



Forced and Planned Outage Substitution, RAAIM Pre-Calc

RSI 2017 Training
January 17, 2018 1:00PM

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Forced Outage Substitution

Forced Outage Substitution

Plans RA Validation CSP Offers **Substitutions** Reports

Outage Resource Selection

Trade Month January ▼ *	Trade Year 2018 ▼ *	Outage ID <input type="text"/>
Resource ID <input type="text"/>	Supplier SC -SCID- ▼	Substitution Required YES ▼
<input type="button" value="Show Outages"/>	<input type="button" value="Show/Hide Results"/>	

- Forced >
- Planned >
- Outage Exemptions

- Create
- Review
- Release Type **FORCED** ▼
- Compatible Resources >

Forced Outage - Create Substitution

Outage Resource Selection

[Review Substitution](#)

[Retrospective Substitution]

Trade Month **January** Trade Year **2018** Outage ID Outage Type **FORCED**

Resource ID Supplier SC Substitution Required **YES**

Select Outage	Resource ID	Resource Name	Area	Outage ID	Outage Type	Start Date	End Date	Nature of Work	SC ID	Substitution Required	RA Information
<input type="radio"/>				:	FORCED	01/05/2018 08:07:00	01/13/2018 00:00:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/11/2018 00:00:00	01/11/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input checked="" type="radio"/>				:	FORCED	01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/09/2018 00:00:00	01/12/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED			PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/06/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/05/2018 08:25:00	01/05/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/05/2018 16:00:00	01/13/2018 00:00:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>				:	FORCED	01/05/2018 11:00:00	01/09/2018 00:00:00	AMBIENT_DUE_TO_TEMP		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>

Forced Outage Generic RA Information

Outage Resource Selection

[Review Substitution](#)

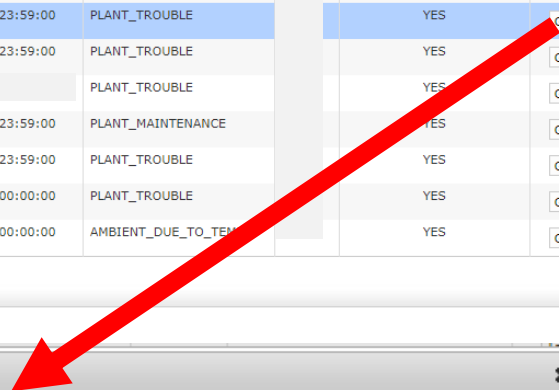
[Retroactive Substitution]

Trade Month: Trade Year: Outage ID: Outage Type:

Resource ID: Supplier SC: Substitution Required:

Select Outage	Resource ID	Resource Name	Area	Outage ID	Outage Type	Start Date	End Date	Nature of Work	SC ID	Substitution Required	RA Information
<input type="radio"/>					FORCED	01/05/2018 08:07:00	01/13/2018 00:00:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/11/2018 00:00:00	01/11/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input checked="" type="radio"/>					FORCED	01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/09/2018 00:00:00	01/12/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED			PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/06/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/05/2018 08:25:00	01/05/2018 23:59:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/05/2018 16:00:00	01/13/2018 00:00:00	PLANT_TROUBLE		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>
<input type="radio"/>					FORCED	01/05/2018 11:00:00	01/09/2018 00:00:00	AMBIENT_DUE_TO_TEM		YES	<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>

1 2 Next 10



Generic RA Information								
Start Date	End Date	NQC	Total RA MW	Local MW	System MW	CPM MW	Dispatchable	Area
			120.87	120.87	0	0	Yes	
			0.0	0	0	0	Yes	
			120.87	120.87	0	0	Yes	
			62.87	62.87	0	0	Yes	
			120.87	120.87	0	0	Yes	

Selecting an Outage

Outage Resource Selection

Trade Month **January** * Trade Year **2018** * Outage ID Outage Type **FORCED** ▼

Resource ID Supplier SC Substitution Required **YES** ▼

Select Outage	Resource ID	Resource Name	Area	Outage ID	Outage Type	Start Date	End Date	Nature of Work	SC ID	Substitution Re
<input type="radio"/>					FORCED	01/05/2018 08:07:00	01/13/2018 00:00:00	PLANT_TROUBLE		YES
<input type="radio"/>					FORCED	01/11/2018 00:00:00	01/11/2018 23:59:00	PLANT_TROUBLE		YES
<input checked="" type="radio"/>					FORCED	01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE		YES
<input type="radio"/>					FORCED	01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE		YES
<input type="radio"/>					FORCED	01/09/2018 00:00:00	01/12/2018 23:59:00	PLANT_TROUBLE		YES
<input type="radio"/>					FORCED			PLANT_TROUBLE		YES
<input type="radio"/>					FORCED	01/06/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE		YES
<input type="radio"/>					FORCED	01/05/2018 08:25:00	01/05/2018 23:59:00	PLANT_TROUBLE		YES
<input type="radio"/>					FORCED	01/05/2018 16:00:00	01/13/2018 00:00:00	PLANT_TROUBLE		YES
<input checked="" type="radio"/>					FORCED	01/05/2018 11:00:00	01/09/2018 00:00:00	AMBIENT_DUE_TO_TEMP		YES
<input type="radio"/>					FORCED	01/04/2018 00:00:00	01/04/2018 23:59:00	PLANT_MAINTENANCE		YES

