

# Use of Transaction IDs

February 5, 2015

# Why do we need to use transaction IDs?

- Through the Full Network Model Expansion initiative, implemented in the Fall of 2014, it provided multiple possibilities for scheduling with the ISO. Therefore using the master file for each resource's physical registration becomes impractical.
- Uniquely identifies static system resource bids and schedules
- Certain types of system resources will still be registered in the master file

# Registered Intertie Resources

System resources with the following characteristics will continue to use registered resource IDs:

- Resources with resource adequacy obligations
- ETC/TOR contracts
- Certified to provide ancillary services
- IBAA agreements for transmission loss adjustment
- Trans Bay Cable resource ID
- Resource recirculating resource ID
- Losses, Inadvertent payback, emergency assistance
- MSS load following
- EIM transfer schedule defined by intertie and transmission service provider

# Intertie Transaction - fictitious examples

Non-resource specific Physical Import bid :

SC05-AMARGOSA\_1\_SN001-AMARGO-I-P-F-DECM01

SC05-AMARGOSA\_1\_SN001-AMARGO-I-P-F-DECM01.1

SC05-AMARGOSA\_1\_SN001-AMARGO-I-P-F-DECM01.2

...

SC05-AMARGOSA\_1\_SN001-AMARGO-I-P-F-DECM01.9

Non-resource specific Physical Export bid:

SC05-AMARGOSA\_1\_SN001-AMARGO-E-P-F-DECM01

SC05-AMARGOSA\_1\_SN001-AMARGO-E-P-F-DECM01.1

Non-resource specific Physical Wheeling Import bid:

SC05-AMARGOSA\_1\_SN001-AMARGO-I-P-W-DECM01

Non-resource specific Physical Wheeling Export bid:

SC05-BLYTHE\_1\_N101-BLYTHE-E-W-P-DECM01

Scheduling  
Coordinator

Intertie Scheduling  
Point

Primary Intertie  
Identifier

Direction  
Bid Type  
Energy Type

Purchase-Selling  
Entity Identifier

# SIBR UI

- Day Ahead Bids or Real Time Bids tab – Hourly Components
- Resource drop down gives the choice to select
  - Inter-tie
  - Inter-tie Transaction

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SSIBR2

Hourly Bid Components

Day Ahead Bids | **Real Time Bids** | Trades | Adv Submit | Portfolios | Ind Viewer | Convergence Bids | OTC Viewer | Energy Forecast

Bid Summary | Daily Components | **Hourly Components**

Market: Real Time

Monday July 7, 2014  
07/07/14

Scheduling Coordinator: PACE

Resource: Inter-Tie (selected)  
Generator  
INTER-TIE TRANSACTION  
Load

Product Type: Inter-Tie (selected)  
Load

Display Mode: Edit New Bid(s)

Scheduling Point: [ALL]

Primary Tie: [ALL]

Alternate Tie: [ALL]

PSE Identifier: [ALL]

Hour: [ALL]

Direction: [ALL]

Energy Type: [ALL]

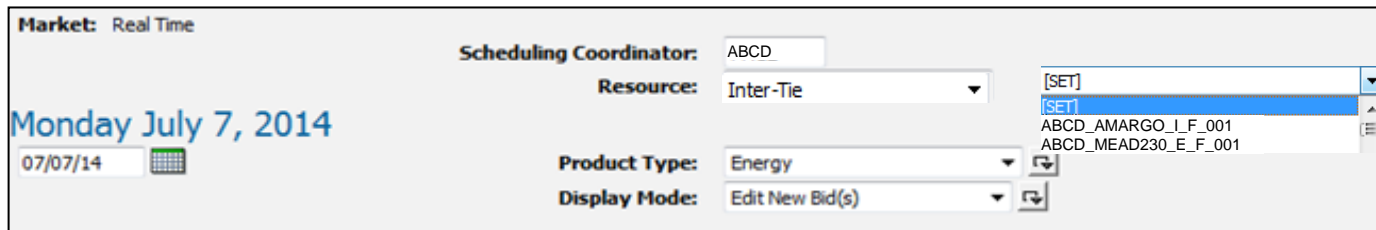
Refresh

Hourly Bid Components

HR	Resource Name	GHG Price	Pumping Level	Pump Shutdown Cost	Pumping Cost	Price Curve	Distribution
No Rows							

