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How Markets Work℠

Overview of Allocation Choices: Alternatives and Implications

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Overview

1. Basic Allocation Choices
2. Additional Allocation Possibilities
3. Apportionment to States and Sectors
4. Evaluation Criteria
5. Issues Arising in Implementation
6. Conclusions and Implications

Basic Allocation Choices

- **The table below summarizes basic allocation alternatives**

Basic Allocation Type	☐ **Free** ☐ Non-updated ☐ Updating	☐ **Auctioning** ☐ Maximum 5% ☐ Other	
Metric Used	☐ Emissions ☐ Fuel or other Inputs	☐ Product Output ☐ Capacity	
Years Used	☐ 1998 ☐ 2001	☐ 1999 ☐ 2002	☐ 2000 ☐ Other Years
Specific Data/ Formula	☐ Single Year	☐ Average	☐ Max

Additional Allocation Possibilities

- **Set asides**
  - For specific installations or technologies
  - For new entrants (form of "updating")
- **Allocations to non-emitters**
  - E.g., "indirect emissions", "Sky Trust"
- **Incorporation of existing regulations and actions**
  - "early action" credits
  - Renewable programs, energy efficiency programs
- **Changes over time in allocation choices**
  - E.g., shift in percentage of auctioned allowances
- **Other changes tied to allocations**
  - E.g., Public Utility Commission decisions on electricity rates and "opportunity costs" of using "free" allowances

Apportionment to States and to Sectors Raises Other Issues

- **Alternative approaches**
  1. One-stage allocation to facilities
  2. Two-stage allocation: a) states; b) facilities
  3. Three-stage allocation: a) states; b) sectors; c) facilities.
- **Differences among approaches**
  - Data availability
  - Flexibility to deal with differences among sectors and facilities (e.g., growth, existing regulatory requirements, different "output" measures)
  - Consistency in light of differences in "macro" and "micro" level data on facilities and sectors