1000 ▼

Selecting an Outage Search Criteria

Forced Outages Substitute Resource Selection (For Flex Substitution, Substitute Resource must provide must offer obligation for Outage resource)

Resource ID SC ID Area Resource with Non-RA capacity only Compatible Only Only Third Party Resources

Physical ITIES Substitution Type Market Timeframe

Substitution Start Date: Substitution End Date:

Day	01/17	01/18	01/19
Curtailed MW	259.6	259.6	259.6
Local RA MW	0.0	0.0	0.0
System RA MW	183.5	183.5	183.5
CPM MW	0	0	0
Total RA MW	183.5	183.5	183.5
Local Cumulative Sub Cap	0	0	0
System Cumulative Sub Cap	0	0	0
CPM Cumulative Sub Cap	0	0	0
Total Cumulative Sub Cap	0	0	0

- RA is now split into its components. The Local, System and CPM is now summed into the Total RA MW.
- Users can select the substitution start and end dates.
- Select a start date where the substitution MWs are non-zero.

Searching for and selecting a Substitute

Forced Outages Substitute Resource Selection (For Flex Substitution, Substitute Resource must provide must offer obligation for Outage resource)

Resource ID SC ID Area Resource with Non-RA capacity only Compatible Only Only Third Party Resources

Physical Virtual

Substitution Type * Market Timeframe *

Substitution Start Date: * Substitution End Date: *

Resource ID	Resource Name	SC ID	RA Info	Outages	Area	Compatible	Dispatchable	Select
			<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>	<input type="button" value="View"/>		Yes	No	<input type="button" value="Add"/>
			<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>	<input type="button" value="View"/>		Yes	No	<input type="button" value="Add"/>
			<input type="button" value="Generic RA"/> <input type="button" value="Flex RA"/>	<input type="button" value="View"/>		Yes	Yes	<input type="button" value="Add"/>

Day	01/19	01/20	01/21	01/22	01/23	01/24	01/25	01/26	01/27	01/28	01/29	01/30	01/31
Curtailment MW	315	315	315	315	315	315	315	315	315	315	315	315	315
Local RA MW	131.5	381.5	381.5	131.5	131.5	131.5	131.5	131.5	381.5	381.5	131.5	131.5	131.5
System RA MW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CPM MW	0	0	0	0	0	0	0	0	0	0	0	0	0
Total RA MW	131.5	381.5	381.5	131.5	131.5	131.5	131.5	131.5	381.5	381.5	131.5	131.5	131.5
Local Cumulative Sub Cap	0	0	0	0	0	0	0	0	0	0	0	0	0
System Cumulative Sub Cap	0	0	0	0	0	0	0	0	0	0	0	0	0
CPM Cumulative Sub Cap	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Cumulative Sub Cap	0	0	0	0	0	0	0	0	0	0	0	0	0

Forced Outage Substitution Rules Matrix

Resource Adequacy (RA) Forced Outage Substitution Rules					
	Original Resource Attributes		Checks on Substitute Resource		
Market Type	Capacity	Location	Location Check	Dispatchability check	Compatibility check
Real-time	Generic Local	Internal	Substitute resource must be in the same local area as the original	Substitute resource must be dispatchable if original resource is dispatchable	If orig. resource is in a 'local capacity area' and has local capacity, substitute resource must be compatible to the original resource for a RT substitution
Real-time	Generic System	Internal	Substitute resource must be internal - either local or non-local	Substitute resource must be dispatchable if original resource is dispatchable	Do not check compatibility
Day Ahead	Generic Local	Internal	Substitute resource must be in the same local area as the original	Substitute resource must be dispatchable if original resource is dispatchable	Do not check compatibility
Day Ahead	Generic System	Internal	substitute resource must be internal - either local or non-local	If original resource is dispatchable, substitute resource must be dispatchable	Do not check compatibility
Day Ahead	Generic System	External	substitute resource can be internal or external	Do not check dispatchability of substitute resource	Do not check compatibility
Real-time	Flex	Internal	Substitute resource must be internal - either local or non-local	Substitute resource must be dispatchable if original resource is dispatchable and internal	If orig. resource is in a 'local capacity area' and has Flex capacity, substitute resource must be compatible to the original resource for a RT substitution
Real-time	Flex	External	Substitute resource can be internal	Do not check dispatchability of substitute resource	Do not check compatibility
Day Ahead	Flex	Internal	Substitute resource must be internal - either local or non-local	If original resource is dispatchable, substitute resource must be dispatchable	Do not check compatibility
Day Ahead	Flex	External	Substitute resource can be internal or external	Do not check dispatchability of substitute resource	Do not check compatibility

