California ISO

Settlements and Billing

Design Standard and Convention

Version 5.27

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1.   Purpose of Document

The purpose of this document is to provide design standard and naming convention for SaMC configuration design and give a direction to the people involved in the development of design guide, design template, and data mapping to move forward and implement successfully the required charge codes.

1.1 Revision History

Date	Doc Version	Description of Change
11/16/11	5.1	Updated Shortfall Distribution new attribute DEFAULT_SC_ID
01/06/12	5.2	In Section 4 (Bill Determinant Attribute Enumeration), in the table, enumerated the values 'LESR' and 'DDR' for the F' attribute; enumerated the values 'REM' and 'NREM' for the S' attribute.
02/09/12	5.2	Added revision history section 1.1. In section 4, updated name for attribute Y (CONFIGURATION_MRID). In section 3.2.49, showed attribute location for attribute Y under the BCR Precalc (SUC MLC) charge group.
02/24/12	5.2	Clerical Update: Corrected formatting at end of Table of Contents page. In Section 3.2 (Charge Group Specific Bill Determinant Attributes (by Parent Group)), added subsection 3.2.60 to defined attributes for new Charge Group (MSS Deviation Penalty Quantity Pre-Calc) of Parent Group "Pre-calculation" .
03/13/12	5.3	Revised subsection 3.2.60 (MSS Deviation Penalty Pre-Calc) to update attribute assignments. Added GIP Parent Charge Group
03/23/12	5.3	In Section 4 (Bill Determinant Attribute Enumeration), changed enumerated values for subscript c' (Contingent Flag) from 'CNTG', 'NCNTG' to 'YES', 'NO', respectively.
10/29/12	5.4	In Section 4 (Bill Determinant Attribute Enumeration), extended enumerated values for subscript O (Exceptional Dispatch Type) as a result of new Control Area TAC Area, TAC North Central (TAC_NCNTR). Local Capacity Area values become LOCAL1 through LOCAL4, Insufficient Resource Adequacy values become CADEF1 through CADEF15, Significant Event values become SIGEVT1 through SIGEVT15 and Risk of Retirement values become ROR1 through ROR15. Update design features for VEA, CPM, and RA Maintenance Outage Replacement Backstop Capacity. Added definition for k' attribute in Section 4 (Bill Determinant Attribute Enumeration), assigning "Alternate UDC ID" for its subscript name.

Date	Doc Version	Description of Change
12/05/12	5.5	Remove design features associated with RA Maintenance Outage Replacement Backstop Capacity.
06/21/13	5.6	In Section 4 (Bill Determinant Attribute Enumeration), defined new entries for K'' (Fuel-related Operating Penalty Type), O'' (Alternate Period ID), and Y'' (Alternate MSG Configuration ID)
7/30/13	5.6	Updated the Ancillary Services and Upward AS in Charge Group Specific Bill Determinant Attributes Section with a' (INTERTIE_CONSTRAINT_ID).
12/20/13	5.7	In Section 4 (Bill Determinant Attribute Enumeration), defined VER as new enumerated value for S' (Entity Component Subtype); defined new entry fo S'' (Entity Component Subtype Extension); renamed subscript i to be 10-Minute Interval.
1/17/14	5.7	Removed attribute K'' (Fuel-related Operating Penalty Type).
1/31/14	5.7	Changed exceptional dispatch type enumeration from PRETEST to TEST.
2/12/14	5.7	Reversed-out new attribute a'' definition and its application in Charge Group Deviation Settlement.
04/20/14	5.8	Incorporated features for EIM enhancement project
05/15/14	5.8	Remove attribute j' (FINANCIAL NODE ID) and replace with nodal attributes A, A', Q, and p in respective charge groups.
06/26/14	5.8	In Section 4 (Bill Determinant Attribute Enumeration), added enumeration EIM_DYN for subscript S'.
09/15/14	5.8	Remove Greenhouse Gas Emissions subgroup, as the charge code CC 491 is now under Imbalance Energy
10/03/14	5.8	Add shared attribute19, CRR_TYPE under CRR Daily Settlement charge group, for TD prior to 10/1/14.
10/16/14	5.9	Remove shared attribute NON_PTO_FLAG and use CHAIN_CRN_ID for attribute23, under ETC_Precalc charge group. Applies to all TDs once deployed in the December 2014 configuration release around calendar date 12/15/14.
3/24/15	5.10	Add general description of how shared attributes will appear in xml. Added attributes to existing charge groups Upward_Ancillary Services and AS_REG_DOWN Include description for attribute a' to also include flowgate ID in addition to intertie constrain ID and/or transmission constraint ID. Added attribute 27 BID_TYPE (a) to RT_PC Charge Group
7/31/15	5.11	Added Peak Reliability Coordinator Charge

Date	Doc Version	Description of Change
8/7/15	5.12	In Section 3.2.63 (CPM Settlement), assigned attribute symbol k' to CPM Transaction ID and added it to attribute position 25 for the CPM Settlement Charge Group (of the Resource Adequacy Parent Group); assigned attribute symbol o' to CPM_TRANS_ID and added it to attribute position 22 for the CPM Settlement Charge Group; added attributes from Excess Cost Charge Group to the CPM Settlement Charge Group to reflect some external inputs that are common to the two (2) Charge Groups. In Section 4, updated the attribute definition table to assign subscript/attribute names CPM Transaction ID and CPM Type to symbol k' and o', respectively, and to define the associated attributes' enumerations.
3/31/16	5.13	Fall 2016 release In Section 4 (Bill Determinant Attribute Enumeration) defined subscript Q'' (Alternate Balancing Authority Area / Alternate External Control Area Added Transferred Frequency Response Charge 7/14/16: Added attributes to RAAIM charge group
12/9/16	5.14	Added attributes for charge group Compliance Supporting Data Pre-Calc (of the Pre-calculation parent group)
10/16/2018	5.15	In Section 4 (Bill Determinant Attribute Enumeration) added ETSR as Attribute Enumeration for attribute RSRC_TYPE (subscript t).
11/14/2018	5.16	Updated attributes for Charge Groups CRR_DA_STLMT and CRR_MTH_STLMT as part of CRR Phase 1B Initiative
2/22/2019	5.17	In Section 3.2.63 (CPM Settlement), added attribute symbol t'' (LSE_ID) and assigned it to attribute position 26 for charge group CPM Settlement (of the Resource Adequacy parent group). In Section 4 (Bill Determinant Attribute Enumeration), updated the attribute definition table to • Assign new attribute t'' (LSE_ID) • Include new CPM Type (o') attribute enumerations (and associated descriptions)
6/14/2019	5.18	Removed Peak Reliability Coordinator Charge Group Created new Parent and Charge Groups for RC Services (Section 3.2.73) and HANA Services (Section 3.2.74) Updated the Common Attribute Name of the common attribute set table for Attributes 'B' and 'r' In Section 4 (Bill Determinant Attribute Enumeration), updated the

Date	Doc Version	Description of Change
		attribute definition table as follows: • Attribute 'B' updated to include RC_ID • Attribute 'r' updated to include Net Energy Zone
10/23/2019	5.19	Added Charge Group: Reliability Must Run (RMR) Settlement
2/4/2020	5.20	Added PTO_ID attribute to existing Black Start Capability charge group for Black Start initiative and Spring 2020 Release
12/2/2020	5.21	Changed Decline Hasp Bids to Deviation Settlment. This change will be effective 2/1/2021
2/17/2021	5.22	Added c" for a COMPONENT_ID attribute at Attribute 26 to PIRP Forecast charge group for Hybrid Resources initiative and Spring 2021 Release. Also created Hybrid = HBRD BD name convention standard
5/25/2021	5.23	Added Charge Group HASP_UPLIFT
10/11/2021	5.24	Added TMODEL8 and TMODEL9 enumeration under Exceptional dispatch type attribute.
12/7/2021	5.25	Feb Emergency 2022 Release - COTP/WAPA Project. Added two attributes to the existing Charge Group "Transmission Loss Obligation."
2/7/2022	5.26	Added attribute j'' for JOU parent, attribute descriptionS and bill determinant keywords related to JOU Pilot initiative.
7/18/2022	5.27	Added p and Q in Attributes 17 and 19 to support PRICE_NODE and INTERTIE_ID for FRP Deliverability and existing attributes W' and V in the Charge Group Flex Ramp and Q" to support CONSTRAINT_ID in Charge Group Ancillary Services Pre-Calc Removed PTO_ID attribute from BLACK_START_CAPABILITY charge group. It is not associated with this CG Added BLACK_START_CAP_PMT charge group to document as it was not added in 2020 when it was implemented Removed hidden paragraph marks within tables of charge groups.

2. Introduction

2.1 Scope

The scope of this document covers and limits to the Settlement system configuration design. It doesn't cover any impact on the upstream systems or the invoicing process that is depending on the Settlement system.

2.2   Definitions, Acronyms and Abbreviations

For detailed understanding of the definitions and terminology and notations, refer to the latest Charge Code General Conventions for Requirements and Design as well as the requirement references.

2.3   Requirement References

This design document is based on the following   documents.

