# Regulatory means and environmental ends

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#### **ENVIRONMENTAL DEFENSE FUND**

finding the ways that work

## Multiple market failures, multiple instruments

- 1. CO2 emissions (negative externality)
- 2. Innovation and learning-by-doing (positive spillover)
- 3. Network effects (coordination problem)
- 4. Consumer decision making (information asymmetries)

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- 1. Matching means to ends
  - RES/RPS: Neither necessary nor sufficient
  - Is real-time pricing green? Why should it be?
  - Need a cap/price on carbon

- 1. Matching means to ends
- 2. New markets, new market failures?
  - Cautionary example: CA elec market and RECLAIM
  - How to regulate carbon as a financial market?

- 1. Matching means to ends
- 2. New markets, new market failures?
- 3. Operating in a second- (or third-) best world
  - $P \neq MC$  to begin with
  - Capital bias in regulated electricity markets

- 1. Matching means to ends
- 2. New markets, new market failures?
- 3. Operating in a second- (or third-) best world
- 4. Understanding decision-making behavior
  - Principal-agent issues
  - Implicit discount rates
  - Marginal price vs. total cost
  - What role for technology?

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- 2. New markets, new market failures?
- 3. Operating in a second- (or third-) best world
- 4. Understanding decision-making behavior
- 5. Political and institutional constraints
  - Limited attention in a sea of issues
  - Setbacks have lasting consequences
  - Importance of getting the framework right