

WESTERN

EIIM



2022

IMPLEMENTATION WORKSHOP

July 20, 2022

INTRODUCTION

Nita Zimmerman

Chief Business Transformation Officer

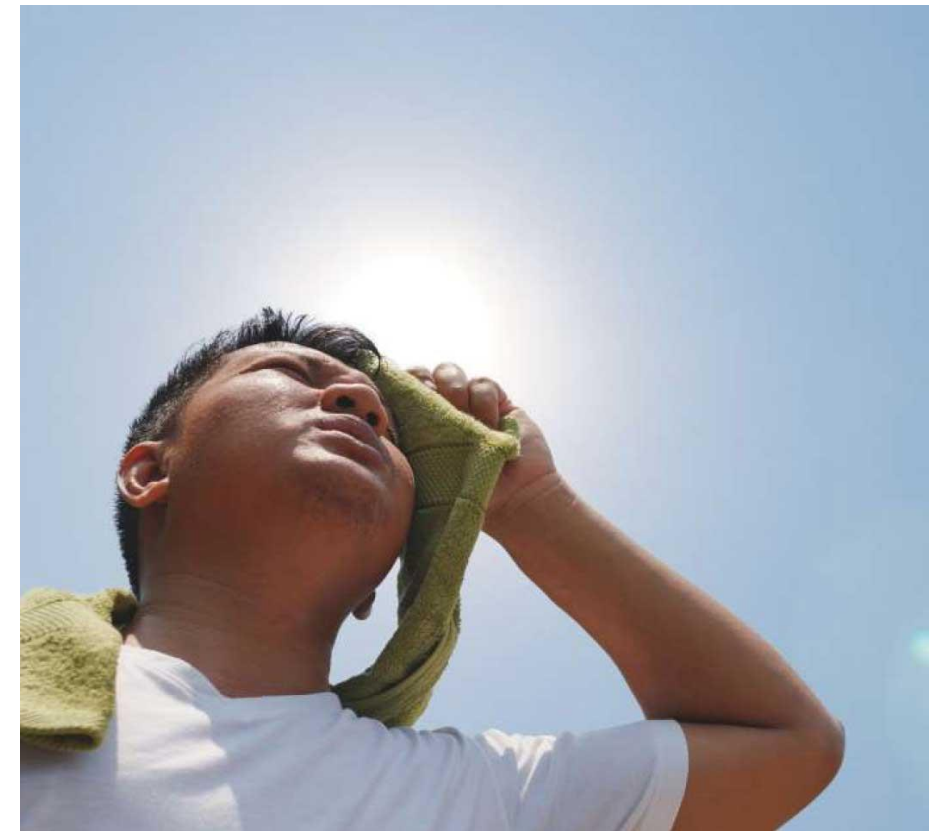


Avoiding Heat-related Illnesses and Death

- Knowing the symptoms and proper responses to heat exhaustion and heat stroke can save a life. Heat exhaustion and heat stroke can escalate rapidly leading to delirium, organ damage or even death.
 - National Safety Council shares that in 2019, 884 people died and 2,061 were injured in the United States from exposure to excessive heat.
- Best way to avoid heat-related illness is to limit exposure to outdoors on hot days.
 - Air conditioning is the best way to cool off
 - Drink fluids
 - Wear loose, lightweight clothing and a hat
 - Replace salt lost from sweating by drinking fruit juice or sports drinks
 - Avoid spending time outdoors during hottest time of the day
 - Wear sunscreen (sunburn affects the body's ability to cool itself)
 - Pace yourself when exerting your body

Heat Exhaustion

- Heat exhaustion can occur when the body loses excessive water and salt. Signs and symptoms can include:
 - Pale, ashen or moist skin
 - Muscle cramps
 - Fatigue, weakness or exhaustion
 - Headache, dizziness or fainting
 - Nausea or vomiting
 - Rapid Heart Rate
- Treat victims quickly:
 - Move victims to a shaded or air-conditioned area
 - Give water or other cool, nonalcoholic beverages
 - Apply wet towels or have victims take a cool shower



Heat Stroke

- Signs include:
 - Body temperature above 103 degrees
 - Skin that is flushed, dry and hot to touch; sweating has usually stopped
 - Rapid breathing
 - Headache, dizziness or confusion or other signs of altered mental status
 - Irrational or belligerent behavior
 - Convulsions or unresponsiveness
- Take immediate action :
 - Call 911
 - Move victim to a cool place
 - Remove unnecessary clothing
 - Immediately cool the victim, preferably by immersing up to the neck in cold water. Keep cooling until body temperature drops to 101 degrees
 - Monitor breathing and be ready to give CPR if necessary
- Do Not – force a victim to drink liquids, apply rubbing alcohol to the skin, or allow the victim to take pain relievers or salt tablets

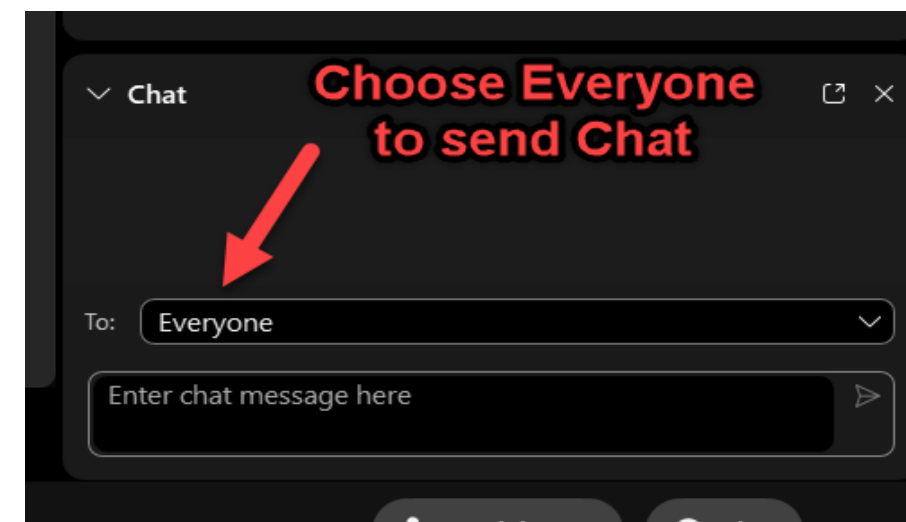
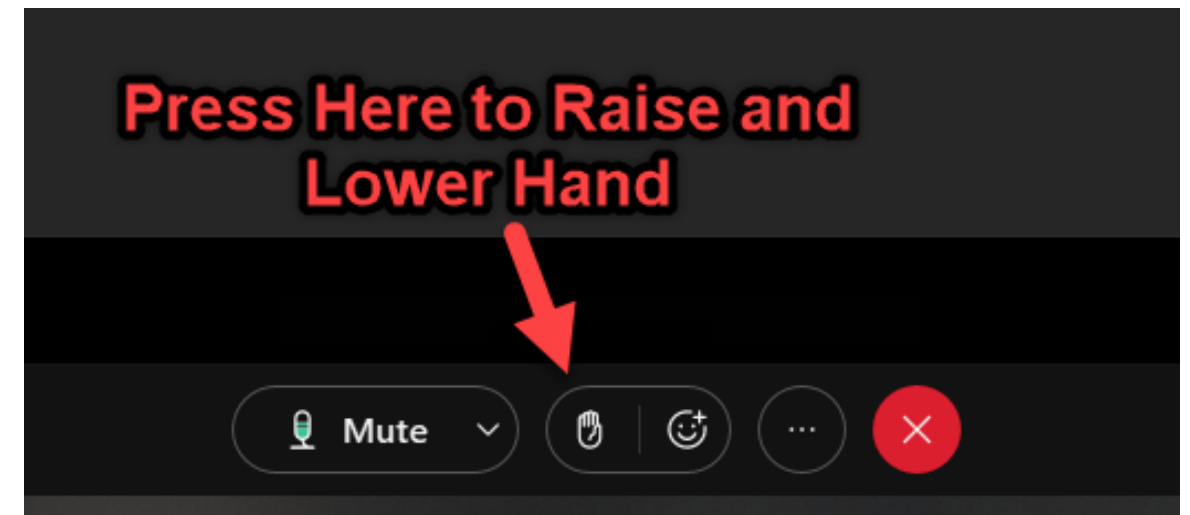
Agenda