Forced Outage Substitution Review

Search Substitution Request (For Flex Substitution, Substitute Resource must provide must offer obligation for Outage resource)

Substitution ID <input type="text"/>	Original Resource ID <input type="text"/>	Sub Resource ID <input type="text"/>	Outage ID <input type="text"/>	Substitution Status <input type="text" value="-Select-"/>
Trade Month <input type="text" value="January"/>	Trade Year <input type="text" value="2018"/>	Substitution Type <input type="text" value="-Select-"/>	Supplier SC <input type="text" value="-Select-"/>	<input type="checkbox"/> DA <input type="checkbox"/> Third Party <input type="checkbox"/> RT
<input type="button" value="Search"/>				

Forced Outage Substitution Review

Search Substitution Request (For Flex Substitution, Substitute Resource must provide must offer obligation for Outage resource)

Substitution ID Original Resource ID Sub Resource ID Outage ID Substitution Status **-Select-**
 Trade Month **January** Trade Year **2018** Substitution Type **-Select-** Supplier SC **-Select-** DA Third Party RT

Select	Outage ID	Outage Start Date	Outage End Date	Nature of Work	Sub ID	Original SCID	Original Res ID	Original Res Name	Sub Res ID	Description	Sub Type	Market Timeframe
<input checked="" type="radio"/>		01/11/2018 00:00:00	01/19/2018 23:59:00	PLANT_TROUBLE	:	£	F				GENERIC	DA
<input type="radio"/>		01/09/2018 00:00:00	01/12/2018 23:59:00	PLANT_TROUBLE	:	£	F				GENERIC	DA
<input type="radio"/>		01/06/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE	:	£	£				GENERIC	DA
<input type="radio"/>		01/06/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE	:	£	£				GENERIC	DA
<input type="radio"/>		01/06/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE	:	£	£				GENERIC	DA
<input type="radio"/>		01/05/2018 08:25:00	01/05/2018 23:59:00	PLANT_TROUBLE	:	£	F				GENERIC	RT
<input type="radio"/>		01/05/2018 00:00:00	01/05/2018 23:59:00	PLANT_MAINTENANCE	:	F	F				GENERIC	DA

Outage ID: _____ Resource on Outage: _____ Outage SC ID: _____

Day	01/12	01/13	01/14	01/15	01/16	01/17	01/18	01/19
Outage MW	259.6	259.6	259.6	259.6	259.6	259.6	259.6	259.6
GENERIC APPROVED								
Substitute Local MW	0	0	0	0	0	0	0	0
Substitute System MW	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5
CPM Substitute MW	0	0	0	0	0	0	0	0
Total Substitution MW	57.5	57.5	57.5	57.5	57.5	57.5	57.5	57.5

Forced Outage Substitution Review - detailed

Outage ID	Resource on Outage:	Outage SC ID:	Generic RA	Flex RA	Outage Info
Day		11/02			11/03
Outage MW		5			5
<div style="display: flex; justify-content: space-between;"> GENERIC APPROVED </div> <div style="display: flex; justify-content: space-between;"> Generic RA Flex RA Outage Info </div>					
Substitute Local MW		0.1			0.1
Substitute System MW		0.11			0.11
CPM Substitute MW		0.13			0.13
<div style="display: flex; justify-content: space-between;"> GENERIC APPROVED </div> <div style="display: flex; justify-content: space-between;"> Generic RA Flex RA Outage Info </div>					
Substitute Local MW		0.15			0.15
Substitute System MW		0.25			0.25
CPM Substitute MW		0.21			0.21
<div style="display: flex; justify-content: space-between;"> GENERIC REJECTED </div> <div style="display: flex; justify-content: space-between;"> Generic RA Flex RA Outage Info </div>					
Substitute Local MW		0.13			0.13
Substitute System MW		0.2			0.2
CPM Substitute MW		0.11			0.11
<div style="display: flex; justify-content: space-between;"> GENERIC APPROVED </div> <div style="display: flex; justify-content: space-between;"> Generic RA Flex RA Outage Info </div>					
Substitute Local MW		0.2			0.2
Substitute System MW		0.12			0.12
CPM Substitute MW		0.11			0.11
<div style="display: flex; justify-content: space-between;"> GENERIC APPROVED </div> <div style="display: flex; justify-content: space-between;"> Generic RA Flex RA Outage Info </div>					
Substitute Local MW		0.2			0.2
Substitute System MW		2			2
CPM Substitute MW		3			3
Total Substitution MW		7.02			7.02