Document Name	Document Version
Various Design Guides	versions

3.   Bill Determinant Attribute Convention

3.1   Common Bill Determinant Attribute

- Attribute number describes the order of the attributes in eterra attribute definition table.
    - ✓ The first 15 attributes (Attribute 1 – 15) for all the charge groups are fixed.
    - ✓ Attribute 16 – 30 may vary from one charge group to the other.

- Attribute symbols y, m, d, h, c, i, and f are subscripts that reflect time granularity for bill determinants and charge types. Subscripts y, m, and d, representing Trading Year, Month, and Day are implied. Therefore, these subscripts are assumed to be present even though y, m, and d are not declared in the attribute set for a given variable name.
Subscripts h, c, i, and f will be present to capture hourly, 15 minute, 10 minute, and 5 minute granularities. Subscripts h and c will both be present when the granularity is 15 minute; h and i will both be present when the granularity is 10 minute; h, i, and f will all be present when the granularity is 5 minute.

    Subscripts y, m, d, h, c, i, and f will not be configured as one of the 30 (configurable) attribute positions, and as such, the declaration (or non-declaration) of y, m, and d for charge types at hourly, 15 minute, 10 minute, or 5 minute granularities does not affect charge code configuration, nor the accuracy of the calculation

- Attribute symbol is provided in configuration guides but will not be used in detailed design template.

- Attribute name indicates the actual name of the attributes in the attribute definition table and they are used by detailed design template.

- Attribute locations are not included in the xml statements.

The following table defines common attribute set across charge groups:

Attribute Number	Attribute Symbol	Common Attribute Name
1	B	BA_ID/RC_ID
2	r	RSRC_ID/NET_ENERGY_ZONE
3	t	RSRC_TYPE
4	E	ENERGY_TYPE
5	T'	ENTITY_TYPE
6	Q'	BAL_AUTHORITY_AREA / EXT_CONT_AREA
7	O	EXCP_DISPATCH_TYPE
8	b	BID_SEGMENT_NUM
9	J	PTB_ID
10	u	UDC_ID
11	I'	MSS_GROSS_OR_NET_FLAG
12	M'	MSS_SUBGROUP
13	A	APN_ID
14	A'	APN_TYPE
15	m'	CHANNEL_ID

- There is an eterra system limitation of 30 attribute locations, which requires attribute location to be shared, as shown above for attribute number 6. When shared, only one attribute name will be listed in the xml statement file. The newer attribute name added will replace the attribute label even for older Trading Days that are recalculated, and this will appear in the xml statements.

  An exception was made for the shared attribute 6 that is under fixed attributes 1-15. The configuration output file was customized to show the correct attribute name of EXTERNAL_CONTROL_AREA for older Trading Days prior to TD 10/1/2014, even after a newer attribute BAL_AUTHORITY_AREA is introduced and used for this attribute location.

3.2 Charge Group Specific Bill Determinant Attributes (by Parent Group)

Access Charge

3.2.1 CRR Prepayments

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19	Q	INTERTIE_ID
20	P	PTO_ID
21	p'	CRR_PREPAYMENT_ID
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.2 CRR Remainder Allocation

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19	Q	INTERTIE_ID
20	P	PTO_ID
21	p'	CRR_PREPAYMENT_ID
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.3 High Voltage Wheeling

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19	Q	INTERTIE_ID
20	P	PTO_ID
21	p'	CRR_PREPAYMENT_ID
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.4 Low Voltage Wheeling

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19	Q	INTERTIE_ID
20	P	PTO_ID
21	p'	CRR_PREPAYMENT_ID
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.5 High Voltage Access Charge

Attribute Number	Attribute Symbol	Common Attribute Name
16	v	TAC_AREA_ID
17	H	HVAC_PAYER_ID

18		
19	Q	INTERTIE_ID
20	P	PTO_ID
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.6 Low Voltage Access Charge

Attribute Number	Attribute Symbol	Common Attribute Name
16	v	TAC_AREA_ID
17	H	HVAC_PAYER_ID
18		
19		
20	P	PTO_ID
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Ancillary Services

3.2.7 Ancillary Services Regulation Down

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18	W'	MSS_EMISSION_PAY_FLAG

19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27		
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.8 Black Start Capability   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.9 Black Start Cap Pmt

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		

25		
26		
27		
28	P	PTO_ID
29		
30		

3.2.10 Flex Ramp

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23	Q''	CONSTRAINT_ID
24		
25		
26		
27		
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.11 Supplemental Reactive Energy

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18	W'	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27		
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG

30	L'	LOAD_FOLLOWING_FLAG

3.2.12 Upward Ancillary Services

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18	W'	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27		
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.13 Voltage Support   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Annual FERC Fee

3.2.14 FERC Fee Due Annually   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Cost Recovery

3.2.15 Bid Cost Recovery

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W '	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	O'	PERIOD_ID
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H / w'	HVAC_PAYER_ID / ASSOC_PARTICIPATING_LOAD_RSRC
27	v	TAC_AREA_ID
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.16 Emissions

Attribute Number	Attribute Symbol	Common Attribute Name
16		

17		
18	W '	MSS_EMISSION_PAY_FLAG
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.17   Start-Up

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

DA Energy-Congestion-Losses

3.2.18   CRR Auction and CRR Auction Collateral

Attribute Number	Attribute Symbol	Common Attribute Name
16	z	CRR_ID
17	U'	BILL_PERIOD_START

18	U	BILL_PERIOD_END
19		
20		
21		
22	N'	CRR_AUCTION_NAME
23	t'	TIME_OF_USE
24		
25		
26		
27		
28		
29		
30		

3.2.19 CRR Daily Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	z	CRR_ID
17	p	PRICE_NODE_ID
18	W '	MSS_EMISSION_PAY_FLAG
19	Q / M	INTERTIE_ID / CRR_TYPE *
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	j'	FINANCIAL_NODE_ID
23	t'	TIME_OF_USE
24	M	CRR_TYPE *
25	e'	CONTINGENCY_CASE_ID
26	H'	HEDGE_TYPE
27	d"	DIRECTION
28	a'	INTERTIE_CONSTRAINT_ID**
29	G'	CBEM_GROUP_ID
30	u'	ABA_ID

* CRR_TYPE is under location 19 prior to TD 10/1/2014, and is under location 24 starting with TD 10/1/2014. As old trade dates are recalculated and the xml published, the CRR_TYPE values for those old trade dates (earlier than TD 10/1/2014) will be labeled as "INTERTIE_ID" instead of CRR_TYPE.

** This attribute location will also contain transmission constraint IDs, but will be listed as INTERTIE_CONSTRAINT_ID.

3.2.20 CRR Monthly Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	z	CRR_ID
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22	N'	CRR_AUCTION_NAME
23	t'	TIME_OF_USE
24	M	CRR_TYPE *
25	e'	CONTINGENCY_CASE_ID
26	H'	HEDGE_TYPE
27		
28	a'	INTERTIE_CONSTRAINT_ID**
29		
30		

** This attribute location will also contain transmission constraint IDs, but will be listed as INTERTIE_CONSTRAINT_ID.

3.2.21 DA Energy and Marginal Loss Surplus

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	p	PRICE_NODE_ID
18		
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23	g'	CHAIN_CRN_ID
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26		
27	a	BID_TYPE
28		
29	V / y'	RUC_PARTICIPATION_FLAG /INTERTIE_NODE_FLAG
30	L' / u'	LOAD_FOLLOWING_FLAG /ABA_ID

Over and Under Scheduling

3.2.22 Over and Under Scheduling EIM

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

Enforcement Protocol Penalty

3.2.23 EP Adjustment

Attribute Number	Attribute Symbol	Common Attribute Name
16	X	TRADE_PERIOD_START
17	X'	TRADE_PERIOD_END
18	W '	MSS_EMISSION_PAY_FLAG
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.24 EP Penalty

Attribute Number	Attribute Symbol	Common Attribute Name
16	X	TRADE_PERIOD_START
17	X'	TRADE_PERIOD_END
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

FERC Fee

3.2.25 FERC Fee Due Monthly   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.26 FERC Fee Recovery   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		

17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

FERC Rerun Interest

3.2.27 FERC Interest

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Financial Adjustments

3.2.28 Interest

Attribute Number	Attribute Symbol	Common Attribute Name
16	V'	INVOICE_REFERENCE
17	U'	BILL_PERIOD_START

18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.29 Invoice Deviation Interest

Attribute Number	Attribute Symbol	Common Attribute Name
16	V'	INVOICE_REFERENCE
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19	F	FROM_DATE
20	F"	FROM_DATE_TYPE
21	T	TO_DATE
22	T"	TO_DATE_TYPE
23		
24		
25		
26		
27		
28		
29		
30		

3.2.30 Late Payment Penalty

Attribute Number	Attribute Symbol	Common Attribute Name
16	V'	INVOICE_REFERENCE
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		

23		
24		
25		
26		
27		
28		
29	v'	REFERENCE_ID
30		

3.2.31 Shortfall Distribution

Attribute Number	Attribute Symbol	Common Attribute Name
16	V'	INVOICE_REFERENCE
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20	L	INVOICE_RUN_NUM
21		
22	B'	DEFAULT_SC_ID
23		
24		
25		
26		
27		
28		
29		
30		

