



Release Notes – SIBR Rules Version 9.10x Up to Winter 2018 Release

Revision History

Date	Version	By	Description
11/14/2018	1.1	WT	Updated with 9.10.5
10/14/2018	1.0	WT	Initial Draft for Winter 2018 set. BR(v9.9.3)+



For the version 1.0 this will be the Baseline Release and is referenced in the revision history as the Initial Draft. For modifications and adjustments of the SIBR Rules that come after the Baseline Release the revision history will show an Incremental change with the new BR(vX.X.x). The incremental changes will be listed on top of the baseline.

The Baseline Release will identify all the Projects associated with the SIBR Release and if there are any changes to the UI or API web services. Changes to the UI will be documented in the SIBR SC Users Guide or the BSAP Users Guide, web services changes will be documented in the Technical Specifications and posting of the related artifacts on the Release Planning page.

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//////////////////////////////////// Baseline Release //////////////////////////////////////

This set of Release Notes covers the changes going forward from SIBR Rules Version 9.9.3 to 9.10.5

SIBR Winter 2018 Release Impacts

SIBR UI

NO



SIBR Web Services

NO

SIBR Rules

Yes (GDF modification, Long-Start Resource, EIM Powerex, Overlapping Resource

Aggregation, NGR RUC bid, EIM GHG adder)

Please visit the SIBR user documentation on the Release Planning page for the updates to the documents associated to Release.

<http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>

SIBR Scheduling Coordinator Users Guide – UI changes will be documented in this document.

SIBR Interface Specifications - all web service (wsdl, xsd, xml) changes will be documented in this document.

SIBR Business Rules for Bidding – Complete set of SIBR Business Rules.

SIBR Winter Release Projects (included Independent Projects)

The **2018 Winter Release** SIBR Rules capture changes associated with the following projects targeted for implementation near November 1st 2018. <http://www.caiso.com/informed/Pages/ReleasePlanning/Default.aspx>

This set also includes updates to rule modifications not tied to a release.

Opportunity Costs (CCE3) Fall 2018

(Rules were in place in previous release without Opportunity Cost data from upstream sources.)

Introduction of Opportunity Cost adders, Removal of Ramp Rates. Rules for Opportunity Cost also require data from upstream sources.

<http://www.caiso.com/Documents/BusinessRequirementsSpecification-CommitmentCostPhase3.pdf>

EIM Enhancements Fall 2018

ORA implementation for EIM.

<http://www.caiso.com/Documents/BusinessRequirementsSpecification-BiddingRulesEnhancements-GeneratorCommitmentCostImprovements.pdf>



California ISO

Revision History for Rules: (9.9.3 – 9.10.5)

Version	Date	Changes	Reference
9.9.3	3/8/2018	Modified 32901, 42302, 42303, 42304, and 42305 to handle conditions where the NGR RUC capacity is greater than Gmax (i.e. when IFM schedule is negative).	Winter 2017
9.9.3	3/8/2018	Added 32416 to add NGR/TNGR bid validation rules for RUC.	Winter 2017
9.9.3	3/8/2018	Modified 51003 and 71038 to exclude Long Start Resources from MOO in real-time	Winter 2017

Version	Date	Changes	Reference
9.9.4	4/17/2018	Modified 41802, 42801 GDF generation only if EN or SS exists.	Winter 2017

Version	Date	Changes	Reference
9.10	1/31/2018	Added 38053-38056 for ORA validation.	ORA

Version	Date	Changes	Reference
9.10.1	2/15/2018	Corrected typo in 32901.	
9.10.1	2/15/2018	Modified the ORA Type definition to add ANPR_NCL and make the ANPR_BASE a NGR.	ORA
9.10.1	2/15/2018	Modified 38053-38054 and deleted 38056 to add support for ANPR_NCL.	ORA
9.10.1	2/15/2018	Added 38106-38107 to prevent distribution overlap between the ANPR_NCL and other ORA members.	ORA



Version	Date	Changes	Reference
9.10.4	8/20/2018	Modified 10063 to remove "Default" from Maximum Greenhouse Gas Emission Rate.	
9.10.4	8/20/2018	Added 10067 to initialize the Relative Greenhouse Gas Cost Adder.	
9.10.4	8/20/2018	Modified 40018 by adding the Relative Greenhouse Gas Cost Adder.	

