



Direct Participation of Demand Response Resources in CAISO Electricity Markets

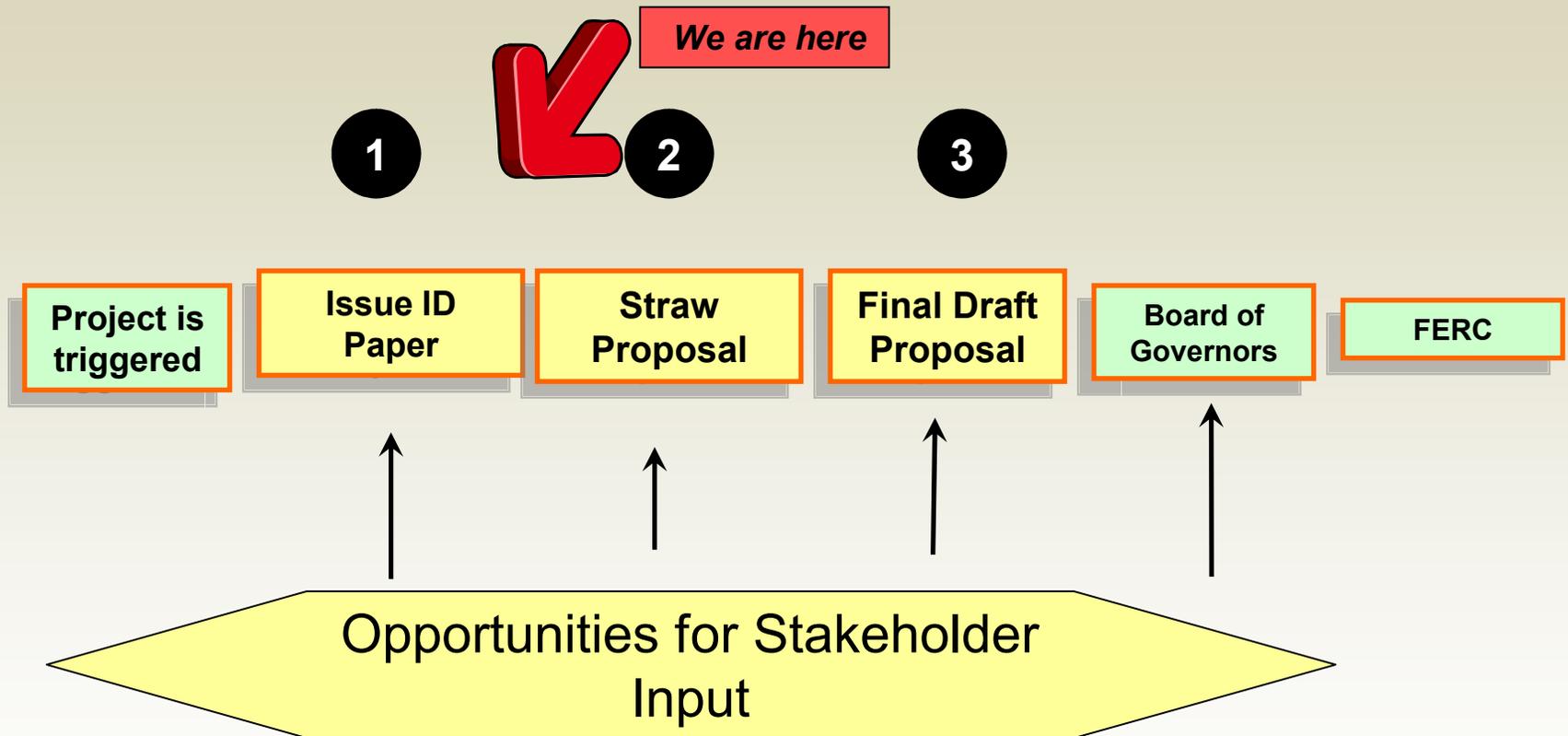
Jim Price
Lead Engineering Specialist,
Market Design & Regulatory Policy