GIP

3.2.32 Generator Interconnection Process (GIP) Forfeited Deposit Allocation

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		

27		
28		
29		
30		

GMC

3.2.33 Grid Management Charge

Attribute Number	Attribute Symbol	Common Attribute Name
16	R' / x / z	PENALTY_RSRC_ID / MARKET_TYPE / CRR_ID
17	p / s	PRICE_NODE_ID / IST_ID
18	W' / w / r'	MSS_EMISSION_PAY_FLAG / IST_TYPE / SUB_RSRC_ID
19	Q / Z / M	INTERTIE_ID / TRADE_PLACE / CRR_TYPE
20	F' / K	ENTITY_COMPONENT_TYPE / COUNTER_BAID
21	S' / D	ENTITY_COMPONENT_SUBTYPE / DEPEND_ON_NAME
22		
23	t'	TIME_OF_USE
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HEDGE_TYPE
27	v / a / i'	TAC_AREA_ID / BID_TYPE / CRR_MKT_NAME
28	x'	MRKT_DESC
29	V / y'	RUC_PARTICIPATION_FLAG / INTERTIE_NODE_FLAG
30	L'	LOAD_FOLLOWING_FLAG

HASP-RT Settlement

3.2.34 Black Start Energy

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18	W'	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE

21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27		
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.35 Deviation Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18	W'	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27		
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.36 Emergency Energy Exchange

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

26		
27		
28		
29	E'	EEP_REF_ID
30		

3.2.37 Exceptional Dispatch

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18	W'	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.38 Excess Cost

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		UDP_RSRC_TYPE
27		
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.39 Hasp Uplift

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	w'	ASSOC_PARTIC_LOAD_RSRC
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.40   Imbalance Energy

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n' / g'	NON_PTO_FLAG / CHAIN_CRN_ID
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v/a	TAC_AREA_ID/ BID_TYPE
28	P	PTO_ID
29	V/y'	RUC_PARTICIPATION_FLAG/ INTERTIE_NODE_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.41 MSS Deviation Penalty

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	q	LOSS_INTERTIE_ID
21	q'	LOSS_BASIS
22	d'	DYNAMIC_RESOURCE_TYPE
23	c'	CONTINGENT_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26		
27		
28		
29		
30		

3.2.42 PIRP Export Energy   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.43 PIRP Export Energy Fee   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		

17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.44 PIRP Forecast   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26	c"	COMPONENT_ID
27		
28		
29		
30		

3.2.45 PIRP Settlement   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		

21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

3.2.46 Real Time Congestion

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23	g'	CHAIN_CRN_ID
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.47 Transmission Loss Obligation

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSIONS_PAY_FLAG
19	Q	INTERTIE_ID
20		
21		
22		
23		
24	N	CONTRACT_REF_ID

25	z'	CONTRACT_TYPE
26		
27		
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

Inter-SC Trades

3.2.48 Inter-SC Trades Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	x	MARKET_TYPE
17	s	IST_ID
18	w	IST_TYPE
19	Z	TRADE_PLACE
20	K	COUNTER_BA_ID
21	D	DEPEND_ON_NAME
22		
23		
24		
25		
26		
27		
28		
29		
30		

Neutrality Settlement

3.2.49 Neutrality

Attribute Number	Attribute Symbol	Common Attribute Name
16	G'	NEUTRALITY_ID
17		
18		
19		
20		
21		
22		
23		
24		
25		

26		
27		
28		
29		
30		

3.2.50 Rounding   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Pre-calculation

3.2.51 Access Charge Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	v / R'	TAC_AREA_ID / PENALTY_RSRC_ID
17	H / p	HVAC_PAYER_ID / PRICE_NODE_ID
18	n' / W'	NON_PTO_FLAG/ MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	P / F'	PTO_ID / ENTITY_COMPONENT_TYPE
21	F' / S'	ENTITY_COMPONENT_TYPE / ENTITY_COMPONENT_SUBTYPE
22	S' / d'	ENTITY_COMPONENT_SUBTYPE / RESOURCE_SUBTYPE
23	L' / n'	LOAD_FOLLOWING_FLAG / NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	R' / z'	PENALTY_RSRC_ID / CONTRACT_TYPE

26	p / H	PRICE_NODE_ID / HVAC_PAYER_ID
27	W' / v	MSS_EMISSION_PAY_FLAG / TAC_AREA_ID
28	d' / P	RESOURCE_SUBTYPE / PTO_ID
29	z' / V	CONTRACT_TYPE / RUC_PARTICIPATION_FLAG
30	V / L'	RUC_PARTICIPATION_FLAG / LOAD_FOLLOWING_FLAG

3.2.52 Ancillary Services Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n' /Q"	NON_PTO_FLAG/CONSTRAINT_ID
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.53 BCR Pre-Calc (SUC MLC Pre-calc)

Attribute Number	Attribute Symbol	Common Attribute Name
16	R' / j''	PENALTY_RSRC_ID / JOU_PARENT_ID
17	p	PRICE_NODE_ID
18	W '	MSS_EMISSION_PAY_FLAG
19	Q / O''	INTERTIE_ID / ALT_PERIOD_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE SUBTYPE
23	O'	PERIOD_ID
24		
25	X	TRADE_PERIOD_START
26	Y	CONFIGURATION_MRID

27	v / Y"	TAC_AREA_ID / ALT_CONFIGURATION_MRID
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.54 Bid Cost Recovery Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p / s	PRICE_NODE_ID / IST_ID
18	W '	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE SUBTYPE
23	O'	PERIOD_ID
24		
25		
26		
27	v	TAC_AREA_ID
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.55 Compliance Supporting Data Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG/ FLEX_RA_CAT
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	w'	ASSOC_PARTIC_LOAD_RSRC
27	v	TAC_AREA_ID
28	a' / P	INTERTIE_CONSTRAINT_ID / PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.56 Estimated Settlement Liability

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	P	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27	v	TAC_AREA_ID
28		
29	V	RUC PARTICPATION FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.57 ETC-TOR-CVR Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	g'	CHAIN_CRN_ID
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	a'	INTERTIE_CONSTRAINT_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.58 Measured Demand Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID

17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.59 Metered Energy Adjustment Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W '	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.60 Real Time Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE

22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v/a	TAC_AREA_ID/BID_TYPE
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.61 System Resource Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F' / q	ENTITY_COMPONENT_TYPE / LOSS_INTERTIE_ID
21	S' / q'	ENTITY_COMPONENT_SUBTYPE / LOSS_BASIS
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.62 Transmission Loss Allocation Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	q / F'	LOSS_INTERTIE_ID / ENTITY_COMPONENT_TYPE
21	q' / S'	LOSS_BASIS / ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG

24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.63 Estimated Meter Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W '	MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27	v	TAC_AREA_ID
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.64 MSS Deviation Penalty Pre-Calc

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W'	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	d'	RESOURCE_SUBTYPE
23	c' / n'	CONTINGENT_FLAG / NON_PTO_FLAG
24	N	CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID

29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

Reliability Must Run (RMR) Settlement

3.2.65 Reliability Must Run (RMR) Capacity

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27	v	TAC_AREA_ID
28		
29		
30		

Resource Adequacy

3.2.66 CPM Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	U' / p	BILL_PERIOD_START /PRICE_NODE_ID
18	U / W'	BILL_PERIOD_END / MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	o'	CPM_TYPE
23		
24		
25	k'	CPM_TRANS_ID
26	t''	LSE_ID
27	v	TAC_AREA_ID

28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.67 Standard Capacity Product

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	r'/ W'	SUB_RSRC_ID/ MSS_EMISSION_PAY_FLAG
19	h'/ Q	SUB_REQ_ID/ INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	s'/ d'	HIST_QC_FLAG/ RESOURCE_SUBTYPE
23	n'	NON_PTO_FLAG
24	f'/ N	GF_CONTRACT_REF_ID/ CONTRACT_REF_ID
25	z'	CONTRACT_TYPE
26	H	HVAC_PAYER_ID
27	v	TAC_AREA_ID
28	P	PTO_ID
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

3.2.68 ICPM Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	U'	BILL_PERIOD_START
17	U	BILL_PERIOD_END
18		
19		
20		
21		
22		
23		
24		
25		
26		
27	v	TAC_AREA_ID

28		
29		
30		

3.2.69 Resource Adequacy Availability Incentive Mechanism (RAAIM)

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	U'/ p	BILL_PERIOD_START / PRICE_NODE_ID
18	U/W'	BILL_PERIOD_END / MSS_EMISSION_PAY_FLAG
19		
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22	o'	CPM_TYPE
23	j'	FLEX_RA_CAT
24		
25	k'	CPM_TRANS_ID
26		
27	a	BID_TYPE
28		
29	V	RUC_PARTICIPATION_FLAG
30	L'	LOAD_FOLLOWING_FLAG

Shortfall Adjustments

3.2.70 Shortfall Allocation

Attribute Number	Attribute Symbol	Common Attribute Name
16	V'	INVOICE_REFERENCE
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20	L	INVOICE_RUN_NUM
21		
22	B'	DEFAULT_SC_ID
23		
24		
25		
26		
27		
28		

29		
30		

Station Power Settlement

3.2.71 Station Power   (No charge group-specific attributes)

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

UDP Settlement

3.2.72 Uninstructed Deviation Penalty

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17		
18		
19		
20	j	UDP_RSRC_TYPE
21		
22		
23		
24		
25		
26		
27		
28		
29		

