Training: Transmission Service and Market Scheduling Priorities – Phase 1

April 28, 2022

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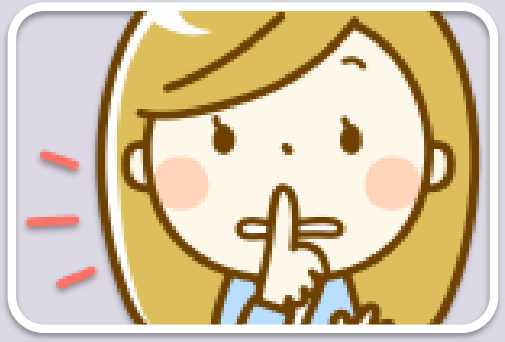
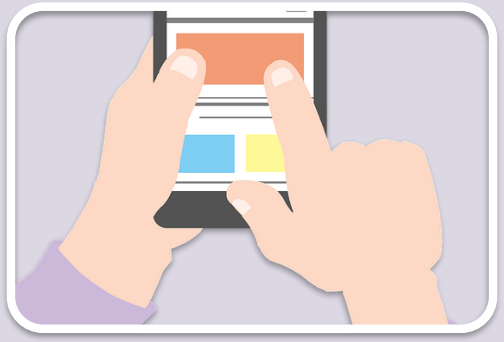
Customer Readiness

Updated: 4/28/2022

Housekeeping



Keep yourself muted to minimize background noise



Unmute to ask verbal questions or write questions in the chat pod

Raise your hand using WebEx interactivity tools

Agenda

- This training will cover the following topics:
  - High-level review of changes
  - Application-specific details
  - Process review: Registration in Master File and SIBR terminology
  - Market simulation activities

Objectives: Transmission Service and Market Scheduling Priorities

- Extend current (interim) wheeling through scheduling priorities framework for summer 2022/2023 through May 31, 2024
- Foster coordination between supporting resources and scheduling coordinators submitting high priority exports
- Change how VERs can support high priority exports
- Publish additional requested data and information

Acronyms

Abbreviation	Term
BAA	Balancing Authority Area
CMRI	Customer Market Results Interface
DALPT	Day-Ahead Lower Price Taker
DAM	Day-Ahead Market
DAPT	Day-Ahead Price Taker
FERC	Federal Energy Regulatory Commission
GRDT	Generator Resource Data Template
HASP	Hour-Ahead Scheduling Process
HE	Hour-ending
IFM	Integrated Forward Market
IRDT	Intertie Resource Data Template

Acronyms

Abbreviation	Term
LPT Export	Lower Price Taker Export
LPT Wheel	Lower Price Taker Wheel
NERC	North American Electric Reliability Corporation
OASIS	Open Access Same-time Information System
PT Export	Price Taker Export
PT Wheel	Price Taker Wheel
RA	Resource Adequacy
RTD	Real-Time Dispatch
RTLPT	Real-Time Lower Price Taker
RTM	Real-Time Market

Acronyms

Abbreviation	Term
RTPD	Real-Time Pre Dispatch
RTPT	Real-Time Price Taker
RUC	Residual Unit Commitment
SC	Scheduling Coordinator
SIBR	Scheduling Infrastructure and Business Rules
SS-LPT	Self-Schedule Lower Price Taker
SS-STD	Self-Schedule Standard (also known as a Self-Schedule Price Taker)
TOR	Transmission Ownership Rights
UI	User Interface
VER	Variable Energy Resource

TRANSMISSION SERVICE AND MARKET SCHEDULING PRIORITIES – PHASE 1

Implementation timeline

- Tariff amendment filed with FERC: January 27, 2022
  - FERC approval obtained March 15, 2022
- Market simulation window: May 3 – 20, 2022
- Production activation target date: June 1, 2022

BACKGROUND: HIGH-LEVEL REVIEW OF CHANGES

Extend interim wheeling through scheduling priorities

- High-priority wheels are available for external load serving entities that are planning on using the ISO system to meet their reliability needs
- High-priority wheels are established by:
  - Notifying the ISO 45 days prior to the month the MW quantity of the wheel
  - Attesting that they have secured firm transmission to the ISO border for the entire month
- This change will now expire June 1, 2024 (previously set to expire in 2022)
- Allows for time to focus on long-term solution to establish a transmission reservation process (Phase 2)

Foster coordination between supporting resources and scheduling coordinators submitting high priority exports

- Provide additional visibility of non-RA capacity for a supporting resource
- Provide notification when a high priority export (PT export) schedule exceeds the non-RA capacity of the supporting resource
- Information will be provided via the SIBR tool to scheduling coordinators on the generator and the export side

Change how VERs can support high priority exports

CURRENT:

- Rules require that resources supporting high-priority exports have sufficient capacity for the entire hour (based on forecast at time of bid submission)

NEW:

- Require VER supporting high-priority exports be based on the most recent forecast ahead of the real-time market close for the relevant hour

- This change sets the expectation that if the forecast changes, an SC for a high priority, non-recallable export should update its bid accordingly

Publish additional requested data and information

- Manual reports posted to caiso.com
  - Aggregate historical resource adequacy import data
  - Aggregate data on registered high-priority wheeling transactions

- OASIS
  - Load forecast adjustments in RUC, HASP, RTPD, and RTD
  - Data on aggregate schedule reduction in RUC and HASP

Questions

SIBR

OASIS

Manual Reports

REVIEW APPLICATION-SPECIFIC DETAILS

SC of supporting resource will have instantaneous visibility of available capacity in SIBR

SIBR

- SIBR will calculate the hourly total self-scheduled exports submitted by SCs for the same designated supporting resource ID for each supporting resource before the market close in DAM and RTM
  - Display: Designated supporting resource ID, non-RA capacity, total submitted self-scheduled PT exports
  - Timeframe: Whenever PT export resources submit schedules

SCs will receive notification when the sum of PT export schedules exceed non-RA capacity of supporting resource

SIBR

- SIBR will notify SCs of PT export schedule and supporting resource when the latest submission of self-scheduled export causes the sum of schedules to exceed the non-RA capacity
  - Method of notification: Export Priority Report tab (in addition to SIBR validation rules)
  - Timeframe: Whenever PT export resources submit schedules, before close of DAM or RTM
  - Market participant action: SCs should coordinate to resubmit/adjust PT exports to maintain PT priority prior to market close
    - If resource non-RA capacity is not sufficient to cover all associated PT export self schedules, they will be converted to DALPT or RTLPT self-schedules

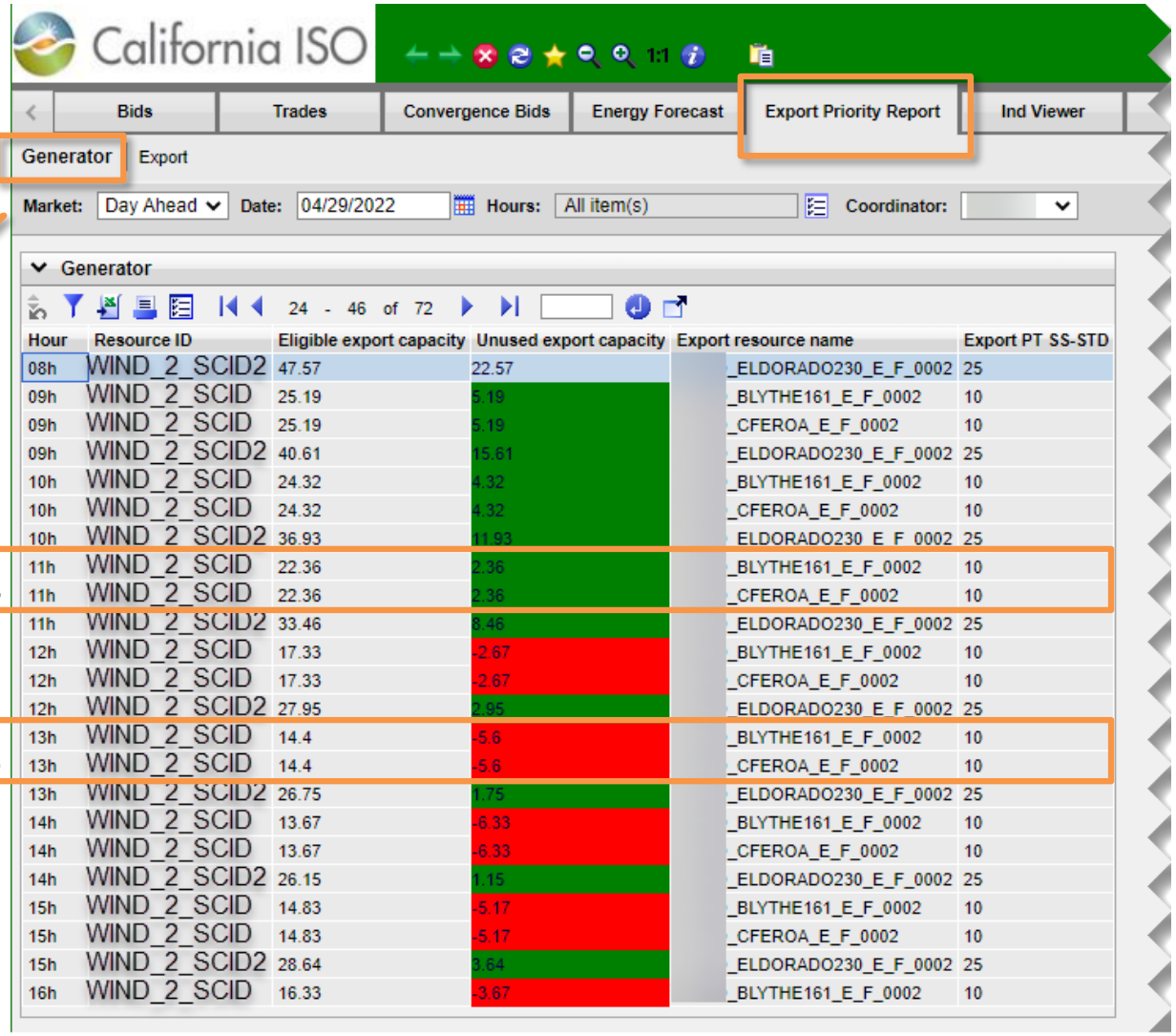
SIBR: New Tab – Export Priority Report > **Generator** subtab

