California ISO's first annual auction of Firm Transmission Rights ("FTR Auction"). ABC understands that:

- 1) the training will be conducted in up to three separate, one day sessions on February 8, 9, and 10, 1999,
- 2) the training will be held at the ISO's offices at 151 Blue Ravine Road in Folsom, California,
- 3) due to limitations on the number of training slots available, ABC will be entitled to send no more than two persons to one such training session, and
- 4) the ISO will allocate available slots first come - first served based on the date the ISO receives Training Registration letters.

ABC prefers to have ___ (one/two) persons attend training on the following dates (in order of preference): February ___, February ___, and February ___.

Finally, ABC acknowledges that this training is required for participation in the FTR Auction.

Yours Truly,

Appendix II
EDI Implementation Guide

California ISO
EDI 810 Implementation Guide

Proposed V003060-Utility Industry Group

The California Independent System Operator (ISO) Corporation
151 Blue Ravine Road
Folsom, California 95630

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151 Blue Ravine Road
Folsom, CA 95630

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- About The California ISO's EDI Program
- The ISO's EC/EDI Setup & Contact Information
- Testing with the ISO
- Transaction Set Specifications: Invoice (810)

This guideline is written to help you accomplish implementation as quickly and smoothly as possible. Please take some time to review this material before you begin. If you have any questions along the way, please contact The California ISO.

California ISO utilizes ANSI ASC X12 version 003060 and wherever possible aligned with the most current published Utility Industry Group (UIG) Implementation Guideline. In some instances, code values from later versions of the standards have been incorporated. The California ISO notes exceptions to the 003060 standard and pending information in ***bold italicized*** print within the segment descriptions.

Segment definitions are separated into two areas. The first area describes the segment in general terms. The second area describes in detail, each element than can occur within the element. Element definitions contain 5 areas.

The areas are as follows:

Column Name	Usage/Definition	Sample Value
Elem. ID	The position of the element with the segment	ITA14
Elem. #	The ANSI X12 Data Element Dictionary Reference Number	150
Name	The ANSI X12 Data Element Name	Special Charge Code
ANSI/California ISO Features	This area contains three different sections.	
section 1- element usage		O
	M-Mandatory (if the segment is used the element must occur)	
	O-Optional (the use of the segment is at the trading partners discretion)	
	C-Conditional (the use of this element is predicated on the existence of another element within the segment)	
Column Name	Usage/Definition	Sample Value
section 2-type of element		ID
	AN -Alphanumeric	
	R -Numeric with explicit decimal	
	DT -Date (YYMMDD)	
	ID -Identifier (using explicit ANSI codes)	
	Nn -Numeric with implied decimal	
	TM -Time	
Section 3 minimum and maximum length of element	Data to the left of the '/' is the minimum number of bytes. Data to the right of the '/' is the maximum number of bytes '3/3' is a minimum of three and a maximum of three bytes (in other words you must send three bytes. '3/10' is a minimum of three bytes but no more than 10 bytes can be sent for the element.	3/3
Comments	This is the area where code values that are utilized by CALIFORNIA ISO will be defined. The code value will be presented, and its definition follows.	BLD - Billed Demand

California ISO SET-UP AND CONTACT INFORMATION

California ISO Communication ID: 943274043
(ISA Sender ID)
Communications ID Qualifier:
(ISA Sender ID Qualifier) 30

	Hex Code	ASCII Char
Data Element Delimiter	2A	*
Data Segment Terminator	7E	~
Data SubElement Separator	5E	^

California ISO's Value Added Network: Sterling Commerce

CALIFORNIA ISO's Transmit and Receive time: **7:00PM Pacific Standard Time, Normal Business Days**

California ISO Contact: Gerry R Abad
Internet: GAbad@caiso.com
916-351-2139 (Office)
916-351-2263 Fax)

TESTING WITH The California ISO

Once you have setup the EDI profile for The California ISO on your EDI translator software, you will be in a testing phase with The California ISO. **You should contact your EDI representative at The California ISO and let them know that you are now EDI capable.** This person will also need to know your Dun and Bradstreet number as well as your name, company address, telephone number, and the Value Added Network (VAN) that you use.

The California ISO requires functional acknowledgements at the group level to confirm that you have received the EDI 810 Invoice.

Example 1 (Normal Bill – With DTM segments):

```
ISA*00*      *00*      *30*943274043  *14*848921276VANT
*980130*0944*U*00300*000000007*0*T^GS*IN*943274043*SINVV943274043*980130*0944*7*
X*003060
ST*810*0001
BIG*980109*10048****FB
N1*BT*ENRON Power Marketing Inc
N3*1400 Smith
N4*Houston*TX*77002*US
N1*RE*Bank of America NT&SA
N3*1850 Gateway Boulevard
N4*Concord*CA*94520*US
REF*11*ISOAcctNo
REF*01*ISOBankABA
ITD*03*****980113
DTM*150*980106***19
DTM*151*980106***19
IT1*1*1*EA*40.57**TP*0103
PID*X****Day-Ahead AGC/Regulation due ISO
IT1*2*1*EA*0.53**TP*0153
PID*X****Hour-Ahead AGC/Regulation due ISO
IT1*3*1*EA*-8487.82**TP*0403
PID*X****Load Deviation Settlement
IT1*4*1*EA*-609.07**TP*0405
PID*X****Import Deviation Settlement
IT1*5*1*EA*2043.5**TP*0406
PID*X****UFE Settlement
TDS*-701229
CTT*5
SE*26*0001
GE*1*7
IEA*1*000000007
```

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Example 2 (Manual Billing or Settled Bill – Without DTM segments):