30		

NERC WECC Charge Group

3.2.73 NERC WECC Charge

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Under-Scheduled Load Penalty

3.2.74 Under-Scheduled Load Settlement

Attribute Number	Attribute Symbol	Common Attribute Name
16	R'	PENALTY_RSRC_ID
17	p	PRICE_NODE_ID
18	W '	MSS_EMISSION_PAY_FLAG
19	Q	INTERTIE_ID
20	F'	ENTITY_COMPONENT_TYPE
21	S'	ENTITY_COMPONENT_SUBTYPE
22		
23		
24		
25		
26		
27	v	TAC_AREA_ID
28	b' / P	CAISO_BAL_AUTH_REGION / PTO_ID
29	V	RUC_PARTICIPATION_FLAG

30	L'	LOAD_FOLLOWING_FLAG

Reliability Coordinator Services Charge

3.2.75 RC Services Charge

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Hosted Advanced Network Applications (HANA) Charge

3.2.76 HANA Charges

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Transferred Frequency Response Charge

3.2.77 TFR Charge

Attribute Number	Attribute Symbol	Common Attribute Name
16		
17	U'	BILL_PERIOD_START
18	U	BILL_PERIOD_END
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

Process Configuration

3.2.78 PTB

Attribute Number	Attribute Symbol	Common Attribute Name
16 – 30		Depends on PTB logic applied to each

Note: In addition to BA_ID and PTB_ID, PTB Direct Charge, PTB Financial Adjustment and PTB Bill Determinant can have the relevant set of attributes applicable to the Charge code.

3.2.79 RMR Invoice

Attribute Number	Attribute Symbol	Common Attribute Name
16	V'	INVOICE_REFERENCE
17	K	COUNTER_BA_ID
18		
19		
20		
21		
22		
23		
24		
25		

26		
27		
28		
29		
30		

3.2.80 Historic Rerun PTB

Attribute Number	Attribute Symbol	Common Attribute Name
16	n	STLMT_SUMMARY_ID
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		

4.   Bill Determinant Attribute Enumeration

Based on configuration guides and communication with requirement team, the design team has made the following assumptions regarding valid enumerations for Bill Determinant attributes.
These still need to be confirmed by requirement or integration team.

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
a	Bid Type	Bid type which refers to either a supply or demand bid. The classification applies to physical or virtual bids.	Charge Group specific	BID_TYPE	SUP	Supply bid
					DMND	Demand bid
a'	Intertie Constraint ID / Transmission Constraint ID / Flowgate ID	The transmission constraint to which a resource participates in transmission flows. Used for instance in associating shadow prices like that for A/S imports congestion. With convergence bidding, this is now expanded to apply to all possible transmission constraints, not just constraints for system resource (at interties) but for other resources as well. Intertie Constraint ID / Flowgate ID is used for identifying derates related to MT_TOR CRR type.	Charge Group specific	INTERTIE_CONSTRAINT_ID	{alphanumeric value}	Intertie Constraint Identifier / Transmission Constraint Identifier / Flowgate Identifier
a''	*Reserved*		NA			
A	APNODE	Aggregated Pricing Node ID	13	APN_ID	{alphanumeric value}	APN Identifier
A'	APNODE TYPE	Aggregated Pricing Node Type	14	APN_TYPE	CUSTOM	Custom Price Zone
					DEFAULT	Default Price Zone
					APL	Aggregated Participating Load

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					TH	Trading Hub
					NPL	Non-Participating Load
					AGEN	Aggregate Generation
					ASR	Aggregate System Resource
					SPZ	Sub-LAP APNODE
					POD	Point of Delivery
					IND	Individual Pnode
b	Bid Segment Number	Unique index number for the bid curve segment	8	BID_SEGMENT_NUM	{numeric value}	Bid Segment Number
b'	CAISO Balancing Authority Region	CAISO Control Area split into 2 regions based upon TAC Area definition	28	CAISO_BAL_AUTH_REGION	SOUTH	Comprised of Forecast Zones SCE-TAC & SDGE-TAC in which the aforementioned Forecast Zones are equivalent to TAC Areas TAC_ECNTR (East Central TAC Area & TAC_SOUTH (Southern TAC Area) respectively
					NORTH	Comprised of Demand Forecast Zone PGE-TAC in which the aforementioned Forecast Zone is equivalent to TAC_NORTH (Northern TAC Area)
					NULL	Comprised of Forecast Zone CAISO-TAC or other non-specific zone

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
B	Business Associate ID / Reliability Coordinator ID	Unique numeric ID for the Business Associate. A BA can be a Scheduling Coordinator, a UDC, a PTO, a CRR holder, an RMR Owner, a Trustee, an RC Customer, or a Non-Market Participant	1	BA_ID RC_ID	{numeric value}	Business Associate Identifier RC Customer ID
B'	Default-Invoice SC	The SCID(s) selected by an entity pursuant to the Default Election procedures that are to be allocated a portion of any payment default amount.	Charge Group specific	DEFAULT_SC_ID	{numeric value}	Default-Invoice SC
c	FMM Interval	Fifteen-Minute Market (FMM) Interval. The 15-minute time interval for which ISO Dispatch instructions are issued, energy and AS is scheduled or AS is procured, and that corresponds to a particular FMM Interval (c) within a Trading Hour.	NA	Not a design attribute	1-4, corresponding to the four(4) successive 15-minute intervals of a Trading Hour.	FMM (15-Minute Market) Interval
c'	Contingent Flag	Indicates contingent Ancillary Service energy	Charge Group specific	CONTIGENT_FLAG	YES	Contingent System Resource
					NO	Non Contingent System Resource
c"	Component	Component or sub component of a hybrid resource that needs visibility to be settled at the resource level	Charge Group Specific	COMPONENT_ID	{alphanumeric}	Resource Component
C	CRR Cycle	The start date and end date for the relevant CRR cycle of CRR ID	Charge Group specific	CRR_CYCLE	{numeric value}	CRR Cycle
C'	Commitment Period	The status of Commitment Period	NA	Not a design attribute	SELF	Self-Commitment Period
					CAISO	CAISO Commitment Period.

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
d	Trading Day	Trading Day associated with the relevant Bill Determinant or Settlement Amount	NA	Not a design attribute	NA	NA
d'	Resource Subtype	Used to identify a specific Generator subtype	Charge Group specific	RESOURCE_SUBTYPE	HYD	Hydro Resource
					T	Thermal Resource
					SOL	Solar Resource
					WIND	Wind Resource
					NULL	Undefined
d''	Resource Category / Direction	Used to identify a resource category . The category can include resources having different resource types. /For purpose of intertie constraint, whether import or export direction	Charge Group specific	RESOURCE_CATEGORY / DIRECTION	VER /I – for Import direction E – for Export direction	Variable Energy Resource
D	Depend On Trade Name	Points to the unique Inter-SC trade name in the chain of physical energy trade	Charge Group specific	DEPEND_ON_NAME	{alphanumeric value}	Generating resource ID
D'	Dispute Reference ID	Text indicating comments or the dispute reference number(s) that apply to the transactional data	NA	Not a design attribute	{alphanumeric value}	Dispute Reference ID
e	Source	A PNode or Trading Hub specified as the point of receipt for the relevant CRR, ETC, CNV, or TOR	NA	Not a design attribute	{alphanumeric value}	Source
e'	Contingency Case	Used to identify a contingency case	Charge Group specific	CONTINGENCY_CASE_ID	{alphanumeric value}	Contingency Case ID
E	Energy Type	A specific type of Energy or AS Capacity for System Resource as being Dynamic, Real-Time, Firm, Non-Firm, Wheel, Spin, Non-Spin, Regulation Up, Regulation	4	ENERGY_TYPE	FIRM	Firm
					NFRM	Non-Firm
					WHEEL	WHEEL
					DYN	DYNAMIC

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
		Down, Exceptional Dispatch, or Unit Contingent			SPIN	Spin
					NSPN	Non-Spin
					REGUP	Regulation Up
					REGDN	Regulation Down
					RT	Real Time
					EXCPDISP	Exceptional Dispatch
					UCTG	Unit-Contingent
E'	Energy Exchange Interchange ID Reference	The unique ID of an Energy exchange between CAISO and another Control Area	Charge Group specific	EEP_REF_ID	{alphanumeric value}	Energy Exchange Interchange ID Reference
f	Dispatch Interval/Settlement Interval	The time interval at which CAISO Dispatch instructions are issued corresponding to a particular Settlement Interval and Trading Hour	NA	Not a design attribute	{numeric value}	Dispatch Interval
f'	Grandfathered Contract Reference Number (SCP)	Unique ID number for Existing Grandfathered Contract for Standard Capacity Product	Charge Group specific	GF_CONTRACT_REF_ID	24	Grandfathered Contract Reference Number
F	From Date	Due date for initial Invoice or beginning of quarter date	19	FROM_DATE	{alphanumeric value}	Due date for initial Invoice or beginning of quarter date
F'	ENTITY COMPONENT TYPE	The category of the entity for a resource	Charge Group specific	ENTITY_COMPONENT_ TYPE	GEN	Generator
					LOAD	Load
					PUMP	Pump Unit
					PMPST	Pump Storage Unit
					PMPP	Participating Pump
					LESR	Limited Energy Storage Device