SIBR

Drop-down for **Day Ahead** or **Real Time**

Example 1

Example 2



Hour	Resource ID	Eligible export capacity	Unused export capacity	Export resource name	Export PT SS-STD
08h	WIND_2_SCID2	47.57	22.57	_ELDORADO230_E_F_0002	25
09h	WIND_2_SCID	25.19	5.19	_BLYTHE161_E_F_0002	10
09h	WIND_2_SCID	25.19	5.19	_CFEROA_E_F_0002	10
09h	WIND_2_SCID2	40.61	15.61	_ELDORADO230_E_F_0002	25
10h	WIND_2_SCID	24.32	4.32	_BLYTHE161_E_F_0002	10
10h	WIND_2_SCID	24.32	4.32	_CFEROA_E_F_0002	10
10h	WIND_2_SCID2	36.93	11.93	_ELDORADO230_E_F_0002	25
11h	WIND_2_SCID	22.36	2.36	_BLYTHE161_E_F_0002	10
11h	WIND_2_SCID	22.36	2.36	_CFEROA_E_F_0002	10
11h	WIND_2_SCID2	33.46	8.46	_ELDORADO230_E_F_0002	25
12h	WIND_2_SCID	17.33	-2.67	_BLYTHE161_E_F_0002	10
12h	WIND_2_SCID	17.33	-2.67	_CFEROA_E_F_0002	10
12h	WIND_2_SCID2	27.95	2.95	_ELDORADO230_E_F_0002	25
13h	WIND_2_SCID	14.4	-5.6	_BLYTHE161_E_F_0002	10
13h	WIND_2_SCID	14.4	-5.6	_CFEROA_E_F_0002	10
13h	WIND_2_SCID2	26.75	1.75	_ELDORADO230_E_F_0002	25
14h	WIND_2_SCID	13.67	-6.33	_BLYTHE161_E_F_0002	10
14h	WIND_2_SCID	13.67	-6.33	_CFEROA_E_F_0002	10
14h	WIND_2_SCID2	26.15	1.15	_ELDORADO230_E_F_0002	25
15h	WIND_2_SCID	14.83	-5.17	_BLYTHE161_E_F_0002	10
15h	WIND_2_SCID	14.83	-5.17	_CFEROA_E_F_0002	10
15h	WIND_2_SCID2	28.64	3.64	_ELDORADO230_E_F_0002	25
16h	WIND_2_SCID	16.33	-3.67	_BLYTHE161_E_F_0002	10

Example 1:

- One resource with total eligible export capacity of 22.36 in HE 11
- Supporting two 10 MW exports
- 2.36 MW unused capacity

Example 2:

- One resource with total eligible export capacity of 14.4 in HE 13
- Identified as supporting two 10 MW exports
- SCs should coordinate to resubmit/adjust exports to prevent both exports from being converted to lower priority

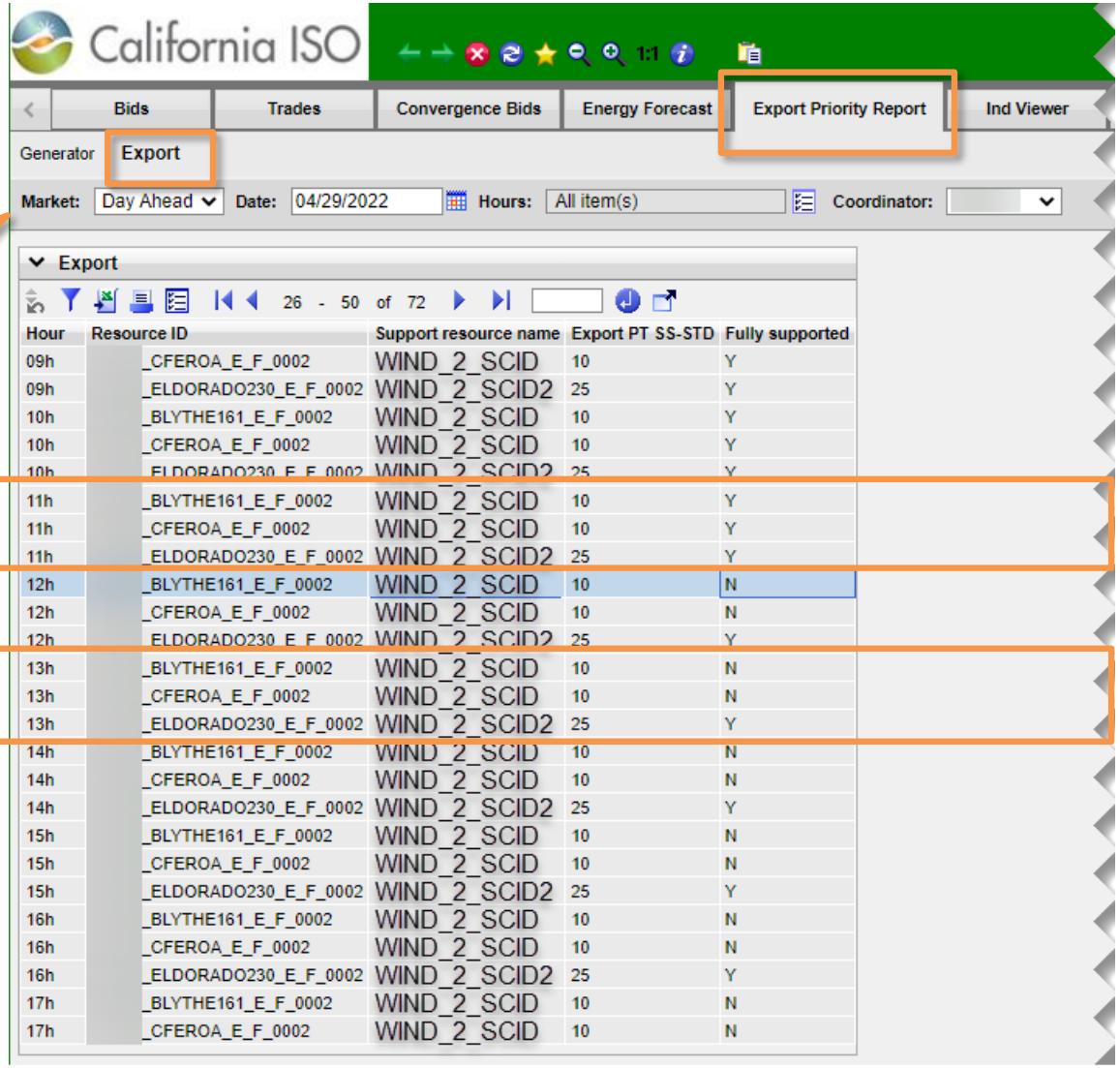
SIBR: New Tab – Export Priority Report > **Export** subtab