Version	Date	Changes	Reference
9.10.5	10/26/2018	Modified 21018, 22003, and 23022 to allow Greenhouse Gas Bid Component from EIMPR not within a GHG Area.	SMUD

Revision of Terms up to Winter 2018 Release:

Name	Acronym	Definition
Greenhouse Gas Area	GHG Area	A set of Network Nodes and Resources subject to greenhouse gas regulation.
Greenhouse Gas Flag	GHG Flag	A (Y/N) Resource attribute indicating membership to a GHG Area.
Default Maximum Greenhouse Gas Emission Rate		The greenhouse gas emission rate used to calculate the Default Maximum Greenhouse Gas Price; it is determined from the highest emitting unit.
Relative Greenhouse Gas Cost Adder		The relative cost adder used to calculate the Default Maximum Greenhouse Gas Price.
Overlapping Resource Aggregation Type	ORA Type	The type of an Aggregate Resource in an ORA: ANPR_BASE: a single EIMNPR NGR that may have a non-negative Base Energy Schedule. ANPR_NCL: a single EIMNPR NGR that may have a non-positive Base Energy Schedule. APR: a single EIMPR NGR that may have an Energy Bid Component and

		Spinning and Non-Spinning Reserve Base Schedules. ANPR_AM: multiple EIMNPR NGR that may be registered for Auto-Match. ANPR_ABC: a single EIMNPR NGR that may have AS Base Schedules.
Long-Start Resource	LSR	A Resource that can be committed in RTM, for which SUT+MUT>270min.
Available Balancing Capacity	ABC	Reserved Capacity on an EIM Resource that is dispatched only to prevent or reduce a power balance constraint violation in its EIM BAA; it is designated as Base Regulation Up/Down Schedules.
Auto-Match	AM	An EIM feature where an EIMNPR is dispatched to match imbalance Energy deviations from associated Registered Import/Export Resources.
Overlapping Resource Aggregation	ORA	A group of Aggregate EIM Resources that share the same set of physical resources; they must all reside in the same EIM BAA. ORAs may not overlap.
Overlapping Resource Aggregation Type	ORA Type	The type of an Aggregate Resource in an ORA: ANPR-BASE: a single EIMNPR Generating Resource that may have a nonzero Base Energy Schedule. APR: a single EIMPR NGR that may have an Energy Bid Component and AS Base Schedules. ANPR-AM: multiple EIMNPR NGR that may be registered for Auto-Match. ANPR-ABC: a single EIMPR NGR that may have ABC (Regulation Bid Component) and AS Base Schedules.

SIBR Impacted Rules – Up to Winter 2018 Release:

Rule changes for the SIBR Rules up to Version 9.10.5 x are located below. Modified Text in red, new rules will be all red.

New rules 9.9.3 are as follows:

Market	Business Rule ID	Description	Comments
DAM	32416	If there is a Load Self-Schedule Bid Component and a RUC Capacity specified in a RUC Bid Component for a Trading Hour in a Non-Generator Resource Bid, there must be an Energy Bid Component for that Trading Hour in that Bid with an Energy Bid Range greater than or equal to that RUC Capacity.	Load Self-Schedule and Energy Bid must accommodate RUC Capacity.