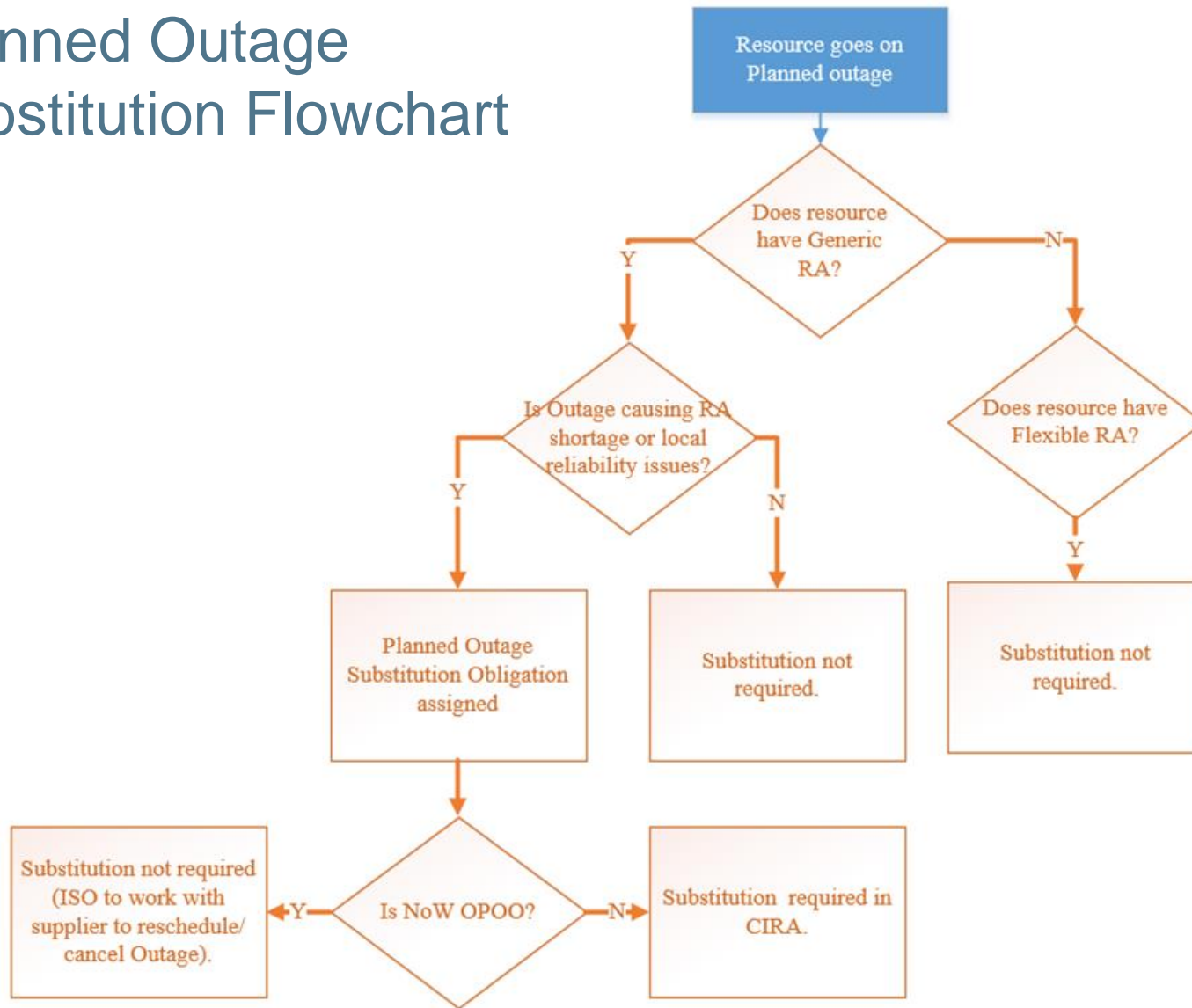
Forced Outage Substitution Review

In the detailed example in the prior slide,

- Multiple sub resources were used.
- Each resource has its own status.
 - Approved
 - Rejected
 - Pending
- The *Total Substitution MW* is the sum of all the substitutions spread across Local, System and CPM MWs.