ISA*00* *00* *30*943274043 *ZZ*057001272T
*980130*0946*U*00300*000000009*0*T*^
GS*IN*943274043*057001272T*980130*0946*22*X*003060
ST*810*0001
BIG*980116*10180*****N6
N1*BT*Portland General Electric Company*ZZ*616146
N3*One World Trade Center*121 SW Salmon St
N4*Portland*OR*97204*US
N1*RE*Bank of America NT&SA
N3*1850 Gateway Boulevard
N4*Concord*CA*94520*US
REF*11* ISOAcctNo
REF*01*ISOBankABA
ITD*03*****980120
IT1*1*2*EA*10.67**TP*0001
PID*X****Day-Ahead Spinning Reserve due SC
IT1*2*1*EA*13.78**TP*0003
PID*X****Day-Ahead AGC/Regulation due SC
IT1*3*4*EA*7.35**TP*0053
PID*X****Hour-Ahead AGC/Regulation due SC
IT1*4*3*EA*8**TP*0151
PID*X****Hour-Ahead Spinning Reserve due ISO
IT1*5*2*EA*12.5**TP*0254
PID*X****Hour-Ahead Inter-Zonal Congestion Refund due TO
TDS*11352
CTT*5
SE*24*0001
GE*1*22
IEA*1*000000009

INVOICE
(810)
TRANSACTION SET SPECIFICATIONS

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

Invoice (810) - 3060

Segments used by California ISO

TABLE 1: DATA SEGMENT SEQUENCE FOR THE HEADING AREA

SEG ID	TITLE	USAGE		MAX USE	LOOP ID REPEAT
		ANSI	ISO		
ISA	Interchange Control Header	M	M	1	
GS	Functional Group Control Header	M	M	1	
ST	Transaction Set Header	M	M	1	
BIG	Beginning Segment for Invoice	M	M	1	
N1	Name	O	M	1	N1/2
N2	Additional Name Information	O	O	1	
N3	Address Information	O	M	1	
N4	Geographic Location	O	M	1	
REF	Reference identification	O	M	2	
ITD	Terms of Sale	O	M	1	
DTM	Date/Time Reference	O	O	2	

TABLE 2: DATA SEGMENT SEQUENCE FOR THE DETAIL AREA

SEG ID	TITLE	USAGE		MAX USE	LOOP ID REPEAT
		ANSI	ISO		
IT1	Baseline Item Data(Invoice)	O	M	1	IT1/100
PID	Product/Item Description	O	M	1	PID/100

**TABLE 3: DATA SEGMENT SEQUENCE FOR THE
 TRAILER/SUMMARY AREA**

SEG ID	TITLE	USAGE		MAX USE	LOOP ID REPEAT
		ANSI	ISO		
TDS	Total Monetary Value Summary	M	M	1	
CTT	Transaction Totals	M	M	1	
SE	Transaction Set Trailer	M	M	1	
GE	Functional Group Control Trailer	M	M	1	
IEA	Interchange Control Trailer	M	M	1	

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: ISA - Interchange Control Header

LEVEL: Heading

MAX USAGE/LOOPS: 1/none

PURPOSE: To start and identify an interchange of one or more functional groups and interchange related control segments.

GENERAL INFORMATION: This segment is mandatory. The interchange control number occurring in the interchange header must match the control number in the interchange control trailer. This segment is a fixed length segment of 106 bytes. This is the only segment where blank elements are permitted.

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EXAMPLES: ISA*00* *00* *30*943274043 *01*991345164 *941206*1350*U*00300*000000026*0*P*^

ELEM ID	ELEM #	NAME	ANSI/ California ISO FEATURES	COMMENTS
ISA01	I01	Authoriz. Info. Qual.	M ID 02/02	"00"
ISA02	I02	Authoriz. Info.	M AN 10/10	Spaces
ISA03	I03	Security Info. Qual	M ID 02/02	"00"
ISA04	I04	Security Info.	M AN 10/10	Spaces
ISA05	I05	Interchg. ID Qual.	M ID 02/02	"30" - Federal Tax ID
ISA06	I06	Interchg. Sender ID	M AN 15/15	"943274043"
ISA07	I05	Interchg. ID Qual.	M ID 02/02	
ISA08	I07	Interchg. Receiver ID	M AN 15/15	
ISA09	I08	Interchg. Date	M DT 06/06	Date
ISA10	I09	Interchg. Time	M TM 04/04	Time
ISA11	I10	Interchg. Stand. ID.	M ID 01/01	"U" - Universal
ISA12	I11	Interchg. Version ID	M ID 05/05	"00300"
ISA13	I12	Interchg. Control Nbr.	M N0 09/09	
ISA14	I13	Acknowledge. Requested	M ID 01/01	
ISA15	I14	Test Indicator	M ID 01/01	"T" or "P"
ISA16	I15	Sub Element Separator	M AN 01/01	"^"

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: GS - Functional Group Control Header

LEVEL: Heading

MAX USAGE/LOOPS: 1/none

PURPOSE: To indicate the start of a Functional Group and to provide control information

GENERAL INFORMATION: This segment is mandatory. The control number occurring in the functional group header must match the control number in the functional group control trailer.

EXAMPLES:

GS*IN*943274043*991345164*971002*0923*26*X*003060

ELEM ID	ELEM #	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
GS01	479	Functional ID Code	M ID 02/02	"IN"
GS02	142	Application Sender Code	M AN 02/12	943274043
GS03	124	Application Receiver Cd.	M AN 02/12	
GS04	29	Group Date	M DT 06/06	
GS05	30	Group Time	M ID 04/04	
GS06	28	Group Control Nbr.	M NO 01/09	
GS07	455	Responsible Agency Cd.	M ID 01/02	"X"
GS08	480	Version/Rel. ID Code	M ID 01/12	"003060"

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: ST - Transaction Set Header

LEVEL: Heading

MAX USAGE/LOOPS: 1/none

PURPOSE: To indicate the start of a transaction set and to assign a control number.

GENERAL INFORMATION: This segment is mandatory. The transaction set control number (ST02) in this header must match the transaction set control number (SE02) in the transaction set trailer (SE).