GRID Modernization 

Time	Topic	Presenter
9 to 9:10 a.m.	Introductions	Nita Zimmerman
9:10 to 9:15 a.m.	Grid Mod Update	Mark Symonds
9:15 to 9:25 a.m.	EIM Program Update	Elsa Chang
9:25 to 10:15 a.m.	Settlements	Rasa Keanini
	Break	
10:30 to 11:40 a.m.	Settlements (cont'd)	Rasa Keanini
11:40 a.m. to 12:00 p.m.	Open question and answer	Jinah Nakaji

Meeting Participation and How to Ask Questions

- After you join the WebEx Event, you will not be able to unmute yourself until the host recognizes and unmutes you.
- To be recognized for asking a question:
 1. Use the “Raise your Hand” option to signal you have a question
 2. Or use the Chat option to send a question request to “Everyone”
- When finished the Host will re-mute you. Please remember to re-mute and **lower your hand** when done speaking.
- Participants on the phone:
 - ‘*3’ to raise hand and lower hand



GRID MODERNIZATION MOBILIZATION

Mark Symonds

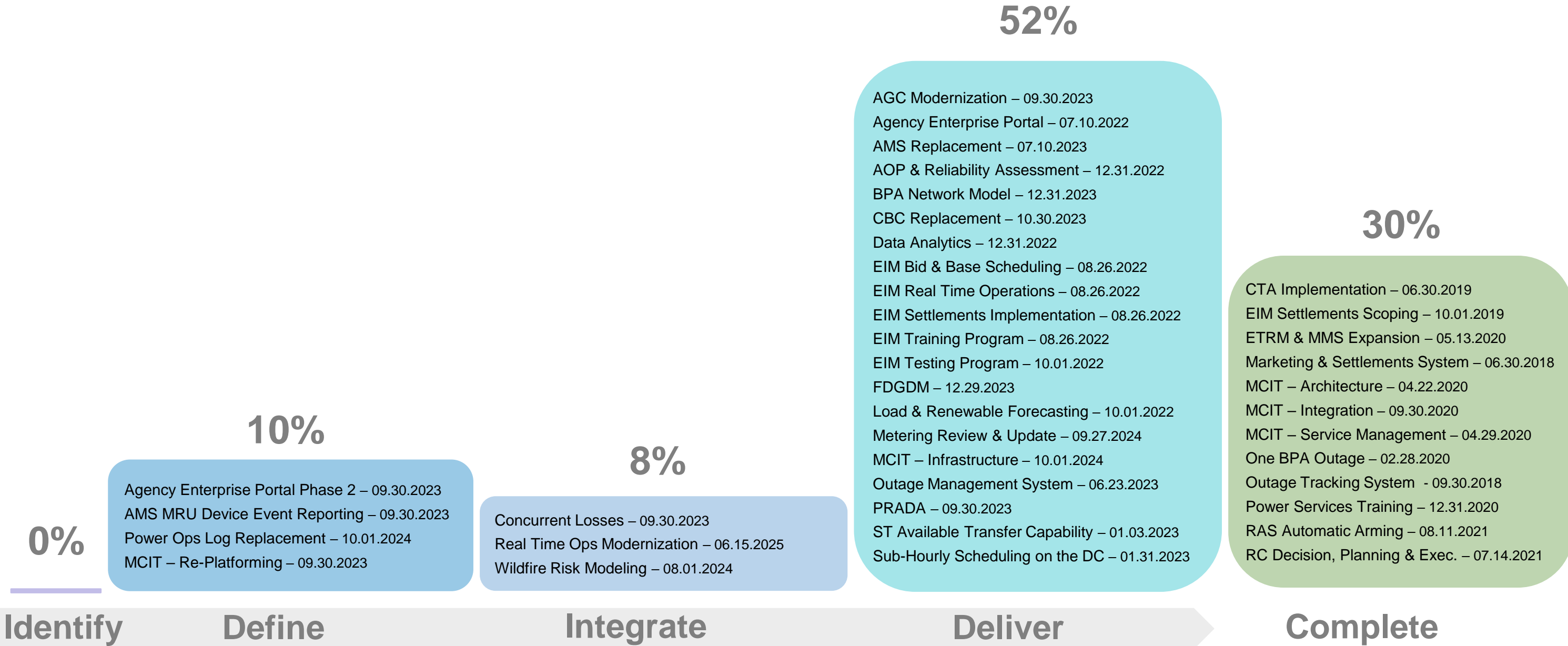
Grid Modernization Director



Grid Modernization Mobilization Status

GRID Modernization

Updated: 06.16.2022
Date = Completion Date



EIM Participation Principles

GRID Modernization 

1

Bonneville's participation is consistent with its statutory, regulatory and contractual obligations.

2

Bonneville will maintain reliable delivery of power and transmission to its customers.

3

Bonneville's participation is discretionary and Bonneville retains its ability to effectively exit the market in the event participation is no longer consistent with these principles.

4

Bonneville's participation is consistent with a sound business rationale.

5

Bonneville's participation is consistent with the objectives of Bonneville's Strategic Plan.

6

Bonneville's evaluation of EIM participation includes transparent consideration of the commercial and operational impacts on its products and services.

