

**CHARACTERISTICS**

	SCE Proposal	SDG&E proposal	Constellation proposal	NRG Proposal	NYISO	ISO NE - settlement	PJM
Market timing/ Compliance Demonstration	Resources committed 4 years in advance. Annual auctions for 12 monthly capacity prices	Resources committed 4 years in advance. CAISO procurement integrated into auction	Forward resources commitments are bilateral only. Compliance demonstrations are monthly.	Resources committed 4 years in advance, reconfiguration auctions.	Final resource commitment one month in advance, annual and seasonal forward auctions also available	Resources committed 3 years ahead for 12 month period	Resources committed 4 years in advance. Specific resources can change on seasonal basis - obligation remains the same
Pricing mechanism	Administrative demand curves, price based on new resource, need based on CEC advance forecast	Clearing auction price based on bid that meets minimum planning reserve	Administrative demand curves, price based on new resource, need based on CEC advance forecast. Multi-year forward publishing of requirements and demand curve pricing.	Declining clock auction, prices set by new resources, price floor to avoid crash. New resource can get price for up to 4 years	Administrative demand curves, price based on new resource, reviewed by independent entity, need based on NYISO advance forecast. Multi-year forward publishing of requirements and demand curve pricing.	Descending clock auction, bid quantity at specified price starting @ 2x CONE, existing capacity price taker down to .8xCONE. Permissible price between 1.4 and 0.6 CONE	Administrative demand curves, price based on new entrant cost, need based on PJM forecast
Local capacity issues	Separate demand curves for high cost local areas	Second stage auction if needed for local requirements	Separate demand curves for high cost local areas	Locational auction	Separate demand curves for NYC and Long Island	Zonal requirements to be determined by ISO NE	Separate locational requirements and demand curves for specified load pockets (subject to technical conference)
Backstop	CAISO 10 year commitment for new resources at a fixed capacity payment, RMR-type contract for other capacity	CAISO 10 year commitment competes with existing resources	None specified	CAISO backstop if auction is not sufficient. Terms to be determined	None	New resources can get fixed price for up to 5 years. Relies on reconfiguration auctions if insufficient capacity bids.	If 4 successive base auctions fail to provide sufficient capacity, PJM can commit resources up to 15 years.
Imports	May require special consideration or cut out	May require special consideration or cut out	Included in monthly auctions if qualified	May require special consideration/rules	Physical resources must be identified and certified. System resources must provide assurance that delivery will not be curtailed to serve native load	must demonstrate that Capacity will not be recalled or curtailed to satisfy native load, or that the External Control Area will afford New England Control Area load the same curtailment priority that it affords its own Control Area native load. Converted to physical before delivery term.	must demonstrate that Capacity will not be recalled or curtailed to satisfy native load, or that the External Control Area will afford PJM load the same curtailment priority that it affords its own Control Area native load. Converted to physical before delivery term.
<b>OBJECTIVES</b>							
<b>1. Liquid tradable product</b>	4 year forward standard capacity product w/locational variants, committed to CAISO at demand curve price. No LSE requirement to obtain capacity, self-procurement allowed	Price(s) set in 4 year forward auction. 2nd stage locational auction on same schedule. No LSE requirement to obtain capacity, but self-procurement allowed	Month ahead residual auction of standard product, priced based on demand curves. Annual/seasonal trading also available.	Price set in 4 year forward auction, several reconfiguration auctions to reallocate as needed.	Month ahead residual auction of standard product, priced based on demand curves. Annual/seasonal trading also available.	Price set in 3-year forward auction, several reconfiguration auctions to reallocate as needed.	4 year forward standard capacity product w/locational variants, committed to PJM at demand curve price. No LSE requirement to obtain capacity, self-procurement allowed, 4 reconfiguration auctions