Planned Outage Substitution

Planned Outage Substitution Flowchart

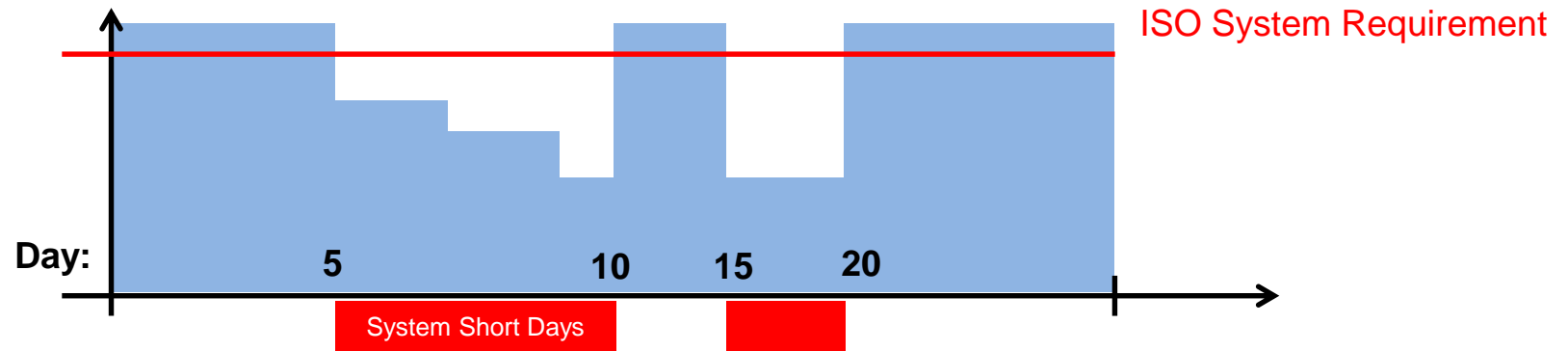


NoW OPOO = Nature of Work Off-Peak Opportunity for Outage

Planned Outage Substitution Review

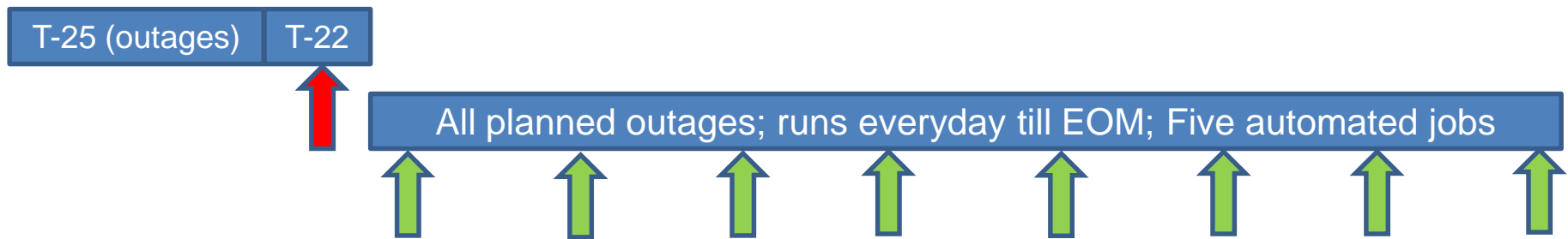
- ISO applies the impact of Planned Outages no later than 22 days prior to the compliance month for RA resources (includes CPM).
- On each day, if the ISO total system is short due to Planned Outages, a Planned Outage Substitution Obligation is assigned to suppliers in CIRA.
- Suppliers need to log in to CIRA to view substitution requirement as there is no automatic notification sent out.
- Planned Substitutions are due by T-8 (eight days before start date of the substitution).

POSO for Scheduled Generation Outages



- ISO system requirement is the total adjusted obligation.
- Blue is total RA per day.
- In this example, during days 5 -10 and 15 - 20 the System RA is deficient.

Initial POSO Planned Outage Analysis



1. The substitution requirement is assigned on or before 22 days prior to the compliance month for RA resources.
 - This requirement doesn't change (Initial POSO)
2. Substitution requirements are assigned everyday for any changes to existing outages.
3. New outages in the system are assessed everyday until the end of the RA month and output is displayed in the Latest POSO run.

Planned Outage Analysis

- All planned outage substitutions are submitted using the CIRA user interface.
- Substitution RA from planned outages is treated as system RA.
 - RA is transferred as system RA to the substitute resource irrespective of the RA designation on the outage resource.

Planned Outage Analysis

- Substitutions may be canceled if the substitution has not yet commenced (i.e. moved past its DAM submission deadline).
- Substitution may be released if substitution has already commenced AND substitution is still active.
- For both the cancel and release features, the original resource RA will revert substitution RA back to its initial RA listing, provided there is available capacity remaining on the original resource.

Planned Outage Analysis

- You can only release substitution capacity in the day ahead timeframe through the end of the substitution period.
- If you cancel or release a POSO substitution, the MWs are transferred back to the original resource with the same Local and System MW allocation that the resource had prior to the substitution.