EIM PROGRAM UPDATE

Elsa Chang

EIM Program Manager



EIM Experience to Date

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- BPA operations in EIM have gone reasonably well in our first two months
 - EIM dispatch has been complementary with hydraulic objectives, and we have been moving a lot of water since EIM go-live
 - Experience with oversupply has gone well
 - Staff was well prepared and responded appropriately
 - Systems worked as expected, minimal issues
- Passed Resource Sufficiency (RS) tests almost every hour in May. Per monthly WEIM Transition Period Report for May:
 - BPA BAA observed no infeasibility for undersupply in the fifteen-minute and one infeasibility in the five-minute market.
 - BPA successfully passed over 95.69 percent of its balancing tests and 99.86 percent of its bid-range capacity tests.
 - BPA successfully passed 99.14 percent of its upward flexible ramping sufficiency tests.
- Transmission customer donations of transmission for use in EIM have been steady and we encourage additional donations.

Learning and Improving

GRID Modernization 

- We will continue learning more from participating in the EIM and engaging with CAISO in daily market quality calls to get resolution to issues and concerns.
- The EIM Market Operations Team is a cross-agency collaboration that oversees the market participation
 - bridge the transition from implementation to market operations
 - review BPA's EIM market performance
 - triage cross-organization issues
 - share lessons learned and communicate CAISO related changes
 - develop strategies to optimization market operations
- We also recognize we haven't met all of our customers' expectations (delivery of sub-allocation service bills) prior to EIM go live and are working to improve.

BPA Contacts for EIM

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Topic / Question Area	Email and Phone	Email (cc)
EIM Services Bill (EESC)	EESCSettlements@bpa.gov or 503-230-EIM1	gridmod@bpa.gov and Power or Transmission Account Executive
Customer Billing		
Metering	mdm@bpa.gov	
Customer Portal	customerportal@bpa.gov	
BPA Outage Office	Planned outages: bpaoutage@bpa.gov Unplanned: Contact BPA's Generation Dispatcher	
After-hours Outage	Contact BPA's Generation Dispatcher	

Continued Customer Engagement

GRID Modernization 

- We will schedule an additional workshop if we need more time for today's material.
- Please submit any questions to gridmod@bpa.gov and we will address them via email, or work with your Account Executive.

EIM SETTLEMENTS

Rasa Keanini

EIM Settlements Product Owner



Agenda

GRID Modernization 

- High Level Overview of EIM Settlements
 - EIM Settlements Update
 - Basic info – EIM Services Bill
 - EIM Settlements Timeline
- EIM Services Bill example
- Tying Detailed Data Files out to Invoice line items
- Measured Demand and Block
- Disputes and Inquiries

EIM Settlements Update:

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- Detailed Data Files (DDF) for 5/3 – 5/9 were made available on 7/11
 - Customers may have received detailed data files even if all of the charge/credit values were zero
 - Some customers may have no non-zero values in their detailed data files
 - Also includes Intentional Deviation, Persistent Deviation and Energy Imbalance Reassignment (e.g., non-EIM charges)
- For May, only provide two DDFs : 5/3 – 5/9 and 5/3 – 5/31
- Expect to issue EIM Services bills for May in mid-July
- For June, only provide a single DDF from 6/1 – 6/30

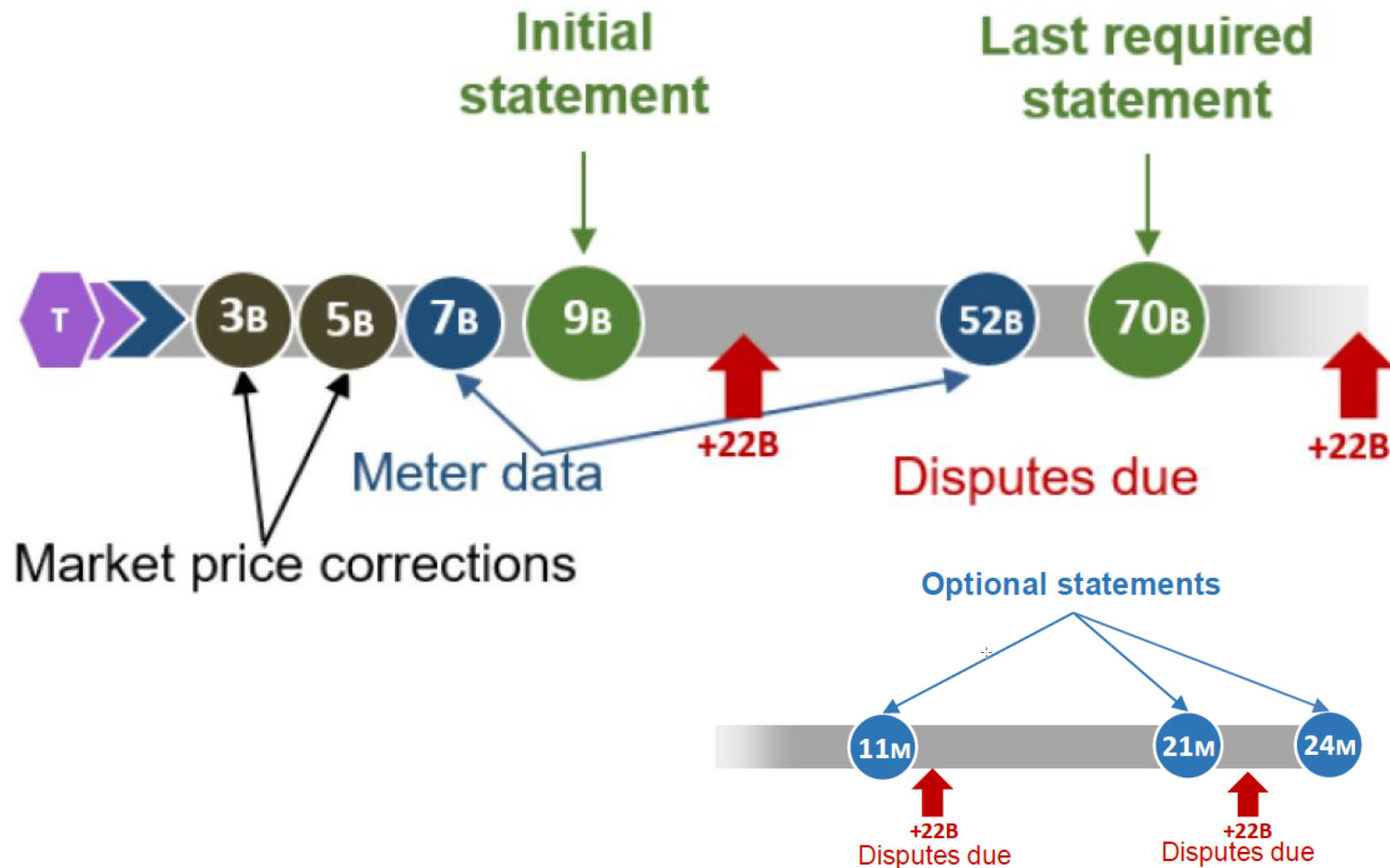
EIM Services Bills will:

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- Be issued monthly (around the 25th in a typical month).
- Be completely separate from other BPA bills.
- Include Energy Imbalance associated with EIM Charge Codes.
- Include Intentional Deviation and Persistent Deviation (these penalties will no longer be on the Transmission bill).
- Be distributed from BPA's billing department like Power and Transmission bills.
- Include contact information for any EIM-S related questions.
- Follow the same initial starting point for bill disputes – customers will contact their Transmission Account Executives to file a bill dispute.