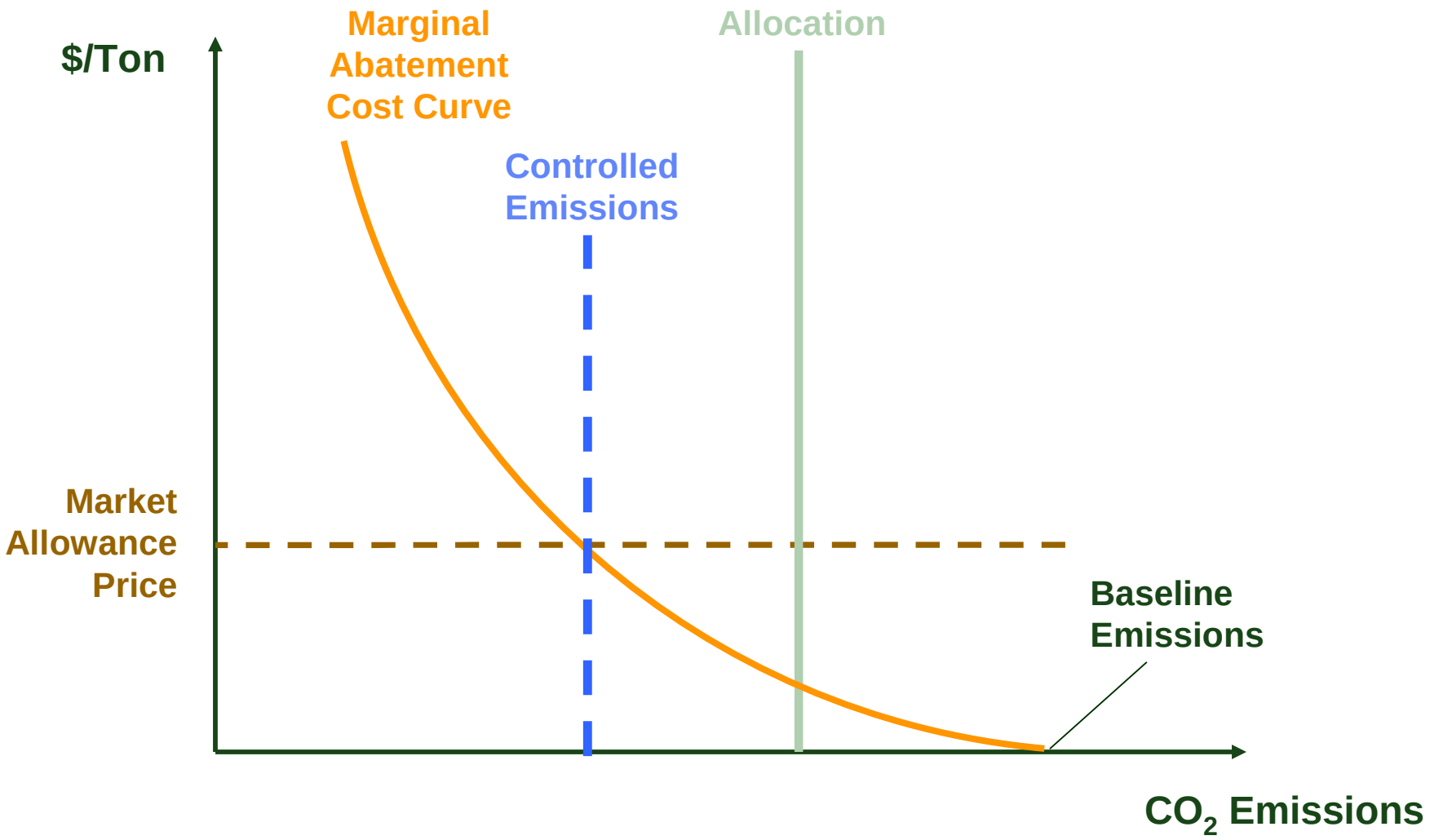
Two Major Types of Evaluation Criteria

- **Efficiency**
  - Two major efficiency goals:
    1. Compliance cost minimization
    2. Avoid product market "distortions" (e.g., electricity prices *not* reflecting carbon emissions)
  - Other efficiency goals: administrative costs, transaction costs, removal of tax-induced inefficiencies
- **Distributional**
  - Many groups potentially affected
    - Sectors and participating firms (competitive impacts)
    - Consumers/workers/taxpayers
  - Ultimate distributional effects depend upon:
    - Market effects (e.g., electricity prices, fuel prices)
    - Non-market effects (e.g., PUC treatment of "free" allowances, tax changes if auction revenues)

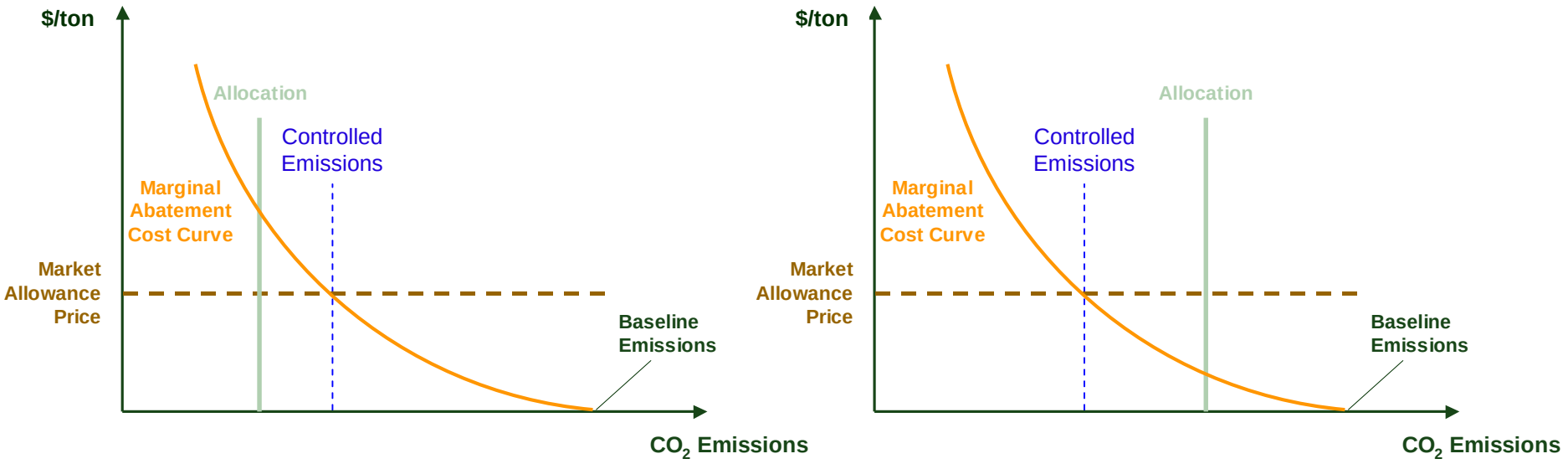
Issues Arising in Implementation

- **Data availability**
  - Implement allocation approach
  - Evaluate effects (sector growth, sector control costs)
- **Confusion on whether the initial allocation affects decision to control facility emissions**
- **"Prisoners dilemma" related to states' choices to allow new entrant set-asides and competitiveness**
- **Empirical size of "inefficiencies" and "efficiencies"**
  - E.g., "Inefficiency" due to updating
  - E.g., "Efficiency" of tax revenue shift due to auction
- **Complexities of ultimate distributional impacts**
  - Allocation choices themselves (many specific details)
  - Market effects (e.g., electricity prices, fuel prices)
  - Non-market effects (e.g., PUC treatment)

Framework for Considering Incentives for Firms to Control



Why Grandfathered Allocations Don't Affect Firm Decisions on Emissions



- Two different allocation levels…
  - …but facility emissions levels are the same
- Note, however, that the distributional effects are very different!

General Conclusions and Implications

- **Importance of detailed analyses by governments and participating sectors/firms**
  - Data availability (may include collection of confidential/verified company information)
  - Determine "what is at stake" under major alternatives
  - Consider implications of additional details (e.g., credits for early action, credits for renewables)
  - Provide the basis for informed decision-making process
- **Sound initial allocation is both important and possible**
  - Encourage cost savings from trading
  - Avoid competitive product market distortions
  - Avoid serious distributional impacts

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