DAM	32901	The RUC Capacity specified in a Non-Generator Resource RUC Bid Component must be greater than zero and less than or equal to the difference between the Maximum NGR Generation and the Maximum NGR Load for that Non-Generator Resource and Trading Hour.	This rule assumes continuous operation across zero.
DAM	42302	If there is a RUC Capacity specified in a RUC Bid Component for a Trading Hour in a Non-Generator Resource Bid, there is no Energy Bid Component and no Load Self-Schedule Bid Component for that Trading Hour in that Bid, and the Total Generating Self-Schedule Quantity derived from all Generating Self-Schedule Bid Components for that Trading Hour in that Bid is less than that RUC Capacity, an Energy Bid Component must be generated for that Trading Hour in that Bid with an Energy Bid Curve from the higher of the registered Minimum NGR Generation for that Non-Generator Resource and Trading Hour or that Total Generating Self-Schedule Quantity, to the lower of that RUC Capacity or the registered Maximum NGR Generation for that Non-Generator Resource and Trading Hour.	Non-Generator Resource with RUC Bid and no Energy Bid. This rule must fire after Self-Schedule Bid Component Generation (42401-42405).
DAM	42303	If there is a RUC Capacity specified in a RUC Bid Component for a Trading Hour in a Non-Generator Resource Bid, and there is an Energy Bid Component but no Load Self-Schedule Bid Component for that Trading Hour in that Bid, the Energy Bid Curve specified in that Energy Bid Component must be extended upwards, if necessary, to the lower of that RUC Capacity or the registered Maximum NGR Generation for that Non-Generator Resource and Trading Hour so that the Energy Bid Range is not less than that RUC Capacity.	Non-Generator with RUC Bid and Energy Bid. This rule assumes continuous operation across zero.
RTM	42304	If there is no Energy Bid Component and no Load Self-Schedule Bid Component for a Non Generator Resource and a Trading Hour in a Non-Generator Resource Bid, and the RUC Schedule is greater than the Day-Ahead Schedule for that Non-Generator Resource and Trading Hour, and greater than the Total Generating Self Schedule Quantity derived from all Generating Self-Schedule Bid Components in that Bid, an Energy Bid Component must be generated in that Bid with an Energy Bid Curve from the higher of the registered Minimum NGR Generation for that Non-Generator Resource and Trading Hour or that Total Generating Self-Schedule Quantity, to the lower of that RUC Schedule or the registered Maximum NGR Generation for that Non-Generator Resource and Trading Hour.	RUC Schedule greater than Day-Ahead Schedule, without Energy Bid. This rule must fire after Self-Schedule Bid Component Generation (42401-42405).
RTM	42305	If there is an Energy Bid Component and no Load Self-Schedule Bid Component for a Non Generator Resource and a Trading Hour in a Non-Generator Resource Bid, and the RUC Schedule is greater than the Day-Ahead Schedule for that Non-Generator Resource and Trading Hour, the Energy Bid Curve specified in that Energy Bid Component must be extended upwards, if necessary, to the lower of that RUC Schedule or the registered Maximum NGR Generation for that Non-Generator Resource and Trading Hour.	RUC Schedule greater than Day-Ahead Schedule, with Energy Bid. This rule assumes continuous operation across

			zero.
RTM	51003	If there is no Generating Resource Bid for a Generating Resource and the Active Hour, but the RA Flag for that Generating Resource that Active Hour is "Yes" and that Generating Resource is registered as a MOO Resource and not a LSR for that Active Hour, a Generating Resource Bid must be generated for that Generating Resource and Active Hour. Any Day-Ahead Schedule and Ancillary Service Awards for that Generating Resource and Active Hour must be transferred to this Bid.	MFR: LSR registry. RTM Bid Generation and transfer of DA Schedule and AS Awards.
RTM	71038	If there is no Multi-Period Generating Resource Bid for a Generating Resource and a Trading Hour after the Active Hour in the Real-Time Market Horizon, but the RA Flag for that Generating Resource and Trading Hour is "Yes" and that Generating Resource is registered as a MOO Resource and not a LSR for that Trading Hour, a Multi-Period Generating Resource Bid must be generated for that Generating Resource and Trading Hour.	Multi-Period Bid Generation for RA MOO Resources.

New rules 9.9.4 are as follows:

Market	Business Rule ID	Description	Comments
ALL	41802	If there is an Energy Bid Component or a Self-Schedule Bid Component but # there is no Distribution Bid Component for a Trading Hour in a Generating Resource Bid, but the Generating Resource specified in that Bid is registered as an Aggregate Generating Resource for that Trading Hour, a Distribution Bid Component must be generated for that Trading Hour in that Bid with the applicable Distribution Pairs from the GDF Library for that Generating Resource and Trading Hour. If the External Bid Status is not set to "M" (Modified) or "CM" (Conditionally Modified), set the External Bid Status to "MI" (Valid).	GDF Library Requirement: Distribution Pairs (Distribution Location, Distribution Factor) for Aggregate Generating Resources.