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2	<b>Adequate physical resources committed to CAISO Control Area when and where needed</b>	CEC forecast establishes requirement, demand curve based on new entry costs w/localational component defines need. CAISO backstops to assure sufficiency	New resources bid for 10 year contract w/existing. Backstop provides for added procurement. Localational component in stage 2.	Relies on market stability and LSE procurement to assure availability. Demand curve prices provides price and location incentive	Sufficient physical capacity must be demonstrated 4 years forward. If not, CAISO can do backstop.	Relies on market stability and LSE procurement to assure availability. Demand curve prices provides price and location incentive	Sufficient physical capacity must be demonstrated 3 years forward.	Forecast establishes requirement, demand curve based on new entry costs w/localational component defines need. PJM backstops to assure sufficiency if market fails to get sufficient resources
3	<b>No free riders and no cross subsidization</b>	Allocation of locational price differences not specified. Overall costs allocated to LSEs based on realized peak loads	Costs recovered through transmission rates, applicable to all load on a non-bypassable basis. Costs and associated capacity follow load as it migrates between LSEs	LSEs must demonstrate compliance with their share of required peak load resources each month	Costs recovered through LSE charges at time of delivery. Cost allocation based on LSE peak loads.	Locational price differences applied to local load, costs allocated based on specific customers served	All customers pay clearing price at time of delivery	Locational price differences applied to local load, costs allocated based on specific customers served
4	<b>Potential to supplement energy market revenues</b>	Availability incentive in form of peak energy rent adjustment based on "realized" energy prices	Expected energy revenues factored into capacity bids	Capacity price offset by estimated energy rents.	Peak energy rent offset based on 22,000 heat rate peaker, allows suppliers to adjust capacity bids based on expected infra-marginal revenues. Offset going forward based on historic prices (rolling 12 month average)	Energy rent offset included in capacity payment - fixed on ex ante basis - known before delivery month	PER based on 12 month average proxy unit strike price, adjusted for % of expected peak load	Energy price offset based on 6 year average using proxy unit characteristics, actual fuel prices and LMPs, \$2.254/kW year for A/S revenue, VO&M = \$5/MWh
5	<b>Provides transparent and effective price signals for new generation, transmission upgrades, demand response and</b>	4 year forward and 10 year backstop provides opportunity for new generation and retirement decisions.	4 year forward and 10 year backstop provides opportunity for new generation and retirement decisions.	"Spot" demand curve price signals provide incentive for new and existing resources, implicitly predictable, longer term incentives based on expectation of stability	4 year forward and up to 4 year commitment provides opportunity for new generation and retirement decisions.	"Spot" demand curve price signals provide incentive for new and existing resources, implicitly predictable, longer term incentives based on expectation of stability	3 year forward and up to 5 year commitment provides opportunity for new generation and retirement decisions.	Gen, tx, DM all explicitly included in analysis, include transmission backstop for local deficiencies and 15 year generation contract backstop for system
6	<b>Facilitates load migration</b>	LSE obligation based on realized load, cost follow load as it migrates between LSEs.	Load pays through transmission costs; Costs and associated capacity follow load as it migrates between LSEs.	LSE obligation determined month ahead	Reconfiguration/settlement auctions in year of delivery	Settlement based on LSE load obligation at time of delivery	Settlement based on LSE load obligation at time of delivery	Settlement based on LSE load obligation at time of delivery
7	<b>Address potential stranded costs</b>	Through separation of capacity offering and load obligation. Capacity market provides a mechanism to sell any long positions in capacity	Market value capacity revenues continue to be generated even if load leaves LSE that procured capacity on its behalf because costs and associated capacity follow load as it migrates	All cost allocation is done pursuant to bilateral contracts that LSEs have entered into to make their compliance demonstration, so there is neither customer nor utility/CAISO exposure to	Reconfiguration reduces stranded cost exposure. Self Supply/Schedule option allows "netting" against load requirements to avoid paying for more then allocated load allocation.			

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8	<b>Permanent energy/capacity structure that allows for capacity costs to be offset by energy revenues</b>	Yes	Unbundles capacity and energy products, and properly values capacity at a market-based price, thereby allowing bids in energy markets to more accurately reflect the marginal costs of power.	Yes	Yes	Forecast basis	yes	yes
9	<b>Market power mitigation</b>	Through demand curve pricing and backstop mechanism	Reliance on 4 year forward and competition between new entrants and incumbents to eliminate incumbent market power	Through demand curve pricing	Reliance on 4 year forward new entrant competition with auction rules and market monitoring.	Through demand curve pricing	Various rules based on % of CONE for delisting, new, or replacement capacity. Intended to mitigate both buyer and seller market power.	Demand curve pricing, existing units bids mitigated to "avoidable cost rate"
#	<b>Replace LSE-based RAR</b>	Yes	Yes	LSE obligation in month ahead process	Yes Allows for external self supply provision not included in auction process.	yes	Yes	Yes
#	<b>Does not interfere with bilateral market</b>	Allows for bilateral capacity and energy markets	Allows for continued bilateral capacity and energy markets.	Month ahead process supports bilateral transactions	Allows for continued bilateral capacity and energy markets.	Allows for continued bilateral capacity and energy markets.	Allows for continued bilateral capacity and energy markets.	Allows for continued bilateral capacity and energy markets.
#	<b>Accommodates imports</b>	Additional consideration needed.	Yes	Treated same as internal resources in month ahead, but need to meet qualification rules	Additional consideration may be needed	Fairly stringent criteria, must designate system supply - treated same as native load or specify units.	Fairly stringent criteria, must designate system supply - treated same as native load or specify units.	Fairly stringent criteria, must designate system supply - treated same as native load or specify units.
#	<b>Forward enough to allow for building new infrastructure</b>	Yes, four year ahead annual price stream could provide sufficient capacity revenue assurance to attract investment. If no, includes 10 year contract as backstop	Yes, makes available 10-year contract so new entrants can compete with incumbents and has a 4 year planning horizon, which allows adequate time for construction of needed capacity.	Not explicitly, relies on anticipated stability of structure	Yes. 4 year planning horizon should be minimum, 4 year price commitment may provide initial stability	Relies on stability of mechanism to support development, bilateral contracts have been let to procure needed capacity	Yes, three year forward commitment, allows new resources to lock in price for up to 5 years	Yes, four year forward, relies on stable demand curve for price stability, up to 15 year backstop procurement if 4 successive auctions fail to get new capacity built.
#	<b>Provides stable regulatory environment that encourages investment</b>	4 year forward commitment assures some level of stability	4 year forward commitment assures some level of stability	Demand curve assures some level of stability	4 year forward commitment assures some level of forward price projection and stability	Demand curve assures some level of stability	Forward commitment plus fixed price option	Demand curve plus backstop
#	<b>Complements jurisdictional rules/roles</b>	Potential 10 year backstop role involves CEC (state) and the CAISO	CPUC adopts rules for mechanism; the mechanism is implemented by the CAISO.	Works for NY	Would be implemented within CAISO tariff and operated by either ISO or other Third party administrator	NYISO and NYPSC coordinate process	Consensus difficult, problem with some states	Includes "opt out" mechanism for utilities in areas w/out competitive process
#	<b>Minimizes CAISO procurement role</b>	Allows parties to hedge through bilateral transactions, CAISO ensure sufficient capacity is procured	The CAISO only procures that which has not been self-procured and cleared through capacity market.	Yes	Backstop only if 4 year forward market fails. ISO only conducts auction. Load has supply/price commitment.	NYISO has not backstop role	5-year price commitment integral in auction	Backstop up to 15 yeears - only if market fails to supply over 4 auctions

