

# Monitoring California's Greenhouse Gas Emissions Permit Market

UC Market Simulation Group

# Outline of Talk

- An international GHG emissions permit market presents unique monitoring challenges
- Main roles of a monitoring process
  - Information collection and dissemination
  - Ensuring compliance with market rules
  - Protecting against behavior harmful to market efficiency
    - Exercise of market power
    - Market manipulation (exploitation of asymmetric information)
- Trade-offs faced in design of GHG emissions permit market monitoring process

# WCI's International Carbon Market

- Product would not exist without mandate of participating governments—CA and Quebec
- Expanding geographic scope of market has costs and benefits
  - Need consistent legal framework for access information and procedures for imposing penalties and sanctions for failing to comply with market rules
  - Expanding number of participating jurisdictions increases likelihood that environmentally important global GHG emissions are achieved

# Goal of Market Monitoring Process

- Prevent substantial economic harm to consumers and producers
  - Efficient allowance prices should equal the marginal cost of reducing carbon emissions for lowest marginal cost market participant not mitigating carbon emissions
  - Enormous wealth transfers can occur in a short period of time
    - Member countries of European Trading System (ETS) issued more emissions allowances than likely emissions and this led to rapid decline in price of allowances during spring of 2006
    - Substantial wealth transfers and adverse impact on firms in participant countries
- Very difficult to undo these transfers once they occur
  - Emphasizes need for forward-looking monitoring process to prevent significant inefficiency and wealth transfers

# Challenges to Market Monitoring

- Should expect that profit-maximizing market participants exercise all available unilateral market power
  - Cannot prevent exercise of market power
  - Market monitoring process can limit market efficiency costs of the exercise of unilateral market power
- Should expect profit-maximizing market participants to attempt to exploit informational advantage to increase profits
  - Failure to disclose information creates an advantage for that entity which possesses it
  - Manipulation reduces economic efficiency of market outcomes

# Three Main Roles of Market Monitoring Process

- Information Collection and Dissemination
  - Compile and release information about market outcomes and market performance to existing and prospective market participants
  - Provides “Smart Sunshine Regulation” to market
- Ensuring Compliance with Market Rules
  - Define compliance mechanisms and issue penalties and sanctions for violations of these market rules
- Protecting Against Behavior Harmful to Market Efficiency
  - Addresses concerns about difficult to detect and prove, but easy to say, concepts such as market manipulation, abuse of market dominance, and abuse of market power

# Smart Sunshine Regulation

- Public release of as much data as practical
- International cooperation essential to success
- Failure to release data that can harm market efficiency
  - Releasing data already collected has virtually zero cost
  - Symmetric information among market participants typically enhances market performance
- Price discovery concerns
  - Periodic auction produce transparent prices
  - Bilateral trading may not produce transparent prices

# Process for Monitoring Potentially Harmful Behavior

- Identify behavior that is likely to harm market efficiency
  - Ensure compliance with obligations
- Process for disclosure
  - Allow all market participants opportunity to address problem
- Disclosure process for determining intent
  - Establish direct causal relationship between behavior and harm
- System of Penalties and sanctions
  - Expected cost of market rule violation must exceed expected benefits to market participant
  - Standardize penalties across jurisdictions
- If well designed, unlikely this process will ever go to conclusion
  - Provide clarity in process so that harmful market outcomes will be eliminated by market participants as soon as possible



# Coordinating an International Market Monitoring Process

- Authority of process comes from international agreement
  - Significantly less legal authority than a country-specific regulator
  - Rely on country-specific regulators to provide much of its authority
    - Assessing penalties and sanctions for market rule violations
    - Determining behavior harmful to market efficiency
- Primary role of monitor (at least initially) is information collection, dissemination, and analysis
  - Must make case in court of public opinion and manner accessible to policymakers in all participant countries
  - Obtain greater authority through reputation building

# Conclusions (1)

- Anticipated size and scope of international carbon market and unique governance structure for market requires a transparent regulatory process
- Market participants and governments will make arguments against data collection, release, and analysis
- If intent is to scale carbon market to all countries of world, this aspect of regulatory process is crucial to success of carbon market at achieving verifiable global carbon emissions reductions at least cost

# Conclusions (2)

- Likely to be allegations of market manipulation, market abuse and competition law violations in market
  - Regulatory process should be in place from start to deal with these allegations in pro-active manner
  - Important part of this process is knowledge of how market should perform under
    - Perfectly competitive conditions
      - Competitive benchmark pricing
    - Imperfectly competitive conditions
      - Oligopoly equilibrium pricing
  - Simulation modeling provides these benchmarks