EXAMPLES: ST*810*000000592

ELEM ID	ELEM #	NAME	ANSI/ California ISO FEATURES	COMMENTS
ST01	143	Transaction Set ID	M ID 03/03	'810'
ST02	329	Transaction Set	M AN 04/09	A unique Number assigned to each transaction set within a functional group. This number must match the value in SE02.

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)
SEGMENT: BIG - Beginning Segment for Invoice
LEVEL: Heading
MAX USAGE/LOOPS: 1/none
PURPOSE: To indicate the beginning of an inventory advice transaction set and to transmit identifying numbers and dates.

GENERAL INFORMATION:

EXAMPLES: BIG*971002*10580*****FB

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
BIG01	245	Invoice Date	M DT 06/06	Statement Date
BIG02	76	Invoice Number	M AN 01/22	Unique invoice number
BIG03	323	P.O.Date	O DT 06/06	Not used
BIG04	324	P.O.Number	O AN 01/22	Not used
BIG05	328	Release Number	O AN 01/30	Not used
BIG06	327	Chg.Order Seq.No.	O AN 01/08	Not used
BIG07	640	Transaction Type	O ID 02/02	"FB" - Final Bill "N6" - Notice of Settlement

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: N1 - Name

LEVEL: Header

MAX USAGE/LOOPS: 1/per N1 loop

PURPOSE: To identify a party by type of organization, name and code.

GENERAL INFORMATION:

EXAMPLES: N1*BT*ACME & CO*ZZ*9876151
 N1*RE*Bank of America

ELEM ID	ELEM#	NAME	ANSI California ISO FEATURES	COMMENTS
N101	98	Entity ID Code	M ID 02/02	"RE"-Remit To or "BT"-Bill To
N102	93	Name	C AN 01/35	
N103	66	ID Code Qualifier	C ID 01/02	"ZZ"
N104	67	ID Code	O ID 02/20	Customer reference number

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: N2 - Additional Name Information

LEVEL: Heading

MAX USAGE/LOOPS: 1/per N1 loop

PURPOSE: To specify additional names or those longer than 35 characters in length.

GENERAL INFORMATION:

EXAMPLES: N2*ACME & CO

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
N201	93	Name	O AN 01/35	
N202	93	Name	O AN 01/35	Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: N3 - Address Information

LEVEL: Header

MAX USAGE/LOOPS: 1/per N1 loop

PURPOSE: To specify the location of the named party.

GENERAL INFORMATION:

EXAMPLES: N3*1850 Gateway Boulevard

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
N301	166	Address	M AN 01/35	
N302	166	Address	M AN 01/35	

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: N4 - Geographic Location

LEVEL: Header

MAX USAGE/LOOPS: 1/per N1 loop

PURPOSE: To specify the geographic place of the named party.

GENERAL INFORMATION:

EXAMPLES: N4*BAKERSFIELD*CA*93306*US

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
N401	19	City Name	C AN 02/30	
N402	156	State/Prov. Code	C ID 02/02	
N403	116	Postal Code	O ID 03/15	
N404	26	Country Code	O ID 02/02	
N405	309	Location Qualifier	O ID 01/02	Not Used
N406	310	Location Id	C AN 01/25	Not Used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: REF - Reference identification

LEVEL: Name

MAX USAGE/LOOPS: 2/per N1 loop within "RE" type N1 loop

PURPOSE: To specify ISO bank account information.

GENERAL INFORMATION:

EXAMPLES: REF*01* ISOBankABA
 REF*11*ISOAcctNo

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
REF01	128	Reference identification qualifier	M ID 02/03	01 - ABA No. 11 - Acct No.
REF02	127	Reference identification	M ID 01/30	

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: ITD - Terms of Sale/Deferred Terms of Sale

LEVEL: Header

MAX USAGE/LOOPS: 1

PURPOSE: To specify terms of sale.

GENERAL INFORMATION:

EXAMPLES: ITD*03*****971007

ELEM ID	ELEM#	NAME	ANSI California ISO FEATURES	COMMENTS
ITD01	336	Terms Type Code	O ID 02/02	"03" - Fixed Date
ITD02	333	Terms Basis Date Code	O ID 01/02	Not used
ITD03	338	Terms Discount Percent	O R 01/06	Not used
ITD04	370	Terms Discount Due Date	X DT 06/06	Not used
ITD05	351	Terms Discount Days Due	X NO 01/03	Not used
ITD06	446	Terms Net Due Date	M DT 06/06	YYMMDD
ITD07-15				Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: DTM - Date/Time Reference

LEVEL: Header

MAX USAGE/LOOPS: 2

PURPOSE: To specify pertinent dates and times.

GENERAL INFORMATION: Used to convey service period dates

EXAMPLES: DTM*150*941031***19
 DTM*151*941201***19

ELEM ID	ELEM#	NAME	ANSI NC FEATURES	COMMENTS
DTM01	374	Date/Time Qualifier	M ID 03/03	"150" - Service Period Start "151" - Service Period End
DTM02	373	Date	C DT 06/06	Date (YYMMDD)
DTM03	337	Time	C TM 04/08	Not used
DTM04	623	Time Code	O ID 02/02	Not used
DTM05	624	Century	M ID 02/02	
DTM06-07				Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: IT1 - Baseline Item Data (Invoice)

LEVEL: Detail

MAX USAGE/LOOPS: 1/100

PURPOSE: To specify the basic and most frequently used line item data for the invoice and related transactions.

