

**ATTACHMENT E:**  
**Index To Major Design Features**

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<b>Design Feature</b>	<b>Description</b>	<b>Cite to Design Document paragraph</b>	<b>Cite to Filing Letter page</b>
Must Offer Obligation	The ISO requests that the current Commission-imposed must offer requirement be modified to require all non-hydro units within California that use the ISO Grid or ISO Markets to bid or schedule their entire operable capacity into the Day Ahead and Hour Ahead forward markets.	1-4, 118	12, 84-87
Implementation of a Day Ahead and Hour Ahead Integrated Forward Market (IFM) based on Locational Marginal Pricing (“LMP”)	The ISO’s proposes to manage congestion and price Energy using LMP. The IFM will produce final schedules that are feasible and will eliminate the current distinction between inter-zonal and intra-zonal congestion.	5, 6, 11, 12, 14, 17	12-13, 25-36
Security Constrained Unit Commitment based on a full network model	The ISO proposes to simultaneously optimize congestion management, the Energy Market, and Ancillary Service procurement using a full network model with a bid-cost minimization objective.	6, 12, 29, 30, 60, 115	34-36; 46-47
Market Power Mitigation	Market power at the system level will be mitigated by: (a) a Damage Control Bid Cap (“DCBC”); (b) a bid floor at -\$30/MWh; and (c) extension of the automatic mitigation procedure (“AMP”), currently in effect today for the Real Time market, to the IFM and RUC procedures and to imports, which are currently exempt from AMP in the Real Time market.	13, 37, 38	21, 37-38, 40, 57, 102-104, 107
LMP Cost Cap	The ISO’s proposes to cap nodal prices at \$250/MWh initially and recover as an uplift any revenue shortfalls.	16	39-40
Bidding	The ISO’s proposes to use a three-part bid structure, including start-up, minimum-load and incremental energy curve. Resources may also submit capacity bids for A/S and availability bids for RUC. The ISO has also developed re-bidding activity rules.	11, 18-21, 23, 24, 25, 27, 28, 119-122	101-106
Start-up and minimum load bids	Resources would be given a choice of cost-based or market based options regarding the start-up and minimum-load components of the bid. If an entity selects the market-based option, it would be required to keep the start-up and minimum load cost components of the bid fixed for a six-month period.	19, 20, 21, 22	95-97
Proxy bids	The ISO would be authorized to generate unit-specific Proxy Bids for each Must Offer resource, which the ISO would insert into the relevant market in instances where the resource fails to bid or schedule its full capacity.	26	84-85
Self Scheduling	The revised market design makes provision for SCs who want to self schedule by submitting preferred quantities of supply or demand without associated bids.	31-35	109-111

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Integration of Market Power Mitigation and RMR into the IFM	System and local market power mitigation procedures and determination of RMR dispatch levels will be performed in a sequence of pre-processing IFM runs in the Day Ahead and Hour Ahead time frames.	39-47, 75	106-109
Ancillary Services	The ISO has incorporated Ancillary Service procurement into the Day Ahead and Hour Ahead forward markets and will select resources using an integrated approach that co-optimizes energy and Ancillary Service procurement costs.	48 – 56	80-84
Ramp Rates	The ISO’s scheduling and dispatch software will support three ramp rates. The ISO has also developed a “No-Pay” charge to account for differences between the amount of capacity awarded in the forward market and the amount actually available for dispatch.	57-59	113-115
Cost Recovery for Committed Units	When the ISO commits resources that were not otherwise self-committed the ISO will pay their start-up and minimum load costs over the unit-specific Commitment Period net of market revenues.	61	95-98
Load Aggregation and Demand Scheduling, Bidding and Settlement	The ISO proposes to settle most loads within the ISO control area at aggregate prices that are averages of nodal prices over the existing transmission service areas of the investor-owned utilities.	15, 62-65, 123-126	14-15, 38-40
Existing Transmission Contracts	The ISO proposes to: (1) fully honor ETC rights of access to the grid, but without today’s day-ahead reservations of unscheduled transmission, which is the cause of phantom congestion, (2) require the Participating Transmission Owner to certify that the submitted ETC schedules are in accordance with their contractual rights, and (3) treat all ETC schedules and real time deviations the same as those of any other user of the ISO Controlled Grid in the settlement process.	66-70, 85	15-16, 18, 115-122
Losses	The ISO’s proposes to follow the New York ISO’s methodology of incorporating the cost of losses into the locational marginal price. The ISO will add any over-collection of losses to the CRR Balancing Account.	71, 72	44-46
Day Ahead Timeline	The ISO intends to retain the current time of 10 A.M. for closing the Day Ahead market to SC submissions. The proposed Day Ahead market process will eliminate today’s “revised preferred” iteration with SCs.	73	Not discussed
Congestion Revenue Rights	The ISO has redesigned its congestion hedging instrument (today’s FTRs) to be consistent with LMP. The new instrument – CRRs – are defined from a source to a sink rather than over a specific transmission pathway.	7, 70, 76-97	13, 17, 66-80
Residual Unit	The ISO’s RUC proposal is designed to ensure	8, 74, 98-113	13-14, 87-100

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Commitment	that resources not scheduled in the forward markets but needed for real time operation will be available. The ISO has developed a capacity procurement target; an optimization process; and recommendations with respect to cost-recovery, an availability payment, and cost allocation.		
Hour Ahead and Real Time	The ISO has decided to withdraw the proposal to move the Hour Ahead market up to T-60 and to close the real-time market at the same time, and now proposes to close the Hour Ahead IFM at T-120, to publish final Hour Ahead schedules at T-90, and to close the real-time market at T-60. The ISO still anticipates performing a real-time pre-dispatch at approximately T-45.	114, 116	14, 111-113
Lumpy Generators	Lumpy generators should not be permitted to set the energy price in the forward markets.	117	48-49
Settlement of Supply Resources	Supply resources would be settled on a nodal basis.	123	36-38
Demand Participation	The ISO has developed means for Demand resources to participate in the ISO Markets.	127-129	122
Local Market Power Mitigation	The ISO proposes preferred local market power mitigation measures comparable to those of PJM, but, if the ISO's preferred means of mitigating local market power is not accepted, the ISO proposes to modify the AMP conduct and market impact tests as a back-up mechanism to protect against the exercise of local market power.	13, 36, 39-47, 75, 130-146	15, 23, 49-66
RMR	The ISO will continue to rely on RMR contracts for units that are critical for local reliability and to offer each RMR resource a one-time opportunity to modify its current RMR contract to declare that its RMR contract ramp rate is effectively equal to its bid-in Operational ramp rate. The ISO also proposes changes to the manner in which RMR resources can participate in the revised market.	39, 59, 142, 143-146	106-109
Metered Subsystems	The ISO has incorporated the MSS concept into the revised market design.	10, 112, 147-157	16, 122-123
Resource Adequacy	The State of California is currently addressing resource procurement and resource adequacy in several forums. Consistent with the ISO Board's direction and the FERC White Paper, the ISO does not propose to move forward with the Available Capacity proposal that was contained in the May 1, 2002 filing.	158, 159	18-19, 24