

# Outline

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- What is Cap-and-Trade?
- Some History and Pictures
- Allocation, Allowance Value, and Electric Power Regulation



# The Allocation Problem

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- Cap creates a scarcity rent embodied in allowances. Who should receive it?
  - **Prior Use Claims**—incumbent emitters
    - Also, compensation and political uses
  - **Public Use Claims**—the government
    - Expenditures or tax/debt reduction
  - **Cap-and-Dividend**—Per capita to households
  - Always recycled. Issue is how & to whom?
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# Free Allocation vs. Auctioning

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- The usual dichotomy in allocation debate
    - Allowance value to gov't or corporations
    - Auctioning often coupled with “double dividend”
  - But ignores who is the ultimate recipient
    - Both govt and corp are legal shells
    - Quite different distributional outcomes
  - US debate now focused on ultimate recipients
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# Cost Implications

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- Free allocation raises **opportunity cost** issue
    - Typically fixed and historical; independent of current emissions or production
    - Allowance use incurs an opportunity cost
    - Do emitters recognize opportunity cost?
  - Straight-forward with auctioning/purchase
    - Pay as for any other input into production
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# Interaction with Electric Power Regulation

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- Liberalized power markets  $\Rightarrow$  marginal cost pricing
  - Allowance cost incorporated into price
  - Free allocation over-compensates *assuming* opportunity cost is recognized and passed on
- Cost-regulated markets  $\Rightarrow$  average cost pricing
  - Only incurred costs are included
  - Free allocation reduces consumer price effect



# Summary

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- A known, tested, and tried concept
  - Creates a price on emissions and reduces emissions with few other side effects
- A highly desirable form of environmental regulation
  - Radically different from conventional “command-and-control”
  - Object is to reduce and limit emissions only
  - Trading is means for least-cost compliance,
  - Profit is by-product, not the object of trading



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