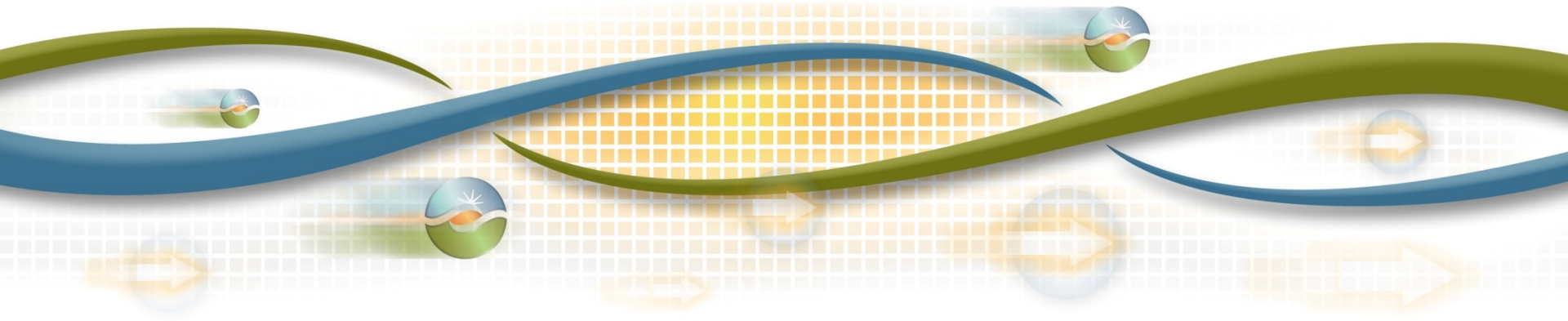


Bidding rules discussion

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Several phases to initiative

Phase	Board Target	Implementation Target
Phase 1: FERC Order 809: examined changes to day-ahead market timing	FERC approved ISO's proposal to not move day-ahead market	
Phase 2: Minimum load rerates	February – Passed	Spring 2016
Phase 3: Generator commitment cost improvements	March	Fall 2016
Phase 4: Resolve remaining bidding rules issues	TBD	TBD

Phase 3: Generator commitment cost improvements, proposed changes

- The ISO explored impact triggered market power mitigation methods for commitment cost compared to its current bid cap method:
 - 25% bid cap headroom allows for cost recovery in most instances
 - Proposing after-the-fact recovery for extreme events.
- Improvements to commitment cost bidding flexibility
 - Allow resources without day-ahead schedule to rebid commitment costs in real-time market until committed
 - Won't insert non-RA resources day-ahead bids into STUC if resource not scheduled in day-ahead and does not submit real-time bid.
- Refine gas transportation and auxiliary power costs to reflect resource-specific cost and better align ISO and EIM resources modelling

Phase 3: Other generator commitment cost improvements considered

- Change to 125% proxy cost bid cap
 - FERC directed ISO to review whether cap should apply to whole cost estimate or apply cap that varies by cost type
 - Found current cap optimal since bid cap allows for various risks to be managed
- Change to gas price index used by market
 - Current index has mismatch with operating day
 - Improved spot price requires delaying day-ahead market
 - With FERC Order 809 April effective date, index publication timing may change after gas nomination timelines move earlier
 - Item deferred until Order 809 effective date (Phase 4)

Changes to ISO's proposal to allow market participants opportunity to request after-the-fact reimbursement for commitment costs

- ISO continues to propose to allow market participants the opportunity to request after-the-fact recovery for commitment costs
- ISO revises proposal to extend a filing right at FERC for resources to seek recovery of incurred fuel commodity costs exceeding the commitment cost bid cap unrecovered through market revenues.
- Request FERC applies just and reasonable standard to review of resources that:
 - Incurred fuel commodity costs that exceeded the commitment cost cap, and
 - Have commitment costs (including incurred fuel costs above cost cap) that result in net market revenue shortfall as calculated through bid cost recovery

Applicable fuel costs for after-the-fact reimbursement

- Applicable fuel commodity costs are fuel costs for fuel burned for commitment to meet an ISO instruction
- Ineligible fuel commodity costs are:
 - Non-incremental costs such as pooling arrangement costs
 - Incurred OFO penalties
 - Gas losses resulting from unprofitable trades after resources are exceptionally dispatched off
- In event FERC accepts cost recovery filing and BCR resettlement with adjusted costs results in net market revenue shortfall, ISO proposes to allocate shortfall through BCR.

Eligibility for after-the-fact reimbursement

- FERC filing to be submitted no later than 60 days after ISO operating day gas costs incurred
- Filing must contain the following:
 - Data supporting actual applicable fuel costs for applicable operating day(s) including but not limited to invoices
 - Explanation of why actual costs exceeding the costs as reflected in commitment cost offers
 - ISO written explanation of applicable day's gas and electric events on market participant request

Advantages of FERC review of cost recovery requests

- Introduces process with a reasonable but measurable cost of seeking recovering that:
 - Allows recovery of incurred net market revenue shortfalls
 - Does not make generators indifferent to fuel price
- Weaknesses with a pre-defined ISO process:
 - ISO cannot prescribe all circumstances recovery is appropriate
 - ISO does not have insight into hedging instruments
 - Could preclude cost recovery after consideration of all facts
- ISO finds assessment should consider all sales and purchases including hedging instruments before finding incurred fuel commodity costs exceeding cost cap

Create flexible process for requesting new region selections in Master File fields

- ISO proposes to create flexible process for scheduling coordinators to request new fuel region values in the Master File (MF) for both ISO and EIM resources.
- ISO proposes to leverage process developed to support formation of new fuel region and extend it to the introduction of a new MF field for an auxiliary region.
- ISO will review fuel and auxiliary regions as geographically appropriate resource-specific costs supported by retail company invoices and schedules

Costs for fuel region will differ for depending on whether generator submits GHG allowances directly

A ISO's Fuel Regions	B Intra-state Transporation Rates (\$/therm)	C AB 32 CARB Fee Credit	D Cap and Trade Exemption' Credit	E Effective April 1, 2016 Effective Rate for Covered Entities	F Effective Rate for Non-covered Entities
PGE (Backbone level rate)	0.00915	0.00056		0.00859	0.00915
PGE2 (Other Customers Rate)	0.02921	0.00056		0.02865	0.02921
SCE1 (<3 million therms/year)	0.10554	0.0011	0.01932	0.08512	0.10554
SCE2 (> 3 million therms/year)	0.03688	0.0011	0.01932	0.01646	0.03688
SDG&E1 (<3 million therms/year)	0.105420	0.00041	0.02249	0.08252	0.105420
SDG&E2 (> 3 million therms/year)	0.036380	0.00041	0.02249	0.01348	0.036380

Q&A