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					DDR	Dispatch-able Demand Response Resource
					ETIE	Exporting System Resource
					ITIE	Importing System Resource
					INTERTIE	Tie
					CONTRACT	Resource under contract
					INTRATIE	Logical resource used to represent an Unaccounted-for-Energy (UFE) value (derived from meter data) for MSS u
					TRADE_MSS_LCTN	Logical resource used to represent the traded Energy from or to MSS u
					NETMD	Logical resource or City Gate used to represent the net MSS Demand for MSS u
					TG	Tie-Generator (defined in Tariff as Resource-Specific System Resource)
F"	From Date Type	Accepted enumerations for the attribute From Date Type	20	FROM_DATE_TYPE	Invoice1_Due_Date	1st weekly Invoice due date
					Invoice2_Due_Date	2nd weekly Invoice due date
					Invoice3_Due_Date	3rd weekly Invoice due date
					Invoice4_Due_Date	4th weekly Invoice due date
					Invoice5_Due_Date	5th weekly Invoice due date
					Invoice6_Due_Date	6th weekly Invoice due date
					BOQ1_Date	Beginning of 1st quarter date
					BOQ2_Date	Beginning of 2nd quarter date
					BOQ3_Date	Beginning of 3rd quarter date
					BOQ4_Date	Beginning of 4th quarter date
					BOQ5_Date	Beginning of 5th quarter date

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					BOQ6_Date	Beginning of 6th quarter date
					BOQ7_Date	Beginning of 7th quarter date
					BOQ8_Date	Beginning of 8th quarter date
					BOQ9_Date	Beginning of 9th quarter date
					BOQ10_Date	Beginning of 10th quarter date
					BOQ11_Date	Beginning of 11th quarter date
					BOQ12_Date	Beginning of 12th quarter date
					BOQ13_Date	Beginning of 13th quarter date
					BOQ14_Date	Beginning of 14th quarter date
					BOQ15_Date	Beginning of 15th quarter date
g	Priority Level	Value assigned to distinguish scheduling priorities among contracts or services using the same resource. Value is cardinal number 0, 1, 2, 3, etc…with 0 being the highest. For contracts, the higher the number the lower the priority. CRNs having the same scheduling priority are assigned the same priority level value.	NA	Not a design attribute	{numeric value}	Priority Level
g'	Chain CRN ID	Identifies a chain of CRNs and a contract self-schedule at the chain level	Charge Group specific	CHAIN_CRN_ID	{alphanumeric value}	Chain CRN ID

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
G	General Ledger Reference ID	The General Ledger (GL) reference ID only relevant to the accrual transactions, shortfalls, and interest, created upon calculation of the relevant Charge Code.	NA	Not a design attribute	{alphanumeric value}	General Ledger Reference ID
G'	CBEM Group ID	The CBEM group ID, identifying the parent company common to both a CB Entity and a CRR Holder.	Charge Group specific	CBEM_GROUP_ID	{alphanumeric value}	CBEM Group ID
h	Trading Hour	Trading Hour associated with the relevant Bill Determinant or Settlement Amount	NA	Not a design attribute	{numeric value}	Trading Hour
h'	Substitution Request ID	Alphanumeric Characters internally provided by System after request has been submitted and approved	Charge Group specific	SUB_REQ_ID	{alphanumeric value}	Substitution Request Identification.
H	HVAC Payer ID	The unique BA ID which associates a SC/Load Resource combination with an HVAC PTO	Charge Group specific	HVAC_PAYER_ID	{alphanumeric value}	HVAC Payer ID
H'	Hedge Type	Represents CRR Obligation or CRR Option	Charge Group specific	HEDGE_TYPE	YES	Option
					NO	Obligation
i	10-Minute Interval	The 10-minute time period associated with the relevant Bill Determinant	NA	Not a design attribute	{numeric value}	10-Minute Interval
i'	CRR Market Name	Unique identifier for a CRR allocation or auction market name	Charge Group specific	CRR_MKT_NAME	{alphanumeric value}	Identifies a CRR allocation or auction market
I'	MSS Energy Settlement Election	MSS election flag for Energy settlements (either "Gross" or "Net")	11	MSS_GROSS_OR_NET_FLAG	GROSS	Gross
					NET	Net
j	UDP Record Type	Flag which indicates whether the relevant data is for a Penalty Location ID	Charge Group specific	UDP_RECORD_TYPE	P	Penalty record
					D	Supporting detail record

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
j'	Flexible RA Capacity Category	Identifies a category of Flexible RA	Charge Group specific	FLEX_RA_CAT	CAT1	Flexiable RA Capacity Category 1 17 hours per day 5am – 10pm (HE6 – HE22)
					CAT2	Flexiable RA Capacity Category 2 5 hours per day 3pm – 8pm (HE16 – HE20)
					CAT3	Flexiable RA Capacity Category 3 5 hours per non-holiday weekdays 3pm – 8pm (HE16 – HE20)
j''	Joint Owned Unit (JOU) parent ID	Identifies a JOU parent	Charge Group specific	JOU_PARENT_ID	{alphanumeric value}	JOU parent ID
J	Pass Through Bill ID	Unique identifier for a PTB transaction (system generated)	9	PTB_ID	{numeric value}	Pass Through Billing Identifier
J'	MWh Segment	Identifies a data pair for an Intertie Transaction Scheduling System (ITSS) instruction that contains a start minute and Energy output by resource in a given Trading Hour	NA	Not a design attribute	{alphanumeric value}	MWh Segment
k	Sink	A PNode or Trading Hub specified as the point of withdrawal for the relevant CRR, ETC, CVR or TOR	NA	Not a design attribute	{alphanumeric value}	Sink
k'	CPM Transaction ID	Unique autogenerated ID created in Settlement System for each CPM record (that corresponds to a particular Competitive Solicitation Process (CSP) transaction for CPM capacity)	Charge Group specific	CPM_TRANS_ID	{numeric value}	Identifies a CPM Competitive Solicitation Process (CSP) transaction by means of a a unique 9-digit numeric identifier.

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
K	Counter BA ID	Counterparty BA ID for an RMR Invoice amount. There is always a unique combination of the PTO/OWNER pair for each FACILITY_ID, therefore COUNTER_BA_ID is representing an OWNER of the specified facility	Charge Group specific	COUNTER_BA_ID	{alphanumeric value}	Counter BA ID
K'	Enforcement Protocol Penalty Type	Text or code denoting the Enforcement Protocol Penalty Type as determined by the Department of Market Monitoring when a Scheduling Coordinator violates one of the Rules of Conduct per ISO Tariff Section 37	Charge Group specific	PENALTY_TYPE	{alphanumeric value}	Enforcement Protocol Penalty Type
L	Invoice Run Number	A unique number associated with a specific Invoice Run.	Charge Group specific	INVOICE_RUN_NUM	{numeric value}	Invoice Run Number
L'	Load Following Resource Flag	Load Following Resource indicating whether the resource is part of a group of generators and loads where the generators provide for the loads' real-time demand on an as-needed basis	Charge Group specific	LOAD_FOLLOWING_FLAG	YES	MSS Load Following
					NO	Undefined
M	CRR Holder Type	CRR Holder Type representing the type of Market Participant that holds the CRR: LSE, ETC, TOR	Charge Group specific	CRR_TYPE	TOR	Transmission Ownership Rights
					LSE	Load Serving Entity internal to the CAISO control area
					ETC	Existing Transmission Contracts
					CVR	Converted Rights
					AUC	Auction CRR Type
					MT	Merchant Transmission

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					LMT_CNT	Load Migration Counter Flow CRR Type
					LSE_LMT	Load Migration CRR Type
					TER	Hybrid of TOR and TEA (WAPA Transmission Agreement with CAISO and PG&E)
					OBAALSE	Out-of-Balancing Area Authority Load Serving Entity
					LSE_THCNT	Load Serving Entity Trading Hub Counterflow CRR Type
					AGG	Aggregated obligation CRRs
					MT_TOR	Merchant Transmission for a TOR
					LSE_CNT	The counter-flow CRR awarded to the load losing LSE during load migration
M'	MSS Subgroup	Single MSS within an MSS Operator	12	MSS_SUBGROUP	{alphanumeric value}	MSS "Bubble" Identifier
m	Trading Month	Trading Month associated with the relevant Bill Determinant or Settlement Amount	NA	Not a design attribute	{numeric value}	Trading Month
m'	Channel ID	Channel identifier for meter data provided by the OMAR subsystem. Currently 2 channels, 1 and 4, are applicable to Energy settlements, although other channels are defined within OMAR	15	CHANNEL_ID	1	Energy Demand
					4	Energy Generation
n	Settlement Summary ID	Unique ID for a given Business Associate and Settlement Summary Date combination in the legacy Settlement system	Charge Group specific	STLMT_SUMMARY_ID	{alphanumeric value}	Settlement Summary ID

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
n'	Non-PTO Flag	A flag that indicates whether a specific entity is a PTO (or not)	Charge Group specific	NON_PTO_FLAG	YES	Non-PTO
					NO	PTO
N	Contract Reference Number (CRN)	Unique ID number for an ETC, TOR, or CVR contract	Charge Group specific	CONTRACT_REF_ID	{numeric value}	Contract Reference Number
N'	CRR Auction Market Name	Name that represents the season in which the CRR Auction occurs	Charge Group specific	CRR_AUCTION_NAME	{alphanumeric value}	CRR Auction Market Name
o	Control Area	Unique name for a specific Control Area (i.e., – CAISO)	NA	Not a design attribute	{alphanumeric value}	Control Area
o'	Capacity Procurement Methodology (CPM) Type	Unique name specifying the Capacity Procurement Methodology (CPM) designation type	Charge Group specific	CPM_TYPE	LOCAL	Insufficient Local Capacity Area Resources in a monthly Resource Adequacy Plan
					ANCOL	CPM supply designation code that covers both Annual Local deficiency (ANLOCAL) and Annual Collective deficiency (COLDEF).
					ANLOCAL	Insufficient Local Capacity Area Resources in an Annual RA plan.
					COLDEF	Collective deficiency in Local Capacity Area Resources idenitifed in a monthly Resource Adequacy Plan
					CADEF	Insufficient Resource Adequacy Resources in an LSE's monthly Resource Adequacy Plan
					ANCADEF	Insufficient RA resources in an LSE's Annual RA plan.