GENERAL INFORMATION:

EXAMPLES: IT1*1*1*EA*125**TP*0351

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
IT101	350	Assigned Id	O AN 01/20	Line item count
IT102	358	Quantity Invoiced	M R 01/10	Nbr of Units Invoiced (Always a whole number)
IT103	355	Unit of Measure Code	M ID 02/02	"EA"
IT104	212	Unit Price	M R 01/17	Used to show settlement charge. Credits are prefixed with a minus sign.
IT105	639	Basis Unit Price Code	O ID 02/02	Not used
IT106	235	Product/Service id qualifier	M ID 02/02	"TP"
IT107	234	Product/Service id	O AN 01/40	Settlement charge code.
IT108-IT125				Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: PID - Product/Item Description

LEVEL: Detail

MAX USAGE/LOOPS: 1/IT1

PURPOSE: To describe a product or process in coded or free-form format

GENERAL INFORMATION:

EXAMPLES: PID*X****Monthly Grid Management Charge due ISO

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
PID01	349	Item Description Type	M ID 01/01	"X"- Semi-structured (Code and text)
PID02-04				Not Used
PID05	352	Description	M AN 01/80	Settlement Charge Description
PID06-09				Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: TDS - Carrier Details (Routing Sequence/
Transit Time)

LEVEL: Summary

MAX USAGE/LOOPS: 1/none

PURPOSE: To specify the total invoice discounts and amounts.

GENERAL INFORMATION:

EXAMPLES: TDS*48510

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
TDS01	361	Total Invoice Amount	M N2 01/15	Total Balance Due
TDS02	390	Amount Subject to Terms Discount	C N2 01/10	Not used
TDS03	391	Discounted Amount Due	O N2 01/10	Not used
TDS04	362	Terms Discount Amount	O N2 01/10	Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: CTT - Transaction Totals

LEVEL: Summary

MAX USAGE/LOOPS: 1/none

PURPOSE: To transmit a hash total for a specific element in the transaction set.

GENERAL INFORMATION: To provide number of IT1 segments.

EXAMPLES: CTT*1

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
CTT01	354	Number of Line Items	M NO 01/06	Count of line itmes
CTT02	347	Hash Totals	O R 01/10	Not used
CTT03	81	Weight	O R 01/08	Not used
CTT04	355	Unit of Meas. Code	C ID 02/02	Not used
CTT05	183	Volume	O R 01/08	Not used
CTT06	355	Unit of Meas. Code	C ID 02/02	Not used
CTT07	352	Description	O AN 01/80	Not used

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: SE - Transaction Set Trailer

LEVEL: Summary

MAX USAGE/LOOPS: 1/none

PURPOSE: To indicate the end of the transaction set and provide the count of the transmitted segments including the Transaction Set Header (ST) and Trailer (SE) segments).

GENERAL INFORMATION: The number of included segments is the total of all segments used in the transaction set including the ST and SE segments. The transaction set control number (SE02) in the trailer must match the transaction set control number (ST02) in the transaction set header segment (ST).

EXAMPLES: SE*23*000000592

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
SE01	96	Number of Included Segments	M NO 01/06	Total number of segments in transaction set including ST and SE
SE02	329	Transaction Set Control Number	M AN 04/09	Same as corresponding ST02

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: GE - Functional Group Trailer

LEVEL: Summary

MAX USAGE/LOOPS: 1/none

PURPOSE: To indicate the end of a functional group and control information.

GENERAL INFORMATION: The number of transaction sets is the total of all transaction sets in the functional group. The functional group control number (GE02) must match the control number in the functional group header (GS06).

EXAMPLES: GE*01*000000592

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
GE01	97	Number of Included Sets	M NO 01/06	Total number of transaction sets in functional group
GE02	28	Group Control Nbr	M AN 04/09	Same as corresponding GS06

California ISO IMPLEMENTATION GUIDELINES FOR EDI CONVENTIONS

TRANSACTION SET: 810 - Invoice (3060)

SEGMENT: IEA - Interchange Control Trailer

LEVEL: Summary

MAX USAGE/LOOPS: 1/none

PURPOSE: To indicate the end of an interchange of one or functional groups and interchange-related control segments.

GENERAL INFORMATION: The number of included groups is the total number of all functional groups within the interchange. The interchange control number (IEA02) must match the control number in the interchange control header the (ISA13).

EXAMPLES: IEA*01*000000592

ELEM ID	ELEM#	NAME	ANSI CALIFORNIA ISO FEATURES	COMMENTS
IEA01	I16	Number of Included Groups	M NO 01/06	Total number of functional groups in interchange
IEA02	I12	Interchange Control Nbr	M AN 04/09	Same as corresponding ISA13

Appendix III
Financial Information Form

Financial Information Form
(For EDI and Fed-Wire Transactions)

Company Name: _____

Primary Contact: _____
(include name, phone, fax, email)

Accounts Payable Contact: _____
(include name, phone, fax, email)

Bank Name: _____

Bank Contact: _____
(include phone number)

Bank Address: _____

Bank ABA Number: _____

Bank Account Number: _____

ISO Information:

Bank Institution	Bank of America, N.T. & S.A., S.F., CA
Account Number	12336-26208
ABA Number	1210-0035-8
Bank Contact	Karen Meyers
Bank Contact Phone Number	510 675-7368
ISO Contacts	Gloria Edwards; Business Systems Melodie Iverson; Finance

Please fax or mail this form to John Goodin before March 4, 1999:

John Goodin
California ISO
P.O. Box 639014
Folsom, CA 95630-9014
Fax: (916) 351-2263

Appendix IV

Auction Rules for Increments

FTR Auction Design for the California ISO

Separate Simultaneous Auctions, ISO Names Prices

- (1) the ISO sets (low) prices in round 1 for each of the up to 52 markets. Each market pertains to FTRs on one interface in one direction.
- (2) buyers submit bids indicating the quantity they would choose to buy at the round 1 price
- (3) the ISO then raises the price in each market for the next round, the amount of price increase being a function of the excess of demand over supply in the previous round
- (4) buyers bid for the quantities they would like to buy at the new price. A buyer may not bid for more in one round than he bid for in the previous round
- (5) if demand still exceeds supply in a market, then steps (3) and (4) are repeated
- (6) when demand is less than or equal to supply in an individual market, that market closes. Price is set at the last price for which demand exceeded supply for that market
- (7) bidders receive all the FTRs they demanded in the final round plus a pro rata share of any FTRs that were demanded in the next to last round

Example:

Total demand in the market was 120 at a price of 100 and 90 at the next called price of 105. Total supply is 100. Then the market-clearing price is 100. An individual firm had demanded 20 FTRs at a price of 100 and 11 FTRs at a price of 105. That firm is awarded $11 + (20-11) \cdot (100-90) / (120-90) = 14$ FTRs at a price of 100.