EIM Settlements Timeline

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- BPA receives from CAISO
 - Settlement Statements on a daily basis
 - Invoices on a weekly basis
- Once BPA gets on a regular cadence, Detailed Data Files will be available weekly via Customer Portal*
- On a monthly basis, BPA will bill Transmission customers (EIM Services Bill) – same process as for Transmission bills

*Detailed data files will ONLY be available via Customer Portal

EIM Imbalance Charges by Customer Type



Customer Type	Energy Imbalance Pre-EIM	Generation Imbalance Pre-EIM	EIM Energy Imbalance (EI and GI) 64750, 64600,64700	EIM Interchange* 64600, 64700
Load Following Customer				X
Load Following Customer with Generating Resource		X	X	X
Customer with NPR (Gen)		X	X	X
Customer receiving EI (pre-EIM)	X		X	X
Transmission Customer				X

*Any Transmission Customer who is the tagged **Purchasing Selling Entity** on the interchange tag will receive an EIM Services Bill.

A Transmission Customer may fit into more than one of the rows above.

Charge Code by Position Type

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Charge Code	Generating Resource	Load	Interchange
Over/Under Scheduling Charge and Allocation 6045, 6046		X	
Uplift and Neutrality Charges 6478, 64770, 67740, 69850		X	X
Uninstructed Imbalance Energy 64750	X	X	
Instructed Imbalance Energy – FMM 64600	X		X
Instructed Imbalance Energy - RTD 64700	X		X

EIM Services Bill

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U.S. Department of Energy



Bonneville

POWER ADMINISTRATION

EIM SERVICES BILL

Attn: Manager
PO Box 3621
Portland, OR 97208

Bill ID: JUL22-EIM01-
Issue Date:
Bill Period: July 2022
Period Ending: July 31, 2022

AMOUNT DUE TO:

Bonneville Power Administration	\$2,000,779.30
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Due Date: **August 1, 2022**

Note:
Bill ID will include customer number – has been redacted.

Bill Period refers to the month/year the bill was created.

Bill Period and Period Ending will be June 2022.

EIM Services Bill

GRID Modernization 

EIM SERVICES BILL

Customer Name:		Bill Period:	July 2022
Bill ID:	JUL22-EIM01-	Period Ending:	July 31, 2022
Issue Date:	July 10, 2022		

INITIAL: 2022-05

Charge Code	Description	Current Amount	Previous Amount	Net Amount
15	Prior 2205 Intentional Dev Pntly	\$10,482.80	\$0.00	\$10,482.80
20	Prior 2205 Persistent Dev Pntly	\$0.00	\$0.00	\$0.00
25	Prior 2205 Imbalance Reassignment	(\$1,525,860.30)	\$0.00	(\$1,525,860.30)
6045	Prior 2205 Over/Under Sched Settle	\$1,033.19	\$0.00	\$1,033.19
6046	Prior 2205 Over/Under Sched Alloc	(\$6,709.11)	\$0.00	(\$6,709.11)
64600	Prior 2205 FMM IIE EIM Settlement	\$262,982.11	\$0.00	\$262,982.11
64700	Prior 2205 RT IIE EIM Settlement	(\$188,031.18)	\$0.00	(\$188,031.18)
64750	Prior 2205 RT UIE EIM Settlement	\$3,504,199.99	\$0.00	\$3,504,199.99
64770	Prior 2205 RT Imb Energy Offset EIM	\$98,149.29	\$0.00	\$98,149.29
6478	Prior 2205 RT Sys Imb Energy Offset	\$2,188.42	\$0.00	\$2,188.42
67740	Prior 2205 RT Congestion Offset	(\$170,772.84)	\$0.00	(\$170,772.84)
69850	Prior 2205 RT Marg Losses Offset	\$13,116.93	\$0.00	\$13,116.93
			Net Amount:	\$2,000,779.30

Note:
Bill ID will include customer number – has been redacted.

Bill will indicate Month/Year covered and whether Initial or Recalc.

This is test data – not representative of any particular customer.

High Level: Weekly Detailed Data Files

GRID Modernization 

- Customers may access their weekly zip files via Customer Portal
- The zip file will include multiple Excel files with at least a week's worth of data in each Excel file
 - First week will be one week of data
 - Second week will include both week 1 and week 2 data
 - Final zip file for the month will include Excel files with a month's worth of data to allow for comparison against EIM Services Bills
 - Intended purpose is to give customers advance information in the event a dispute with CAISO is needed
- Zip file naming convention:
XXXXX_CustNam_TDYYYYMMDD_Version (e.g., Initial, Recalc, etc.)

High Level: Weekly Detailed Data Files

GRID Modernization 

- Excel files are not one to one with charge codes
 - Example: Other EIM Charges Excel file includes four charge codes
- Excel file naming convention:
XXXXX_CustNam_(GRName)_ReportName_CreationDate_Time_TDYYYYMMDD_Version
Days
- Level of granularity of data varies
 - 5 min, hourly, daily – depending on report

EIM Charge Code 64750

GRID Modernization

	A	B	C	D	Q	R
1					NPR Real-Time Uninstructed Imbalance Energy	
2					Real-Time Price	Customer RTD UIE Amount Allocation
3	Resource	Trade Date	Hour Ending	Interval	DispatchIntervalRTDLMP	AllocEIMSettIntUIESettleAmt
4						IF J = 1 THEN 0, ELSE -1 * (P * Q)
5					\$/MWh	\$
6	GeneratingResourceName	05/03/2022	1	00:00	\$74.68	\$6.22
7	GeneratingResourceName	05/03/2022	1	00:05	\$64.01	\$5.33
8	GeneratingResourceName	05/03/2022	1	00:10	\$64.01	\$5.33
9	GeneratingResourceName	05/03/2022	1	00:15	\$74.49	\$6.21
10	GeneratingResourceName	05/03/2022	1	00:20	\$53.21	\$4.43
11	GeneratingResourceName	05/03/2022	1	00:25	\$53.21	\$4.43
12	GeneratingResourceName	05/03/2022	1	00:30	\$52.98	\$4.42

EIM Charge Code 64750 applies to both Load and Generating Resources.