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# <b>Minimize administrative and enforcement activities</b>	Up front effort to establish demand curves offsets simple administrative process to maintain operations. Automatic allocation to LSEs	There is no enforcement activity necessary to ensure LSE compliance. This eliminates jurisdictional arguments over the ability of regulators to do this, while maximizing the	Up front effort to establish demand curves offsets simple administrative process to maintain operations.	Declining clock auction based on new generation bids to set price May require additional market monitoring process to monitor buyer and seller market power exercise.	Up front effort to establish demand curves offsets simple administrative process to maintain operations. Automatic allocation to LSEs		Up front effort to establish demand curves offsets simple administrative process to maintain operations. Automatic allocation to LSEs
# <b>Minimize interference w/LSE risk management</b>	Self provision requires 4 year forward action.	Allows LSE's to implement regulatory guidance on procurement portfolios. .	LSEs can choose forward commitment, short term or long term or go short	LSE have self schedule and forward hedge options	LSEs can choose forward commitment, short term or long term or go short	Self provision requires 3-year forward action	Self provision requires 4 year forward action.
# <b>Address credit issues</b>	Minimum generation credit exposure to 4 year auctions; LSE must be capable of paying capacity bill. 10-year contracts and other new entry requires additional credit.	There could be CAISO credit issues. Need to examine means of implementing proposal through tariff provisions that minimize credit issues.	LSEs need to meet ISO credit requirements on monthly basis. All other credit issues are handled bilaterally.	Credit performance requirements for new generation for 4 year auction. Minimal credit requirements in year of delivery for existing generation or load requirements		Payment through load obligation. Suppliers required to provide credit 1 mo. For existing, 3 months for new resources	Credit requirement applies only to new resources (including demand response and qualifying tx upgrade), based on expected difference between initial and incremental auctions for period
# <b>Integrate with operations</b>	Consistent w/offer obligation. Attached value to all participating capacity	Consistent w/offer obligation. Only capacity that clears auction has value. The market is operated by the one entity best positioned to address operational issues.	Consistent w/offer obligation. Attached value to all participating capacity	Consistent w/offer obligation. Only capacity that clears auction has value. The market is operated by the one entity best positioned to address operational issues.	Consistent w/offer obligation. Attached value to all participating capacity	Consistent w/offer obligation. Only capacity that clears auction has value. The market is operated by the one entity best positioned to address operational issues.	Consistent w/offer obligation. Attached value to all participating capacity
# <b>Reasonable costs to consumers</b>	Administrative demand curve minimizes volatility and pre-defines cost exposure	Relies on forward auction process that maximizes competitive forces by allowing new entrants to compete against existing providers to provide reasonable prices	Administrative demand curve minimizes volatility and pre-defines cost exposure	Market based bid and provides stability of forward generation prices and self schedule hedge option for load providers		Result of negotiation	Previous mechanism (monthly ICAP) deemed not J&R
	> Treatment of imports	> Treatment of imports	> Need for backstop procurement	> Defining Self service provision option			Develop best method to determine localioan transmission constraints
	> Energy rent offset/performance incentives	> Call strike price	> How to assure new capacity is built	> Treatment of imports			appropriate length of commitment
	> Nature of MOO – DA or thru real time	> CAISO credit exposure		> Backstop			How RTEP provides gen, DM and tx to satisfy local need
	> Shape of demand curve	>		> Tying operating reserve requirements and scarcity pricing with a capacity market proposal			Terms of opt out

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	> New entry benchmark						
	> Backstop auction trigger						
	> Need for residual reconfiguration auction						
<b>Open Issues</b>	> New entrant credit exposure						