



FERC 844: Uplift Cost Allocation Transparency

February 4, 2019

Radha Madrigal

External Training and Readiness

The information contained in these materials is provided for general information only and does not constitute legal or regulatory advice. The ultimate responsibility for complying with the ISO FERC Tariff and other applicable laws, rules or regulations lies with you. In no event shall the ISO or its employees be liable to you or anyone else for any decision made or action taken in reliance on the information in these materials.

Agenda



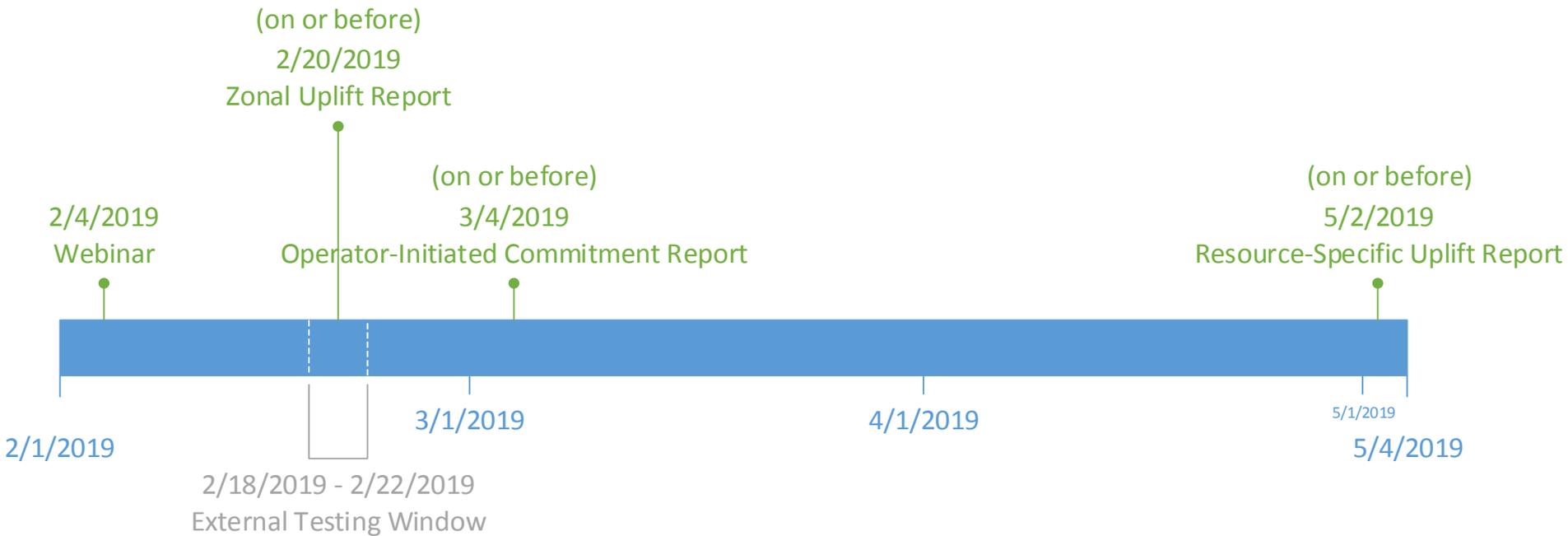
- Compliance with FERC Order 844
 - uplift cost allocation transparency
- Implementation timeline
- Review new OASIS reports
 - Zonal Uplift
 - Resource-Specific Uplift
 - Operator-Initiated Commitment

Compliance with FERC Order 844

- Implement market software functionality to provide increased transparency for uplift cost allocation
- This project creates three new monthly reports that will be accessible on the Open Access Same-time Information System (OASIS) site:
 - Zonal Uplift
 - Resource-Specific Uplift
 - Operator-Initiated Commitment