Reports:

XXXXX_CustNam_GR_GenResourceImbalanceCC64750_64600_64700
 XXXXX_CustNam_LoadUIECC64750

If a customer has Generating Resources, they will need to add the sum of the Load file with ALL of the Generating Resource files.

	A	B	C	D	E	F	G
1							
2			Real-Time Uninstructed Imbalance Energy Settlement (EIM 64750) for Load				
3			Base Schedule - Tag	Meter Read	Imbalance Quantity	Price	Customer Real-Time UIE Settlement Allocation
4	Trade Date	Hour Ending	PriBaseScheduleQty	PriMeterQty	AllocUIEQty	HourlyRTMLAPPrice	AllocEIMSettIntUIESettlementAmt
5					(D - C) * -1		(E * F) * -1
6			MW	MW	MW	\$	\$
7	05/03/2022	1	2,708.100	2,770.612	-62.512	\$81.13	\$5,071.52
8	05/03/2022	2	2,680.000	2,758.531	-78.531	\$76.34	\$5,995.06
9	05/03/2022	3	2,706.400	2,753.097	-46.697	\$75.35	\$3,518.41
10	05/03/2022	4	2,764.800	2,775.877	-11.077	\$43.82	\$485.35
11	05/03/2022	5	2,919.800	2,904.824	14.976	\$10.40	\$(155.73)
12	05/03/2022	6	3,212.300	3,162.985	49.315	\$65.33	\$(3,221.54)

Other EIM Charges: 6478, 69850, 64770, 67740

GRID Modernization

				2918.68531			
	A	B	C	I	J	K	L
				Other EIM Ch			
				CAISO Charge (EIM CC 67740) BA EIM Real-Time Congestion Offset	Customer EIM Real-Time Congestion Offset Alloc	CAISO Charge (EIM CC 64770) BA EIM Real-Time Imbalance Energy Offset	Customer EIM Real-Time Imbalance Energy Offset Allocation
	Trade Date	Hour Ending	Interval	EIMEntitySCRTCongestionOffsetAlloc	AllocEIMEntityRTCongestionOffsetAlloc	EIMEntityRealTimeImbalanceEnergyOffsetAllocationAmt	AllocEIMEntityRTImbEnergyOffsetAllocAmt
				H * I		H * K	
				\$	\$	\$	\$
7	05/03/2022	1	00:00	\$2,918.69	\$7.05	\$15,783.00	\$38.15
8	05/03/2022	1	00:05	\$44.87	\$0.11	\$5,571.92	\$13.31
9	05/03/2022	1	00:10	-\$17.32	-\$0.04	\$205.54	\$0.49
10	05/03/2022	1	00:15	\$206.11	\$0.48	\$430.43	\$1.01
11	05/03/2022	1	00:20	\$339.20	\$0.81	\$466.56	\$1.11
12	05/03/2022	1	00:25	\$359.36	\$0.85	\$343.71	\$0.82
13	05/03/2022	1	00:30	-\$59.46	-\$0.14	\$(0.56)	\$0.00
14	05/03/2022	1	00:35	-\$42.01	-\$0.10	\$(151.31)	-\$0.35
15	05/03/2022	1	00:40	-\$20.26	-\$0.05	\$(292.53)	-\$0.69
16	05/03/2022	1	00:45	\$362.54	\$0.86	\$(251.20)	-\$0.59
17	05/03/2022	1	00:50	\$267.77	\$0.63	\$(255.38)	-\$0.60
18	05/03/2022	1	00:55	\$278.48	\$0.65	\$(281.63)	-\$0.66

- Uplift/Neutrality Codes are pretty straightforward
- Validate four EIM Charge Codes with one spreadsheet

Over/Under Scheduling Charge: 6045

GRID Modernization

	A	B	K	L	M	N
1						
2						
3	Trade Date Hour Ending		CAISO Charge (EIM CC 6045) BA Over Scheduling Charge	Customer Over Scheduling Charge Allocation	CAISO Charge (EIM CC 6045) BA Under Scheduling Charge	Customer Under Scheduling Charge Allocation
4			BAHourlyLAPOverSchedulingAmount	AllocBAHourlyLAPOverSchedulingAmount	BAHourlyLAPUnderSchedulingAmount	AllocBAHourlyLAPUnderSchedulingAmount
5			G * K			J * M
6			\$	\$	\$	\$
607	05/30/2022	1	\$0.00	\$0.00	\$0.00	\$0.00
608	05/30/2022	2	\$0.00	\$0.00	\$0.00	\$0.00
609	05/30/2022	3	\$0.00	\$0.00	\$0.00	\$0.00
610	05/30/2022	4	\$0.00	\$0.00	\$0.00	\$0.00
611	05/30/2022	5	\$0.00	\$0.00	\$0.00	\$0.00
612	05/30/2022	6	\$0.00	\$0.00	\$0.00	\$0.00
613	05/30/2022	7	\$0.00	\$0.00	\$0.00	\$0.00
614	05/30/2022	8	\$0.00	\$0.00	\$0.00	\$0.00
615	05/30/2022	9	\$0.00	\$0.00	\$0.00	\$0.00
616	05/30/2022	10	\$0.00	\$0.00	\$2,109.56	\$587.65
617	05/30/2022	11	\$0.00	\$0.00	\$0.00	\$0.00
618	05/30/2022	12	\$0.00	\$0.00	\$0.00	\$0.00
619	05/30/2022	13	\$0.00	\$0.00	\$0.00	\$0.00
620	05/30/2022	14	\$0.00	\$0.00	\$0.00	\$0.00
621	05/30/2022	15	\$0.00	\$0.00	\$0.00	\$0.00
622	05/30/2022	16	\$0.00	\$0.00	\$0.00	\$0.00
623	05/30/2022	17	\$0.00	\$0.00	\$0.00	\$0.00
624	05/30/2022	18	\$0.00	\$0.00	\$0.00	\$0.00
625	05/30/2022	19	\$0.00	\$0.00	\$0.00	\$0.00
626	05/30/2022	20	\$0.00	\$0.00	\$0.00	\$0.00
627	05/30/2022	21	\$0.00	\$0.00	\$0.00	\$0.00
628	05/30/2022	22	\$0.00	\$0.00	\$0.00	\$0.00
629	05/30/2022	23	\$0.00	\$0.00	\$0.00	\$0.00
630	05/30/2022	24	\$0.00	\$0.00	\$0.00	\$0.00

