



# **First Deliverer Approach to Regulating Electricity Imports in Cap and Trade Programs**

**RGGI Learning Session  
October 11, 2011  
New York, NY**

**Scott Murtishaw, California PUC**

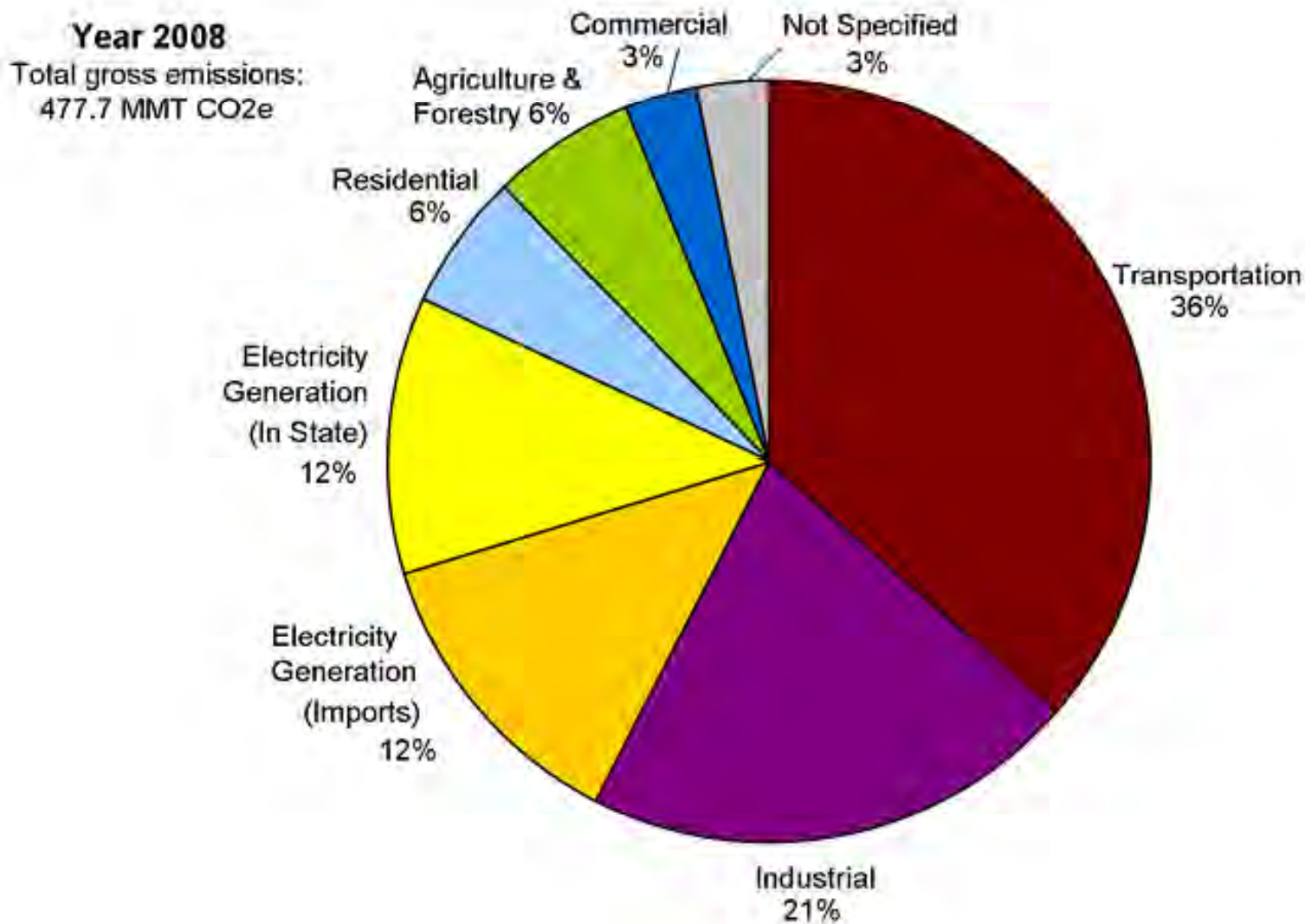
# Background: AB 32 Requirements

## CHAPTER 3. Definitions

38505. (m) "**Statewide greenhouse gas emissions**" means

- *the total annual emissions of greenhouse gases in the state,*
- *including all emissions of greenhouse gases from the generation of electricity delivered to and consumed in California, ....*