Implementation Timeline

Tune in to the RUG meetings for any updates to the dates shown below



New OASIS report: Zonal Uplift

The screenshot shows the California ISO OASIS interface. The top navigation bar includes 'ATLAS REFERENCE', 'REPORT DEFINITION', 'PRICES', 'TRANSMISSION', 'SYSTEM DEMAND', 'ENERGY', 'ANCILLARY SERVICES', 'CONGESTION REVENUE RIGHTS', and 'PUBLIC BIDS'. The 'ENERGY' menu is expanded, listing various reports such as 'System Load and Resource Schedules', 'Expected Energy', 'Exceptional Dispatch', 'Market Power Mitigation Status', 'RMR', 'Marginal Losses', 'Resource Adequacy and Minimum Load', 'Convergence Bidding Aggregate Awards', 'Net Cleared Convergence Bidding Awards', 'Day Ahead Market Summary Report', 'Convergence Bidding Nodal MW Limits', 'Contingency Dispatch Resource Schedules', 'Aggregated Generation Outages', 'EIM Transfer Limits', 'EIM Transfer', 'EIM BAA Dynamic NSI', 'EIM BAA Base NSI', 'EIM Transfer Limits By Tie', 'EIM Transfer By Tie', 'Wind and Solar Summary', 'Flexible Ramp Requirements', 'EIM BAA Hourly Base NSI', 'EIM BAA Hourly Base Loss', 'Uncertainty Movement by Category', 'Flexible Ramp Aggregate Awards', 'Flexible Ramp Surplus Demand Curves', 'Flexible Ramp Requirements Inputs', and 'BAA Market Events'. A large orange arrow points to the 'Zonal Uplift' report, which is highlighted in the menu. A callout box next to the arrow contains the text: 'Zonal Uplift will be added to this menu'. On the left side of the page, there is a welcome message and sections for 'Standards Information' and 'System Help'.

- Publication: Monthly
- Data granularity: Daily

New OASIS report: Zonal Uplift

- This report contains monthly uplift payments to resources. The report identifies uplift payments by transmission zone, day, and uplift category (i.e. charge code).
- For purposes of this report, a transmission zone within the CAISO shall reflect the Transmission Access Charge Area of each Participating Transmission Owner.
- This report is published at the end of each trade month plus 20 calendar days, and again 80 days after the end of each trade month.

Report Mockup: Zonal Uplift

Trade Date **1/1/2019** Apply Reset

Download XML Download CSV

Zonal Uplift

Interval Start Date Time	Interval End Date Time	TAC Area Name	Charge Code	Uplift [\$]
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_ECNR	CC 6630	-1,234,567.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_ECNR	CC 6620	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_ECNR	CC 691	-123,467.89
01/02/2019 08:00:00	01/03/2019 08:00:00	TAC_ECNR	CC 6482	-123467.89
01/03/2019 08:00:00	01/04/2019 08:00:00	TAC_ECNR	CC 6488	-123,467.89
01/04/2019 08:00:00	01/05/2019 08:00:00	TAC_ECNR	CC 7891	-123,467.89
01/27/2019 08:00:00	01/28/2019 08:00:00	TAC_ECNR	CC 6630	-123,467.89
01/27/2019 08:00:00	01/28/2019 08:00:00	TAC_ECNR	CC 6482	-123467.89
01/28/2019 08:00:00	01/29/2019 08:00:00	TAC_ECNR	CC 6488	-123,467.89
01/29/2019 08:00:00	01/30/2019 08:00:00	TAC_ECNR	CC 7891	-123,467.89
01/30/2019 08:00:00	01/31/2019 08:00:00	TAC_ECNR	CC 692	-123,467.89
01/31/2019 08:00:00	02/01/2019 08:00:00	TAC_ECNR	CC 66200	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_AZPS	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_IPCO	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_BCHA	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_NEVP	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_PAC	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_PSEI	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_PGE	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_NCNR	CC 6630	-123,467.89
01/01/2019 08:00:00	01/02/2019 08:00:00	TAC_ECNR	CC 6630	-123,467.89
01/30/2019 08:00:00	01/31/2019 08:00:00	TAC_SOUTH	CC 6630	-123,467.89
01/31/2019 08:00:00	02/01/2019 08:00:00	TAC_NORTH	CC 6630	-123,467.89

Note: Please refer to the Configuration Guides posted on the Settlements and Billing BPM page to obtain the charge code descriptions included on this report.