- Always a charge
- Only occurred on May 30th

Over/Under Scheduling Allocation: 6046

GRID Modernization

	A	H	I	J	K	L
1		Over and Under Scheduling Amount Allocation				
2						
3		Customer Metered Load	BA Total Metered Load	Customer Share	CAISO Charge (EIM CC 6046) BA Over and Under Scheduling Amount	Customer Over and Under Scheduling Amount Allocation
4	Trade Date	TCTotalMeterQty	BATotalMeterQty	AllocDailyOUSHeteredDemandRatio	EIMEntityBAOUSAllocAmount	AllocEIMEntityBAOUSAllocAmt
5		Sum(PriMeterQty) across all TC load resources (NCL is separate)	Sum(TCTotalMeterQty) across all TCs	IF (G = 1) THEN H / I, ELSE 0		J * K
6		MW	MW	Ratio	\$	\$
7	05/03/2022	0.000	140,273.172	0.00000000	-\$726.97	\$0.00
8	05/04/2022	0.000	137,928.291	0.00000000	-\$953.60	\$0.00
9	05/05/2022	0.000	139,782.991	0.00000000	-\$403.66	\$0.00
10	05/06/2022	2.304	137,736.204	0.00001673	-\$1,466.91	-\$0.02
11	05/07/2022	2.304	120,318.475	0.00001915	-\$823.24	-\$0.02
12	05/08/2022	2.304	125,600.435	0.00001834	-\$1,572.35	-\$0.03
13	05/09/2022					

- Always a credit
- Based on metered demand
- Data is on a daily basis
- Depends on eligibility

EIM Charge Code 64600 – Fifteen Minute Instructed Imbalance Energy and EIM Charge Code 64700 – Real-Time Instructed Imbalance Energy

					Fifteen Minute Instructed Imbalance Energy (EIM CC 64600) and Real-Time Instructed Imbalance Energy (EIM CC 64700) Amounts					
Position Name	Trade Date	Hour Ending	Interval	Fifteen Minute Price	Customer FMM IIE Amount Allocation	ATF Tag Quantity	RTD Instructed Imbalance Quantity	Real-Time Price	Customer RTD IIE Amount Allocation	
				FMMIntervalLMPPPrice	AllocEIMSettFMMIIEAmt	PriATFTagQty	AllocRtdIIEQty	DispatchIntervalRTDLMP	AllocEIMSettIIEAmt	
				\$/MWh	-1 * (G * H)	MW	(J - F) / 12	\$/MWh	-1 * (K * L)	
					\$		MWh		\$	
TagName	05/03/2022	1	00:00	\$98.84	\$0.00	0.000	0.000	\$68.79	\$0.00	
TagName	05/03/2022	1	00:05	\$98.84	\$0.00	0.000	0.000	\$58.96	\$0.00	
TagName	05/03/2022	1	00:10	\$98.84	\$0.00	0.000	0.000	\$58.96	\$0.00	
TagName	05/03/2022	1	00:15	\$98.84	\$0.00	0.000	0.000	\$69.10	\$0.00	

					Fifteen Minute Instructed Imbalance Energy (EIM CC 64600), and Real-Time Instructed Imbalance Energy (EIM CC 64700) Amounts				
Resource	Trade Date	Hour Ending	Interval	Fifteen Minute Price	Customer FMM IIE Amount Allocation	RTD Instructed Imbalance Quantity	Real-Time Price	Customer RTD IIE Amount Allocation	
				FMMIntervalLMPPPrice	AllocEIMSettFMMIIEAmt	AllocRTDIIEQty	DispatchIntervalRTDLMP	AllocEIMSettIIEAmt	
				\$/MWh	IF H = 1 THEN 0, ELSE -1 * (S * T)	L	\$/MWh	IF J = 1 THEN 0, ELSE -1 * (V	
					\$	MWh		\$	
GeneratingResourceName	05/03/2022	1	00:00	\$104.20	\$0.00	0.00000	\$73.07	\$0.00	
GeneratingResourceName	05/03/2022	1	00:05	\$104.20	\$0.00	0.00000	\$62.63	\$0.00	
GeneratingResourceName	05/03/2022	1	00:10	\$104.20	\$0.00	0.00000	\$62.63	\$0.00	
GeneratingResourceName	05/03/2022	1	00:15	\$104.20	\$0.00	0.00000	\$72.87	\$0.00	
GeneratingResourceName	05/03/2022	1	00:20	\$104.20	\$0.00	0.00000	\$52.05	\$0.00	
GeneratingResourceName	05/03/2022	1	00:25	\$104.20	\$0.00	0.00000	\$52.05	\$0.00	
GeneratingResourceName	05/03/2022	1	00:30	\$72.80	\$0.00	0.00000	\$52.05	\$0.00	
GeneratingResourceName	05/03/2022	1	00:35	\$72.80	\$0.00	0.00000	\$52.05	\$0.00	
GeneratingResourceName	05/03/2022	1	00:40	\$72.80	\$0.00	0.00000	\$52.05	\$0.00	
GeneratingResourceName	05/03/2022	1	00:45	-\$15.60	\$0.00	0.00000	\$52.06	\$0.00	
GeneratingResourceName	05/03/2022	1	00:50	-\$15.60	\$0.00	0.00000	\$52.06	\$0.00	
GeneratingResourceName	05/03/2022	1	00:55	-\$15.60	\$0.00	0.00000	\$52.06	\$0.00	

EIM Charge Code 64600 and 64700 apply to both Interchange and Generating Resources.

Reports:
[XXXXX_CustNam_GR_GenResourceImbalanceCC64750_64600_64700](#)
[XXXXX_IntertieImbalanceCC64600_64700](#)

Measured Demand and Block Customers

 GRID Modernization

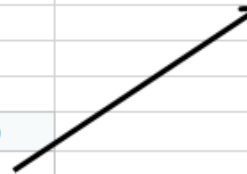
- BPA is required to remove the block portion of measured demand (Metered + Exports) for uplift/neutrality charge codes from the customer and pass it along to BPA
- No change needed for customers solely within BPA's Balancing Authority Area
- For customers who export, will need to start marking Block Tags on August 1st
- May/June/July is being dealt with using a manual process

Block Tag Example

GRID Modernization

Tag ID:	BPAT_LSEL01000001_BPAT					
Tag Code:	1					
Tag Type:	Normal					
Tag State:	Implemented					
Contact:	A. Person					
Market Path						
PSE	Product	Contract	Misc Info			
GENR01	G-F		Yes			
LSEL01	L		No			
Physical Path & Transmission						
CA	PSE	Source/Sink	MO	Contract	Misc Info	
BPAT	GENR01	GENR01			No	
Physical Path						
TP	PSE	POR	POD	SE	MO	Misc Info
BPAT	LSEL01	GENR01	LSEL01	BPAT		No
CA	PSE	Source/Sink	MO	Contract	Misc Info	
BPAT	LSEL01	LSEL.System			No	
Profiles						
Date:	7/7/2021					
Timezone:	PPT					
Hourly:	Yes					
	BPAT					
Hour Ending	Energy (Gen)	00000001				
10	150	150				
Transmission Requests						
Type	Request #	Requestor	Submission Date	Request State		
Tag Creation	0	LSEL01	7/7/2021 6:00 AM	Approved		
Adjustment	1	LSEL01	7/7/2021 8:32 AM	Approved		