# SIBR UI – Inter-tie Resource ID

- If Inter-tie is selected in the Resource field, the user must select from the registered resource IDs



Market: Real Time

Scheduling Coordinator: ABCD

Resource: Inter-Tie

Product Type: Energy

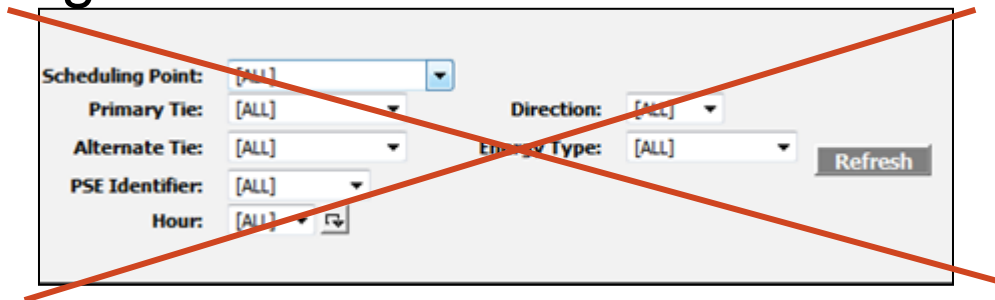
Display Mode: Edit New Bid(s)

Monday July 7, 2014

07/07/14

[SET]  
[SET]  
ABCD\_AMARGO\_I\_F\_001  
ABCD\_MEAD230\_E\_F\_001

- There is no need to select the additional fields to the right



Scheduling Point: [ALL]

Primary Tie: [ALL]

Alternate Tie: [ALL]

PSE Identifier: [ALL]

Hour: [ALL]

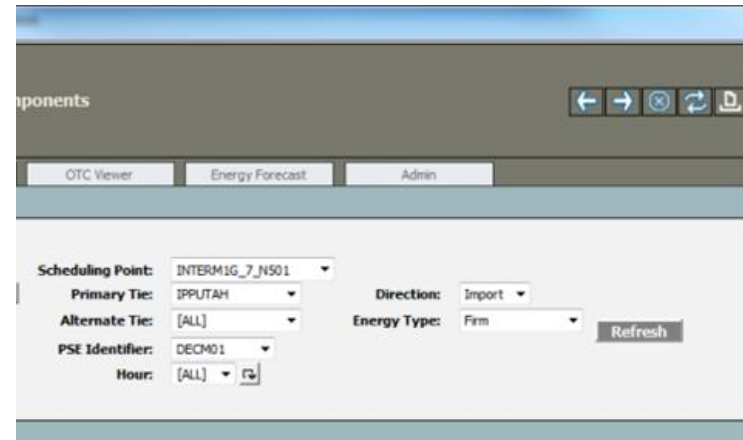
Direction: [ALL]

Energy Type: [ALL]

Refresh

# SIBR UI – Inter-tie Transaction ID

- If Inter-tie Transaction is selected in the Resource field, the user must select
  - Scheduling Point
  - Primary Tie
  - Alternate Tie (optional)
  - Direction
  - Energy Type
  - PSE Identifier



The screenshot displays a web application interface for configuring an inter-tie transaction. At the top, there are navigation icons (back, forward, search, refresh, print) and a header with the word "Components". Below the header is a tabbed interface with three tabs: "OTC Viewer", "Energy Forecast", and "Admin". The main content area contains a form with the following fields:

- Scheduling Point:** A dropdown menu with the value "INTERMIG\_7\_NS01".
- Primary Tie:** A dropdown menu with the value "IPPLUTAH".
- Alternate Tie:** A dropdown menu with the value "[ALL]".
- PSE Identifier:** A dropdown menu with the value "DECM01".
- Hour:** A dropdown menu with the value "[ALL]" and a refresh icon.
- Direction:** A dropdown menu with the value "Import".
- Energy Type:** A dropdown menu with the value "Firm".
- Refresh:** A button to refresh the data.