ALL	42801	<p>If there is an Energy Bid Component or a Load Self-Schedule Bid Component or a Generating Self-Schedule Bid Component but # there is no Distribution Bid Component for the Non-Generator Resource and a Trading Hour in a Non-Generator Resource Bid, and that Non-Generator Resource is registered as an Aggregate NGR for that Trading Hour, a Distribution Bid Component must be generated for that Trading Hour in that Bid with the registered Distribution Pairs for that Non-Generator Resource and Trading Hour.</p> <p>If the External Bid Status is not set to "M" (Modified) or "CM" (Conditionally Modified), it must be set to "MI" (Valid).</p>	MFR: Distribution Pairs (Distribution Location, Distribution Factor) for Aggregate NGR.
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New and revised rules 9.10 are as follows:

Market	Business Rule ID	Description	Comments
RTM	51003	If there is no Generating Resource Bid for a Generating Resource and the Active Hour, but the RA Flag for that Generating Resource that Active Hour is "Yes" and that Generating Resource is registered as a MOO Resource and not a LSR for that Active Hour, a Generating Resource Bid must be generated for that Generating Resource and Active Hour. Any Day-Ahead Schedule and Ancillary Service Awards for that Generating Resource and Active Hour must be transferred to this Bid.	MFR: LSR registry. RTM Bid Generation and transfer of DA Schedule and AS Awards.
RTM	71038	If there is no Multi-Period Generating Resource Bid for a Generating Resource and a Trading Hour after the Active Hour in the Real-Time Market Horizon, but the RA Flag for that Generating Resource and Trading Hour is "Yes" and that Generating Resource is registered as a MOO Resource and not a LSR for that Trading Hour, a Multi-Period Generating Resource Bid must be generated for that Generating Resource and Trading Hour.	Multi-Period Bid Generation for RA MOO Resources.
BS	38053	The Base Energy Schedule specified in a Base Schedule for a Non-Generator Resource must be zero if that Non-Generator Resource is registered as an ORA member for the Base Schedule Period specified in that Base Schedule.	MFR: ORA registry.



BS	38054	There must not be a Base Ancillary Service Schedule in a Base Schedule for a Generating Resource registered as an ORA member with an ORA Type of ANPR-BASE for the Base Schedule Period specified in that Base Schedule.	MFR: ORA Type registry.
BS	38055	There must not be a Base Regulation Up or Down Schedule in a Base Schedule for a Non-Generator Resource registered as an ORA member with an ORA Type of APR for the Base Schedule Period specified in that Base Schedule.	
BS	38056	There must not be a Base Ancillary Service Schedule in a Base Schedule for a Non-Generator Resource registered as an ORA member with an ORA Type of ANPR-AM for the Base Schedule Period specified in that Base Schedule.	

New and revised rules 9.10.1 are as follows:

Market	Business Rule ID	Description	Comments
DAM	32901	The RUC Capacity specified in a Non-Generator Resource RUC Bid Component must be greater than or equal to zero and less than the difference between the Maximum NGR Generation and the Maximum NGR Load for that Non-Generator Resource and Trading Hour.	
BS	38053	The Base Energy Schedule specified in a Base Schedule for a Non-Generator Resource must be zero if that Non-Generator Resource is registered as an ORA member with an ORA Type of APR, ANPR_AM, or ANPR_ABC , for the Base Schedule Period specified in that Base Schedule.	MFR: ORA registry. MFR: ORA Type registry.
BS	38054	There must not be a Base Ancillary Service Schedule in a Base Schedule for a Non-Generator Resource registered as an ORA member with an ORA Type of ANPR_BASE, ANPR_NCL, or ANPR_AM, for the Base Schedule Period specified in that Base Schedule.	
BS	38055	There must not be a Base Regulation Up or Down Schedule in a Base Schedule for a Non-Generator Resource registered as an ORA member with an ORA Type of APR for the Base Schedule Period specified in that Base Schedule.	
DEL	38056	There must not be a Base Ancillary Service Schedule in a Base Schedule for a Non-Generator Resource registered as an ORA member with an ORA Type of ANPR-AM for the Base Schedule Period specified in that Base Schedule.	Covered by 38054.
BS	38106	If a Distribution Factor for a Distribution Location of a Distribution Pair specified in a Distribution Bid Component in a Base Schedule for a Non-Generator Resource	ANPR_NCL distribution may not