# Background: CA GHG Inventory



## First Deliverer Concept

- In the electricity sector, the regulated entity is defined as the “First Deliverer,” or the entity that first delivers electricity to the CA grid.
- First Deliverers consist of operators of in-state generation facilities and “electricity importers.”

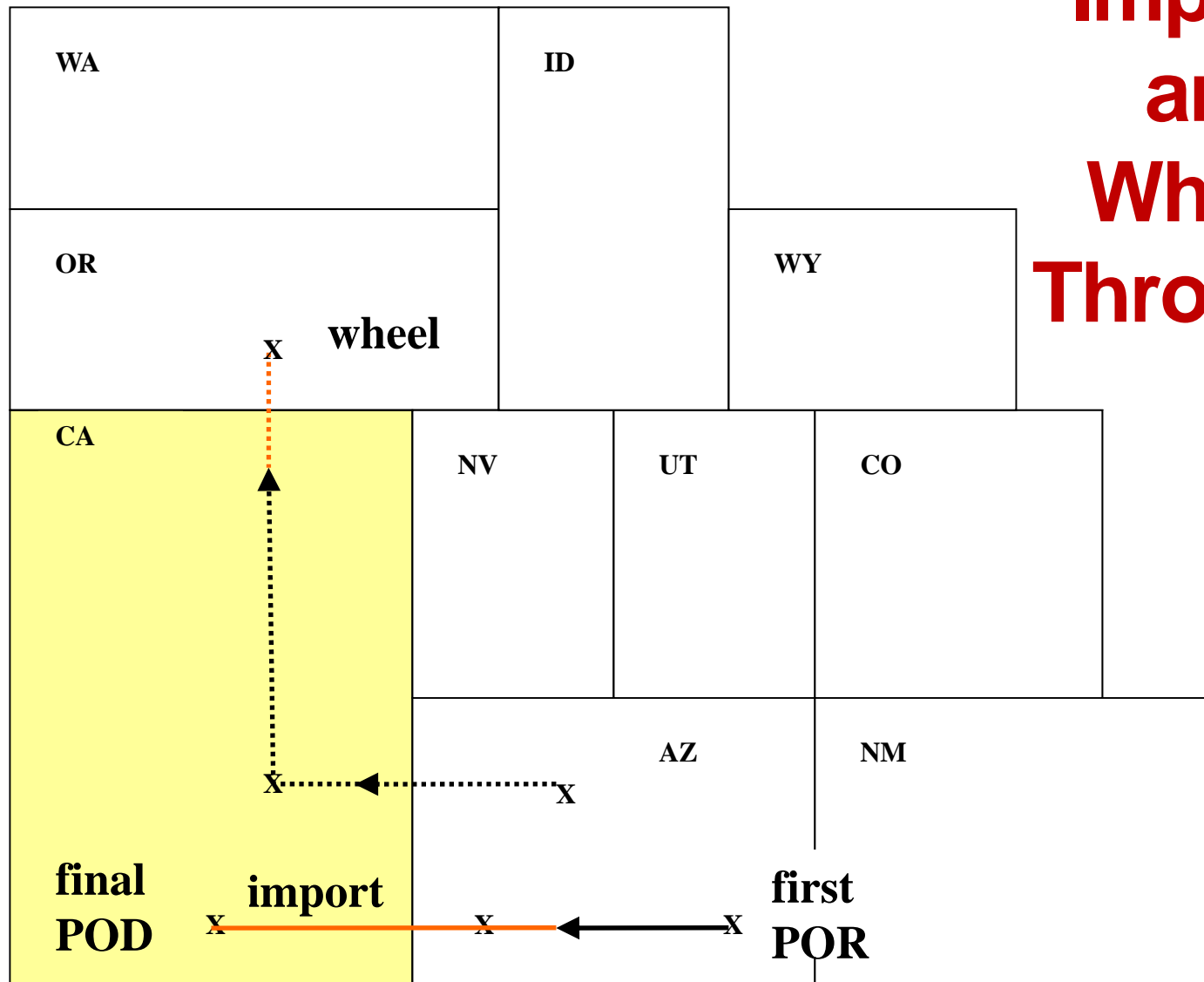
## **Three Questions that Must Be Addressed to Regulate Imports**