New OASIS report: Resource-Specific Uplift

The screenshot shows the California ISO OASIS website interface. The top navigation bar includes 'ATLAS REFERENCE', 'REPORT DEFINITION', 'PRICES', 'TRANSMISSION', 'SYSTEM DEMAND', 'ENERGY', 'ANCILLARY SERVICES', 'CONGESTION REVENUE RIGHTS', and 'PUBLIC BIDS'. The 'ENERGY' menu is expanded, listing various reports such as 'System Load and Resource Schedules', 'Expected Energy', 'Exceptional Dispatch', 'Market Power Mitigation Status', 'RMR', 'Marginal Losses', 'Resource Adequacy and Minimum Load', 'Convergence Bidding Aggregate Awards', 'Net Cleared Convergence Bidding Awards', 'Day Ahead Market Summary Report', 'Convergence Bidding Nodal MW Limits', 'Contingency Dispatch Resource Schedules', 'Aggregated Generation Outages', 'EIM Transfer Limits', 'EIM Transfer', 'EIM BAA Dynamic NSI', 'EIM BAA Base NSI', 'EIM Transfer Limits By Tie', 'EIM Transfer By Tie', 'Wind and Solar Summary', 'Flexible Ramp Requirements', 'EIM BAA Hourly Base NSI', 'EIM BAA Hourly Base Loss', 'Uncertainty Movement by Category', 'Flexible Ramp Aggregate Awards', 'Flexible Ramp Surplus Demand Curves', 'Flexible Ramp Requirements Inputs', and 'BAA Market Events'. A large orange arrow points from a callout box to the 'Resource-Specific Uplift' report in the menu.

Welcome to the California ISO Open Access Same-time Information System site. On OASIS you will find real-time data related to the ISO transmission and its Market, such as system demand forecasts, transmission outage and status, market prices and market result data.

Standards Information
North American Energy Standards Board (NAESB)
ISO Business Practice Manuals
Available Transfer Capability Information

System Help
For interface technical specifications, product release plans and other supporting documents go to:
System Technical Information

- System Load and Resource Schedules
- Expected Energy
- Exceptional Dispatch
- Market Power Mitigation Status
- RMR
- Marginal Losses
- Resource Adequacy and Minimum Load
- Convergence Bidding Aggregate Awards
- Net Cleared Convergence Bidding Awards
- Day Ahead Market Summary Report
- Convergence Bidding Nodal MW Limits
- Contingency Dispatch Resource Schedules
- Aggregated Generation Outages
- EIM Transfer Limits
- EIM Transfer
- EIM BAA Dynamic NSI
- EIM BAA Base NSI
- EIM Transfer Limits By Tie
- EIM Transfer By Tie
- Wind and Solar Summary
- Flexible Ramp Requirements
- EIM BAA Hourly Base NSI
- EIM BAA Hourly Base Loss
- Uncertainty Movement by Category
- Flexible Ramp Aggregate Awards
- Flexible Ramp Surplus Demand Curves
- Flexible Ramp Requirements Inputs
- BAA Market Events

Resource-Specific Uplift will be added to this menu

- Publication: Monthly
- Data granularity: Monthly

New OASIS report: Resource-Specific Uplift

- This report contains the uplift paid to each resource by uplift category and aggregated across a trade month.
- This report is published at the end of each month plus 90 calendar days.

Report Mockup: Resource-Specific Uplift

Trade Date 1/1/2019 Apply Reset

Download XML Download CSV

Resource-Specific Uplift

Interval Start Date Time	Interval End Date Time	Resource ID	Resource Name	Charge Code	Uplift [\$]
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 6630	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 6620	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 66200	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 6482	-123467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 6488	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 7891	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 691	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	Res1	ResName1	CC 692	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 6630	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 6620	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 66200	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 6482	-123467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 6488	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 7891	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 691	-123,467.89
01/01/2019 08:00:00	02/01/2019 06:59:59	ResA	ResNameA	CC 692	-123,467.89
01/01/2019 08:00:00	02/01/2019 08:00:00	ResZ	ResNameZ	CC 6630	-123,467.89

Note: Please refer to the Configuration Guides posted on the Settlements and Billing BPM page to obtain the charge code descriptions included on this report.