		registered as an ORA member with an ORA Type of ANPR_NCL for the Base Schedule Period specified in that Base Schedule is greater than zero, the Distribution Factor for the same Distribution Location of a Distribution Pair specified in a Distribution Bid Component in a Base Schedule, if any, for another Non-Generator Resource registered as a member of the same ORA for the same Base Schedule Period must be zero.	overlap with ANPR_BASE, APR, ANPR_AM, or ANPR_ABC.
BS	38107	If a Distribution Factor for a Distribution Location of a Distribution Pair specified in a Distribution Bid Component in a Base Schedule for a Non-Generator Resource registered as an ORA member with an ORA Type of ANPR_BASE, APR, ANPR_AM, or ANPR_ABC for the Base Schedule Period specified in that Base Schedule is greater than zero, the Distribution Factor for the same Distribution Location of a Distribution Pair specified in a Distribution Bid Component in a Base Schedule, if any, for a Non-Generator Resource registered as a member of the same ORA with an ORA Type of ANPR_NCL for the same Base Schedule Period must be zero.	ANPR_NCL distribution may not overlap with ANPR_BASE, APR, ANPR_AM, or ANPR_ABC.

New and revised rules 9.10.4 are as follows:

(Note: no updates for 9.10.2 or 9.10.3, as they were uplifts from 9.9.2 and 9.9.3)

Market	Business Rule ID	Description	Comments
RTM	10063	The configurable Default Maximum Greenhouse Gas Emission Rate must be initialized to 0.9132545.	
RTM	10067	The configurable Relative Greenhouse Gas Cost Adder must be initialized to 1.1.	
RTM	40018	The Default Maximum Greenhouse Gas Price must be calculated as the product of the Maximum Greenhouse Gas Emission Rate, the registered Greenhouse Gas Allowance Index Price, and the configurable Relative Greenhouse Gas Cost Adder.	MFR: Greenhouse Gas Allowance Index Price registry.

New and revised rules 9.10.5 are as follows:

Market	Business Rule ID	Description	Comments
RTM	21018	A Generating Resource Bid may include the following: 1) at most one Start-Up Bid Component for each registered Online Generating Resource State of the Generating Resource specified in that Bid; 2) at most one Minimum Load Cost Bid Component for each registered Online Generating Resource State; 3) at most one Energy Bid Component for each registered Online Generating Resource State; 4) at most one Self-Schedule Bid Component for each registered Online Generating Resource State; 5) at most one Ancillary Service Bid Component for each registered Online Generating Resource State; 6) at most one Ramp Rate Bid Component for each registered Online Generating Resource State; 7) at most one Distribution Bid Component; 8) at most one Wheeling Bid Component, if and only if the Generating Resource specified in the Bid is registered as an Inter-Tie Generating Resource for the Trading Hour specified in that Bid; 9) at most one Pumping Bid Component, if and only if the Generating Resource specified in the Bid is registered as a Pump Storage Hydro or a Pump for that Trading Hour; 10) at most one State Transition Bid Component, if and only if the Generating Resource specified in the Bid is registered as a MSG for that Trading Hour; 11) at most one Miscellaneous Bid Component; and 12) at most one Greenhouse Gas Bid Component, if and only if the Generating Resource specified in the Bid is registered as an EIM Resource with GHG Flag "N" for that Trading Hour.	MFR: GHG Flag registration for Resources.
RTM	22003	A Non-Generator Resource Bid may include the following: 1) at most one Energy Bid Component; 2) at most one Self-Schedule Bid Component; 3) at most one Ancillary Service Bid Component; 4) at most one Ramp Rate Bid Component; 5) at most one Energy Limit Bid Component, if and only if the Non-Generator Resource specified in that Bid is registered as a LESR for the Trading Hour specified in that Bid; 6) at most one Distribution Bid Component; 7) at most one Miscellaneous Bid Component; and 8) at most one Greenhouse Gas Bid Component, if and only if the Non-Generator Resource specified in the Bid is registered as an EIM Resource with GHG Flag "N" for that Trading Hour.	
RTM	23022	An Inter-Tie Resource Bid for a Registered Inter-Tie Resource may include the following: 1) at most one Energy Bid Component; 2) at most one Self-Schedule Bid Component; 3) at most one Ancillary Service Bid Component; 4) at most one Wheeling Bid Component; 5) at most one Miscellaneous Bid Component; and 6) at most one Greenhouse Gas Bid Component, if and only if the Resource specified in that Bid is registered as an Import Resource and as an EIM Resource with GHG Flag "N" for the Trading Hour specified in that Bid.	



The full set of the SIBR Rules can be seen under SIBR user documentation under the Application Access/ in SIBR user documentation

<http://www.caiso.com/participate/Pages/ApplicationAccess/Default.aspx>

END Document