- Which transactions are regulated?
- Who are the regulated entities?
- What are the emissions associated with the imported electricity?

## Regulated Transactions

- Per AB 32, electricity delivered to *and* consumed in CA
- Electricity wheeled through CA is not regulated
- Additionally, electricity generated in another jurisdiction with a linked cap and trade system is not regulated

# Imports and Wheel-Throughs

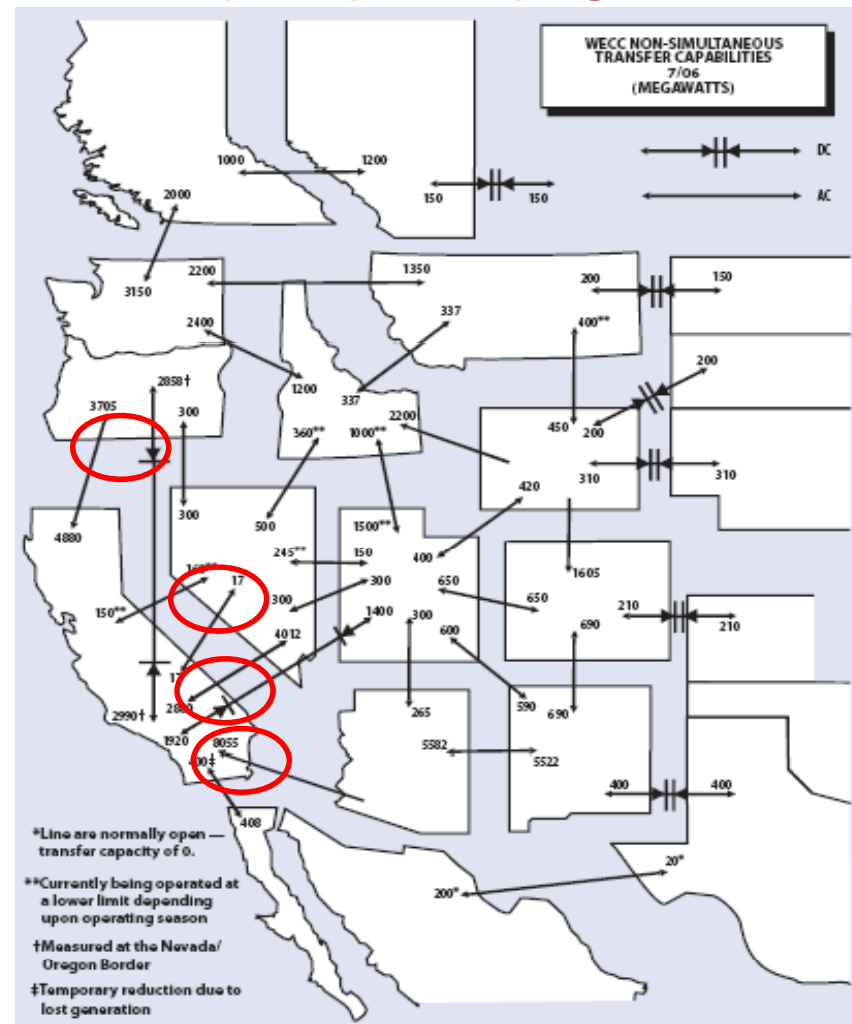


## Determining the Regulated Entities

- The regulated entities are defined as “electricity importers.”
- Electricity importers consist of electric utilities and wholesale power marketers.
- The entities with a compliance obligations are those that are responsible for the electricity on the transmission path that crosses the California border.