# SIBR UI

The screenshot displays the SIBR UI interface. On the left, a sidebar shows 'Market: Real Time' and 'Monday August 4, 2014'. The main area is titled 'Hourly Bid Components' and contains a table with columns for 'HR', 'Resource Name', 'GHG Price', and 'Price Curve'. A modal window is open over the table, showing a list of bid components with 'HR' values from 01 to 10 and 'Resource Name' 'CISO-INTERM1G\_7\_N501-IPPUTAH-I-P-F-DECM01'. Each row has a 'clear' button. Below the table, a 'Price Curve' window is open, showing a graph of Price (\$) vs Qty. The graph shows a price of \$22.88 for quantities up to 60, and a price of \$30.00 for quantities from 60 to 80. A table below the graph shows the price curve data:


Qty	Price [\$]
0.00	\$22.88
60.00	\$30.00
80.00	\$30.00



# Intertie transaction inputs

Field	Description
Scheduling Coordinator	Scheduling Coordinator identifier (required)
Scheduling Point	Intertie Scheduling Point identifier (required)
Primary Tie	Primary Intertie identifier (required)
Direction	Direction (required): I for import, E for export
Bid Type	Bid Type (inserted): P for physical, V for Virtual
Alternate Tie	Alternate Intertie identifier (optional)
Energy Type	Energy Type (required for physical transactions): F – Firm N – Non-Firm U – Unit Contingent D – Dynamic Interchange W – Wheeling
Purchase- Selling Entity Identifier	A registered Purchase-Selling Entity identifier (required for physical transactions); allow PSE, PSE.1, PSE.2 ...PSE.9

# SIBR UI - Wheeling



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**Day Ahead Bids**
Real Time Bids
Trades
Adv Submit
Portfolios
Ind Viewer

Summary
Daily Components
Hourly Components

**Market:** Day Ahead

**Scheduling Coordinator:** ABCD

**Resource:** INTER-TIE TRANSACTION    ABCDBLYTHE\_1\_N101-BLYTHE161

**Monday August 4, 2014**

08/04/14

**Display Mode:** View Latest Submitted Bid(s)

**Hourly Bid Components**

Undo    Update

HR	Counter Resource	Open Tie Indicator	NERC Tag	Sched Coord
01	ABCD_CRAGVIEW_1_GN001-CRAG-E-P-W-1012BM	Y		
02	ABCD_CRAGVIEW_1_GN001-CRAG-E-P-W-1012BM	Y		

**Scheduling Point:** [ALL]    Direction: [A]

I-P-W-1012BM    **Primary Tie:** [ALL]    Energy Type: [A]

**Alternate Tie:** [ALL]

**PSE Identifier:** [ALL]

Sched Point	Primary Tie	PSE ID	Registered Resource	Bid Status
				Modified
				Modified

# SIBR UI – Wheeling – Counter Resource

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Hourly Bid Component

Day Ahead Bids | Real Time Bids | Trades | Adv Submit | Portfolios | Ind Viewer | Convergence Bids

Summary | Daily Components | Hourly Components

Market: Day Ahead

Scheduling Coordinator: ABCD

Resource: INTER-TIE TRANSACTION | ABCD-CRAGVIEW\_1\_GN001-CRAG-E-P-W-1012BM

Monday August 4, 2014

08/04/14

Display Mode: View Latest Submitted Bid(s)

Hourly Bid Components

HR	Counter Resource	Open Tie Indicator	NERC Tag	Sched Coord	Sched Point
01	ABCD-BLYTHE_1_N101-BLYTHE 161-I-P-W-1012BM	Y			
02	ABCD-BLYTHE_1_N101-BLYTHE 161-I-P-W-1012BM	Y			

# SIBR UI – Wheeling – Hourly Components screen

Day Ahead Bids | Real Time Bids | Trades | Adv Submit | Portfolios | Ind Viewer

Admin

Bid Summary | Daily Components | Hourly Components

Market: Day Ahead

Scheduling Coordinator: ABCD

Resource: INTER-TIE TRANSACTION | ABCD-BLYTHE\_1\_N101-BLYTHE161-I-P-W-001CLT

Tuesday August 12, 114

08/12/14

Display Mode: Edit New Bid(s)