Searching for Planned Outages

Plans

RA Validation

CSP Offers

Substitutions

Reports

Outage Resource Selection

Trade Month **January** ▼ *

Trade Year **2018** ▼ *

Outage ID

Resource ID

Supplier SC **-SCID-** ▼

Substitution Required **YES** ▼

Show Outages

Show/Hide Results

Forced

Planned

Outage Exemptions

Create

Review

Selecting a Substitute for Planned Outages

Plans

RA Validation

CSP Offers

Substitutions

Reports

Create POSO Substitution

Trade Month *

Trade Year *

Outage ID

Resource ID

Supplier SC

POSO Calculation Type

Latest

Initial POSO

A planned outage must be POSO assigned for it to be substituted.

Selecting a Substitute for Planned Outages

Create POSO Substitution

[Review POSO Substitution](#)

Trade Month Trade Year POSO Calculation Type Latest Initial POSO

Outage ID Resource ID Supplier SC

Showing 1 to 10 of 26 entries

	Resource ID	Resource Name	Outage ID	Start Date	End Date	Nature of Work	Opportunity Flag	Area	SCID
<input type="checkbox"/>				01/08/2018 00:00:00	01/12/2018 23:59:00	AMBIENT_DUE_TO_TEMP			
<input type="checkbox"/>				01/01/2018 00:00:00	01/02/2018 23:59:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/08/2018 01:00:00	01/08/2018 04:00:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/06/2018 07:00:00	01/06/2018 09:00:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/16/2018 01:00:00	01/16/2018 09:00:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/11/2018 06:00:00	01/11/2018 09:00:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/01/2018 00:00:00	01/01/2018 00:59:00	PLANT_MAINTENANCE			
<input checked="" type="checkbox"/>				12/30/2017 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/02/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE			
<input type="checkbox"/>				01/03/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE			

Show 10 entries

Previous Next

Substitution for Planned Outages

Showing 1 to 10 of 26 entries 1 row selected

	Resource ID	Resource Name	Outage ID	Start Date	End Date	Nature of Work
<input checked="" type="checkbox"/>				01/08/2018 00:00:00	01/12/2018 23:59:00	AMBIENT_DUE_TO_TEMP
<input type="checkbox"/>				01/01/2018 00:00:00	01/02/2018 23:59:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/08/2018 01:00:00	01/08/2018 04:00:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/06/2018 07:00:00	01/06/2018 09:00:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/16/2018 01:00:00	01/16/2018 09:00:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/11/2018 06:00:00	01/11/2018 09:00:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/01/2018 00:00:00	01/01/2018 00:59:00	PLANT_MAINTENANCE
<input type="checkbox"/>				12/30/2017 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/02/2018 00:00:00	01/02/2018 23:59:00	PLANT_MAINTENANCE
<input type="checkbox"/>				01/03/2018 00:00:00	01/31/2018 23:59:00	PLANT_MAINTENANCE

Show 10 entries

Planned Substitute Resource Selection

Sub Start Date * Sub End Date * Only Third Party Resources Non-RA Capacity Only

Resource ID SC ID Area

Substitute MW

*Press Ctrl + -> or Ctrl + <- keys to copy data in the cells right or left

Outage ID:	Resource on Outage:							Outage SCID:									
Day	01/01	01/02	01/03	01/04	01/05	01/06	01/07	01/08	01/09	01/10	01/11	01/12	01/13	01/14	01/15	01/16	01/17
RA MW	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06
CPM MW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total RA	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06	117.06
POSO MW	0	0	0	0	0	0	0	17.06	17.06	17.06	17.06	17.06	0	0	0	0	0
Total Cumulative Sub Cap	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00









Notes on Substitution for Planned Outages

- Substitution can only be provided for the days that POSO is assigned.
- Substitution MWs can be provided up to the RA MW of the original resource.
- Multiple resources can be used in a single substitution.

Substitution for Planned Outages

Substitute MW

*Press Ctrl + -> or Ctrl + <- keys to copy data in the cells right or left

Outage ID:	Resource on Outage	Outage SCID:				
Day	01/19	01/20	01/21	01/22		
RA MW	202.7	202.7	202.7	202.7		
CPM MW	0	0	0	0		
Total RA	202.70	202.70	202.70	202.70		
POSO MW	202.7	202.7	202.7	202.7		
Total Cumulative Sub Cap	0.00	0.00	0.00	0.00		
<input type="button" value="Remove Resource"/>						
Curtailment MW	0	0	0	0		
Eligible Non-RA Capacity	2.1	2.1	2.1	2.1		
Substitute MW	0 	0 	0 	0 		
CPM Substitute MW	0 	0 	0 	0 		

Submitter Information

Name * Email * Phone *
Please specify a valid phone number

Notes

Notes on Substitution for Planned Outages

- In this case the POSO MW requirement of 202.7 is equal to the RA MW of 202.7, but it can be less.
- Substitution MWs can be provided *up to* the RA MW of the original resource.
- CPM Substitute MW can only be provided up to the CPM MW of the original resource.