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					SIGEVT	Significant Event
					ED	CPM capacity procured due to a reliability or operational need for which Exceptional Dispatch Energy has been dispatched.
					ROR	CPM designation for capacity at risk of retirement within the current RA Compliance Year that will be needed for reliability by the end of the calendar year following the current RA Compliance Year
					ANFRDEF	CPM designation for a cumulative deficiency in the total Flexible RA Capacity included in the Annual Flexible RA capacity plans
					FRDEF	CPM designation for a cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans
O	Exceptional Dispatch Type	Unique name specifying the Exceptional Dispatch instruction type	7	EXCP_DISPATCH_TYPE	SYSEMR	**Competitive Path** ED for System Emergency such as to mitigate for over-gen, for voltage support or TMODEL not the fault of the TO

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					SYSEMR1	**Non-competitive Path** ED for System Emergency such as to mitigate for over-gen, for voltage support, TMODEL not the fault of the TO or for generation due to environmental, unit-specific issues or to move a unit to Pmin
					TEMR	Tie-Emergency FERC Order required us to implement emergency energy; therefore, we will need an instruction type to clearly distinguish it from the SYSEMR instruction type. Although it will settle like SYSEMR, it is not considered to be Exceptional Dispatch and will not be subject to a tolerance band check.
					TMODEL	The Exceptional Dispatch to resolve Congestion as a result of a transmission-related modeling limitation.
					TMODEL1	**Competitive Path** ED to resolve Transmission related modeling Limitation due to **PG&E** not providing complete and accurate information
					TMODEL2	**Competitive Path** ED to resolve Transmission related modeling Limitation due to **SCE** not providing complete and accurate information
					TMODEL3	**Competitive Path** ED to resolve Transmission related modeling limitation due to **SDG&E** not providing complete and accurate information

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					TMODEL4	**Non-Competitive Path** ED to resolve Transmission related modeling limitation not associated with a particular TO or more than one TO
					TMODEL5	**Non-Competitive Path** ED to resolve Transmission related modeling limitation due to **PG&E** not providing complete and accurate information
					TMODEL6	**Non-Competitive Path** ED to resolve Transmission related modeling limitation due to **SCE** not providing complete and accurate information
					TMODEL7	**Non-Competitive Path** ED to resolve Transmission related modeling limitation due to **SDG&E** not providing complete and accurate information
					TMODEL8	**Competitive Path** ED to resolve Transmission related modeling limitation. Cost allocation is shared between VEA and Gridliance.
					TMODEL9	**Non-Competitive Path** ED to resolve Transmission related modeling limitation. Cost allocation is shared between VEA and Gridliance.
					NONTMOD	ED to mitigate or resolve congestion due to a non-Transmission related modeling limitation
					TORETC	**Competitive Path** ED for TOR or ETC Schedule Changes after HASP

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					TORETC1	**Non-Competitive Path** ED for TOR or ETC Schedule Changes after HASP
					SLIC	Dispatches due to SLIC re-rates
					BS	Black Start
					VS	Voltage Support
					RMRT	RMR Test Energy
					RMRR	RMR Energy Condition 1
					RMRRC2	RMR Energy Condition 2
					RMRS	RMR/Substitution
					ASTEST	Ancillary Service Testing
					TEST	Pre-commercial operations or PMax testing for generators
					OTHER	Type "OTHER" is used to record in case that there is not enough time or information in real-time to determine the reason. A later correction of the code is expected between grid op, market op and settlement teams.
					LOCAL1 through LOCAL4	Local Capacity Area 1 through Local Capacity Area 4
					LSERA	LSE- paid Designated RA Replacement Backstop Capacity
					NONLSERA	Supplier (non-LSE) - paid Designated RA Replacement Backstop Capacity

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					CADEF1 through CADEF15	Insufficient Resource Adequacy 1 through Insufficient Resource Adequacy 15
					SIGEVT1 through SIGEVT15	Significant Event 1 through Significant Event 15
					ROR1 through ROR15	Risk of Retirement 1 through Risk of Retirement 15
O'	Period ID	Represents a separate consecutive eligibility period.	Charge Group specific	PERIOD_ID	{alphanumeric value}	Period ID
O''	Alternate Period ID	Represents a separate consecutive eligibility period related to Period ID (O').	Charge Group specific	ALT_PERIOD_ID	{alphanumeric value}	Alternate Period ID
p	PNODE	Unique ID for the Pricing Node	Charge Group specific	PRICE_NODE_ID	{alphanumeric value}	PNode
p'	CRR Prepayment ID	A unique identifier for a specific CRR	Charge Group specific	CRR_PREPAYMENT_ID	{alphanumeric value}	CRR Prepayment ID
P	PTO ID	The BA ID for a Participating Transmission Owner (PTO)	Charge Group specific	PTO_ID	{alphanumeric value}	PTO ID
P'	CURRENT BILL PERIOD	Used for Shortfall Allocations and Receipt Distributions and represents the last Trading Day of the most current bill period on an Invoice or Payment Advice	Charge Group specific	CURRENT_BILL_PERIOD	{alphanumeric value}	Current Bill Period
q	Loss Intertie ID	Intertie ID for which external transmission losses under operating agreements are calculated for System Resources associated with an Intertie.	Charge Group specific	LOSS_INTERTIE_ID	{alphanumeric value}	Loss Intertie ID

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
q'	Loss Basis	Denotes whether external Intertie transmission losses are determined from an external input or as a percentage of Intertie net flow	Charge Group specific	LOSS_BASIS	{alphanumeric value}	Loss Basis
Q	Intertie ID	A unique Intertie ID for a Scheduling Point associated with System Resource	Charge Group specific	INTERTIE_ID	{alphanumeric value}	Intertie ID
Q'	Balancing Authority Area / External Control Area	1. The Balancing Authority Area (BAA) to which the attached variable applies. 2. The ID of the In-state Control Area in which the Load served by an Energy Export resides.	6	BAL_AUTHORITY_AREA / EXT_CONT_AREA	{alphanumeric value}	Balancing Authority Area / External Control Area ID
Q''	Constraint ID	An identifier of a constraint to which the variable applies. For flexible ramp, this identifies a BAA constraint or the entire EIM Area constraint.	Charge Group specific	CONSTRAINT_ID	{alphanumeric value} (specific BAA, EIM_AREA)	An identifier of a constraint for a BAA or the EIM Area.
r	Resource ID	Unique reference ID for one of the following combinations: BA ID/Generating Unit, BA ID/Participating Load, BA ID/LAP, BA ID/Import Interchange ID/Energy/AS Type, BA ID/Export Interchange ID/Energy/AS Type, or RC ID Net Energy Zone Owner	2	RSRC_ID for Non-RMR FACILITY_ID for RMR NET_ENERGY_ZONE for RC Services	{alphanumeric value}	Resource Identifier Net Energy Zone Owner
r'	Substituted Resource ID	Unique reference ID for one of the following combinations: BA ID/Generating Unit, BA ID/Import Interchange ID/Energy/AS Type	Charge Group specific	SUB_RSRC_ID	18	Substituted SCP Resource Identifier

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
R	Business Associate ID Role	Indicator for the Role of the BA ID in the market hierarchy (e.g.- PTO, CRR holder, NMP, participant)	NA	Not a design attribute	{alphanumeric value}	Business Associate ID Role
R'	Penalty Resource ID	Unique ID for a specific Location where Uninstructed Deviation Penalties shall be assessed	Charge Group specific	PENALTY_RSRC_ID	{alphanumeric value}	Penalty Resource ID
s	IST Name	The unique transaction name or ID for the Inter SC Trade. It is the same for both the "To" and "From" schedules	Charge Group specific	IST_ID	{alphanumeric value}	IST Name
s'	Historical Qualified Capacity Flag (SCP)	Unique identification from Master File for intermittent resources whose NQC is determined by the historical output .	Charge Group specific	HIST_QC_FLAG	{alphanumeric value}	Historical Qualified Capacity Flag
S	MSS System Unit	Flag indicating the Resource ID r represents one or more individual Generating Units and/or Loads within a MSS	NA	Not a design attribute	{alphanumeric value}	MSS System Unit
S'	ENTITY COMPONENT SUBTYPE	Location type flag for an Entity Component Type	Charge Group specific	ENTITY_COMPONENT_SUBTYPE	IG	Internal Generator
					EG	External Generator
					INTIE	In-state ITIE, ETIE or TIE resource
					OUTTIE	Out-of-state ITIE, ETIE or TIE resource
					ND	Net Demand
					NS	Net Supply
					GL	Gross Load
					PSUG	Pseudo Generator
					PL	Participating Load