Hourly Bid Components

Clear | Undo | Update

	HR	Counter Resource	Open Tie Indicator	NERC Tag	Sched Coord
clear	01				ABCD
clear	02				ABCD

Intertie Transaction (not a registered resource)

Scheduling Point: BLYTHE\_1\_N101

Primary Tie: BLYTHE161

Alternate Tie: [ALL]

PSE Identifier: 001CLT

Direction: Import

Energy Type: Wheeling

Refresh

Sched Point	Primary Tie	PSE ID	Registered Resource
CRAGVIEW_1_GN001	CRAG	1012BM	<input type="checkbox"/>
CRAGVIEW_1_GN001	CRAG	1012BM	<input type="checkbox"/>

# SIBR UI – Wheeling – Hourly Components screen

Day Ahead Bids | Real Time Bids | Trades | Adv Submit | Portfolios | Ind Viewers

Admin

Bid Summary | Daily Components | Hourly Components

Market: Day Ahead

Scheduling Coordinator: ABCD

Resource: Inter-Tie | ABCD\_CTW230\_I\_WHL\_DCTCB1

Tuesday August 12, 114

08/12/14

Display Mode: Edit New Bid(s)

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Hourly Bid Components

Clear | Undo | Update

HR	Counter Resource	Open Tie Indicator	NERC Tag	Sched Coord
clear 01	ABCD_CRAG_E_WHL_DBLCA1			
clear 02	ABCD_CRAG_E_WHL_DBLCA1			

Energy Forecast

Scheduling Point: BLYTHE\_1\_N101

Primary Tie: BLYTHE161

Alternate Tie: [ALL]

PSE Identifier: 001CLT

Direction: Import

Energy Type: Wheeling

Refresh

Sched Point	Primary Tie	PSE ID	Registered Resource
			<input checked="" type="checkbox"/>
			<input checked="" type="checkbox"/>

Registered resource

# CMRI – Reference Report



Market Results



Day-Ahead   Real-Time   Post-Market   Default Bids   Convergence Bidding   Load Forecast   Transmission Constraints   Reference

SC: ABCD   Transaction ID: [ALL]   Apply   Reset

## Intertie Resource Transaction ID

Transaction ID	SC ID	Aggregated Pnode	Individual Pnode	Direction	Primary Flowgate ID	Secondary Flowgate ID
ABCD BLYTHE_1_N101-BLYTHE161-E-P-N-DECM01	ABCD	BLYTHE_1_N101		E	BLYTHE161	
ABCD CAPTJACK_5_N504-WESTLYTSLA-I-P-F-DECM01	ABCD	CAPTJACK_5_N504		I	WESTLYTSLA	
ABCD CAPTJACK_5_N509-LLL115-I-P-F-DECM01	ABCD	CAPTJACK_5_N509		I	LLL115	

Energy Type	Purchase Service Entity	Wheeling Resource ID	Wheeling Resource Registered Flag
NFRM	DECM01		
FIRM	DECM01		
FIRM	DECM01		

# CMRI - FMM Schedule – Effective Intertie

The screenshot displays the California ISO Market Results interface. At the top, it shows the California ISO logo and the text "Market Results". Below this, there are navigation tabs for "Day-Ahead", "Real-Time", "Post-Market", "Default Bids", "Convergence Bidding", "Load Forecast", "Reference", "LSE", and "Energy". The "Real-Time" tab is selected.

The interface includes a search and filter section with the following fields:
 

- Trade Date: 08/05/2014
- SC: [dropdown]
- Resource: [ALL]
- Product: [ALL]
- Schedule Type: [ALL]

The main section is titled "Fifteen-Minute Market (FMM) Schedules" and shows a table with 7 columns: Trade Date, SC ID, Resource, Configuration, Effective Intertie, Product, Schedule Type, and Binding. The "Effective Intertie" column is highlighted with a red box. A "Reset" button is visible on the right side of the table.