In this case the CPM MW is equal to zero so no substitution is allowed.

Review Planned Outage Substitutions

Plans

RA Validation

CSP Offers

Substitutions

Reports

Admin

Review POSO Substitution

Substitution ID <input type="text"/>	Original Resource ID <input type="text"/>	Sub Resource ID <input type="text"/>	Outage ID <input type="text"/>
Trade Month <input type="text" value="January"/> *	Trade Year <input type="text" value="2018"/> *	Substitution Status <input type="text" value="-Select-"/>	<input type="checkbox"/> Third Party <input type="checkbox"/> Released
<input type="button" value="Search"/>			

Review Planned Outage Substitutions

Review POSO Substitution

Substitution ID Original Resource ID Sub Resource ID Outage ID
 Trade Month * Trade Year * Substitution Status Third Party Released

Showing 1 to 6 of 6 entries

	Outage ID	Outage Start Date	Outage End Date	Nature of Work	Sub ID	Original SCID	Original Res ID	Original Res Name	Sub Res ID	Description
<input type="checkbox"/>	:	01/08/2018 00:00:00	01/12/2018 23:59:00	PLANT_MAINTENANCE						Market Sim Sub
<input type="checkbox"/>	:	01/01/2018 00:00:00	01/21/2018 00:00:00	PLANT_MAINTENANCE						
<input type="checkbox"/>	:	01/23/2018 00:00:00	01/26/2018 23:59:00	PLANT_MAINTENANCE						
<input type="checkbox"/>	:	01/23/2018 00:00:00	01/26/2018 23:59:00	PLANT_MAINTENANCE						
<input type="checkbox"/>	:	01/23/2018 00:00:00	01/26/2018 23:59:00	PLANT_MAINTENANCE						
<input type="checkbox"/>	:	01/15/2018 00:00:00	01/19/2018 23:59:00	PLANT_MAINTENANCE						Market Sim Substitution RERC 4

Planned Outage Review and Release

Review POSO Substitution

Substitution ID Original Resource ID Sub Resource ID Outage ID
Trade Month * Trade Year * Substitution Status
 Third Party Released

Showing 1 to 6 of 6 entries 1 row selected

	Outage ID	Outage Start Date	Outage End Date	Nature of Work	Sub ID	Original SCID	Original Res ID	Original Res Name
<input type="checkbox"/>		01/08/2018 00:00:00	01/12/2018 23:59:00	PLANT_MAINTENANCE				
<input checked="" type="checkbox"/>		01/01/2018 00:00:00	01/21/2018 00:00:00	PLANT_MAINTENANCE				
<input type="checkbox"/>		01/23/2018 00:00:00	01/26/2018 23:59:00	PLANT_MAINTENANCE				
<input type="checkbox"/>		01/23/2018 00:00:00	01/26/2018 23:59:00	PLANT_MAINTENANCE				
<input type="checkbox"/>		01/23/2018 00:00:00	01/26/2018 23:59:00	PLANT_MAINTENANCE				
<input type="checkbox"/>		01/15/2018 00:00:00	01/19/2018 23:59:00	PLANT_MAINTENANCE				

Show 10 entries

POSO Substitution Request

Outage ID: Resource on Outage: Outage SCID:

Release	Day	01/01	01/02	01/03	01/04	01/05	01/06	01/07	01/08	01/09	01/10	01/11	01/12	01/13
	POSO MW	70	70	70	70	70	70	70	70	70	70	70	70	70
	Total Cumulative Sub Cap	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00	40.00
<input type="checkbox"/>		APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED	APPROVED
	Substitute MW	40	40	40	40	40	40	40	40	40	40	40	40	40
	CPM Substitute MW	0	0	0	0	0	0	0	0	0	0	0	0	0

Checking here activates the release button above

Planned Substitution Review and Release

The review screen for planned substitution houses the following substitution functions:

- Search
- Approve
- Reject
- Release

If the owner of the original and substitution resource is the same then the system will automatically approve the substitution.











The Forced Substitution has a separate release screen.