ISO Auction Rules for Increments

The following are specific rules regarding the increments and the process to allow de minimis winners to exit.

On the FTRs with minimal projected values choose a minimum increment (\$20) and a fictional value of \$100. The price can then rise according to the same formula as the other FTRs. If the ISO underestimated the value of the low value FTRs, the ISO can increase the increments on them.

The formula is:

Start at 20% of projected value for a market, rounded down so that 1% increments will be in multiples of \$5. For example, if the projected value is \$3,943 then 1% is \$39.43. Round this to \$35 and make the initial price $20 \times \$35 = \700 . Exception: If the projected value is less than \$500 round down so that 1% increments will be an even dollar amount.

Increase increments at 10% of projected value so long as demand exceeds supply by more than 100%.

Change increments to 5% of projected value when demand exceeds supply by 60 to 100%.

Change increments to 3% of projected value when demand exceeds supply by 30 to 60%. Change increments to 2% of projected value when demand exceeds supply by 10 to 30%, Change increments to 1% of projected value when demand exceeds supply by less than 10%.

The ISO has the right to make these increment changes depending on how slowly or quickly the auction is converging to a conclusion.

Pro rata allocation

After the last round of an auction, a pro rata allocation of the bidders will typically be necessary. Assume that there are X units to be allocated by the pro rata mechanism and a demand reduction of Y in the last round. Under the original allocation mechanism each bidder would get X/Y times their own demand reduction. The objections to this scheme are that bidders may not wish to be left with only a small number of FTRs. Note that the problem only really applies to bidders who decreased their demand to 0 in the ultimate round, since other bidders would be receiving an amount greater than or equal to the amount they bid for in the last round.

Bidders who reduced their demand to zero in the last round will be given the option of requesting that their pro rata allocation be reduced. These bidders are prioritized smallest to largest. As many such bidders as possible are treated as though they had not bid in the penultimate round, subject to the constraint of supply being less than or equal to demand in the penultimate round. The pro rata mechanism is then applied.

Example:

Total demand in round 20 is 1100.

Total demand in round 21 is 900.

Supply is 1000.

So $X=1000-900 = 100$. $Y = 1100-900 = 200$.

Four bidders reduced demand in the last round. Bidder A reduced from 75 to 0. Bidder B reduced from 50 to 0. Bidder C reduced from 25 to 0. Bidder D reduced from 300 to 250. All other bidders bid for a total of 650 in both rounds 20 and 21. Bidders C, B, and A could apply to be relieved from their pro rata allocations. However, excess demand in round 20 was only 100 and the bidders had a total demand of 150, so they cannot all be excused. Bidders B and C as the smallest would have first priority in being excused. A could only be excused if B chose to take a share.

If no one asked to be excused the old rule would apply, and each bidder would receive 100/200 of his demand reduction. That is, A would receive 38, B 25, C 12, and D 275. (The other bidders would get 650.)

If A only chose to be excused, then each other bidder would be allocated 100/125 of his or her demand reduction, leading to final allocations of 40 for B, 20 for C, and 290 for D. If B only chose to be excused, then each bidder would be allocated 100/150 of his or her demand reduction, leading to final allocations of 50 for A, 17 for C, and 283 for D. If C only chose to be excused, then each bidder would be allocated 100/175 of his or her demand reduction, leading to final allocations of 43 for A, 28 for B, and 279 for D. If B and C both chose to be excused, then the remaining bidders would be allocated 100/125 of his or her demand reduction, giving A 60 and D 290. If A and C both chose to be excused, then the remaining bidders would be allocated their full demand reduction, giving B 50 and D 300. If A and B (or A, B, and C) chose to be excused then A would not be excused because allowing A to exit would require some other bidder to buy more than it had bid for in the next to last round. Results would be calculated as though A had not asked to be excused.

The last part of the pro rata rules include rounding rules so that bidders do not end up with fractional FTRs. The total number of fractional FTRs to be awarded are reallocated to those who would have had the highest fractions, with ties broken on the basis of who had the larger allocation in the market randomly. For example, if 3 bidders were to get $300 \frac{6}{7}$, $200 \frac{4}{7}$, and $100 \frac{4}{7}$ of an FTR, the allocation would be 301, 201, and 100. If the allocations were to be $300 \frac{6}{7}$, $200 \frac{4}{7}$, and $200 \frac{4}{7}$ then the first bidder would get 301 and a random procedure would determine that one of the last two would get 201 and the other would get 200.

If a small number of FTRs is awarded withdrawals will be handled as follows:

- (1) The withdrawals only apply to bidders who bid for zero in the final round. This is essential, and does not force any bidder to take less than a minimal amount for which it has bid.
- (2) Bidders must inform the ISO before the auction that they do not wish to receive a partial allocation if that allocation is less than the smaller of 5% of the FTRs in the region or the amount the firm had bid for in the previous round.
- (3) Bidders who bid for the smallest quantities in the next to last round are given withdrawal priority. So for example, if 3 bidders submit bids for zero in the last round and say that they do not want to be allocated less than 5% of the FTRs in the region then allocation is done in the following way:

Price is the next to last price for the market in question.

Quantities are re-calculated assuming the smallest of the 3 bidders had bid for zero in both the last and the next to last round and the supply had been the minimum of the total amount bid in the next to last round and the original supply. This may leave all the other bidders with either the full quantity they demanded in the next to last round or at least 5%. If so, the other 2 bidders are not withdrawn.

If, however, either or both of the remaining 2 bidders were to still provisionally be allocated less than the minimum of 5% of the total and the amount they had bid for in the next to last round, then the smaller bidder of the two (as defined by next to last round bids) would be exempted and allocations would be redetermined as if that bidder had bid for zero in both the last and next to last round and if the supply available had been the minimum of the quantity demanded by the remaining bidders and the original supply.