Below the FMM Schedules table, there is a table showing Intertie data for various hours and intervals:

Hour Ending	Interval IE:15 [MW]	Interval IE:30 [MW]	Interval IE:45 [MW]	Interval IE:00 [MW]
10	29.40	29.40	29.40	29.40
10	20.00	20.00	20.00	20.00
11	49.40	49.40	49.40	49.40
11	0.00	0.00	0.00	0.00
12	49.40	49.40	49.40	49.40
12	0.00	0.00	0.00	0.00

Annotations on the screenshot include:
 

- A black arrow pointing from the text "Transaction ID includes the primary tie information" to the "Trade Date" column of the FMM Schedules table.
- A black arrow pointing from the text "Effective Intertie – will show which tie was used (primary or secondary, if applicable)" to the "Effective Intertie" column of the FMM Schedules table.

Transaction ID includes the primary tie information

Effective Intertie – will show which tie was used (primary or secondary, if applicable)

# OASIS – Scheduling Point/Tie Combination LMP

California ISO | OASIS

ATLAS REFERENCE | REPORT DEFINITION | PRICES | TRANSMISSION | SYSTEM DEMAND | ENERGY | ANCILLARY SERVICES | CONGESTION REVENUE RIGHTS | PUBLIC BIDS

Date From: 02/05/2015 To: 02/05/2015 Market: DAM Group: SELECT\_NODE Node: [Set] [Apply] Res

Download XML Download CSV

### Scheduling Point/Tie Combination Locational Marginal Prices (LMP)

Market	Opr Date	Node	Tie	LMP Type	HE01	HE02	HE03	HE04	HE05	HE06	HE07	HE08	HE09	HE10
DAM	02/05/2015	BLYTHE_1_N101	BLYTHE161	LMP	72.38454	68.00508	66.12129	65.49030	69.70461	91.33572	100.43271	102.39267	83.11539	70.572
DAM	02/05/2015	BLYTHE_1_N101	BLYTHE161	Congestion	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	-0.35926	-2.11084	-3.67777	-5.418
DAM	02/05/2015	COACHELV_2_N101	MIR2	LMP	72.13866	67.73181	65.87547	64.81065	68.97681	90.36396	100.85907	103.94061	86.73369	76.253
DAM	02/05/2015	COACHELV_2_N101	MIR2	Congestion	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.07185	-1.29898	-2.25058	-3.316
DAM	02/05/2015	RAMON_2_N001	MIR2	LMP	72.13866	67.73181	65.87547	64.81737	68.98395	90.38265	100.85382	103.75713	86.24955	75.534
DAM	02/05/2015	RAMON_2_N001	MIR2	Congestion	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.06305	-1.36392	-2.41525	-3.558

- This report can be used to determine all the scheduling point/tie combinations



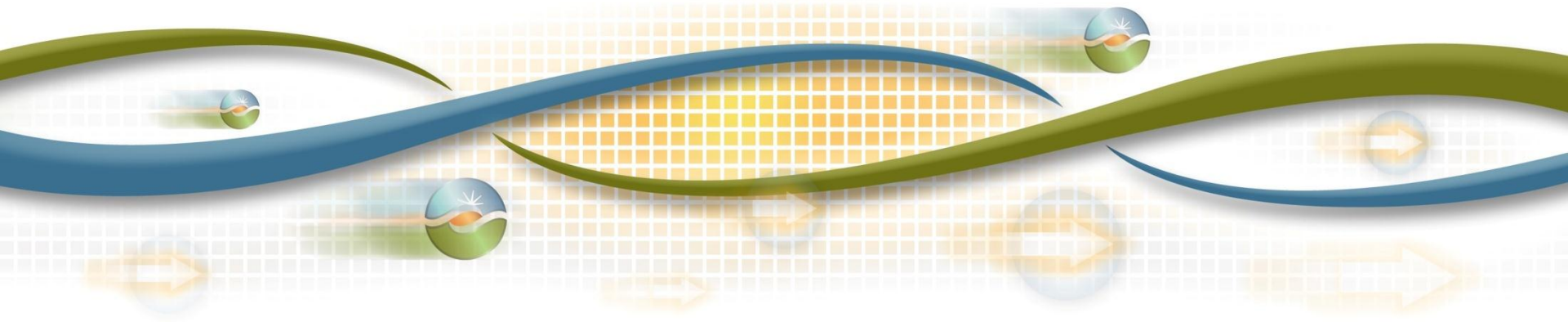
# Use of Transaction IDs

- Effective April 1, 2015, all intertie schedules must use Transaction IDs, unless...
- Inter-tie resource meets the characteristics to continue to use registered resource IDs



