2014 Customer Training Catalog

Prepared by: Client Training Team
California Independent System Operator
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Introduction

The California ISO is committed to providing our customers with a breadth of high-quality training courses on the ISO market functionality as well as individual market applications. These courses are designed to provide participants with the tools and knowledge to interact with the ISO in an efficient and effective manner.

This Customer Training Catalog presents the current 2014 course offerings and is intended as a descriptive training reference for market participants and the general public.

The courses have been grouped into three major categories:

- Overview Courses – The ISO’s role within the California energy landscape
- ISO Markets – In-depth information on market functionality and utilization of the individual market applications
- Settlements – Overview of the settlements publishing schedule as well as interpreting and validating post market settlement charges

Due to the high demand of our training courses, registration is required in advance for each course. Class size is limited to ensure an effective learning environment for all our participants. When a course has reached its limit, it will be closed and a waiting list will be created for those participants wishing to attend the session. Participants on the waiting list will be informed of class availability based on the individual’s position on the waiting list.

Participants should register online using the following link: Market Training Online Registration. Registrants will have the option to submit payment via credit card or check. Government entities are given 2 complimentary seats per class, per entity.

If after reading the following course descriptions you are unable to find a course that meets your organization’s needs, the client training group can customize a training curriculum to meet your needs. This training can be hosted onsite at the ISO or at your location. Please contact MarketTraining@caiso.com for information on availability and costs related to customized training.

Course content is subject to change based on the implementation of new market functionality, rules or processes. This catalog will continue to be updated with new course offerings or additional training dates as they become available.

The California ISO reserves the right to discontinue registration and/or cancel training sessions if enrollment is not sufficient.
Overview Courses

Welcome to the California ISO

*Welcome to the ISO* is a quarterly webinar that provides a basic understanding of the ISO. After the session, participants will receive a toolkit providing web links for more information on each topic.

**Highlights**
- The role of the ISO
- ISO governance leadership and coordination
- Reliability and planning
- Markets and operations
- Electronic systems
- Stakeholder participation

**Target Audience**
This class is intended for individuals who are newcomers to the ISO and parties that may engage in business interactions with the ISO, its markets or grid development programs.

**Delivery Method**
Webinar

**Pre-Requisite**
None

**Schedule**

<table>
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<tr>
<th>Thursday, January 16</th>
<th>Thursday, April 24</th>
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<tr>
<td>Thursday July 24</td>
<td>Thursday, November 20</td>
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**Cost**
This is a free webinar.

**Registration**
To register for this class, RSVP to markettraining@caiso.com prior to the date of the web conference to receive sign in details.
Introduction to California ISO Markets

If you’re unsure how the California wholesale energy markets work and would like to gain a basic understanding, this one day course is for you.

This interactive course covers basic market concepts beginning with an introduction of the California ISO, describing its roles and responsibilities. The course provides an overview of products and services, procured by the California ISO and presents the concepts behind the ISO’s day-ahead and real-time markets timelines, processes and results.

Highlights
- The role of the ISO
- Products and services
- Day-ahead market timeline and inputs
- Real-time market timeline and inputs
- Post market processes

Target Audience
This class is intended for individuals who wish to gain a better understanding of the purpose and function of the ISO, the wholesale energy and ancillary service markets, and an overview of the purpose and timelines of the market and post-market processes. This class is designed as an introductory class for new Scheduling Coordinators, new employees of existing Scheduling Coordinators or for anyone who would like introductory information on the California ISO Markets.

Delivery Method
Instructor led

Pre-Requisite
None

Schedule

<table>
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<tr>
<th>Tuesday, January 14</th>
<th>Tuesday, April 8</th>
<th>Tuesday, April 15 (Houston location)</th>
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<td>Tuesday, July 8</td>
<td>Tuesday, October 14</td>
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Cost
The fee for this course is $500/participant

Registration
To register online for this class please click the following link:
Market Training Online Registration
ISO Markets

Market Transactions

If you’d like to know more about how different transactions are created for use in the ISO markets and how they are used in the day-ahead and real-time markets, then this class is for you!