Demand Response Working Group
January 5, 2009

Demand Response Stakeholder Meeting Agenda – January 5, 2009

Time	Topic	Presenter
1:00 – 1:10	Introduction & Meeting Objective	Tom Cuccia
1:10 – 2:50	<ul style="list-style-type: none">- FERC Order on Competition Adds to Requirements for Demand Response- Addition of Direct Participation to the two DR Models for Post-MRTU Market Enhancements- Design Features and Issues	Jim Price
2:50 – 3:00	Process & Proposed Time line; Wrap up	Jim Price

ISO Stakeholder Process – Demand Response



Topic: FERC Order on Competition Adds to Requirements for Demand Response

FERC Order 719 (issued 10/17/2008) promotes direct participation by Demand Response providers in wholesale electricity markets. Order 719 requires ISOs and RTOs to:

- Accept bids from demand response resources in their markets for ancillary services comparable to any other A/S capable resources (§§ 47-63)
- Allow demand response units to specify limits on frequency, duration, and the amounts of their service in bids to provide ancillary services (§§ 81-89)
- Eliminate, during a system emergency, a charge to a buyer in the energy market for taking less electric energy in the real-time market than purchased in the day-ahead market (§§ 111-121 and §127)
- **Permit a DR aggregator to bid demand response on behalf of retail customers directly into the organized energy market, unless local regulatory authorities do not allow participation (§§ 154-164)**
- **Study and report on whether further reforms are necessary to eliminate barriers to demand response in organized markets. (§§ 274-276) (ISO will address through future meetings)**
- Requires ISOs to assess, through pilot projects, the technical feasibility and value to the market of using ancillary services from small demand response units. (§97)

ISO Will Add Direct Participation to the Two DR Models for Post-MRTU Market Enhancements

- MRTU Release 1 includes core Participating Load features: Custom LAP for DA energy scheduling, and pseudo-generator to bid non-spinning reserve.
 - Replacement planned within 12 months. Changes within ISO markets seem better suited to Post-MRTU Release 1 enhancements.
- Post-MRTU Release 1 market enhancements provide two DR models:
 - Dispatchable Demand Resource (DDR) adds to MRTU PL: RT as well as DA energy, co-optimization of energy & AS, market functionality for spinning reserve & regulation, and recognition of operating characteristics (min. and max. durations of load adjustments, start-up times, minimum curtailment, min. & max. energy limits, etc.).
 - Also, CAISO is exploring implementation of Partial Participation to allow Participating Load to be a fraction of total end-use load.
 - Proxy Demand Resource (PDR) simplifies administration of Custom LAPs in initial DR integration into MRTU and migration of small loads, by scheduling load at Default LAP and dispatch Proxy Generators at local levels.
- ISO anticipates incorporating Direct Participation in both DDR and PDR.

Several Design Features and Issues Must Be Resolved

- Terminology, roles & responsibilities of “Aggregator of Retail Customers”
- Relationship between the end-use customer, LSE/ESP, UDC, SC, ISO and ARC, and required registration/notification processes among involved parties
 - Registration functions
 - Rules for ensure the integrity of registering and scheduling DR resources
 - Tracking of customer migration between LSEs and CSPs
- Existing tariff impediments
 - One SC one meter
 - Participating Load defined as a CAISO Metered Entity
- Specification for metered data
- Settlement issues
- Determining performance - measurement & verification (M&V) approaches
 - Meter Before / Meter After, Estimated Baseline, Maximum Base Load, Others?
- Credit requirements

Process and Proposed Timeline

Tentative Date	Milestone
12/22/08	Publish Issue Paper
1/5/09	Stakeholder Conference Call
1/9/09	Due Date for Stakeholder Comments
1/15/09	Stakeholder / Working Group Meeting
1/22/09	Publish Straw Proposal
2/2/09	Stakeholder Meeting or Conference Call / Joint MSC Meeting, followed by comments
2/25/09	Publish Draft Final Proposal
TBD	Stakeholder Meeting or Conference Call / Joint MSC Meeting, followed by comments
TBD	MSC Opinion Adopted
3/25/09	Presentation to Board of Governors for Decision
4/27/09	File Compliance Filing with FERC