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Public Meeting

Including Imported Electricity in a California Cap-and-Trade Program

June 5, 2009

California Air Resources Board

Meeting Agenda

1:30 - 1:35	Introductions and Purpose of Meeting
1:35 - 4:20	Staff Presentation Roundtable Discussion
4:20 - 4:30	Closing Remarks and Next Steps

Presentation Outline

- AB 32, Scoping Plan, and Mandatory Reporting Requirements (MRR)
- Issues for Discussion
 - Approaches for electricity imports compliance obligation
 - Identifying obligated entities and sources of imported power
 - Emission factors for unspecified power
- Next Steps

AB 32 Requirements and Scoping Plan Recommendations

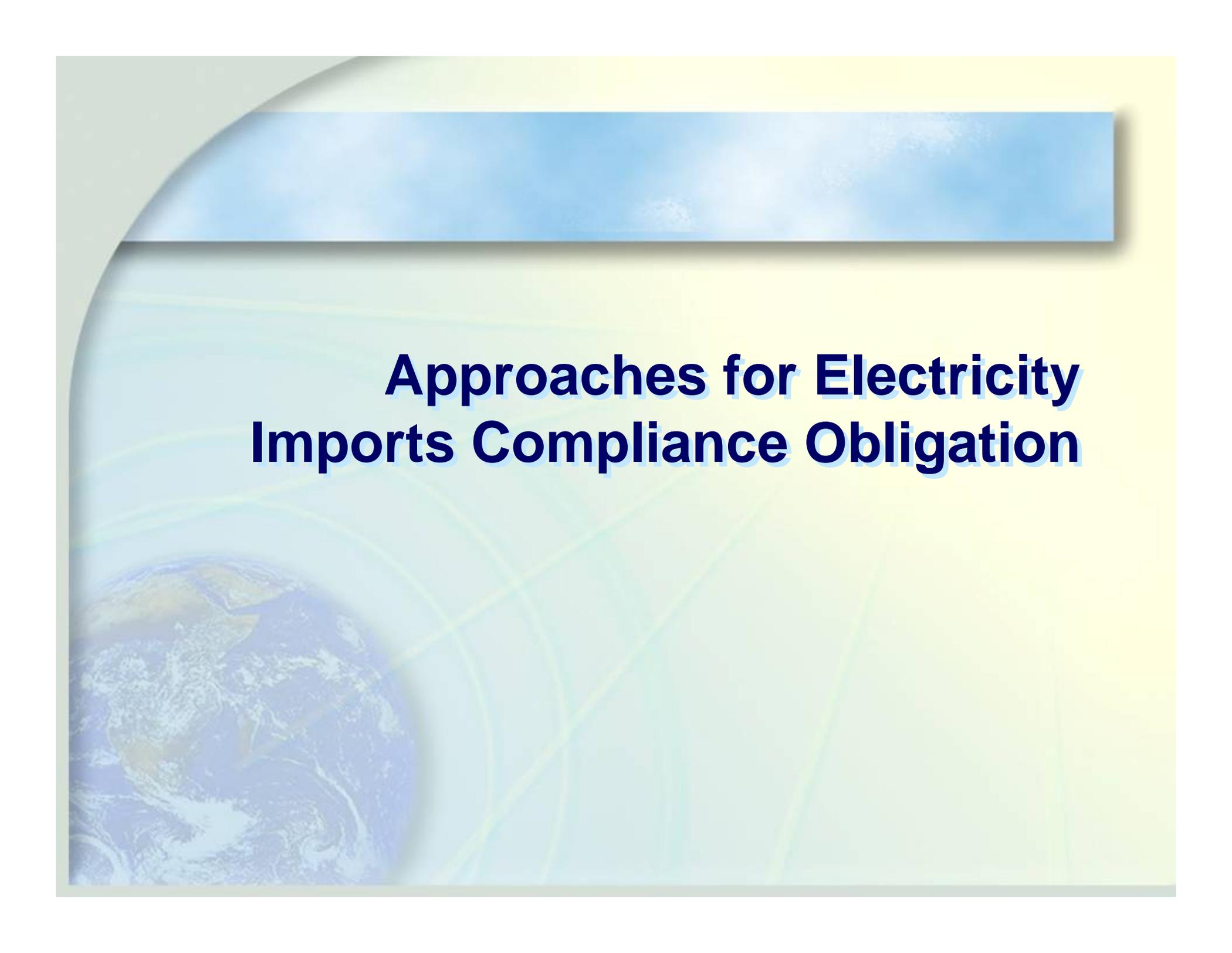
- AB 32: California must account for electricity imports
- Scoping Plan
 - California cap-and-trade program includes electricity sector, beginning in 2012
 - California cap-and-trade program linked to WCI