This course will cover:

- How market transactions are created
- The rules behind some basic market transactions including bids and schedules for energy
- Bids and self-provisions for ancillary services
- Residual unit commitment bids, resource adequacy, and convergence bidding
- Comprehensive overview of Inter-SC trades, what they are and how they are used
- How these market transactions move through the market systems, and discusses market results, and post market processes up to settlements

Target Audience

This class is intended for individuals who wish to gain a better understanding of the bid structures and market rules for transactions that flow through the ISO markets from the submission through to settlements. This is an excellent course for new Scheduling Coordinators or for new employees of existing Scheduling Coordinators who are focused on the front-office functions such as pre-scheduling, power procurement, or real-time operations. This course is also beneficial for individuals who would like a high level understanding of the “bid-to-bill” process focused on the market functions of the ISO markets.

Delivery Method

Instructor led

Pre-Requisite

Introduction to California ISO Markets

Schedule

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<tr>
<th>Wednesday, January 15</th>
<th>Wednesday, April 9</th>
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<td>Wednesday, July 9</td>
<td>Wednesday, October 15</td>
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Cost

Owner: J. Garidel

Customer Service and Stakeholder Affairs

ISO PUBLIC
The fee for this course is $500/participant

Registration
To register online for this class please click the following link:
Market Training Online Registration
Settlements

Settlements 101

If you want to learn more about the ISO Settlements and how to validate charge codes, then you should plan on attending this class!

This course will begin with a review of the market inputs that flow through to settlements and demonstrate how settlement information can be validated. The class examines highlights such as how to locate the settlement documentation for specific resources, how to identify configuration files and billing determinants, and how billing determinants are used in settlement formulas. Settlements 101 will also provide explanation of operational adjustments impact on settlement results and how to validate settlement for basic charge codes.

Highlights
- Settlement inputs
- Documentation and resources
- Day-ahead settlement (charge code 6011)
- Hour-ahead scheduling process settlement (charge code 6051)
- Real-time instructed imbalance energy settlement (charge code 6470)
- Operational adjustments

Target Audience
This class is intended for individuals who wish to gain a better understanding of ISO settlements, how settlement information is created, charge code formulas, how billing determinants are used, and how the settlement information can be validated. This is an excellent course for new Scheduling Coordinators or for new employees of existing Scheduling Coordinators who are focused on the back-office functions including settlements and finance. This course is also good for individuals who would like a high level settlements focused understanding of the ISO Markets.

Delivery Method
Instructor led

Pre-Requisite
Introduction to California ISO Markets or equivalent knowledge

Schedule

<table>
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<tr>
<th>Tuesday, February 11</th>
<th>Wednesday, April 16 (Houston location)</th>
<th>Wednesday, May 14</th>
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<tr>
<td>Tuesday, August 12</td>
<td>Wednesday, November 12</td>
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Cost
The fee for this course is $500/participant

Registration
To register online for this class please click the following link:
Market Training Online Registration
Settlements 201

Settlements 201 covers more complex charge codes that are commonly used in daily settlements processing and the components of a typical invoice. Group exercises and examples are used to describe the various charges, credits and allocations and reinforce charge code comprehension of calculations. Detailed walkthrough of “bid to bill” process to include, but not limited to, ancillary services, bid cost recovery and virtual bidding.

Highlights
- Ancillary services
- Bid cost recovery
- UFE
- Convergence bidding
- CRR settlement rule

Target Audience
This class is intended for individuals who have a good understanding of ISO Settlements, how settlement information is created and how the settlement information can be located and validated.

Delivery Method
Instructor led

Pre-Requisite
Settlements 101

Schedule

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Cost
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Registration
To register online for this class please click the following link:
Market Training Online Registration
Computer Based Training (CBTs) Modules

The California ISO offers several Computer Based Training modules for those that would like to have a broader overview of ISO systems and markets. Below is a list of the CBT modules available on our website, or by clicking the hyperlinked title.

Markets Training

- Day-Ahead Market Overview
- Real-Time Market Overview
- Congestion Revenue Rights Overview
- Introduction to the Energy Imbalance Market (EIM)

Settlements Training

- Settlements – The Market
- Settling the Day-Ahead Market
- Settling the Real-Time Market

ISO Systems Training

- California Market Results Interface (CMRI)
- ISO Reliability Requirements (IRR)
- Operational Meter Analysis and Reporting (OMAR)
- Scheduling and Logging for the ISO or California (SLIC)
- Scheduling Infrastructure Business Rules (SIBR)