California's Cap-and-Trade Regime

Lorenzo Kristov, Ph. D.
Principal, Market and Infrastructure Policy

HEPG Meeting, March 7, 2013

Topics

- ISO market changes
- GHG responsibility for import transactions
- Initial impacts on spot markets
- Import adequacy under stress conditions

ISO market changes to recognize greenhouse gas compliance costs

- ISO markets utilize cost-based bid components in several areas:
  - Cost-based start-up and minimum load costs
  - Default energy bids for local market power mitigation
  - Generated energy bids inserted by ISO if a resource adequacy resource fails to submit bids
- ISO filed tariff amendment in 2012 to reflect GHG compliance costs in these bid components
- FERC approved amendment in December 2012

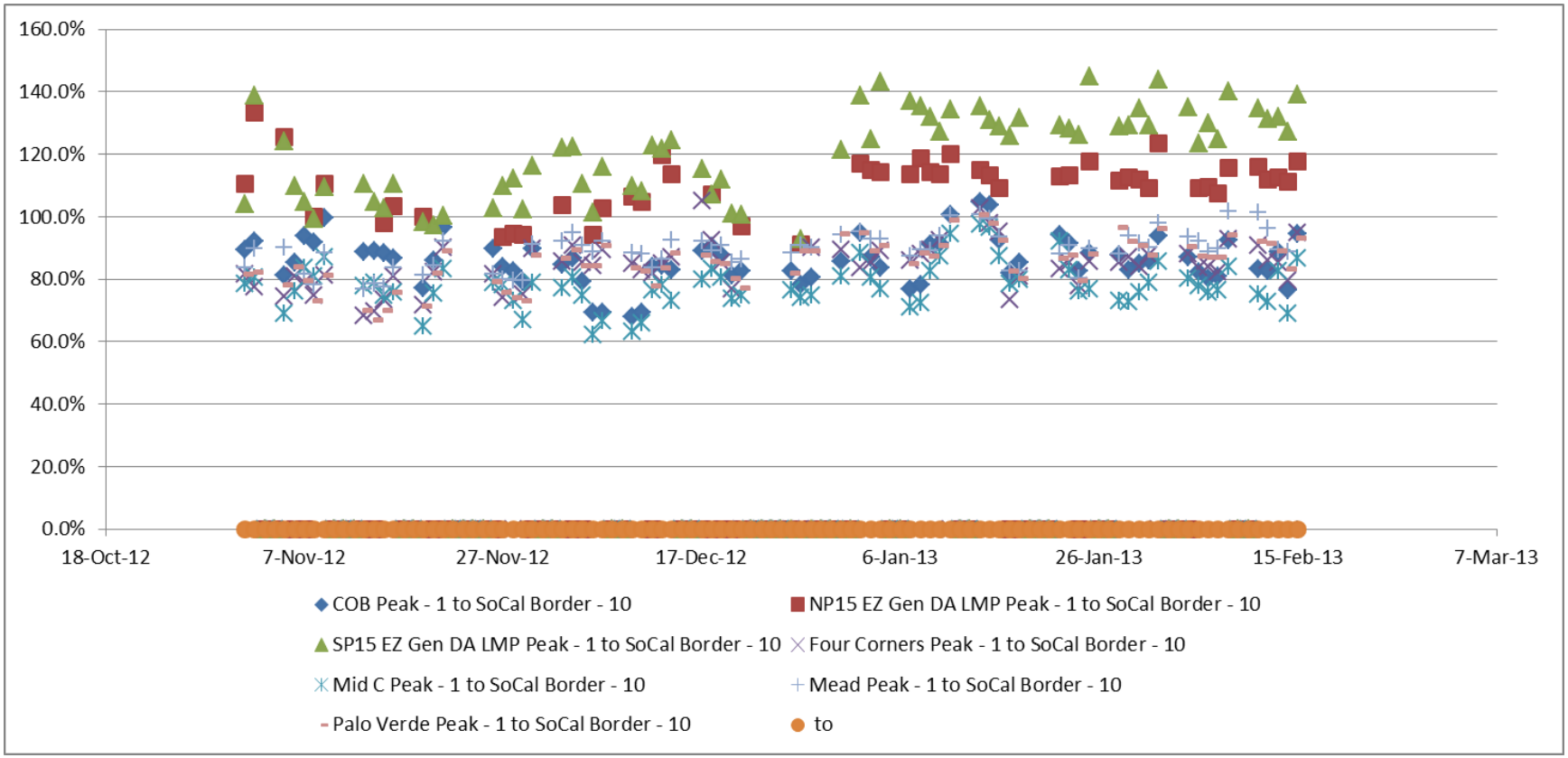
GHG responsibility for energy imports

- Seller of energy into ISO market at inter-tie scheduling point is responsible for GHG compliance, even if the scheduling point is outside California
  - For example, Malin (COB), Palo Verde located outside CA
  - Sellers argued that delivery occurs at these points, therefore seller does not move power into CA and is not responsible for GHG compliance
  - *Sale into ISO market is sale to serve aggregate of ISO load, and delivery occurs within ISO balancing area*
  - E-tag identifies purchasing/selling entity (PSE) for transmission segment going from inter-tie scheduling point (e.g., Malin) to inside CA (e.g., NP15 trading hub), thus crossing CA border.
    - This PSE is typically the market participant (scheduling coordinator) that offers import energy at the inter-tie scheduling point
  - Also, per e-tagging practices ISO is not a PSE
- Resolution aligns GHG compliance costs with energy bid prices, thus aligns market dispatch with environmental goals.

Initial observations of spot price impacts

- Comparing average daily prices for 11/15-12/31/12 versus 1/1-2/15/13 indicates:
  - Increase of $4.05 (11%) in peak NP15 price
  - Increase of $7.46 (19%) in peak SP15 price
  - Increase of $4.20 (12%) in peak ZP26 price
  - Similar differences in off-peak prices
  - Increase of $0-2 in spreads between NP15 and external hub prices (COB, Mead, MidC, PV)
  - Increase of $4-6 in spreads between SP15 and hubs
  - Have not yet analyzed how much of these differences are due to GHG regulation

Initial spot energy price impacts



Import adequacy under system stress conditions

- ISO has studies underway in preparation for summer 2013
- Substantial import amounts are resource adequacy (RA) resources, scheduled by load-serving entities under must-offer obligations