# Identifying the Regulated Transmission Paths into CA

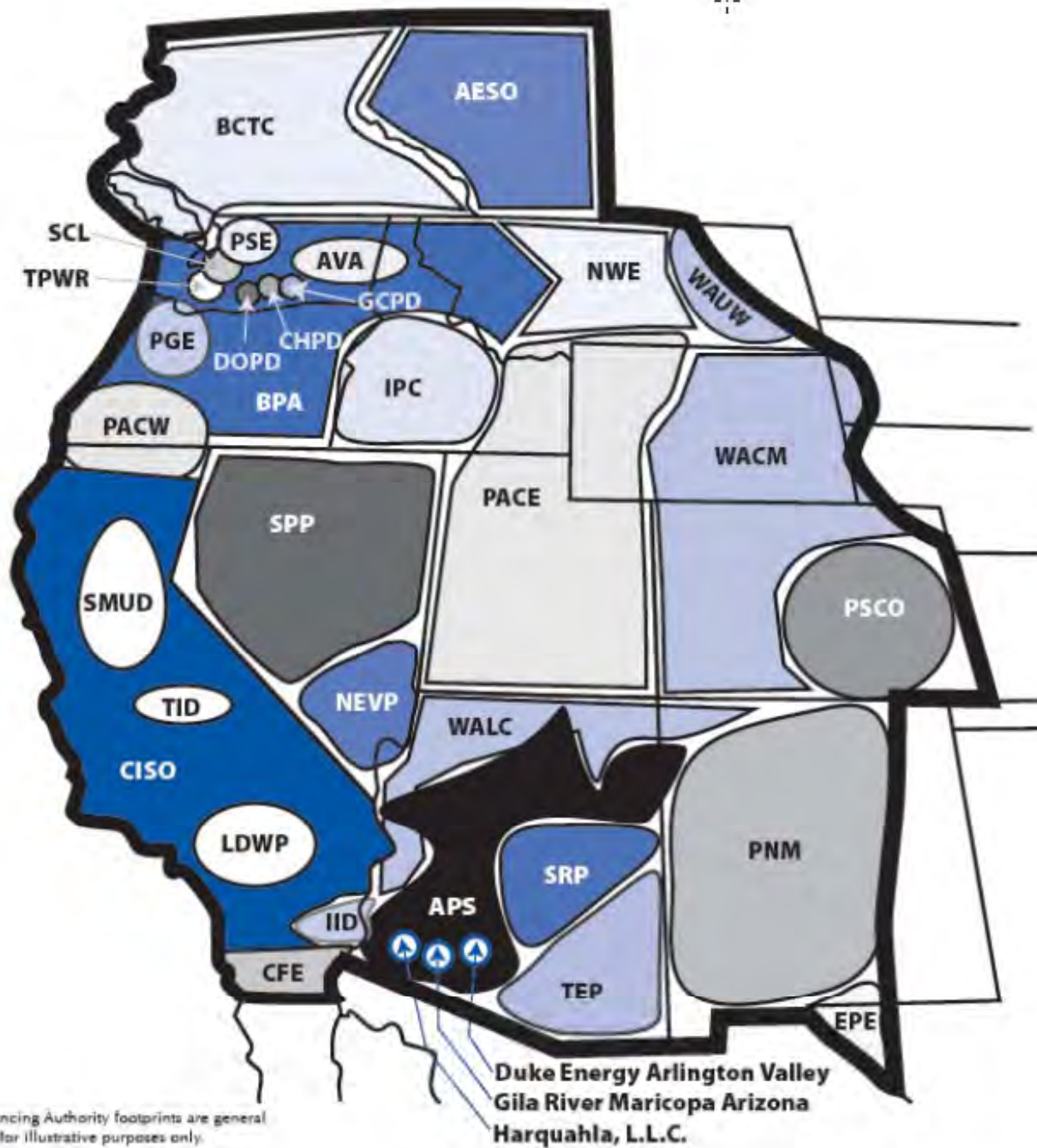


# Documenting Transmission Schedules

- Delivery across Balancing Authorities (may be ISOs, RTOs or utility service territories) is documented by NERC e-tags
- Delivery on transmission across state boundaries, but not across BAs, must be documented using other records

