

Emissions Market Assessment Committee

Introduction

Agenda

- Four Aspects of Cap-and-Trade Market
 - Resource Shuffling Policy
 - Reserve Price Policy
 - Update on MSG modeling
 - Linkage Policy
 - Information Availability Policy
- Public comment: other topics

Resource Shuffling

Resource Shuffling: Outline

- Definitions and potential scope
- Policy Options
 - Legal enforcement approaches
 - Market adjustment approaches
- Options for analysis

Resource Reshuffling

- *Academic Definition*: Changes in pair-wise matches of buyers and sellers that do not result in changes of emissions
 - Combined emissions of importing and exporting regions
- *Policy Definition* has been adjusted to account for reductions in CA GHG consumption triggered by complimentary measures
 - *For example SB 1368*

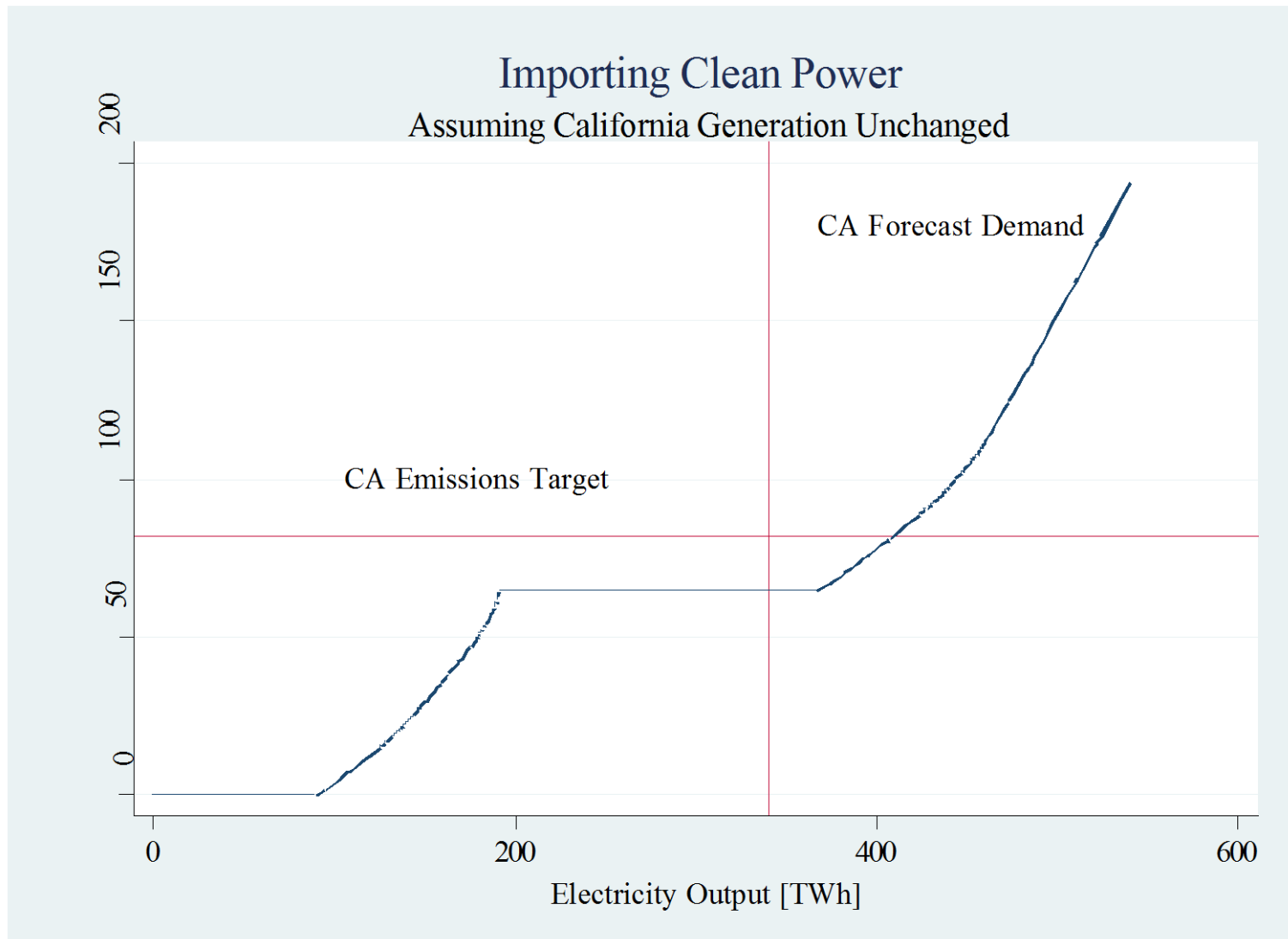
Pathways to Reshuffling

- Default emissions rates: relabeling
 - May be possible to import same power at lower emissions rate if it was higher than default
- Specified sources
 - May be possible to import from clean specified sources that had not previously been selling to CA
 - This could be swapped out for dirtier historic import sources
- Higher defaults decrease in incentives for the first, increase incentives for the second