SIBR

Drop-down for **Day Ahead** or **Real Time**

Example 1

Example 2



Hour	Resource ID	Support resource name	Export PT SS-STD	Fully supported
09h	_CFEROA_E_F_0002	WIND_2_SCID	10	Y
09h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
10h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	Y
10h	_CFEROA_E_F_0002	WIND_2_SCID	10	Y
10h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
11h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	Y
11h	_CFEROA_E_F_0002	WIND_2_SCID	10	Y
11h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
12h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	N
12h	_CFEROA_E_F_0002	WIND_2_SCID	10	N
12h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
13h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	N
13h	_CFEROA_E_F_0002	WIND_2_SCID	10	N
13h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
14h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	N
14h	_CFEROA_E_F_0002	WIND_2_SCID	10	N
14h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
15h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	N
15h	_CFEROA_E_F_0002	WIND_2_SCID	10	N
15h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
16h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	N
16h	_CFEROA_E_F_0002	WIND_2_SCID	10	N
16h	_ELDORADO230_E_F_0002	WIND_2_SCID2	25	Y
17h	_BLYTHE161_E_F_0002	WIND_2_SCID	10	N
17h	_CFEROA_E_F_0002	WIND_2_SCID	10	N

Example 1:

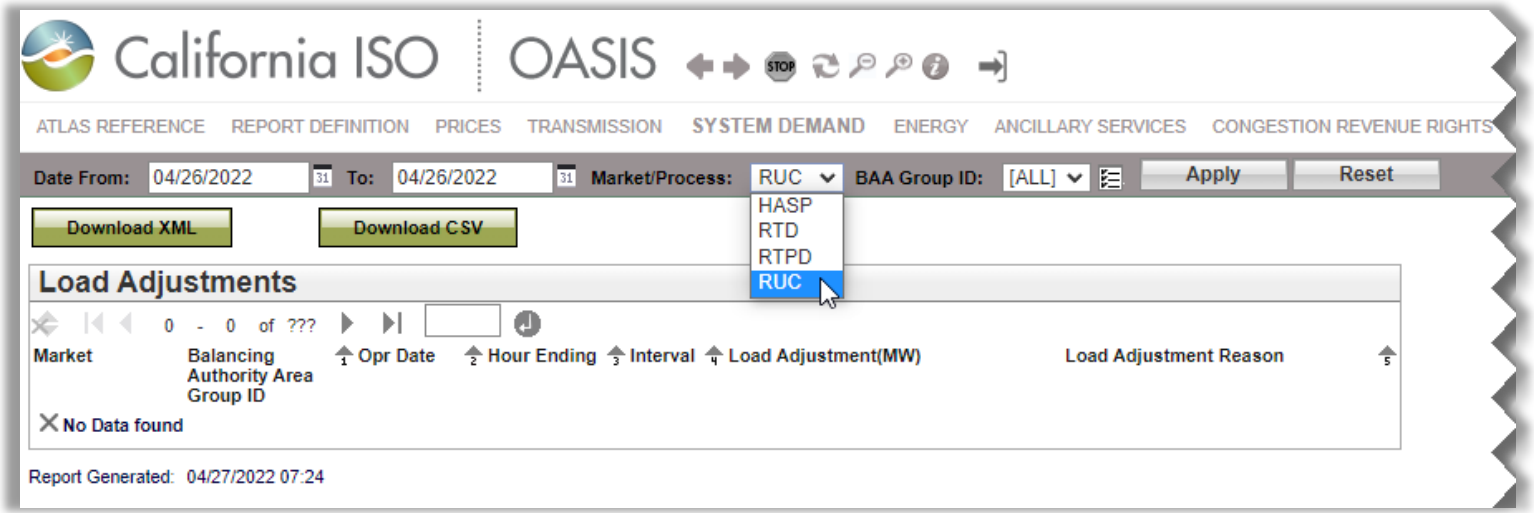
- All exports for HE 11 are fully supported indicating the bids will retain PT status at this time

Example 2:

- 25 MW export is fully supported
- Neither 10 MW export is fully supported and will be converted to lower priority if not adjusted/resubmitted prior to market close for HE13

The ISO will publish RUC load forecast adjustment

OASIS



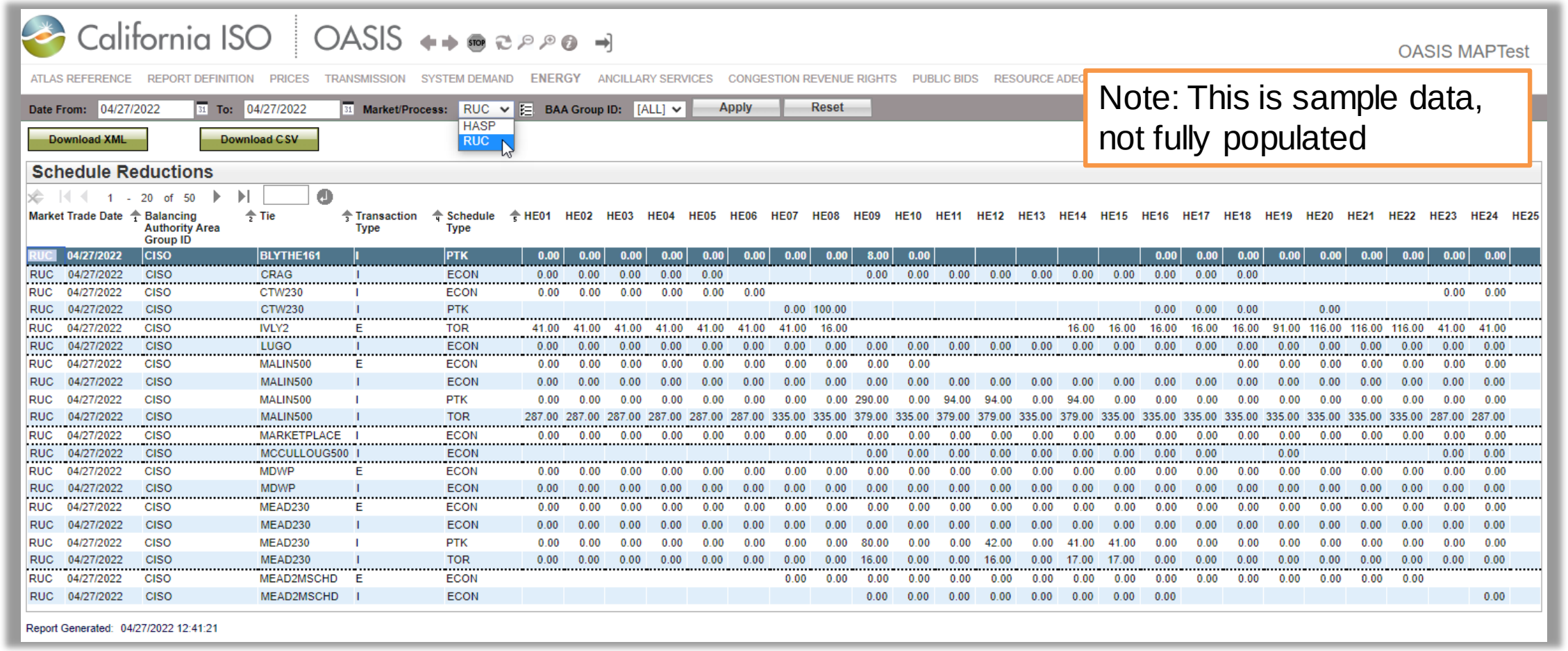
Note: Sample report not populated with data

- Report navigation path: OASIS > System Demand > Load Adjustments
- RUC load forecast adjustment will provide the MW targets the market will use to clear RUC each hour to cover uncertainty

- Reason will be provided, such as:
  - demand response, load forecast error (used to cover load uncertainty), fire danger, weather change, reliability coordinator next day studies, potential loss of resources (used for solar variability), stranded capacity, or reliability concerns