Misc. Info	
Token	Value
BLOCK	Yes

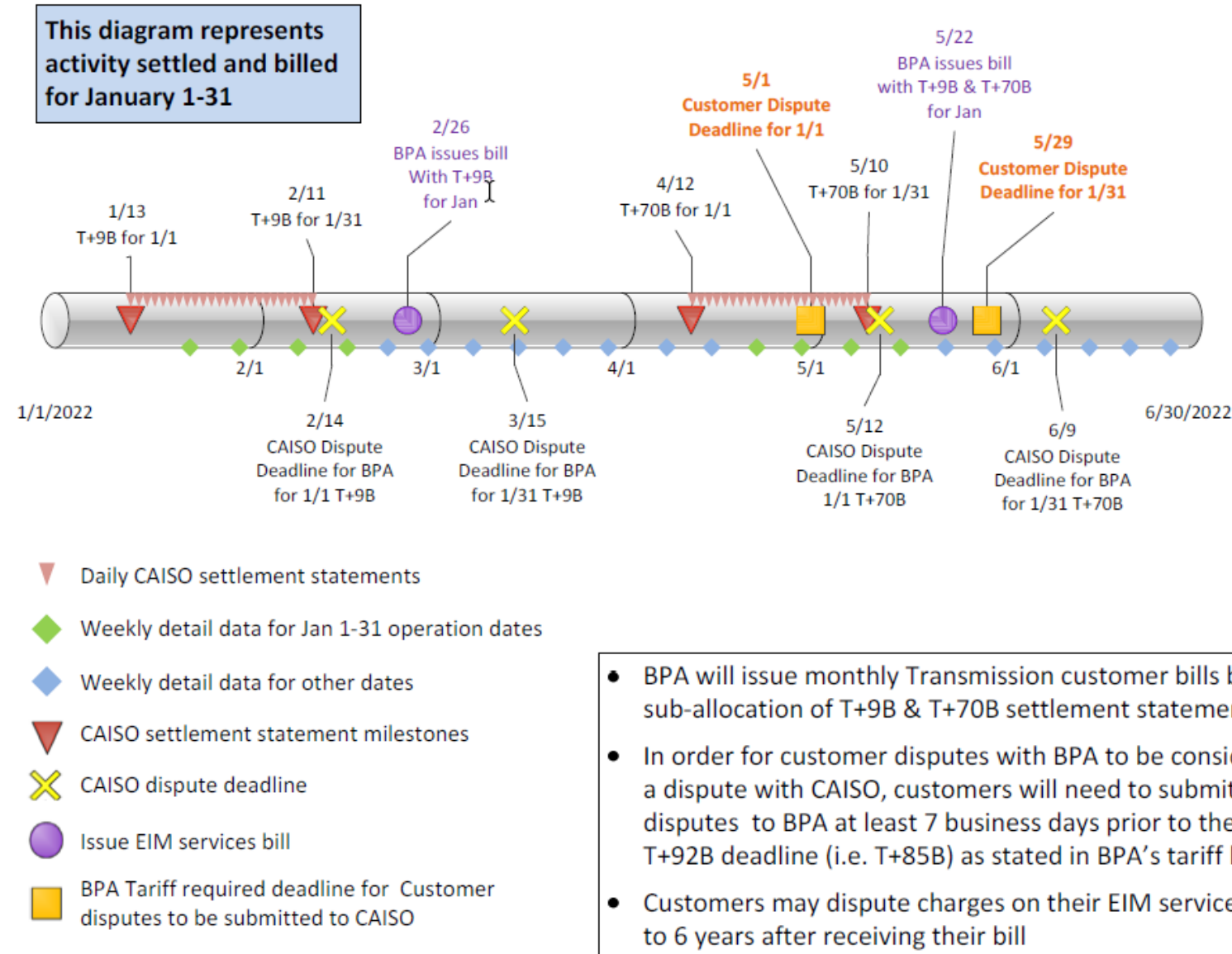


Disputes vs. Inquiries

A white arrow pointing to the right, containing the text "GRID Modernization" in blue.

- Dispute process will start the same for EIM Services Bills:
 - If the customer is disputing how BPA sub-allocated EIM Charge Codes
 - » Customers dispute EIM Services Bills not the Detailed Data Files
 - » Customers have up to six years to dispute a bill
 - » Dispute process for EIM Services Bill starts in the same way as any other bill – contact Transmission Account Executive with courtesy copy to EESCSettlements@bpa.gov
 - If the customer would like BPA to dispute with CAISO on customer's behalf
 - Timeline is dependent on CAISO dispute calendar
 - Customer must submit information to BPA at least 7 business days before CAISO deadline
 - If the deadline is missed, BPA cannot dispute with CAISO
 - This dispute process starts with contacting EESCSettlements@bpa.gov
 - T+9B dispute deadline has passed for days prior to June 6th
 - Not the final chance for disputing CAISO for May activity; T+70B dispute deadline for May 3rd is Sept 13, 2022
- Inquiries
 - Customers may ask questions about their detailed data files and their bills – questions should be directed to EESCSettlements@bpa.gov

DISPUTE TIMELINE



What do you need to do?