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# E-Tagging Rules



# E-Tagging rules

- The transaction ID will replace the resource ID on the e-Tag
- If the tag is for the next day in the day-ahead market timeframe or the next hour (HASP hour) in the real-time timeframe and the transaction ID and the tag do not match, the tag will be automatically denied by the scheduling system.
- If the tag is for a future trading day/hour and the transaction ID in the tag doesn't match, the tag will be approved per NAESB deadlines for taking action on an e-Tag. Later on it will be revalidated after the market has run for the time period the tag is submitted. The transaction ID in the tag will be validated against the most recent transaction ID payload.
  - If at that time the transaction ID and the tag do not match, scheduling system will automatically adjust the e-Tag to zero

# Market Data Requirement in OASIS field

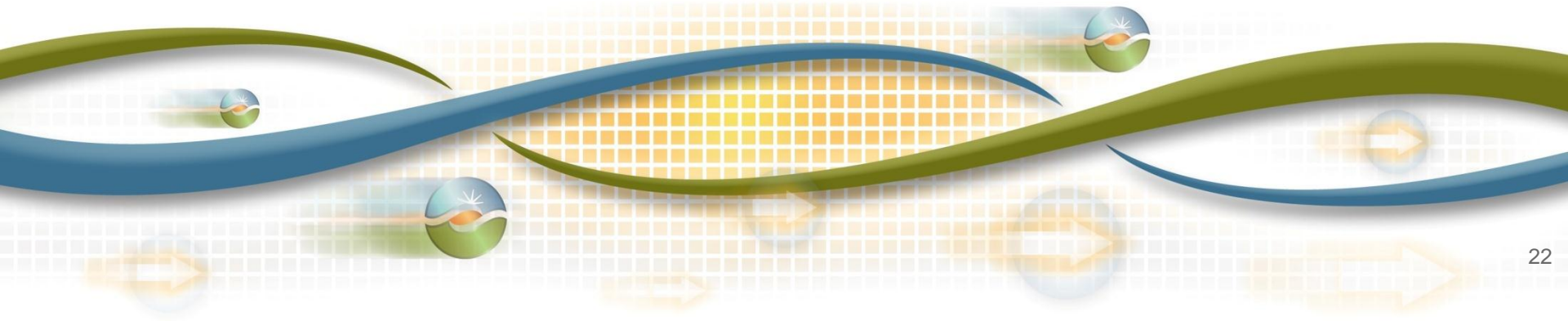
- A market award in the form of a Transaction ID is provided in the OASIS field of the Transmission Allocation section of the e-tag
- The required OASIS market data should appear on the first and/or last line (Import/Export, respectively) where the CAISO is designated as the responsible BAA in the SE column in the e-tag
- It is not required, but acceptable, to place the Transaction ID in the Misc Info. Field of the Physical Path

Transmission Allocation			
TP	Owner	Product	OASIS
“_____”	“_____”	“_____”	“_____”
<b>CISO</b>	“_____”	“_____”	<b>XXXX-XXXX_XXX-XXXX- XXXX-X-X-X-XXXX</b>

# E-Tagging rules

- In any validation process, if the transaction ID matches, the tag is accepted
- A tag without a transaction ID or without a (Master File defined) resource ID, will be automatically rejected

# References



# References and additional information

- Transaction ID Illustration
  - [http://www.caiso.com/Documents/TransactionID\\_Illustration.pdf](http://www.caiso.com/Documents/TransactionID_Illustration.pdf)
- Interchange Scheduling Web Page
  - <http://www.caiso.com/market/Pages/InterchangeScheduling/default.aspx>