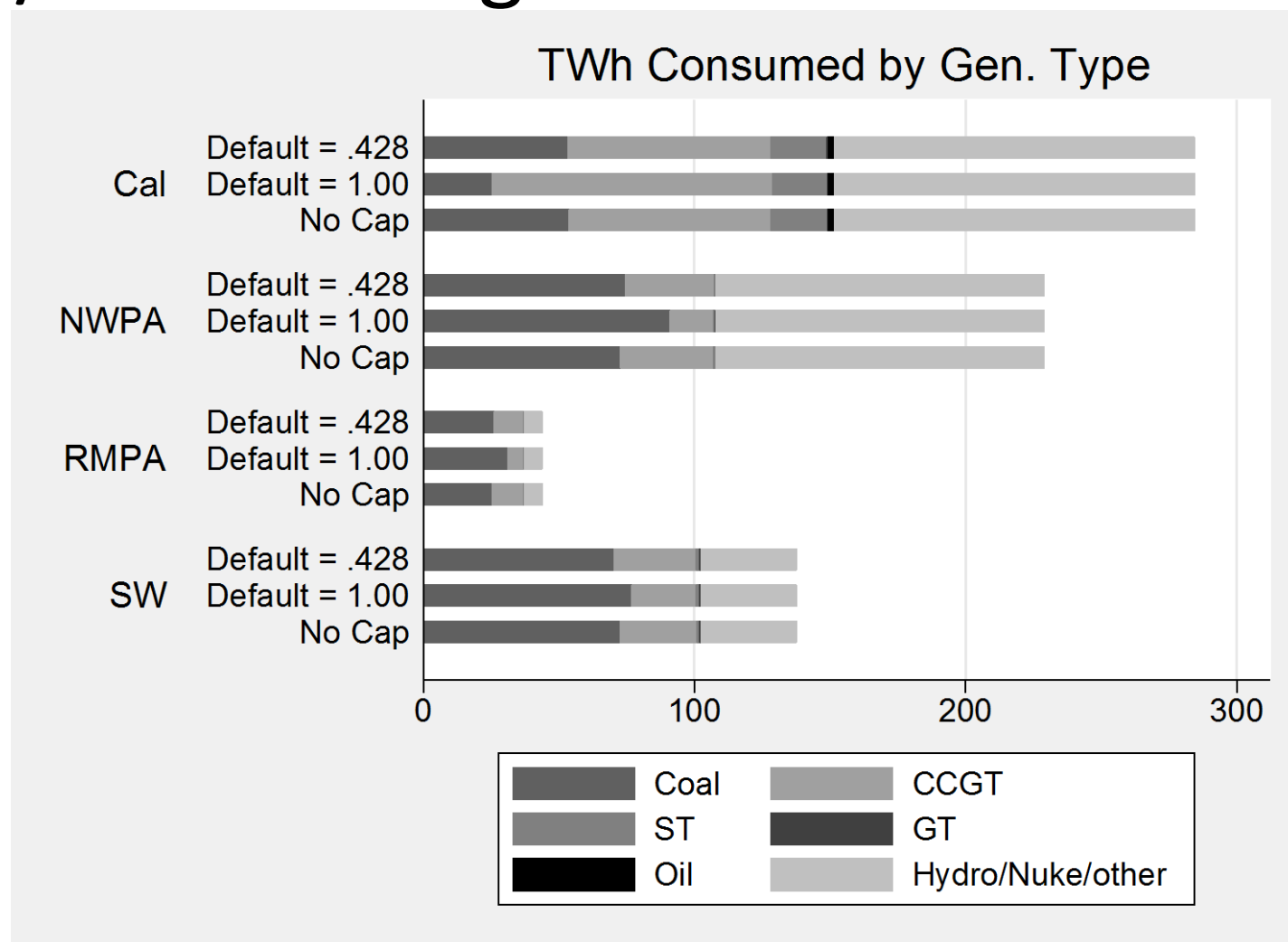
Scope for Reshuffling & Relabeling

- 2010 Emissions from Electricity Imports about 55 mmTons
 - For 90 TWh of energy
 - About 20 TWh was zero carbon source
 - Average Intensity of $55/70 = .785$ tons/MWh for the rest
- If *all 70 TWh* was substituted for zero carbon sources
 - 55 mmTon/year reduction
- If *all* was scored at default of .436 mmTons/MWh
 - About 25 mmTon/year reduction

Estimating Scope for Reshuffling



2007 Re-dispatch w/ Carbon Regulation: 15% reduction



Approaches for Dealing with Reshuffling

- Expand the number of participating jurisdictions
- Ad-hoc regulatory oversight of procurement
 - CPUC procurement proceedings
 - SB 1368
- Legal prohibitions
- Market-Design changes

Legal Enforcement

- Original language

“I certify under penalty of perjury of the laws of the State of California that [facility or company name] for which I am an agent has not engaged in the activity of resource shuffling to reduce compliance obligation for emissions, based on emission reductions that have not occurred as reported under MRR.”

Legal Prohibitions

- Pros:
 - Appealing in its apparent breadth and simplicity
 - Preserves freedom of action for enforcement?
 - Does not require design changes
- Cons:
 - If too open-ended, can disrupt wholesale electricity market
 - Probably very difficult to strictly enforce
 - Must distinguish between transactions motivated by “reducing compliance obligation” from other motivations
 - What will be the burden of proof?

EMAC view

- Very difficult to distinguish between transactions motivated by reshuffling vs. other reasons
- Emphasizing broad, undefined, legal enforcement can yield the market to those willing to bear legal risk
- Favor identifying types of transactions explicitly as reshuffling
 - Rather than a growing list of what is not

Examples

- One type of reshuffling (for purposes of enforcement)

a market participant claiming a source for imported electricity to be a specific generating unit when it can later be determined that this imported energy was procured from a different generating unit with an emissions rate that is higher than the one originally claimed as the source of that energy.