The ISO will publish RUC aggregated schedule reduction

OASIS



Market	Trade Date	Balancing Authority Area Group ID	Tie	Transaction Type	Schedule Type	HE01	HE02	HE03	HE04	HE05	HE06	HE07	HE08	HE09	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24	HE25
RUC	04/27/2022	CISO	BLYTHE161	I	PTK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.00	0.00						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	CRAG	I	ECON	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							
RUC	04/27/2022	CISO	CTW230	I	ECON	0.00	0.00	0.00	0.00	0.00	0.00																	0.00	0.00	
RUC	04/27/2022	CISO	CTW230	I	PTK							0.00	100.00								0.00	0.00	0.00		0.00					
RUC	04/27/2022	CISO	IVLY2	E	TOR	41.00	41.00	41.00	41.00	41.00	41.00	41.00	16.00						16.00	16.00	16.00	16.00	16.00	91.00	116.00	116.00	116.00	41.00	41.00	
RUC	04/27/2022	CISO	LUGO	I	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MALIN500	E	ECON	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	
RUC	04/27/2022	CISO	MALIN500	I	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MALIN500	I	PTK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	290.00	0.00	94.00	94.00	0.00	94.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MALIN500	I	TOR	287.00	287.00	287.00	287.00	287.00	287.00	335.00	335.00	379.00	335.00	379.00	379.00	335.00	379.00	335.00	335.00	335.00	335.00	335.00	335.00	335.00	335.00	287.00	287.00	
RUC	04/27/2022	CISO	MARKETPLACE	I	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MCCULLOUG500	I	ECON									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00				0.00	0.00	
RUC	04/27/2022	CISO	MDWP	E	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MDWP	I	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MEAD230	E	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MEAD230	I	ECON	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MEAD230	I	PTK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.00	0.00	0.00	42.00	0.00	41.00	41.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MEAD230	I	TOR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.00	0.00	0.00	16.00	0.00	17.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
RUC	04/27/2022	CISO	MEAD2MSCHD	E	ECON							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			
RUC	04/27/2022	CISO	MEAD2MSCHD	I	ECON									0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								0.00	

- Report navigation path: OASIS > Energy > Schedule > Schedule Reductions

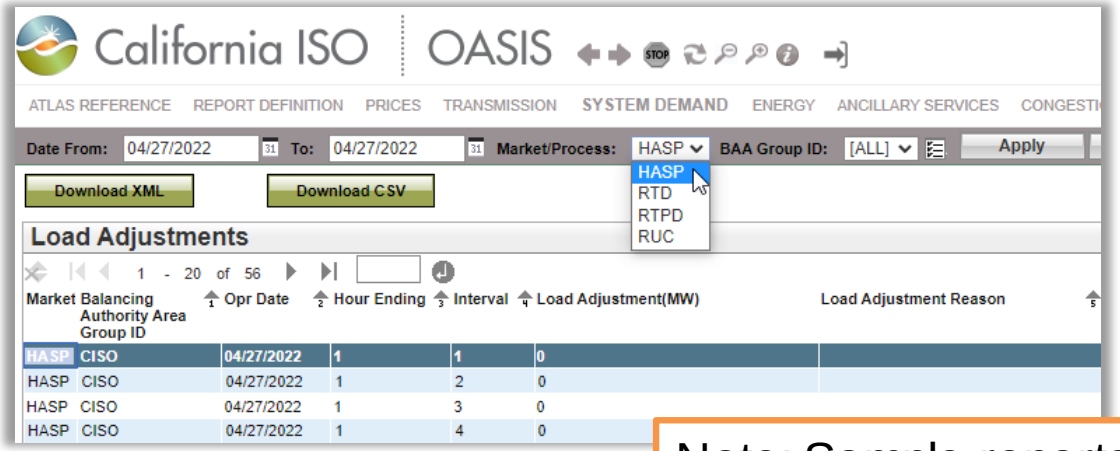
The ISO will publish RUC aggregated schedule reduction

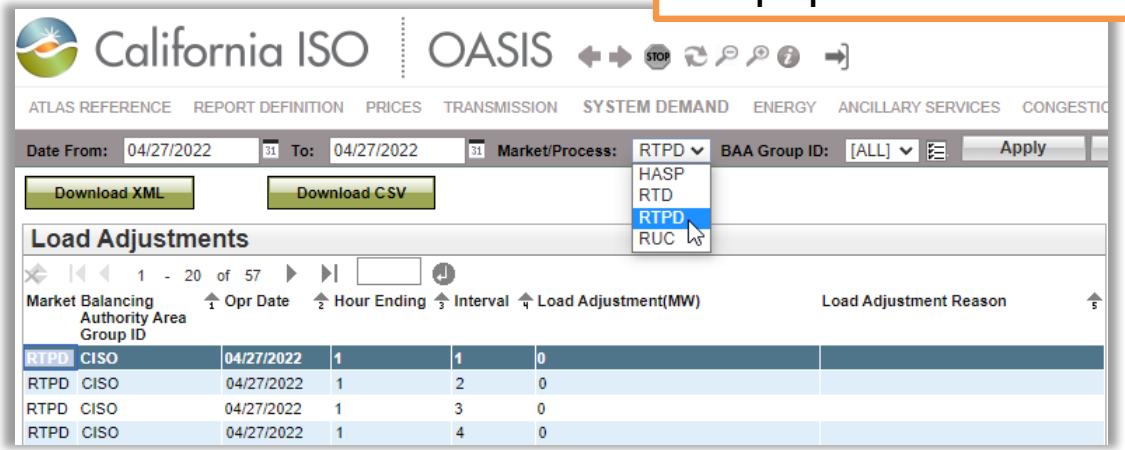
OASIS

- Hourly aggregated MW schedule reduction in RUC right after instruction issued for: wheel through transaction, import, exports, load reduction
- Summarized by BAA, by TOR, DAPT, DALPT, economic, by system and by tie points
- RUC schedule reduction represents the difference between IFM and RUC
  - Reduction occurs due to lack of transmission capability
- RUC schedule reduction data published to downstream systems
  - Individual resource data provided in CMRI (status quo)
  - Aggregate data on OASIS

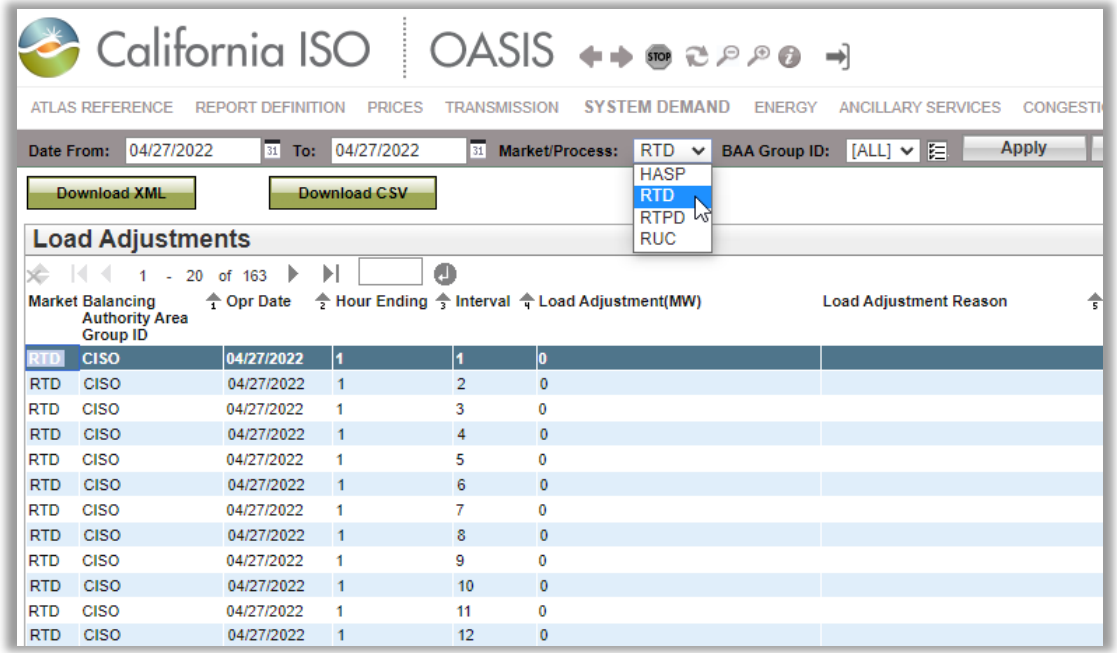
The ISO will publish HASP, RTPD, and RTD load forecast adjustments