# WECC BAs

<http://www.ferc.gov/market-oversight/mkt-electric/wecc-balancing-authorities.pdf>



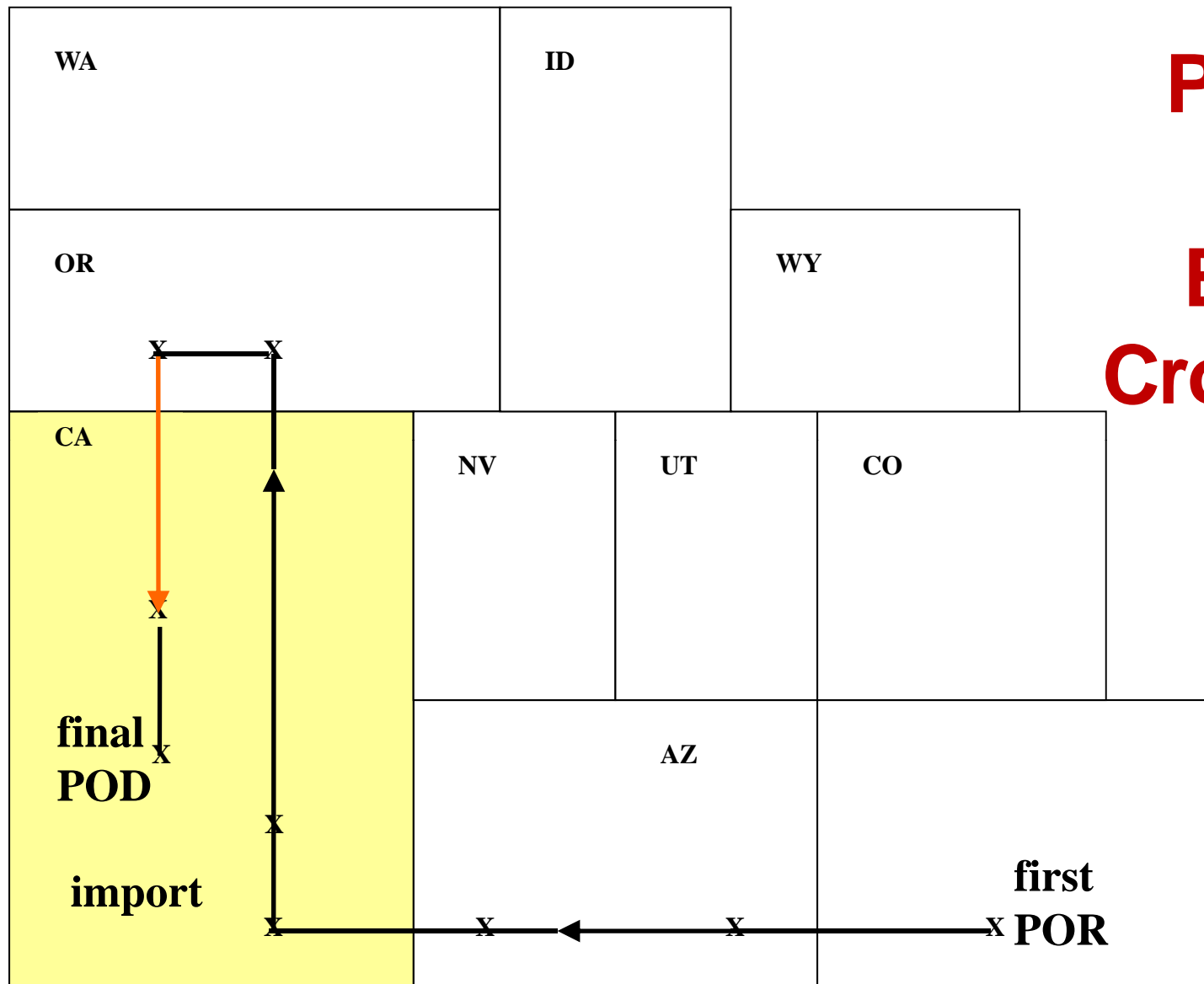
# Example of Import E-tag

CISO Tagging Template							
IMPORT			FOURCORNE345 to SP15				
			Physical Path				
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc
	"- - - -"	"- - - -"	"- - - - -"	FOURCORNE345	"- - - -"		
	CISO	"- - - -"	FOURCORNE345	ELDORADO500	AZPS		
	CISO	"- - - -"	<b>ELDORADO 500</b>	<b>SP15</b>	CISO		Yes
	CISO	"- - - -"	SP15	"- - - - -"	CISO		

# Explanation of E-tags

## Information provided in NERC E-tags

- Reporting entity (PSE or Purchasing/Selling Entity)
- Jurisdiction with first Point Of Receipt
- Jurisdiction with final Point Of Delivery
- Quantity of electricity imported for each transaction



**PSE on  
Last  
Border  
Crossing**

# Quantifying the Emissions Associated with Imported Electricity

- E-tags, or other transmission records, indicate how many MWh were imported for a given transaction
- The final step is to attribute emissions to the imported electricity
- Wholesale electricity transactions may be specified (i.e., tied to a specific generating facility) or unspecified (generic wholesale power)

# Attributing Emissions to Unspecified Sources

- Emissions for unspecified sources must be attributed using default emission factors
- The Western Climate Initiative jurisdictions adopted a simplified annual marginal emission rate analysis, using a spreadsheet-based Default Emission Factor calculator
- The WCI approach assumes that certain types of resources (e.g. most renewables) and high capacity factor facilities generally do not supply generic energy to wholesale markets



# Resource Shuffling

- “Resource shuffling” may be defined as changes in sources of imports that result in reported reductions in emissions that do not reflect real reductions in emissions
- Examples: Laundering (specified dirty to default), Swapping (specified dirty to specified clean), Cherry Picking (default to specified clean)
- Because electricity importers can potentially source their electricity from many different sources, without limitations, resource shuffling is likely