Joint Proposal by IOUs

- Identifies 6-7 activities that would *not* constitute reshuffling (for purposes of enforcement)
 - RPS compliance
 - Compliance with other regs
 - Retirement of resource
 - Termination of contracts for “other reasons”
 - Expiration of contract
 - Short-term transactions
 - Transmission constraints, outages, or emergencies

Market Adjustment Approaches

- In ARB Chair's August letter, ARB considering "adjustments to ensure that emission reductions that occur in the electricity sector as a result of California's cap and trade program are not offset by increases in emissions elsewhere."
- Anticipate or measure degree of reshuffling and adjust cap and/or allocations accordingly
 - How could that be approached?

Market Adjustments: Three Large Issues

- Where does adjustment come from?
- How much of an adjustment?
- Where does adjustment go?

Where does adjustment come from?

- Reduce unallocated auction amount?
- Reduce allocations pro-rata?
 - Come from all industries?
 - Reductions focused on Electricity?
- Link adjustment to market actions
 - Link adjustments to market actions?
 - What kind of actions? Anything not on IOU guidance list?

Adjustment

- How much of an adjustment?
 - Anticipate potential reshuffling?
 - Respond to specific market actions?
- Where does it go?
 - Into the auction pool?
 - Retired?
 - Into the price-reserve?

Assessing Impact of Remedies

- Potential for reshuffling
 - “pure” market potential is large
 - “soft” factors hard to quantify
 - Regulatory oversight (e.g. CPUC procurement)
 - Trade frictions on low GHG power
 - Warm glow vs. Hot glare
- Potential market impacts of adjustments
 - Impacts on expected prices
 - Impacts on volatility of prices

Complimentary Measures

- Very possible that external shocks (rainfall, economy) combined with complimentary policies will yield reductions necessary to meet the cap
 - An outcome where the market price is at or near the floor does not therefore imply a “failure” of the cap-and-trade program

Supply of Abatement

Allowance
Price