New OASIS report: Operator-Initiated Commitment

California ISO OASIS

ATLAS REFERENCE REPORT DEFINITION PRICES TRANSMISSION SYSTEM DEMAND **ENERGY** ANCILLARY SERVICES CONGESTION REVENUE RIGHTS PUBLIC BIDS

Welcome to the California ISO Open Access Same-time Information System site. On OASIS you will find real-time data related to the ISO transmission and its Market, such as system demand forecasts, transmission outage and status, market prices and market result data.

Standards Information
North American Energy Standards Board (NAESB)
ISO Business Practice Manuals
Available Transfer Capability Information

System Help
For interface technical specifications, product release plans and other supporting documents go to:
System Technical Information

System Load and Resource Schedules
Expected Energy
Exceptional Dispatch
Market Power Mitigation Status
RMR
Marginal Losses
Resource Adequacy and Minimum Load
Convergence Bidding Aggregate Awards
Net Cleared Convergence Bidding Awards
Day Ahead Market Summary Report
Convergence Bidding Nodal MW Limits
Contingency Dispatch Resource Schedules
Aggregated Generation Outages
EIM Transfer Limits
EIM Transfer
EIM BAA Dynamic NSI
EIM BAA Base NSI
EIM Transfer Limits By Tie
EIM Transfer By Tie
Wind and Solar Summary
Flexible Ramp Requirements
EIM BAA Hourly Base NSI
EIM BAA Hourly Base Loss
Uncertainty Movement by Category
Flexible Ramp Aggregate Awards
Flexible Ramp Surplus Demand Curves
Flexible Ramp Requirements Inputs
BAA Market Events

Operator-Initiated Commitment will be added to this menu

- Publication: Monthly
- Data granularity
 - Per exceptional dispatch
 - Per close of day-ahead market for residual unit commitment (RUC)

New OASIS report: Operator-Initiated Commitment

- This report contains monthly information reflecting operator commitments that includes the following information:
 - Commitment size (MW)
 - Transmission zone
 - Commitment reason *
 - Commitment start time of each operator-initiated commitment
- This report is published at the end of each trade month plus 30 calendar days.

* Refer to the [Market Operations BPM](#) appendices section K.1 Table 2 for the reason code mapping.