ARB Mandatory Reporting Requirements

- In-State generators:
 - Power plants ≥ 1 MW and emitting $\geq 2,500$ MTCO₂ must report CO₂ emissions
- Imported and specified electricity:
 - Retail provider or marketer reports quantity measured at the power plant's sub-station (busbar)
- Unspecified electricity:
 - Electricity measured at the first point of receipt for which reporting entity has information

Power Path for Electricity Imports





Approaches for Electricity Imports Compliance Obligation

Approaches for Compliance Obligation for Imported Electricity

- Deliverer Approach
(CEC/CPUC Joint Decision Recommendation)
 - First deliverer of electricity to the California grid
- “First Jurisdictional Deliverer” (FJD)
(WCI Design Recommendations)
 - The first entity that delivers imported electricity over which the consuming jurisdiction has regulatory authority
 - Two FJD approaches under consideration by WCI

FJD Approach 1: Individual Boundary

- Imported power generated from a WCI jurisdiction is covered at point of generation
- Electricity purchaser/seller has compliance obligation if it:
 - Holds title to non-WCI power, and
 - The power is imported into a WCI consuming jurisdiction
- Each WCI jurisdiction monitors transmission paths crossing its own borders and collects GHG allowances from obligated entities

Potential Impacts of Individual Boundary Approach

- Pros
 - Implementation can be handled either as a California only approach or through WCI
 - California is not dependent upon another jurisdiction to monitor and enforce
- Cons
 - More potential points of regulation as electricity travels across jurisdictions
 - Creates market complexity and uncertainty

FJD Approach 2: Common Boundary

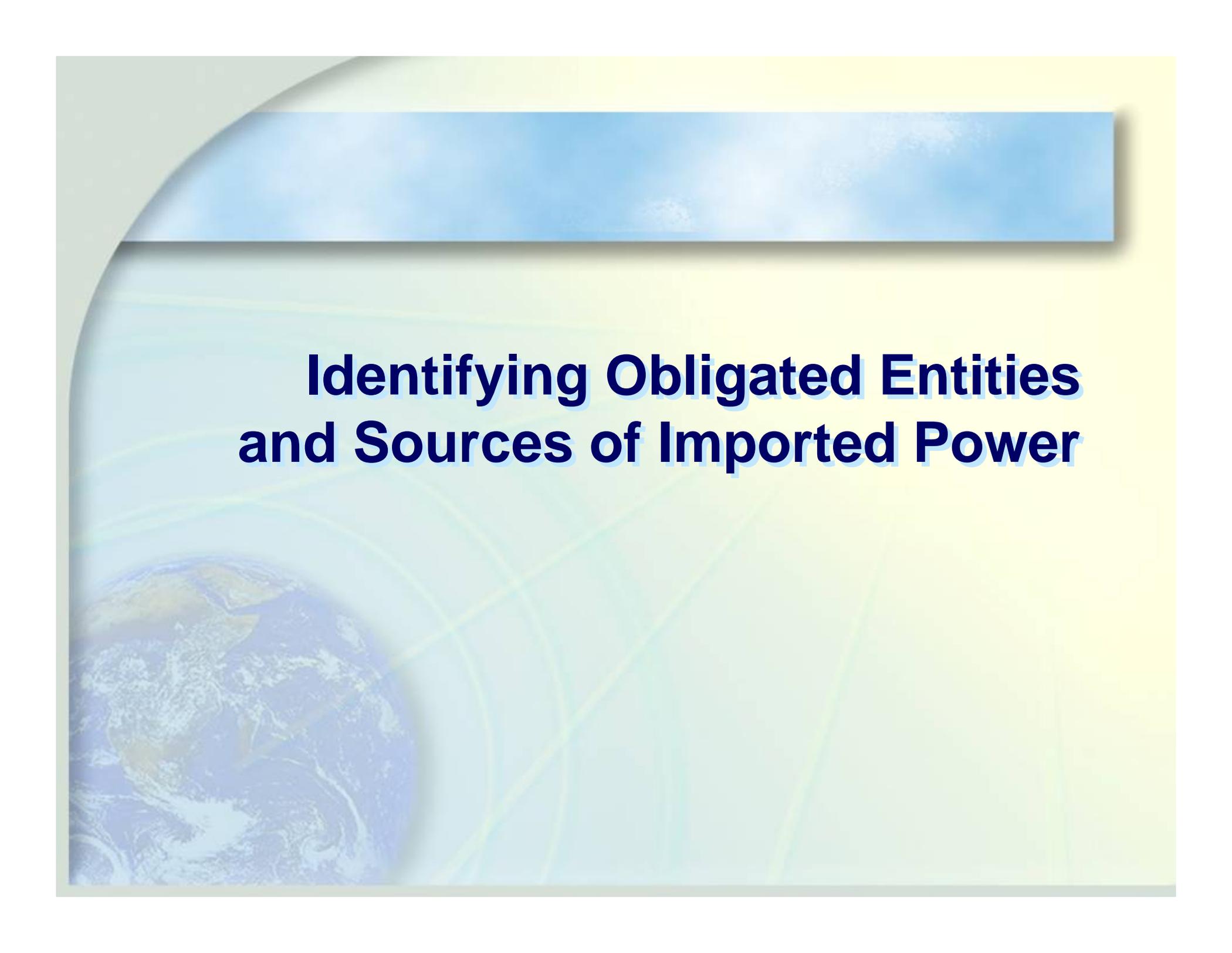
- Electricity purchaser/seller has compliance obligation if it
 - Holds title for power crossing into first WCI jurisdiction and,
 - Is used for consumption in WCI