RAAIM Pre-Calc Runs

RAAIM Calculations

Calculation Period Month: January | Calculation Period Year: 2018
Market Timeframe: -Select- | Status: -Select-

View Publish Reset

Run ID	Calculation Start Date	Calculation End Date	Executed Date	Status	Run Type	Comments	Is Auto Publish	View Details	Publish/Republish
25073220972	01/17/2018 07:00:00	01/17/2018 07:59:59	01/17/2018 06:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220971	01/17/2018 06:00:00	01/17/2018 06:59:59	01/17/2018 05:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220970	01/17/2018 05:00:00	01/17/2018 05:59:59	01/17/2018 04:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220969	01/17/2018 04:00:00	01/17/2018 04:59:59	01/17/2018 03:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220968	01/17/2018 03:00:00	01/17/2018 03:59:59	01/17/2018 02:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220967	01/17/2018 02:00:00	01/17/2018 02:59:59	01/17/2018 01:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220966	01/17/2018 01:00:00	01/17/2018 01:59:59	01/17/2018 00:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220965	01/17/2018 00:00:00	01/17/2018 00:59:59	01/16/2018 23:00:00	COMPLETED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220964	01/16/2018 23:00:00	01/16/2018 23:59:59	01/16/2018 22:00:00	PUBLISHED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>
25073220963	01/16/2018 22:00:00	01/16/2018 22:59:59	01/16/2018 21:00:00	PUBLISHED	SCHEDULER	Triggered By RaaimPrecalcRTJob			<input type="checkbox"/>

1 2 3 4 5 6 7 8 9 10 .. 42 Next Max: 10

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Users will only see published statuses.

RAAIM Pre-Calc Runs

RAAIM Calculations Details

Run ID: Resource ID: Market Timeframe:
 Date From: Date To:

Resource	Outage Info	Run	Market	Date	Pre-Calc Values	HE01	HE02	HE03	HE04	HE05	HE06	HE07	HE08	HE09	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Gen Exempt	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Gen Use Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Gen Non Use Limit	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Flex Exempt	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Flex Use Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Flex Non Use Limit	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Gen RA	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25	185.25
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Gen CPM RA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Flex RA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<input type="button" value="View Outages"/>	2505i	RTM	11/01/2017	Flex CPM RA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<input type="button" value="View Outages"/>	2505i	RTM	11/02/2017	Gen Exempt	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
	<input type="button" value="View Outages"/>	2505i	RTM	11/02/2017	Gen Use Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<input type="button" value="View Outages"/>	2505i	RTM	11/02/2017	Gen Non Use Limit	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6
	<input type="button" value="View Outages"/>	2505i	RTM	11/02/2017	Flex Exempt	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6	208.6

1 2 3 4 5 6 7 8 9 10 .. 149 Next

Max: 14

RAAIM Pre-Calc Runs (closer look)

RAAIM Calculations Details

Run ID Resource ID

Date From Date To

View Reset

Resource	Outage Info	Run	Market	Date	Pre-Calc Values	HE01	HE02	HE03	HE04	HE05	HE06
	View Outages	25056:	RTM	11/01/2017	Gen Exempt	208.6	208.6	208.6	208.6	208.6	208.6
	View Outages	25056:	RTM	11/01/2017	Gen Use Limit	0	0	0	0	0	0
	View Outages	25056:	RTM	11/01/2017	Gen Non Use Limit	208.6	208.6	208.6	208.6	208.6	208.6
	View Outages	25056:	RTM	11/01/2017	Flex Exempt	208.6	208.6	208.6	208.6	208.6	208.6
	View Outages	25056:	RTM	11/01/2017	Flex Use Limit	0	0	0	0	0	0
	View Outages	25056:	RTM	11/01/2017	Flex Non Use Limit	208.6	208.6	208.6	208.6	208.6	208.6
	View Outages	25056:	RTM	11/01/2017	Gen RA	185.25	185.25	185.25	185.25	185.25	185.25
	View Outages	25056:	RTM	11/01/2017	Gen CPM RA	0	0	0	0	0	0
	View Outages	25056:	RTM	11/01/2017	Flex RA	0	0	0	0	0	0
	View Outages	25056:	RTM	11/01/2017	Flex CPM RA	0	0	0	0	0	0
	View Outages	25056:	RTM	11/02/2017	Gen Exempt	208.6	208.6	208.6	208.6	208.6	208.6
	View Outages	25056:	RTM	11/02/2017	Gen Use Limit	0	0	0	0	0	0
	View Outages	25056:	RTM	11/02/2017	Gen Non Use Limit	208.6	208.6	208.6	208.6	208.6	208.6
	View Outages	25056:	RTM	11/02/2017	Flex Exempt	208.6	208.6	208.6	208.6	208.6	208.6

Note there is now both Gen and Flex Exempt MW.

Previously it was only Exempt MW.

RAAIM Pre-Calc Run Downloads

View Outages	2507:	DAM	01/15/2018	Flex CPM RA	0	0	0	0	0	0
View Outages	2507:	DAM	01/15/2018	Gen Exempt	0	0	0	0	0	0
View Outages	2507:	DAM	01/15/2018	Gen Use Limit	0	0	0	0	0	0
View Outages	2507:	DAM	01/15/2018	Gen Non Use Limit	0	0	0	0	0	0
View Outages	2507:	DAM	01/15/2018	Flex Exempt	641	641	641	641	641	641

1 [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [Next](#)

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