Report Mockup: Operator-Initiated Commitment

Trade Date 1/1/2019 Apply Reset

Download XML Download CSV

Operator-Initiated Commitment

Interval Start Date Time	TAC Area Name	RESOURCEBID_SEQ	Start Date Time	End Date Time	Market Type	Execution Type	Commitment Size [MW]	Constraint Type	Reason	Clarified Reason
01/01/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/01/2019 09:00:00	01/01/2019 09:05:00	RTM	RTD	-1234567.89	Min	EDRC01	EDORC00
01/01/2019 08:00:00	TAC_SOUTH	ResourceMask4	01/01/2019 10:10:00	01/01/2019 10:15:00	RTM	RTD	-123467.89	Max	EDRC01	EDORC00
01/01/2019 08:00:00	TAC_NORTH	ResourceMask6	01/01/2019 11:20:00	01/01/2019 11:25:00	RTM	RTD	-123467.89	Fixed	EDRC01	EDORC00
01/04/2019 08:00:00	TAC_NCNTN	ResourceMask2	01/04/2019 08:00:00	01/04/2019 08:15:00	RTM	RTPD	-123467.89	Min	EDRC01	EDORC00
01/04/2019 08:00:00	TAC_NCNTN	ResourceMask2	01/04/2019 09:15:00	01/04/2019 09:30:00	RTM	RTPD	-123467.89	Max	EDRC11	EDORC111
01/04/2019 08:00:00	TAC_NCNTN	ResourceMask2	01/04/2019 09:30:00	01/02/2019 09:45:00	RTM	RTPD	-123467.89	Fixed	EDRC11	EDORC111
01/02/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/02/2019 08:10:00	01/03/2019 08:00:00	RTM	RTCD	-123467.89	Max	EDRC11	EDORC111
01/02/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/02/2019 09:20:00	01/03/2019 02:10:00	RTM	RTCD	-123467.89	Fixed	EDRC19	EDORC119
01/02/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/02/2019 11:10:00	01/02/2019 11:40:00	RTM	RTCD	-123467.89	Min	EDRC11	EDORC111
01/03/2019 08:00:00	TAC_SOUTH	ResourceMask4	01/03/2019 08:00:00	01/04/2019 08:00:00	RTM	RTPD	-123467.89	Min	EDRC11	EDORC111
01/03/2019 08:00:00	TAC_SOUTH	ResourceMask4	01/03/2019 08:00:00	01/04/2019 08:00:00	RTM	RTPD	-123467.89	Max	EDRC11	EDORC111
01/03/2019 08:00:00	TAC_SOUTH	ResourceMask4	01/03/2019 08:00:00	01/04/2019 08:00:00	RTM	RTPD	-123467.89	Fixed	EDRC11	EDORC111
01/05/2019 08:00:00	TAC_NORTH	ResourceMask6	01/05/2019 08:00:00	01/05/2019 09:00:00	DAM	RUC	-123467.89	Capacity	System Wide Capacity	Optimization
01/05/2019 08:00:00	TAC_NORTH	ResourceMask6	01/05/2019 09:00:00	01/05/2019 10:00:00	DAM	RUC	-123467.89	Capacity	System Wide Capacity	Optimization
01/05/2019 08:00:00	TAC_NORTH	ResourceMask6	01/05/2019 10:00:00	01/05/2019 11:00:00	DAM	RUC	-123467.89	Capacity	System Wide Capacity	Optimization
01/27/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/27/2019 13:00:00	01/28/2019 08:00:00	RTM	RTCD	-123467.89	Max	EDRC2	EDORC222
01/28/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/28/2019 13:00:00	01/29/2019 08:00:00	RTM	RTPD	-123467.89	Fixed	EDRC3	EDORC333
01/29/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/29/2019 13:00:00	01/30/2019 08:00:00	RTM	RTD	-123467.89	Min	EDRC4	EDORC444
01/30/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/30/2019 13:00:00	01/31/2019 08:00:00	RTM	RTPD	-123467.89	Max	EDRC5	EDORC555
01/31/2019 08:00:00	TAC_ECNTN	ResourceMask8	01/31/2019 13:00:00	02/01/2019 08:00:00	RTM	RTCD	-123467.89	Fixed	EDRC6	EDORC666

Note: Please refer to the Market Operations BPM for exceptional dispatch reason code descriptions included on this report.

Exceptional Dispatch Reason Codes - Samples

REASON	OTHER_REASON (Clarified Reason on OASIS)
Weather Concerns	Weather Concerns
Planned Transmission Outage	SYSTEM OPERATING LIMIT - RTCA VIOLATION
Incomplete or Inaccurate Transmission	SYSTEM OPERATING LIMIT - RTCA VIOLATION
Fast Start Unit Management	NSPN AWARD PREVENTING ECONOMICAL SHUTDOWN
Fast Start Unit Management	PRESERVING STARTS
Pump Management	CONSERVING STARTS FOR RELIABILITY

Note: For RUC commitments, the reason will be listed as “system wide capacity” and the clarified reason would be “Optimization” since the commitment for RUC is coming from the market optimization.



California ISO

Questions?

REFERENCE MATERIAL

Reference Material

- Business Requirements Specification:
 - <http://www.caiso.com/Documents/BusinessRequirementsSpecification-FercOrder844.pdf>
- FERC Document Links:
 - FERC Order No. 844:
 - <https://www.ferc.gov/whats-new/comm-meet/2018/041918/E-1.pdf>
 - CAISO Compliance Filing for FERC Order No. 844:
 - <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15024264>
 - FERC's Deficiency Letter for FERC Order No. 844:
 - <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15094249>
 - CAISO's Response to FERC's Deficiency Letter for FERC Order No. 844:
 - <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=15112534>