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					NPL	Non Participating Load
					PDR	Proxy Demand Response
					REM	Regulation Energy Management
					NREM	Non-Regulation Energy Management
					EIM_DYN	EIM Dynamic Transfer
S"	Dynamic Transfer Type	Dynamic transfer type	Charge Group specific	DYN_XFR_TYPE	DS	Dynamic Schedule
					PTG	Pseudo-Tie Generator
t	Resource Type	Flag which indicates the specific resource type for Resource r such as a Generator, Load, Control Area Intertie (System Resource), or a UDC Intertie (System Resource)	3	RSRC_TYPE for Non-RMR FACILITY_NAME for RMR	GEN	Generator
					LOAD	Load
					ETIE	Export Intertie
					ITIE	Import Intertie
					ETSR	Energy Imbalance Market Transfer System Resource
					TIE	Tie
					LI	Logical Interface
					TOP	Take-Out Point
					UDPA	UDP Aggregation Resource
t'	Time of Use	Flag indicating on peak or off peak Trading Hour	Charge Group Specific	TIME_OF_USE	0	Off Peak hour
					1	On Peak hour

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
t"	Load Serving Entity ID	Unique alphanumeric identification for the Load Serving Entity	Charge Group Specific	LSE_ID	{alphanumeric value}	Load Serving Entity Identifier
T	To Date	Due date of true up Invoice or end of quarter date.	21	TO_DATE	{alphanumeric value}	Due date of true up Invoice or end of quarter date.
T'	Entity Type	Flag that indicates whether or not a Resource ID is part of a MSS or UDC	5	ENTITY_TYPE	MSS	Metered Sub-System
					UDC	Utility Distribution Company
					NULL	Undefined
T"	To Date Type	Accepted enumerations for the attribute To Date Type.	22	TO_DATE_TYPE	TrueUp1_Due_Date	True-up adjustment Invoice due date for T+12B
					TrueUp2_Due_Date	True-up adjustment Invoice due date for T+55B
					TrueUp3_Due_Date	True-up adjustment Invoice due date for T+9M
					TrueUp3a_Due_Date	True-up adjustment Invoice due date for unscheduled Recalc. Statement after T+9M
					TrueUp4_Due_Date	True-up adjustment Invoice due date for T+18M
					TrueUp4a_Due_Date	True-up adjustment Invoice due date for unscheduled Recalc. Statement after T+18M
					TrueUp5_Due_Date	True-up adjustment Invoice due date for T+35M
					TrueUp6_Due_Date	True-up adjustment Invoice due date for T+36M
					EOQ1_Date	End of 1st quarter date
					EOQ2_Date	End of 2nd quarter date
					EOQ3_Date	End of 3rd quarter date

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
					EOQ4_Date	End of 4th quarter date
					EOQ5_Date	End of 5th quarter date
					EOQ6_Date	End of 6th quarter date
					EOQ7_Date	End of 7th quarter date
					EOQ8_Date	End of 8th quarter date
					EOQ9_Date	End of 9th quarter date
					EOQ10_Date	End of 10th quarter date
					EOQ11_Date	End of 11th quarter date
					EOQ12_Date	End of 12th quarter date
					EOQ13_Date	End of 13th quarter date
					EOQ14_Date	End of 14th quarter date
					EOQ15_Date	End of 15th quarter date
u	UDC ID	Unique name or ID for a Utility Distribution Company	10	UDC_ID	{alphanumeric value}	UDC Identifier
u'	Alternate BA ID	This ID is similar to a Business Associate ID. This can represent the Scheduling Coordinator of a Convergence Bidding Entity, a CRR Holder, or other Business Associate.	Charge Group Specific	ABA_ID	{numeric value} Can be a list of numeric values delimited by ":" (colon) when used in a bill determinant for supporting information.	Business Associate Identifier
U	Bill Period End	The last Trading Day in a Bill Period range	Charge Group specific	BILL_PERIOD_END	{alphanumeric value}	Bill Period End
U'	Bill Period Start	The first Trading Day in a Bill Period range	Charge Group specific	BILL_PERIOD_START	{alphanumeric value}	Bill Period Start

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
v	TAC Area	Unique name or ID that indicates a specific area where both High and Low Voltage transmission Access Charges are assessed	Charge Group specific	TAC_AREA_ID	TAC_SOUTH	Southern TAC Area
					TAC_NORTH	Northern TAC Area
					TAC_ECNTR	East Central TAC Area
					TAC_NCNTR	North Central TAC Area
					NULL	ISO Wide TAC Area
v'	Reference ID	A unique numeric identifier indicating the Business Associate ID plus the calendar date of the associated collateral request. This value is formatted as nnnn-YYYYMMDD.	Charge Group specific	REFERENCE_ID	{alphanumeric value}	Reference ID
V	RUC Participating Flag	RUC Participation Flag indicating resource is participating in Residual Unit Commitment (RUC).	Charge Group specific	RUC_PARTICIPATION_FLAG	YES	Participating
					NO	Not Participating
V'	Invoice Reference Number	A unique number associated with a specific Invoice or Payment Advice for a Business Associate.	Charge Group specific	INVOICE_REFERENCE	{alphanumeric value}	Invoice Reference Number
w	IST Type	Flag indicating the Inter-Scheduling Coordinator Trade as either APN (IST of Energy at Aggregated Pricing Node) or PHY (Physical Trades)	Charge Group specific	IST_TYPE	APN	Flag indicating the Inter-Scheduling Coordinator Trade as IST of Energy at Aggregated Pricing Node
					PHY	Flag indicating the Inter-Scheduling Coordinator Trade as Physical Trades
w'	Associated Participating Load Resource		Charge Group specific	ASSOC_PARTIC_LOAD_RSRC	{alphanumeric value}	Psuedo Gen's associated Participating Load Resource ID

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
W	CRR Transaction Date	Date CRR Auction data payload is received into Settlements system	Charge Group specific	CRR_DATE	{alphanumeric value}	CRR Transaction Date
W'	MSS Emission Pay flag	Flag that indicates whether or not a MSS Operator is electing to receive payment for emissions and to be allocated their associated costs	Charge Group specific	MSS_EMISSION_PAY_FLAG	YES	MSS Emission Payment
					NO	Undefined
x	Market Type	Flag that indicates a specific CAISO Market or Process type (e.g., - Day-Ahead, Hour-Ahead, Real-Time)	Charge Group specific	MARKET_TYPE	DAM	Flag that indicates a specific CAISO Market or Process type for Day Ahead
					HASP	Flag that indicates a specific CAISO Market or Process type for Hour Ahead Scheduling Process
					RTM	Flag that indicates a specific CAISO Market or Process type for Real-Time
					ALLOCATION	Refers to the CRR Allocation process
					AUCTION	Refers to the CRR Auction process
x'	Market Description	Identifies market frequency such as monthly, seasonal or long-term in the case of CRR market types	Charge Group specific	MRKT_DESC	Monthly	Market or process where monthly CRRs are auctioned or allocated.
					Seasonal	Market or process where seasonal CRRs are auctioned or allocated.
					LT	Market or process where long-term CRRs are auctioned or allocated.
X	Trade Period Start Date	Trade Period Start Date	Charge Group specific	TRADE_PERIOD_START	{alphanumeric value}	Trade Period Start Date

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
X'	Trade Period End Date	Trade Period End Date	Charge Group specific	TRADE_PERIOD_END	{alphanumeric value}	Trade Period End Date
y	Annual Interval	Indicates a specific period as yearly	Charge Group specific	Not a design attribute	{alphanumeric value}	Annual Interval
y'	Intertie Node Flag	Identifies whether a node is located at an intertie or not. Used for instance in convergence bidding to distinguish an intertie-based node from a node internal to the CAISO Balancing Authority Area.	Charge Group specific	INTERTIE_NODE_FLAG	TIE	Node location is at an intertie
					null (no value)	Node location is not at an intertie, or is undefined
Y	MSG Configuration ID	Presents the configuration market resource ID for a MSG resource	Charge Group specific	CONFIGURATION_MRID	{alphanumeric value}	Configuration Market Resource ID for an MSG Resource
Y'	Meter Frequency	Meter frequency (e.g., - 5min, 10min or Hourly)	NA	Not a design attribute	{alphanumeric value}	Meter Frequency
Y''	Alternate MSG Configuration ID	Presents an alternate configuration market resource ID for an MSG resource	Charge Group specific	ALT_CONFIGURATION_ MRID	{alphanumeric value}	Alternate Configuration Market Resource ID for an MSG Resource
z	CRR Reference ID	The unique CRR identifier that represents the Congestion Revenue Right between and sources(s) and a sink(s) that is eligible for settlement	Charge Group specific	CRR_ID	{alphanumeric value}	CRR Reference ID
z'	Contract Type	Contract Type of Contract Reference Number	Charge Group specific	CONTRACT_TYPE	ETC	Existing Transmission Contracts
					CVR	Converted Rights
					TOR	Transmission Ownership Rights