OASIS





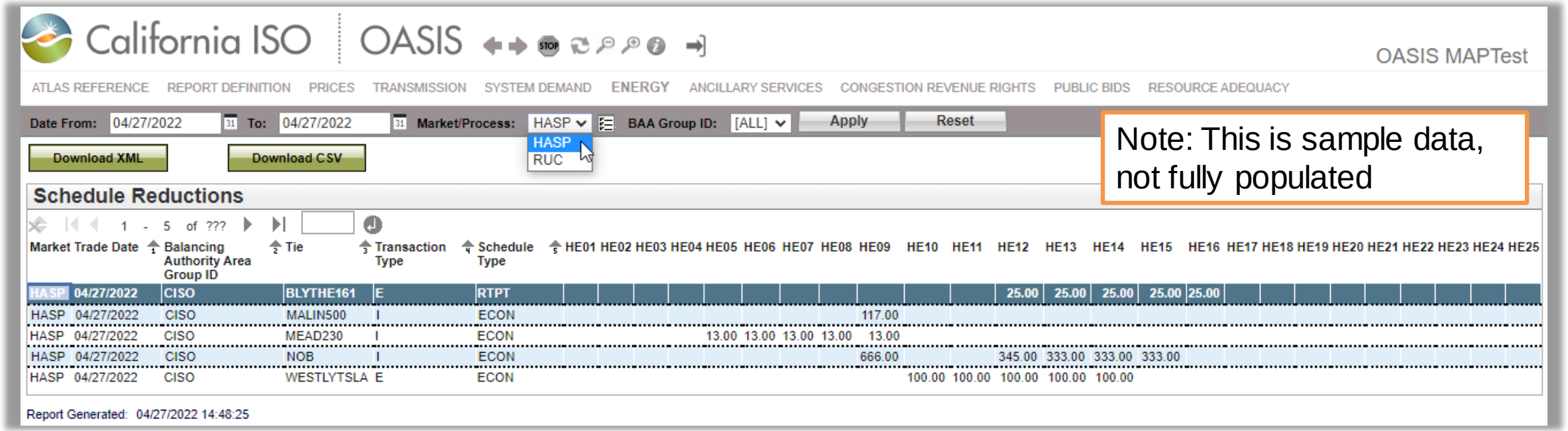
Note: Sample reports not populated with data



- Report navigation path: OASIS > System Demand > Load Adjustments
- Load forecast adjustment reason will be provided, such as: load deviation (used to cover load uncertainty), software issues, reliability event, resource deviation (used for solar variability)

The ISO will publish HASP schedule reductions

OASIS



Market	Trade Date	Balancing Authority Area Group ID	Tie	Transaction Type	Schedule Type	HE01	HE02	HE03	HE04	HE05	HE06	HE07	HE08	HE09	HE10	HE11	HE12	HE13	HE14	HE15	HE16	HE17	HE18	HE19	HE20	HE21	HE22	HE23	HE24	HE25
HASP	04/27/2022	CISO	BLYTHE161	E	RTPT												25.00	25.00	25.00	25.00	25.00									
HASP	04/27/2022	CISO	MALIN500	I	ECON									117.00																
HASP	04/27/2022	CISO	MEAD230	I	ECON					13.00	13.00	13.00	13.00	13.00																
HASP	04/27/2022	CISO	NOB	I	ECON									666.00			345.00	333.00	333.00	333.00										
HASP	04/27/2022	CISO	WESTLYTSLA	E	ECON										100.00	100.00	100.00	100.00	100.00											

- Report navigation path: OASIS > Energy > Schedule > Schedule Reductions

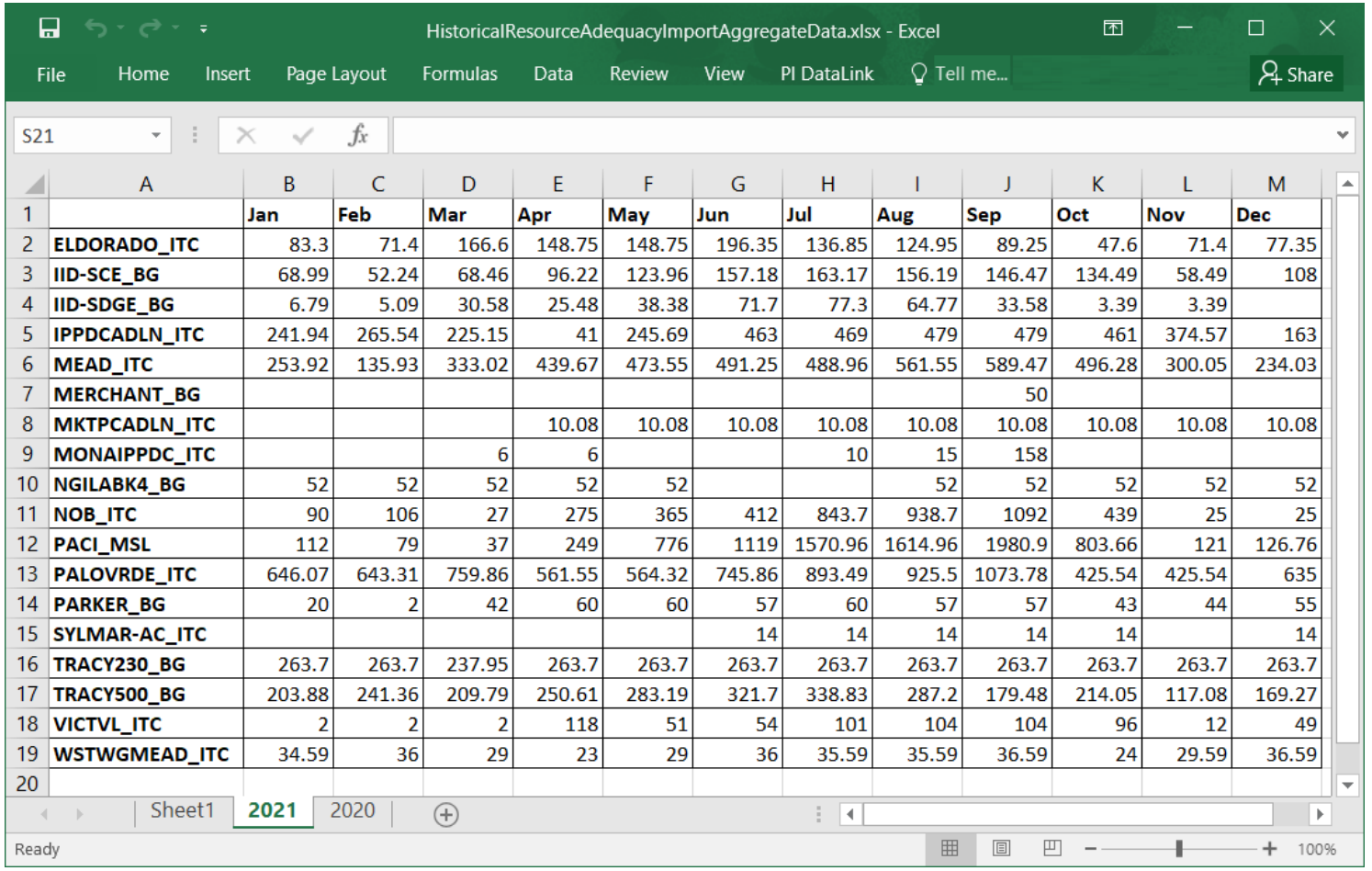
The ISO will publish HASP schedule reductions

OASIS

- Calculate the aggregated MW schedule reduction in HASP hourly block right after the instruction issued for: Wheel, import, exports, load reduction
  - Note: HASP adjustments represent the difference between RUC and HASP
- Summarized by BAA, by TOR, DAPT, DALPT, RTPT, RTLPT, economic, by system and by tie points
- HASP schedule reduction data published to downstream systems
  - Individual resource data provided in CMRI (status quo)
  - Aggregate data on OASIS

Manual report: Historical Resource Adequacy Import Aggregate Data

Manual Reports



	A	B	C	D	E	F	G	H	I	J	K	L	M
1		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2	ELDORADO_ITC	83.3	71.4	166.6	148.75	148.75	196.35	136.85	124.95	89.25	47.6	71.4	77.35
3	IID-SCE_BG	68.99	52.24	68.46	96.22	123.96	157.18	163.17	156.19	146.47	134.49	58.49	108
4	IID-SDGE_BG	6.79	5.09	30.58	25.48	38.38	71.7	77.3	64.77	33.58	3.39	3.39	
5	IPPDCADLN_ITC	241.94	265.54	225.15	41	245.69	463	469	479	479	461	374.57	163
6	MEAD_ITC	253.92	135.93	333.02	439.67	473.55	491.25	488.96	561.55	589.47	496.28	300.05	234.03
7	MERCHANT_BG									50			
8	MKTPCADLN_ITC				10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08
9	MONAIPPDC_ITC			6	6			10	15	158			
10	NGILABK4_BG	52	52	52	52	52			52	52	52	52	52
11	NOB_ITC	90	106	27	275	365	412	843.7	938.7	1092	439	25	25
12	PACI_MSL	112	79	37	249	776	1119	1570.96	1614.96	1980.9	803.66	121	126.76
13	PALOVRDE_ITC	646.07	643.31	759.86	561.55	564.32	745.86	893.49	925.5	1073.78	425.54	425.54	635
14	PARKER_BG	20	2	42	60	60	57	60	57	57	43	44	55
15	SYLMAR-AC_ITC						14	14	14	14	14		14
16	TRACY230_BG	263.7	263.7	237.95	263.7	263.7	263.7	263.7	263.7	263.7	263.7	263.7	263.7
17	TRACY500_BG	203.88	241.36	209.79	250.61	283.19	321.7	338.83	287.2	179.48	214.05	117.08	169.27
18	VICTVL_ITC	2	2	2	118	51	54	101	104	104	96	12	49
19	WSTWGMEAD_ITC	34.59	36	29	23	29	36	35.59	35.59	36.59	24	29.59	36.59
20													