Potential Impacts of Common Boundary Approach

- Pros
 - Fewer points of regulation
 - Electricity deliverer is at first point of entry in WCI and doesn't change regardless of where power is consumed
- Cons
 - Requires coordinated reciprocal monitoring and enforcement by all WCI partners
 - Enforcement challenges

Questions on Approaches Under Consideration by WCI

- Are the potential market impacts significant?
- What mechanisms could be used to diminish any potential market impacts?
- Are there ways state and federal agencies could lessen potential impacts on wholesale markets?

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Identifying Obligated Entities and Sources of Imported Power

Approaches to Assist in Identifying Obligated Entities

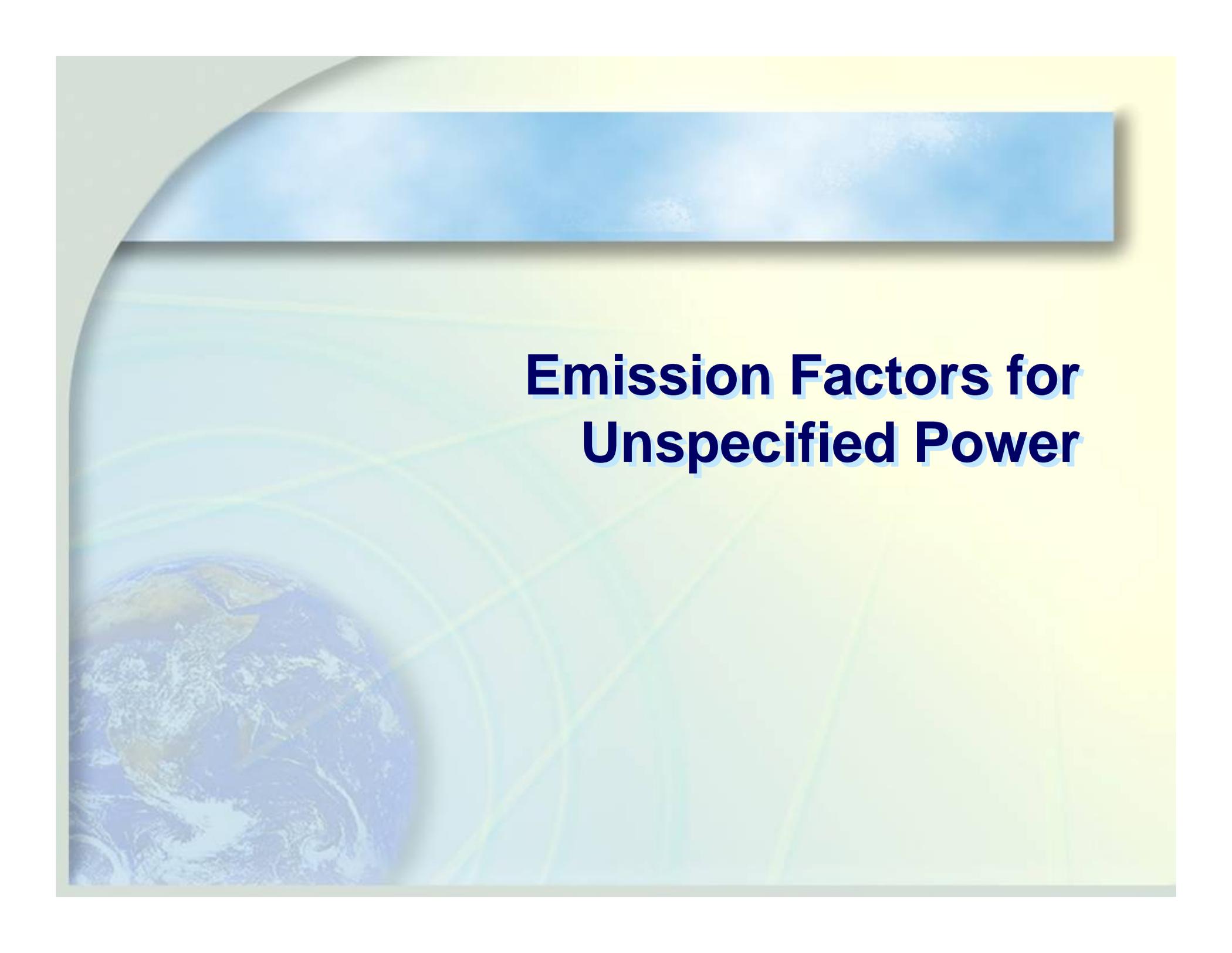
- ARB Mandatory Reporting Requirements
 - Retail providers and marketers report electricity imports into California
- Proposed AB 32 Cost of Implementation Fee Regulation
 - Applies to in-State retail providers, and marketers importing electricity into California
- NERC E-tags
 - Covers purchasers/sellers of power between control areas