## **CA Conditions for Specified Sources with Emission Rates below the Default Rate**

- Source has historically exported to CA
- Deliveries from federally-owned hydro facilities from their exclusive marketers or otherwise allocated by contract with the federal government
- Generation from new facilities, or new capacity at existing facilities, pursuant to a written power contract

# Verifying Specified Imports

To justify whether imports are specified or unspecified

- Review ownership, contracts, settlements data

Specified claims require proof of

- Registration with ARB
- Delivery
- Ownership/right to claim energy from the facility
- Generation at the time of import (exception for renewables)

# Specified Renewables and RECs

- An additional question related to reporting specified imports of renewable electricity is whether Renewable Energy Credits should play a role
- The WCI Partners recommended that WCI jurisdictions focus on the underlying energy rather than RECs, primarily to provide incentives consistent with a larger regional or federal cap and trade program
- The CA Air Resources Board has decided to require both a contract for the underlying energy and the retirement of the associated RECs for imports of renewables to receive zero GHG attribution

## Additional Information

- WCI Electricity Team documents  
<http://www.westernclimateinitiative.org/document-archives/Electricity-Team-Documents/>
- California Air Resources Board GHG reporting documents  
<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>
- California Air Resources Board cap and trade program documents  
<http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>

# Contacts for CA and WCI

- Scott Murtishaw, Advisor to President Peevey, CPUC
  - [sgm@cpuc.ca.gov](mailto:sgm@cpuc.ca.gov)
  - 415.703.5863
- Renee Lawver, Sector Lead, ARB Climate Change Reporting Section
  - [rlawver@arb.ca.gov](mailto:rlawver@arb.ca.gov)
  - 916.323.0296
- Doug Thompson, Manager, ARB Climate Change Reporting Section
  - [dthompso@arb.ca.gov](mailto:dthompso@arb.ca.gov)
  - 916.322.7062