Report details:

- Aggregate RA import showing at scheduling points
- One-time report that contains 2 years of historical data

Report location:

caiso.com > Planning > Reliability Requirements > Wheeling and resource adequacy imports aggregate data > Historical Resource Adequacy Import Aggregate Data

https://www.caiso.com/Documents/HistoricalResourceAdequacyImportAggregateData.xlsx

Manual report: Priority Wheeling Through Transactions Data

Manual Reports

PriorityWheelingThroughTransactionsData.xlsx - Excel

File Home Insert Page Layout Formulas Data Review View PI DataLink Tell me what you want to do... Share

Q14

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**Priority Wheeling Through Transactions - 2022 Registrations**												
2													
3		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
4	**Source**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**	**MW**
5	CFEROA	0	0	0	0	0	0	0	0	0	0	0	0
6	CFETIJ	0	0	0	0	0	0	0	0	0	0	0	0
7	MALIN500	0	0	0	0	0	0	0	0	0	0	0	0
8	MALIN500/NOB	0	0	0	0	0	0	0	0	0	0	0	0
9	NOB	0	0	0	0	0	0	0	0	0	0	0	0
10	SYLMAR	0	0	0	0	0	0	0	0	0	0	0	0
11		0	0	0	0	0	0	0	0	0	0	0	0
12	**Sink**												
13	ELDORADO230	0	0	0	0	0	0	0	0	0	0	0	0
14	MCCULLOUG500	0	0	0	0	0	0	0	0	0	0	0	0
15	MEAD230	0	0	0	0	0	0	0	0	0	0	0	0
16	PVWEST	0	0	0	0	0	0	0	0	0	0	0	0
17	WESTWING500	0	0	0	0	0	0	0	0	0	0	0	0
18		0	0	0	0	0	0	0	0	0	0	0	0
19													

Description | 2021 | 2022

Ready 100%

Report details:

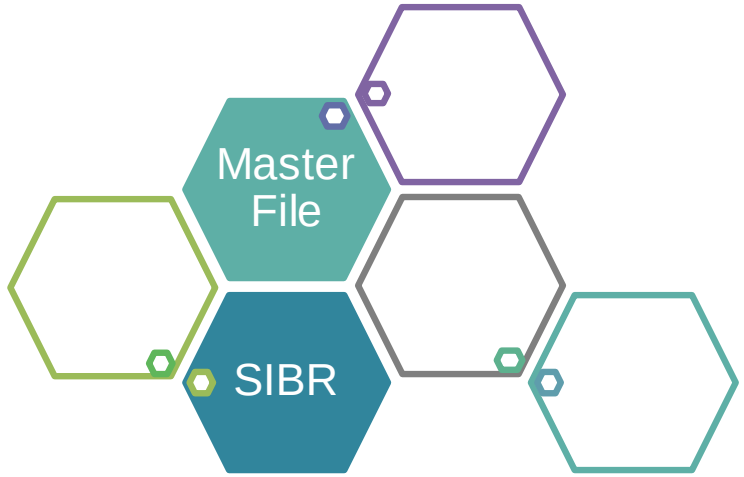
- Aggregate PT wheel registrations at import/export points
- Updated with new registrations submitted

Report location:

caiso.com > Planning > Reliability Requirements > Wheeling and resource adequacy imports aggregate data > Priority Wheeling Through Transactions Data

https://www.caiso.com/Documents/PriorityWheelingThroughTransactionsData.xlsx

Questions



Registration in Master File
SIBR Terminology

PROCESS OVERVIEW

Registration in Master File: Which form should I use?

Master File

Generator Resource Data Template

- Identify ISO internal supply resources that can support PT export
- Update existing data via Master File UI or API

Intertie Resource Data Template

- Identify export system resources that can support PT wheel
- Update existing data via Master File UI or API

New Intertie Resource Request

- Register high-priority wheel
- Send requests to RDT@caiso.com

GRDT: Identify resources that can support PT export

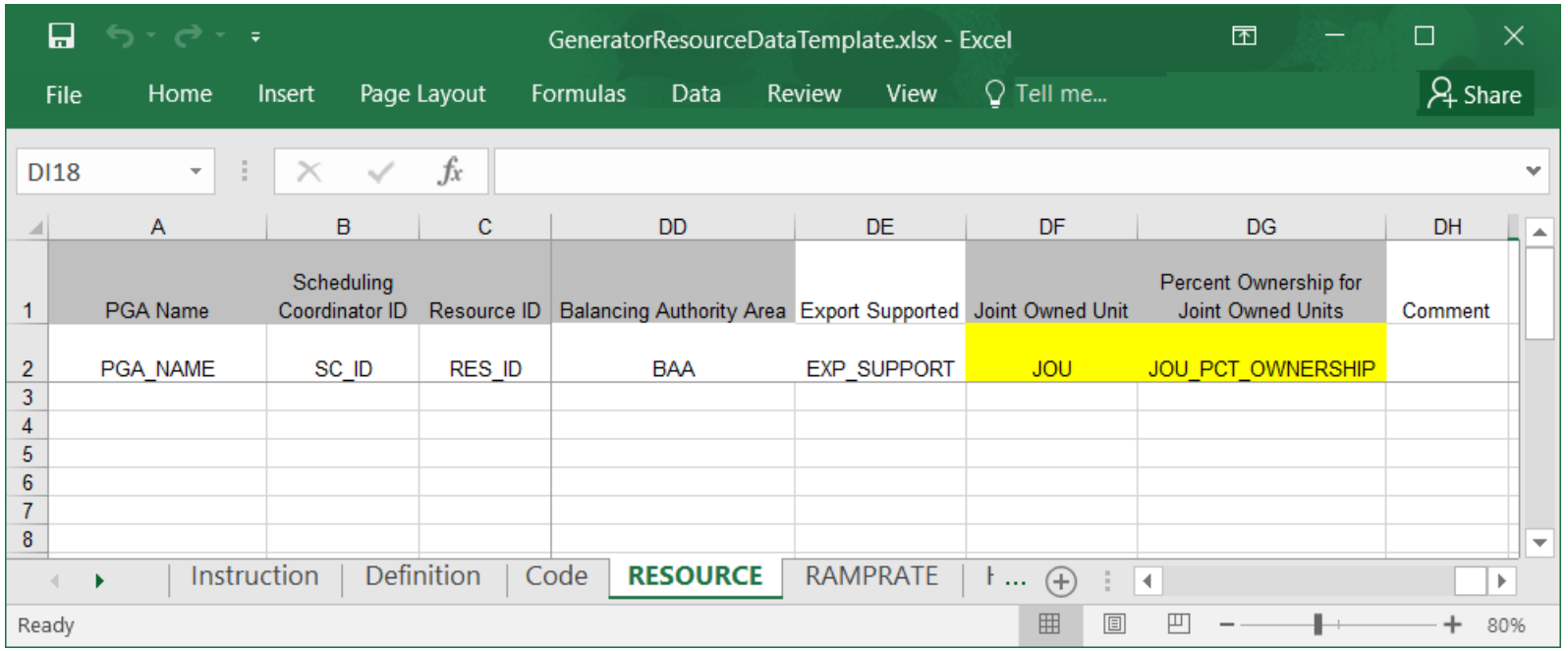
Master File

- Master File flag identifies ISO internal supply resources that can support PT export (will default to null)
  - **EXP_SUPPORT** field on GRDT
- By submitting the flag for designated resource, the SC can confirm:
  - The resource is capable at the time of bid submission of supporting an hourly block schedule over the entire relevant operating hour equal to the PT export quantity
  - A variable energy resource can support the export quantity in all 15-minute intervals
  - The designated capacity has been forward contracted only with an external load serving entity

Generator resource data template (GRDT)

Master File

- Submit GRDT with **EXP_SUPPORT** column set to Y to identify ISO internal supply resources that can support PT export
- Updates are subject to the Master File 5-business day timeline



IRDT: Identify resources that can support PT wheel

Master File

- Master File flags identify export system resources that can support PT wheel (will default to null)
  - **PT_WHEEL_SCHED** and **PT_WHEEL_MW** fields
  - SC must request PT Wheel ID to activate fields, or designate an existing export resource ID by populating these fields in the IRDT
- SCs can define a wheel schedule as a high priority wheel by:
  - Creating new export system resource that will be designated through use of Master File flag as capable of supporting a PT wheel (i.e. meets all attestation criteria on next slide)