Subscript	Subscript Name	Attribute/Subscript Description	Attribute Number	Attribute Name	Attribute Enumeration	Attribute Description
Z	Trade Place	Price Location Name of the Trading Hub, Generator, etc. This is a pricing location where Inter SC Trades are settled. PNodes or APNodes may be contained within the "Trade Place"	Charge Group specific	TRADE_PLACE	{alphanumeric value}	Price Location Name of the Trading Hub, Generator, etc. This is a pricing location where Inter SC Energy Trades are settled. PNodes or APNodes may be contained within the "Trade Place"
Z'	CRR Term	The set of hours for which a given CRR is effective	NA	Not a design attribute	{alphanumeric value}	CRR Term
NA	CRR Category	CRR Category	NA	Not a design attribute	NSR	Network Service Rights or Multi-point (MPT)
					PTP	Point-to-point (PTP)
NA	Price Type	Price Type (RT IIE)	NA	Not a design attribute	BID	Bid
					DFLT	Default Bid
					NEGOT	Negotiated Price
					CALC	Calculated Price

For Reference Purpose Only:
The following table sets out the enumeration provided by payload:

Market Product Type (IFM ResourceAwards)	EN	ENERGY
	RC	RUC
	SR	SPIN
	NR	NSPN
	RU	REGUP
	RD	REGDN
Schedule Type (MF)	Firm	
	Non Firm	
	Dynamic	
	Wheel	
Energy Product Type (IFM)	Energy	
	RUC	
	Spin	
	Non-Spin	
	Reg Up	
	Reg Down	
Product Type (RTM)	Spin	
	Non-Spin	
	Reg Up	
	Reg Down	
Service Type (ADS)	SCHED	
	HASE	
	SPIN	
	NSPN	
Direction Type	Import	
	Export	

5. Bill Determinant Name Convention

Bill Determinant variable short form names are made up of abbreviations that are tied to specific Settlement terms. These terms are identified in the table below under the "Description" column.

The Bill Determinant naming formula is below:

Entity + Operation + Interval + Attribute1 + Attribute2 + Market + Commodity + Commodity Type + Unit + @ Component

- @QUANTITY, @PRICE, @AMOUNT, etc. are applied intermediate BDs.
- _QTY, _PRC, _AMT, etc. are applied raw BDs.

Valid Short form names, categories, and an example of their use are as follows:

Short Form	Category	Description	Example
BA	Entity	Business Associate ID	
TO	Entity	Transmission Owner	
ISO	Entity	Control Area	
UDC	Entity	Utility Distribution Company	
MSS	Entity	Metered Sub-System	
FTR	Entity	Firm Transmission Rights	
PIR	Entity	Participating Intermittent Resources	
FERC	Entity	Federal Energy Regulatory Commission	
PS	Entity	Project Sponsor	
PNODE	Entity	Price Node	
TOT	Operation	Total	
MAX	Operation	Maximum	
MIN	Operation	Minimum	
ABS	Operation	Absolute Value	
ADJ	Operation	Adjust	
LIM	Operation	Limit	
WGHT	Operation	Weighted	
PERC	Operation	Percent	
HRLY	Interval	Hourly	
DAY	Interval	Daily	
15M	Interval	Fifteen Minute	
10M	Interval	Ten Minute	
5M	Interval	Five Minute	

Short Form	Category	Description	Example
MTH	Interval	Monthly	
ANN	Interval	Annual	
YRLY	Interval	Yearly	
RSRC	Attribute	Resource	
REGN	Attribute	Region	
CONT	Attribute	Control	
IMP	Attribute	Import	
EXP	Attribute	Export	
PUMP	Attribute	PUMP	
SCHD	Attribute	Schedule	
INTRA	Attribute	Within	
INTER	Attribute	Between	
ECON	Attribute	Economic	
NFIRM	Attribute	Non-Firm	
FIRM	Attribute	Firm	
DYN	Attribute	Dynamic	
POS	Attribute	Positive	
NEG	Attribute	Negative	
EXCL	Attribute	Exclude	
DISP	Attribute	Dispatch	
UPDN	Attribute	Negative Uninstructed Deviation Penalty	
UDPP	Attribute	Positive Uninstructed Deviation Penalty	
ENGY	Attribute	Energy	
HV	Attribute	High-Voltage	
LV	Attribute	Low-Voltage	
COMP	Attribute	Compensation	
NTRL	Attribute	Neutrality	
SELFP	Attribute	Self-Provided	
ELIG	Attribute	Eligibility	
TOLBAND	Attribute	Tolerance Band	
TLRC	Attribute	Tolerance	
STAT	Attribute	Status	
RECOV	Attribute	Recovery	
EFF	Attribute	Effective	
QUAL	Attribute	Qualified	
UQUAL	Attribute	Unqualified	

Short Form	Category	Description	Example
RCVD	Attribute	Received	
DFLT	Entity/Attribute	Default	
RCPT	Attribute	Receipt	
DIST	Attribute	Distribution	
EXPOST	Attribute	EXPOST	
INSTR	Attribute	Instructed	
ALLOW	Attribute	Allowable	
NSELFP	Attribute	Non Self-Provided	
SELFP	Attribute	Self-Provided	
DDELV	Attribute	Deemed Delivered	
INTX	Attribute	Interchange	
DC	Attribute	Direct Current	
FOUR_CORNER	Attribute	Four Corner System Resource	
MOENKOPI	Attribute	Moenkopi System Resource	
SEG	Attribute	Segment	
EXCP	Attribute	Exceptional	
SPEC	Attribute	Specific	
FCLT	Attribute	Facility	
UTIL	Attribute	Utility	
VOLT	Attribute	Voltage	
AVAIL	Attribute	Available	
LAP	Entity/Attribute	Load Aggregation Point	
PMP	Attribute	Pump	
NORMZD	Attribute	Normalized	
HBRD	Attribute	Hybrid Resource	
DA or DAM	Market	Day Ahead	
FMM	Market	Fifteen Minute Market	
HASP	Market	Hour Ahead Scheduling Process	
RT or RTM	Market	Real Time	
SPIN	Commodity	Spinning Reserve	
NSPN	Commodity	Non-Spinning Reserve	
REGUP	Commodity	Regulation Up	
REGDOWN	Commodity	Regulation Down	
REPL	Commodity	Replacement	
RSRV	Commodity	Reserve	
WITHHOLD	Commodity	Withhold	

Short Form	Category	Description	Example
SUPP	Commodity	Supplemental Energy	
IIE	Commodity	Instructed Imbalance Energy	
UIE	Commodity	Uninstructed Imbalance Energy	
UFE	Commodity	Unaccounted for Energy	
OOS	Commodity	Out of Sequence	
OOM	Commodity	Out Of Market	
CONG	Commodity	Congestion	
TOP	Commodity	Take Out Point	
WHL	Commodity	Wheeling	
TAC	Commodity	Transmission Access Charge	
ML	Commodity	Minimum Load	
GMC	Commodity	Grid Management Charge	
RMR	Commodity	Reliability Must Run	
RED	Commodity	Ramping Energy Deviation	
RIE	Commodity	Residual Imbalance Energy	
OPA	Commodity	Operating Agreement	
OP_ADJ	Commodity	Operational Adjustment	
TL	Commodity	Transmission Loss	
TLOB	Commodity	Transmission Loss Obligation	
BS	Commodity	Black Start	
VS	Commodity	Voltage Support	
NCOP	Commodity	NONCOINCIDENT OFF PEAK	
NCP	Commodity	NONCOINCIDENT PEAK	
CORE_REL	Commodity	CORE RELIABILITY	
TFR	Commodity	Transferred Frequency Response	
METER	Commodity Type	Metered	
MEAS	Commodity Type	Measured	
DMND	Commodity Type	Demand	
INC	Commodity Type	Incremental	
DEC	Commodity Type	Decremental	
CAP	Commodity	Capacity	

Short Form	Category	Description	Example
	Type		
CPBLTY	Commodity Type	Capability	
BID	Commodity Type	BID	
ALLOC	Unit	Allocation	
PMT	Unit	Payment	
ACRU	Unit	Accrual	
BAL	Unit	Balancing	
ACCT	Unit	Account	
ROUND	Unit	Accrual	
MCP	Unit	Market Clearing Price	
EXCP	Unit	Exception	
QTY	Unit	Quantity	
PRC	Unit	Price	
AMT	Unit	Amount	
PTB	Misc.	Pass Through bill	
PASS_THRU	Misc.	Pass Through	
STLMT	Misc.	Settlement	
INV	Misc.	Invoice	
TOU	Misc.	Time of Use	
ISOBA	Misc.	CAISO Business Associate ID	
CONVSN	Misc.	Conversion	
HIST	Misc.	Historical	HIST_QC_FLAG
QC	Misc.	Qualified Capacity	HIST_QC_FLAG
SUB	Misc.	Substitution	SUB_REQ_ID
REQ	Misc.	Request	SUB_REQ_ID
JOUP	Entity	Joint Owned Unit (JOU) Parent	
JOUR	Entity	JOU Child Resource	
JOU	Entity/Attribute	JOU Parent and Child	