If upon doing this calculation the remaining of the 3 bidders is still receiving less than the minimum of 5% of the FTRs in the market and the amount he bid for in the next to last round, then he is exempted and allocations are re-determined as if that bidder had bid for zero in both the last and next to last round and if the supply available had been the minimum of the quantity demanded by the remaining bidders and the original supply.

- (4) If bidders are of equal size (as defined by next to last round bids) then for the purposes of (3) the relative size of the bidders is to be determined randomly.

Appendix V

Interface Capacities

[To be provided no later than 1 month prior to the auction]

Appendix VI
Pro Forma Financial Security Agreements

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] _____, a 1999 Firm Transmission Rights auction participant ("Market Participant") 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. Market Participant desires to participate in the 1999 primary auction ("Auction") to purchase Firm Transmission Rights ("FTRs"), under terms specified in the ISO's Tariffs and Protocols as filed with the Federal Energy Regulatory Commission, as such may be amended from time to time (collectively, the "Tariff"); and
2. Market Participant must therefore establish an appropriate amount of security, \$_____ (the "Escrow Amount") to cover the cost of winning bids for FTRs in the Auction; and
3. Market Participant and the ISO desire California Bank or Financial Institution to hold the Escrow Amount as a California Bank or Financial Institution under the terms set forth in this Escrow Agreement.

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 Market Participant 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 Market Participant, in accordance with the Tariff, to participate in the Auction. Attachment 1 sets forth the necessary details required to establish the Escrow Account and make payments.
- 1.2 Market Participant 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. Market Participant 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 Market Participant 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 Market Participant is in default of payment of any amount due to ISO of any amount pursuant to the Auction, 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 Market Participant and ISO that Market Participant has: (i) withdrawn from the Auction prior to the time such Auction commences; (ii) has participated in the Auction and is not the successful bidder for any FTRs; or (iii) has participated in the Auction and has paid all amounts due to ISO in accordance with the Tariff,
- Escrow Amount shall be paid to Market Participant as provided in such written direction. In the event of such occurrence, ISO shall be entitled to utilize funds credited to the Escrow Account in satisfaction of any amount owed by the Market Participant to the ISO under the Tariff. Upon such occurrence, ISO agrees that once the Market Participant no longer has actual or contingent liabilities under the

ISO Tariff, Protocols or Letter of Understanding, to release all remaining amounts to the Market Participant.

- 2.2 Market Participant 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 twenty-four (24) hours 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 Market Participant 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 Market Participant, 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 Market Participant.
- 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 Market Participant 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 Market Participant, the California Bank or Financial Institution shall pay the full amount in

accordance with the Tariff. The disputed amount shall be addressed under the terms of the 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 Market Participant:

Contact Person: _____
Address: _____

e-mail address: _____
Phone: _____
Fax: _____

If to ISO:

Contact Person: Philip R. Leiber
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:
JeffreyTranen, President and Chief Executive Officer; and Terry Winter, Chief Operating 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 Market Participant. 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 _____

Market Participant By _____

Title _____

California Bank
or Financial Institution By _____

Title _____

ESCROW AGREEMENT

Attachment I

Market Participant shall deposit Escrow Amount on or before the ___ day of _____ 199___
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 #:

Market Participant:

ABA Routing #:
Bank:
Address

Phone:
Fax:
Bank Contact:
Account #:

ISO:

ABA Routing #: 1210 00358
Bank: Bank of America
Address:1850 Gateway Blvd, 4th floor
Concord, CA 94520

Phone: (510) 675-7368
Fax: (510) 603-7269
Bank Contact: Karen Meyers
Account #: 12336-26208

Certificate of Deposit Security Agreement Firm Transmission Rights

This Certificate of Deposit Security Agreement ("Agreement") is made as of this [date] _____, by and between:

- (1) California Independent System Operator Corporation (the "ISO"), a California nonprofit public benefit corporation having its principal place of business located in Folsom, California, and
- (2) [Legal Name] _____, the 1999 Firm Transmission Rights Auction Market Participant ("Market Participant"), having its principal place of business located in [city & state]. (ISO and the Market Participant, collectively, the "Parties").

WHEREAS:

1. Market Participant desires to participate in the 1999 primary auction ("Auction") for firm transmission rights ("FTRs") held by the ISO in accordance with the ISO's Tariffs and Protocols as filed with the Federal Energy Regulatory Commission, as may be amended from time to time (collectively, the "Tariff"), which provide for the Market Participant to pay the cost of winning bids for FTRs in the auction conducted by the ISO ("Costs"); and
2. In order to secure payment of the Costs referred to above, Market Participant hereby agrees to grant to the ISO a security interest in a Certificate of Deposit in the amount of \$ _____ (the "CD") maintained at [NAME OF BANK] (the "Bank").

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

Article 1 Grant of Security Interest

- 1.1 Market Participant hereby pledges and grants to the ISO a security interest in the bank account represented by the CD and all proceeds therefrom (collectively, the "Collateral").
- 1.2 This Agreement secures the payment of all Costs to the ISO now or hereafter existing under the Tariff related to the Auction. Without limiting the generality of the foregoing, this Agreement secures payment of all such amounts which would be owed by the Market Participant to the ISO but for the fact that they are unenforceable or not allowable due to the existence of a bankruptcy, reorganization, receivership or similar proceeding involving the Market Participant.

Article 2
Delivery and Maintenance of the CD

- 2.1 Market Participant shall deliver the CD in the name of the "California Independent System Operator Corporation" to the ISO, with interest payable to the Market Participant. Upon receipt of the CD, the ISO shall allow the Market Participant, in accordance with the Tariff, to bid for FTRs in the Auction.
- 2.2 Market Participant shall pay all fees, charges and costs to establish, maintain and close the CD, including, but not limited to, processing fees, transaction fees, early redemption penalties and maintenance fees. Market Participant shall direct that Bank will pay interest on the CD directly to the Market Participant, and Market Participant shall pay all taxes on interest income generated by the CD and receive all related tax information and forms directly from Bank.