Identify resources that can support PT wheel (cont'd)

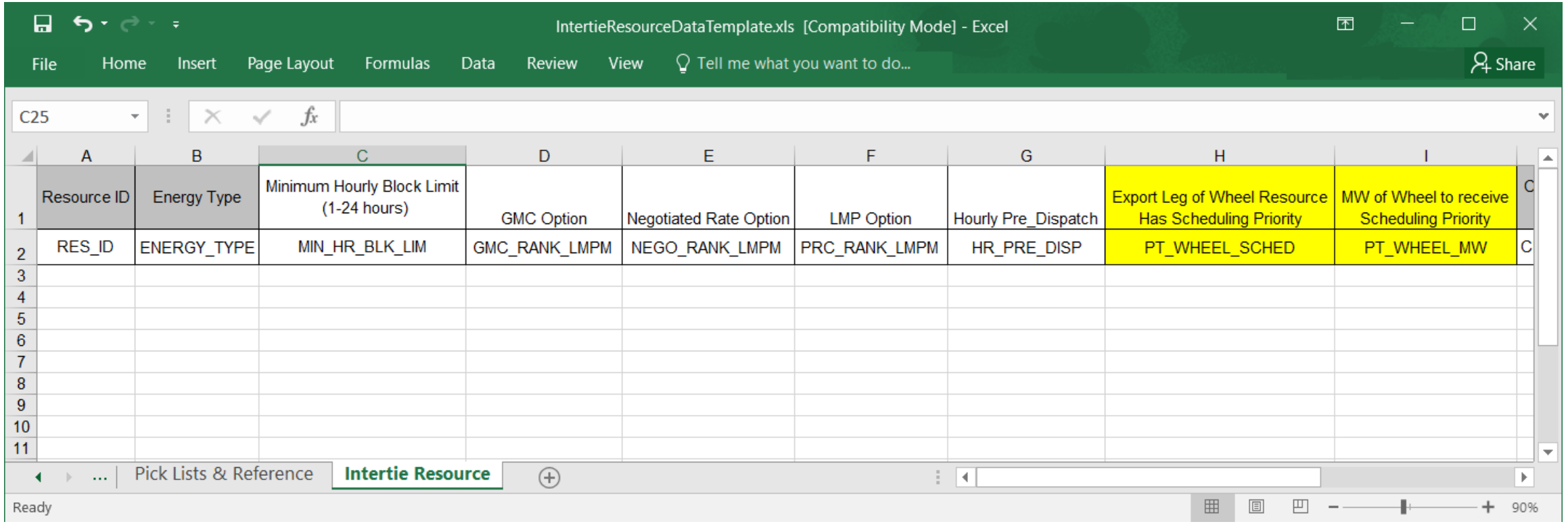
Master File

- By submitting PT wheel flag, the SC is attesting that they meet the following criteria:
  - PT Wheel supported by a firm supply contract to serve load in another BAA outside the CAISO for the month
  - PT Wheel supported by monthly firm transmission contract from source to CAISO scheduling point for HE 07:00-22:00, Monday through Friday, excluding NERC holidays

Intertie resource data template (IRDT)

Master File

- **PT_WHEEL_SCHED** and **PT_WHEEL_MW** fields on IRDT identify export system resources that can support PT wheel

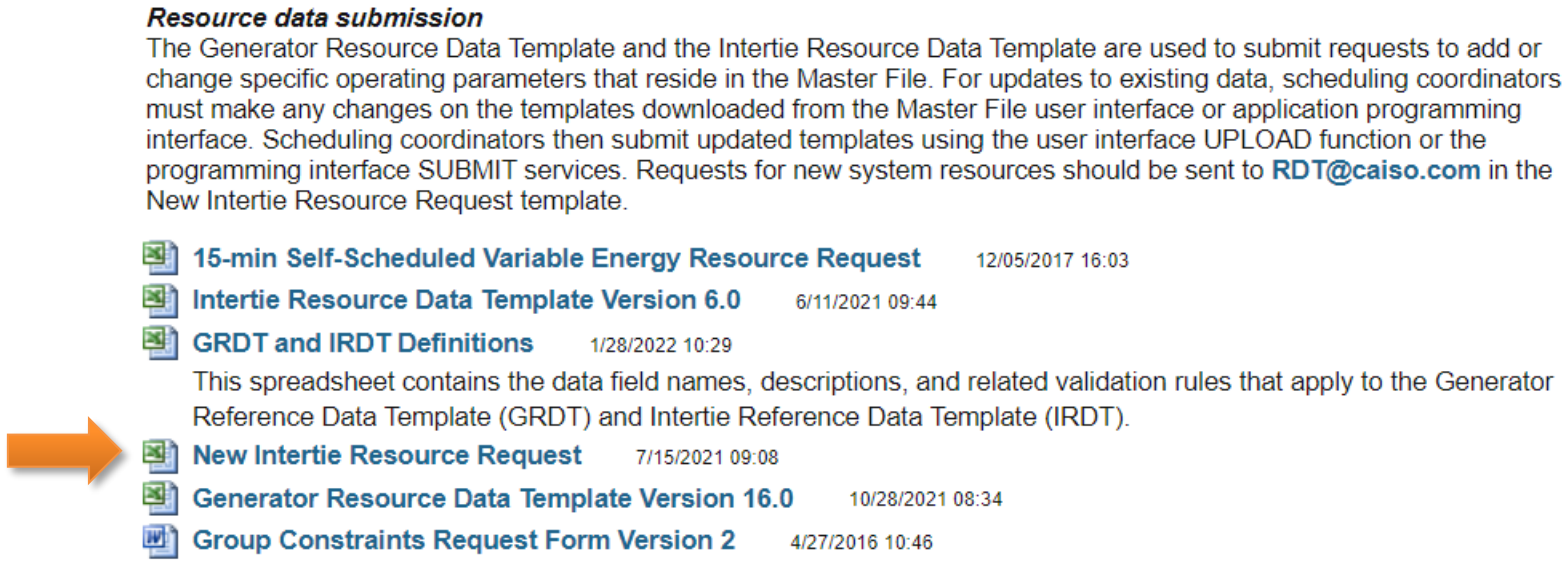


New Intertie Resource Request: Register a high-priority wheel

Master File

- Submit **New Intertie Resource Request** form to RDT@caiso.com
  - Requests are due 45 days prior to the month

- Navigation: caiso.com > Market & Operations > Network and Resource Modeling
  - Scroll down to the **Resource data submission** section to locate the form



Resource data submission

The Generator Resource Data Template and the Intertie Resource Data Template are used to submit requests to add or change specific operating parameters that reside in the Master File. For updates to existing data, scheduling coordinators must make any changes on the templates downloaded from the Master File user interface or application programming interface. Scheduling coordinators then submit updated templates using the user interface UPLOAD function or the programming interface SUBMIT services. Requests for new system resources should be sent to **RDT@caiso.com** in the New Intertie Resource Request template.

15-min Self-Scheduled Variable Energy Resource Request 12/05/2017 16:03

Intertie Resource Data Template Version 6.0 6/11/2021 09:44

GRDT and IRDT Definitions 1/28/2022 10:29

This spreadsheet contains the data field names, descriptions, and related validation rules that apply to the Generator Reference Data Template (GRDT) and Intertie Reference Data Template (IRDT).