GRID Modernization 

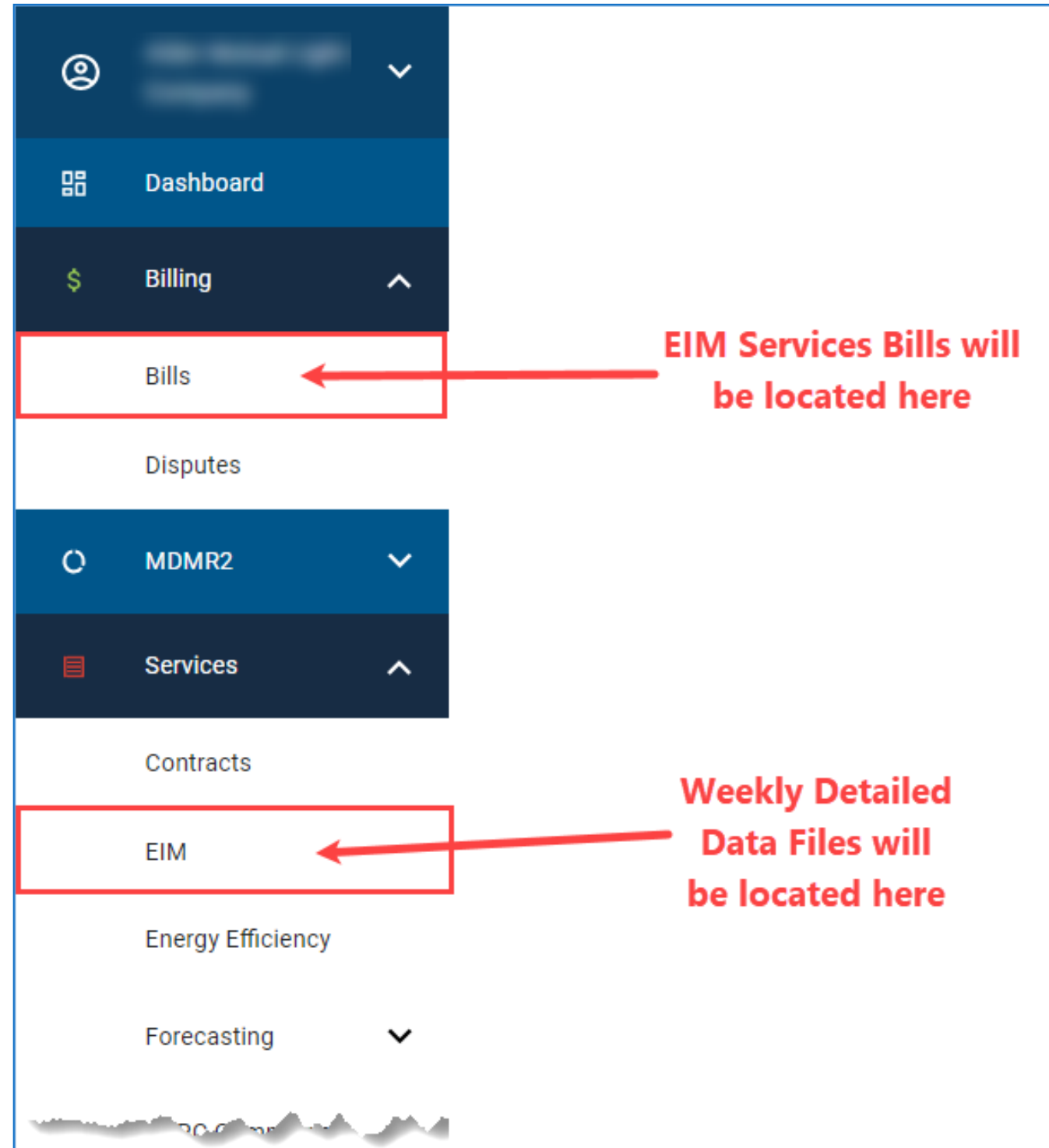
- Review detailed data files on a timely basis
 - If you identify a discrepancy and want BPA to dispute with CAISO, email EEESCSettlements@bpa.gov ASAP (**don't wait for your bill!**)
 - If you identify a discrepancy in how BPA sub-allocated to you, contact EESC Settlements Team EEESCSettlements@bpa.gov
- Review EIM Services Bill
 - If you have questions, contact EEESCSettlements@bpa.gov
 - If you have a dispute, contact your Transmission Account Executive to start the dispute process

Billing process

GRID Modernization 

- Customers will follow the same processes they use today for transmission bills
- Customers may access EIM Services Bills on Customer Portal or they will be emailed to customer if they are not signed up for Customer Portal

EIM on Customer Portal



OPEN QUESTIONS AND ANSWERS



BPA Contacts for EIM

GRID Modernization 

Topic / Question Area	Email and Phone	Email (cc)
EIM Services Bill (EESC)	EESCSettlements@bpa.gov or 503-230-EIM1	gridmod@bpa.gov and Power or Transmission Account Executive
Customer Billing		
Metering	mdm@bpa.gov	
Customer Portal	customerportal@bpa.gov	
BPA Outage Office	Planned outages: bpaoutage@bpa.gov Unplanned: Contact BPA's Generation Dispatcher	
After-hours Outage	Contact BPA's Generation Dispatcher	

COMMENTS

Please send your feedback to
techforum@bpa.gov
by Wednesday, August 3, 2022

**Thank you for participating in today's
workshop.**

**For more information,
visit www.bpa.gov/goto/eim.**



APPENDIX



List of Acronyms



Acronym		Acronym	
BAA	Balancing Authority Area	ID	Intentional Deviation
CAISO	California Independent System Operator	IIE	Instructed Imbalance Energy
CP	Customer Portal	LMP	Locational Marginal Price
DDR	Detailed Data File	MO	Market Operator
DERs	Dispatchable Energy Resources	PD	Persistent Deviation
EESC	EIM Entity Scheduling Coordinator	Pnode	Price Node
EI	Energy Imbalance	RS	Resource Sufficiency
EIM	Energy Imbalance Market	RTD	Real-Time Dispatch
FMM	Fifteen Minute Market	UIE	Uninstructed Imbalance Energy
GI	Generation Imbalance	VERs	Variable Energy Resource
GRSP	General Rate Schedule Provision		

Report Name by Charge Code/Position Type **GRID** Modernization

Charge Code	Generating Resource	Load	Interchange
Over/Under Scheduling Charge 6045		XXXXX_CustNam_OverUnderSch edChargeCC6045	
Over/Under Scheduling Allocation 6046		XXXXX_CustNam_OverUnderSch edAllocCC6046	
Uplift and Neutrality Charges 6478, 64770,67740, 69850		XXXXX_CustNam_OtherEIMChar ges	XXXXX_CustNam_OtherEIMChar ges
Uninstructed Imbalance Energy 64750	XXXXX_CustNam_GR_GenResourcel mbalanceCC64750_64600_64700	XXXXX_CustNam_LoadUIECC64 750	
Instructed Imbalance Energy – FMM 64600	XXXXX_CustNam_GR_GenResourcel mbalanceCC64750_64600_64700		XXXXX_IntertielmbalanceCC6460 0_64700
Instructed Imbalance Energy - RTD 64700	XXXXX_CustNam_GR_GenResourcel mbalanceCC64750_64600_64700		XXXXX_IntertielmbalanceCC6460 0_64700

What is being posted

GRID Modernization 

EIM Services Bills

- Bills will be posted similarly to how BPA posts Power and Transmission Bills today on Customer Portal

Detailed Data Files

- Detailed Data Files will be posted weekly as zip files, containing multiple excel files with at least one week's worth of data
- **Reminder – Customers must register for access to Customer Portal in order to view Detailed Data files**

Agreements and Legacy System Status

GRID Modernization 

- Customers will be required to sign new CP Agreements
 - Please reach out to your Account Executive or customerportal@bpa.gov to do so
- Legacy Customer Portal (CP) only available for historical data
 - Legacy CP will not be updated (no user changes, no live data feeds, no metering reports, etc.)
 - Legacy CP will be retired in calendar year 2022