Article 3
Remedies Upon Default and Return of Collateral

- 3.1 For purposes of this Agreement, an "Event of Default" shall have occurred in the event that Market Participant is in default of any Costs with regard to the Auction pursuant to the terms of the Tariff.
- 3.2 Upon the occurrence of an Event of Default, the ISO shall deliver, by facsimile transmission, a Default Notice to the Market Participant signed by an authorized signatory of the ISO, who is identified in this Agreement, or in a notice thereto designating a different authorized signatory, stating that Market Participant is in default of Costs due to the ISO and is in default under this Agreement. The ISO shall mail, by registered mail, an originally executed copy of the Default Notice to the Market Participant within three business days following the facsimile transmission thereof.
- 3.3 Upon facsimile delivery of a Default Notice to the Market Participant, and without any further notice or action, ISO may redeem the Collateral and retain any amounts due to it as Costs, and shall promptly return to the Market Participant any amounts collected in excess of such Costs. The ISO may also exercise in respect of the Collateral, in addition to the rights and remedies provided for herein or otherwise available to it, all the rights and remedies of a secured party on default under the Uniform Commercial Code in effect in the State of California at that time.
- 3.4 Upon the occurrence of any of the following events, the Market Participant may deliver to the ISO a written notice signed by the Market Participant requesting return of the Collateral (a "Collateral Return Notice"): (i) if Market Participant chooses to withdraw from the Auction prior to the time such Auction commences; (ii) if Market Participant participates in the Auction and is not the successful bidder for any FTRs (and, therefore, owes no Costs); or (iii) if Market Participant participates in the Auction and has paid all Costs due to the ISO in accordance with the Tariff. Upon receipt of a proper Collateral Return Notice, the Collateral shall be transferred or assigned to Market Participant as provided in such written notice. If the ISO receives a Collateral Return Notice and determines that any Costs are due to the ISO, an Event of Default under this Agreement shall have

occurred and the ISO shall be entitled to redeem the Collateral in satisfaction of any Costs owed to the ISO. Upon such termination, ISO agrees that once the Market Participant no longer has any Costs owing to the ISO, it will release the Collateral to the Market Participant as set forth in the Collateral Return Notice.

- 3.5 The Market Participant shall be liable for any and all prepayment or early withdrawal penalties charged by the Bank for any redemptions of the CD performed by the ISO under this Article 3.

Article 4 Disputed Amounts

- 4.1 If any portion of the amount specified in the Demand Notice is in dispute with the Market Participant, the ISO shall redeem the CD in accordance with Article 3 hereof and shall retain the full amount set forth in the Demand Notice, in accordance with the Tariff. Any amounts in dispute shall be addressed under the terms of the Tariff. The Market Participant shall remain liable under Section 3.5 for any penalties or charges for early withdrawal of the CD independent of the outcome of the amounts in dispute.

Article 5 Representations and Warranties

- 5.1 Market Participant represents and warrants to the ISO as follows:
- (a) The Market Participant is the legal and beneficial owner of the Collateral free and clear of any lien, security interest, option or other charge or encumbrance, except for the security interest created by this Agreement.
 - (b) The pledge, assignment and delivery of the CD representing the Collateral pursuant to this Agreement creates a valid and perfected first priority security interest in the Collateral, securing the payment of the Costs to the ISO.
 - (c) No consent of any other person or entity and no authorization, approval, or other action by, and no notice to or filing with, any governmental authority or regulatory body is required (i) for the grant of a security interest by the Market Participant in the Collateral pursuant to this Agreement or for the execution, delivery or performance of this Agreement by the Market Participant, or (ii) for the perfection or maintenance of the security interest created hereby (including the first priority nature of such security interest).
 - (d) There are no conditions precedent to the effectiveness of this Agreement that have not been satisfied or waived.

Article 6 Notices

- 6.1 Unless otherwise provided herein, 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 Market Participant:

Contact Person: _____

Address: _____

e-mail address: _____

Phone: _____

Fax: _____

If to the ISO:

Contact Person: Philip R. Leiber

Address: 151 Blue Ravine Road, Folsom, CA 95630

e-mail address: pleiber@caiso.com

Phone: (916) 351-2168

Fax: (916) 351-2259

**Article 7
ISO Authorized Signatories**

7.1 The Authorized Signatories for the ISO are: Jeffrey Tranen, Chief Executive Officer; and Terry Winter, Chief Operating Officer.

**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 both 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 principles of conflict of laws thereof.

**Article 10
Assignments**

10.1 Each of the Parties may assign any or all of its obligations and rights under this Agreement only with the other Party's prior written consent, which shall not be unreasonably withheld.

**Article 11
Further Assurances**

11.1 The Market Participant agrees that at any time and from time to time, and at its own expense, the Market Participant will promptly execute and deliver all further instruments and documents, and take all further action, that may be necessary or desirable, or that the ISO may reasonably request, in order to perfect and protect any security interest granted or purported to be granted hereby.

**Article 12
Confidentiality**

12.1 Parties shall not disclose the amount of the CD to any third party without the prior written consent of the other Party.

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

California Independent System Operator Corporation

By _____

Title _____

[Market Participant]

By _____

Title _____

Letter of Credit

1999 FTR Auction Market Participant ("Market Participant"):

Amount:

Expiration Date:

Date of Issuance:

California Independent System Operator Corporation ("ISO")

151 Blue Ravine Road

Folsom, CA 95630

To Whom It May Concern:

We hereby establish in your favor, effective immediately, our irrevocable and unconditional Letter of Credit no. _____ which is available for payment

- (a) upon presentation to us at our office at [*bank's address*],² of: (i) your written demand for payment containing the text of Exhibit I and (ii) your signed statement containing the text of Exhibit II; or
- (b) upon both your telephone or fax advice of demand to the attention of _____ at telephone and/or fax number _____ and presentation to us by fax of: (i) your written demand for payment containing the text of Exhibit I and (ii) your statement containing the text of Exhibit II³. Funds may be drawn under this Letter of Credit, from time to time, in one or more drawings, in amounts not exceeding in the aggregate the amount specified above.