New Intertie Resource Request 7/15/2021 09:08

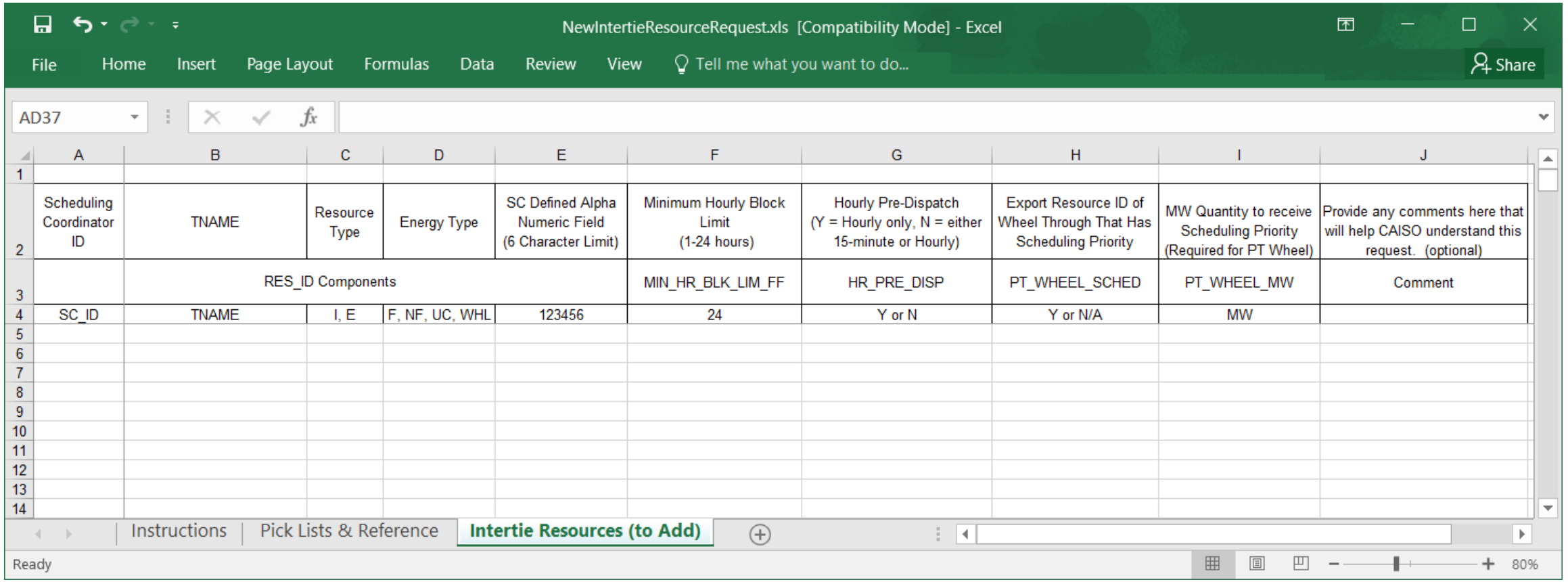
Generator Resource Data Template Version 16.0 10/28/2021 08:34

Group Constraints Request Form Version 2 4/27/2016 10:46

New intertie resource request form

Master File

- Refer to the Instructions tab for information on completing the form



	A	B	C	D	E	F	G	H	I	J
1										
2	Scheduling Coordinator ID	TNAME	Resource Type	Energy Type	SC Defined Alpha Numeric Field (6 Character Limit)	Minimum Hourly Block Limit (1-24 hours)	Hourly Pre-Dispatch (Y = Hourly only, N = either 15-minute or Hourly)	Export Resource ID of Wheel Through That Has Scheduling Priority	MW Quantity to receive Scheduling Priority (Required for PT Wheel)	Provide any comments here that will help CAISO understand this request. (optional)
3		RES_ID Components				MIN_HR_BLK_LIM_FF	HR_PRE_DISP	PT_WHEEL_SCHED	PT_WHEEL_MW	Comment
4	SC_ID	TNAME	I, E	F, NF, UC, WHL	123456	24	Y or N	Y or N/A	MW	
5										
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12										
13										
14										

SIBR TERMINOLOGY

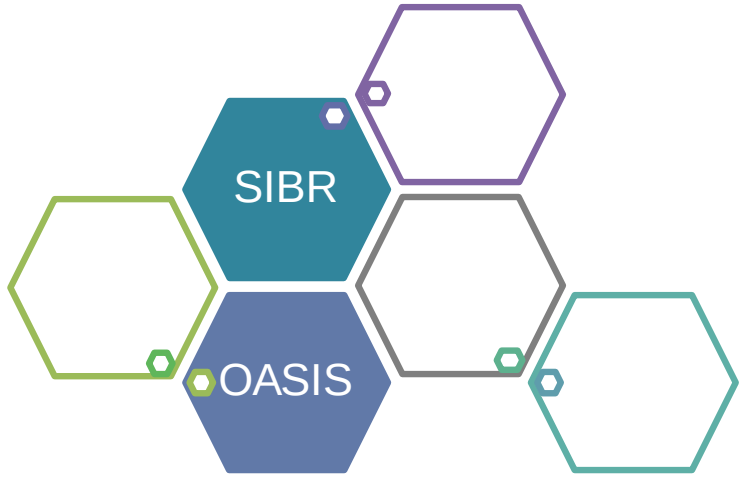
Scheduling Infrastructure & Business Rules (SIBR) terminology

SIBR

- The following terms relate to self-schedules submitted in SIBR:
  - PT export [or SS-STD (Self-Schedule Standard) in SIBR UI]:
    - Self-schedule with designated resource
  - LPT export [or SS-LPT in SIBR UI]:
    - Self-schedule with no identified resource
  - PT wheel:
    - Self-scheduled wheel that meets tariff criteria for high priority wheeling through transaction
  - LPT wheel:
    - Self-scheduled wheel that does not meet tariff criteria for high priority wheeling through transaction

Wheels in SIBR are a bit more complex. The wheel will indicate **SS-STD** from the import side and could be **SS-STD** or **SS-LPT** from the export side.
Note: If the wheel is on a registered intertie, the export cannot name a supporting resource.

Questions



Market Simulation

READINESS ACTIVITIES

Market Simulation Activities

- Market simulation structured scenarios provide customers with the ability to preview and test the following items:
  - View resource support capability and export support status (SIBR)
  - View RUC schedule cuts in new OASIS report
  - View HASP schedule cuts in new OASIS report

Scenario 1: View resource support capability and export support status

SIBR

Scenario Number	Scenario Execution Trade Date: TBD	
1	Description	View resource support capability and export support status
	ISO Actions	N/A
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	SCs for supporting resources submit various combinations of bids SCs for export resources submit bids with various energy levels and supporting resources
	Expected Outcome	SCs can use the new UI to view: • For supporting resources, an indication of their total support capability, unused support capability, and a list of export resources which are using the supporting resource. • For export resources, an indication of whether their resource is supported for a trade hour
	Anticipated Settlement Outcome	N/A
	Expected Settlement Outcome	*N/A*

Scenario 2: View RUC schedule cuts in new OASIS report

OASIS

Scenario Number	Scenario Execution Trade Date: TBD	
2	Description	View RUC schedule cuts in new OASIS report
	ISO Actions	In RUC, create under-generation conditions that are conducive for cutting load and export schedules.
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	SCs for export resources submit bids with various energy levels and supporting resources, with the objective of a mix of low and high priority self-schedules
	Expected Outcome	A mix of load, exports, and wheels are cut in the RUC process. SCs can use the new OASIS report to view an aggregated listing of schedule cuts.
	Anticipated Settlement Outcome	N/A
	Expected Settlement Outcome	*N/A*

Scenario 3: View HASP schedule cuts in new OASIS report

OASIS

Scenario Number	Scenario Execution Trade Date: TBD	
3	Description	View HASP schedule cuts in new OASIS report
	ISO Actions	In HASP, create under-generation conditions that are conducive for cutting load and export schedules.
	EIM Market Participant Actions	N/A
	ISO Market Participant Actions	SCs for export resources submit bids with various energy levels and supporting resources, with the objective of a mix of low and high priority self-schedules
	Expected Outcome	A mix of load, exports, and wheels are cut in HASP. SCs can use the new OASIS report to view an aggregated listing of schedule cuts.
	Anticipated Settlement Outcome	N/A
	Expected Settlement Outcome	N/A

Setup for Market Simulation Activities

- Complete additional setup for structured scenarios by the dates listed below
- Market participants will need to register their request with the ISO to participate in this simulation via the MarketSim@caiso.com mailbox by April 7, 2022
- Users must be provisioned for access in order to participate in market simulation
- Attend the Market Simulation calls to stay informed on the timing of activities for this and other initiatives

Final Questions

Thank you for your participation!

For more detailed information on anything presented, please visit our website at:
www.caiso.com

Or send an email to:
CustomerReadiness@caiso.com

REFERENCE MATERIAL

Reference Material

- Business Practice Manual changes:
  - BPM Change Management
- Business Requirements Specification:
  - https://www.caiso.com/Documents/BusinessRequirementsSpecification-TransmissionServiceandMarketSchedulingPriorities-Phase1.pdf
- Initiative webpage:
  - https://stakeholdercenter.caiso.com/StakeholderInitiatives/Transmission-service-and-market-scheduling-priorities

Reference Material

- Market Simulation Structured Scenarios:
  - https://www.caiso.com/Documents/MarketSimulationStructuredScenarios-TransmissionServiceandMarketSchedulingPriorities-Phase1.pdf

- Technical Specifications – located on the ISO's Developer Site which provides detailed descriptions of the API changes for:
  - OASIS
  - SIBR

- Training Material: Market Enhancements for Summer 2021 Readiness – Load, Export, and Wheeling Through Priorities (initial implementation of enhancements)
  - https://www.caiso.com/Documents/Presentation-Summer-2021-Readiness-Training-Part-3-Jun-24-2021.pdf