Alternative Approaches to Track Sources of Imported Power

- Tracking using NERC E-tags which list source balancing authority/point of receipt
- Contracts and settlements data
- Tracking by emission attributes
 - Similar to WREGIS, but would include non-renewable generators

Questions for Stakeholders

- Which approach for including imports best lends itself to cap-and-trade?
- Are there other options that staff should consider for identifying obligated entities, and what criteria should we consider in determining the best approach?
- What criteria should ARB use in selecting a tracking method for imported power?
- If ARB develops an attribute tracking system, would non-WCI generators participate?

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Emission Factors for Unspecified Power

Specified v. Un-Specified Power

- Electricity purchased for consumption may be:
 - Specified Power: Electricity linked to specific generating facilities or units by ownership or contract
 - Unspecified Power: Electricity not linked to specified generation facilities or units

Emission Factors for Unspecified Power

CPUC/CEC Recommendations

- Single regional default emission rate
 - 1,100 lbs CO₂e/MWh for all unspecified purchases between 2005-2008
- Replace value with “values derived from a common set of rules that will be developed by WCI”

Default Emission Factor Options – Marginal Source Concept

- Marginal Sources
 - Generation sources that are dispatched to serve incremental additions to load
 - Surplus power used for export is usually generated by marginal sources

Default Emission Factor Options (2)

Marginal Source Concept (cont'd)

Option 1:

- Single number for all power imported from non-WCI jurisdictions

Option 2:

- Regional variations based on:
 - Local resource mix
 - Within a balancing authority, or other defined region

Default Emission Factor Options (3)

Option 3:

- Establish an emissions factor based on emission rate of a typical coal-fired facility
 - Would avoid potential under-reporting of actual emissions where coal plants are in the mix of resources
 - Would provide incentive for marketers and retail providers to track electricity from cleaner sources, to the extent they can

Questions for Stakeholders

- Is there enough of a locational difference in the resource mix in non-WCI imported power to warrant multiple default emission factors? If so, how could “contract shuffling” be prevented?
- Are there additional approaches to consider in setting emissions factors to calculate unspecified power?
- Should a reporting threshold apply to imported power? If so, why?
- What criteria should be used in determining a default emission factor?

Next Steps

- Written comments encouraged and accepted through June 2006 to:
<http://www.arb.ca.gov/cc/capandtrade/comments.htm>
- Staff Concept Papers
 - August 2009: Preliminary thinking on identifying obligated entity, sources of imported power, and methodology for tracking imported power
 - October 2009: Discussion of alternative methods for calculating default emission factor for unspecified power

Team Leads for Cap & Trade Rulemaking

Sam Wade, Mary Jane Coombs	Cap setting and allowance distribution
Ray Olsson	Market operations and oversight
Brieanne Aguila	Offsets and cap-and-trade project manager
Claudia Orlando	Electricity
Joshua Cunningham	Transportation
Manpreet Mattu	Reporting and energy efficiency
Bruce Tuter, Mihoyo Fuji	Industrial sectors
Stephen Shelby	Offsets
Karin Donhowe	Natural gas for residential and commercial
Mihoyo Fuji	Marginal abatement costs and leakage related issues
David Kennedy, Stephen Shelby, Barbara Bamberger, Mihoyo Fuji, Jeannie Blakeslee, Judy Nottoli, Jerry Hart	Impact analyses (environmental, economic, localized, small business, public health)

For More Information...

- ARB's Cap-and-Trade Web Site
 - <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>
- To stay informed, sign up for the Cap-and-Trade listserv:
 - http://www.arb.ca.gov/listserv/listserv_ind.php?listname=capandtrade
- Western Climate Initiative
 - <http://www.westernclimateinitiative.org>