Upon presentation to us in conformity with the foregoing, we will, within 60 minutes after such presentation (unless such presentation occurs after 3:00 p.m., Pacific Time, on the day of such presentation, in which event payment will be made within 60 minutes after the opening of business at the office specified above on the next business day), but without any other delay whatsoever, irrevocably and without reserve or condition: (a) if the office set forth above for presentation is in [City], California, pay to your order in the account at _____

² Note to Issuer: The Letter of Credit must be payable in U.S. dollars within the continental U.S.

³ Note to Issuer: If the office specified for presentation is outside of [City], California, alternative (b) must appear in the Letter of Credit when issued. If the office is in [City], California, alternative (b) may be included only if the bank establishes and maintains with the ISO the necessary electronic arrangements.

the bank designated by you in the demand, the full amount demanded by you in the same-day funds which are immediately available to you, or (b) if the office set forth above for presentation is not in [City], California, issue payment instructions to the Federal Reserve wire transfer system in proper form to transfer to the account at the bank designated by you in the demand, the full amount demanded by you in the same-day funds which are immediately available to you in San Francisco, California. We agree that if, on the expiration date of this Letter of Credit, the office specified above is not open for business, this Letter of Credit will be duly honored if the specified statements are presented by you within three (3) full banking days after such office is reopened for business.

Payment hereunder shall be made regardless of: (a) any written or oral direction, request, notice or other communication now or hereafter received by us from the Market Participant or any other person except you, including without limitation any communication regarding fraud, forgery, lack of authority or other defect not apparent on the face of the documents presented by you, but excluding solely an effective written order issued otherwise than at our instance by a court of competent jurisdiction which order is legally binding upon us and specifically orders us not to make such payment; (b) the solvency, existence or condition, financial or other, of the Market Participant or any other person or property from whom or which we may be entitled to reimbursement for such payment; and (c) without limiting clause (b) above, whether we are in receipt of or expect to receive funds or other property as reimbursement in whole or in part for such payment. We agree that we will not take any action to cause the issuance of an order described in clause (a) of the preceding sentence. We agree that the time set forth herein for payment of any demand(s) for payment is sufficient to enable us to examine such demand(s) and the related documents(s) referred to above with care so as to ascertain that on their face they appear to comply with the terms of this credit and that if such demand(s) and document(s) on their face appear to so comply, failure to make any such payment within such time shall constitute dishonor of such demand(s) and this credit.

The stated amount of this Letter of Credit may be increased or decreased, and the expiration date of this Letter of Credit may be extended, by an amendment to this Letter of Credit in the form of Exhibit III. Any such amendment shall become effective only upon acceptance by your signature on a hard copy amendment.

You shall not be bound by any written or oral agreement of any type between us and the Market Participant or any other person relating to this credit, whether now or hereafter existing.

We hereby engage with you that your demand(s) for payment in conformity with the terms of this credit will be duly honored as set forth above. All fees and other costs associated with the issuance of and any drawing(s) against this Letter of Credit shall be for the account of the Market Participant. All of the rights of the ISO set forth above shall inure

to the benefit of your successors. In this connection, in the event of a drawing made by a party other than the ISO, such drawing must be accompanied by the following signed certification:

“The undersigned does hereby certify that ____ [drawer] ____ is the successor by operation of law to the ISO, a beneficiary named in [name of Bank] Letter of Credit no. _____.

[name and title]

Except so far as otherwise expressly stated herein, this documentary credit is subject to the “Uniform Customs and Practices for Documentary Credits,” International Chamber of Commerce, in effect on the date of issuance of this credit.

Yours faithfully,

(name of issuing bank)

By _____

Title _____

DEMAND FOR PAYMENT

Re: Irrevocable and Unconditional Documentary Letter of Credit

No. _____ Dated _____, 19__

To Whom It May Concern:

Demand is hereby made upon you for payment to us of \$ _____ by deposit to our account no. _____ at [insert name of bank]. This demand is made under, and is subject to and governed by, your Irrevocable and Unconditional Documentary Letter of Credit no. _____ dated _____, 19__ in the amount of \$ _____ established by you in our favor for the account of _____ as the Market Participant.

DATED: _____, 19__.

California Independent System Operator Corporation

By _____

Title _____

STATEMENT

Re: Your Irrevocable and Unconditional Documentary Letter of Credit

No. _____ Dated _____, 19_____

To Whom It May Concern:

Reference is made to your Irrevocable and Unconditional Documentary Letter of Credit no. _____, dated _____, 19____ in the amount of \$_____ established by you in our favor for the account of _____.

We hereby certify to you that \$_____ is due and owing to us by the Market Participant.

DATED: _____, 19_____.

California Independent System Operator Corporation

By _____

Title _____

AMENDMENT

Re: Irrevocable and Unconditional Documentary Letter of Credit

No. _____ Dated _____, 19__

Beneficiary:

Market Participant Applicant:

California Independent System
Operator Corporation
151 Blue Ravine Road
Folsom, CA 95630

[Name and Address]

To Whom It May Concern:

The above referenced Irrevocable and Unconditional Documentary Letter of Credit is hereby amended as follows: by increasing / decreasing / leaving unchanged (*strike two*) the stated amount by \$ _____ to a new stated amount of \$ _____ or by extending the expiration date to _____ from _____. All other terms and conditions of the Letter of Credit remain unchanged.

This amendment is effective only when accepted by the ISO, which acceptance may only be valid by a signature of an authorized representative.

Dated: _____

Yours faithfully,

[name of issuing bank]

By _____

Title _____

ACCEPTED

California Independent System Operator Corporation

By _____

Title _____

Date _____