Allowance Price
Containment

Tim Profeta
Director
Nicholas Institute
for Environmental Policy Solutions
## Root of the Issue

<table>
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<th>Goal</th>
<th>Instrument(s)</th>
<th>Advantages</th>
<th>Risks</th>
<th>Address risk</th>
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<td><strong>Price certainty</strong></td>
<td>Tax</td>
<td>Guaranteed price</td>
<td>Undermine emissions target</td>
<td>Re-evaluate or re-set emission targets?</td>
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<tr>
<td><strong>Emissions certainty</strong></td>
<td>Cap and trade with firm cap</td>
<td>Guaranteed long-term emissions target</td>
<td>Price/Cost uncertainty</td>
<td>Flexibility: Banking, borrowing, and offsets</td>
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<td>Intervention (price ceiling, price floor, allowance reserve)</td>
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Cap-and-Trade: Price Uncertainty Implications

• Policymakers: A rational decision (ex ante)
  – “Trusted” economists estimate the allowance prices and economic impacts in advance
  – Congress chooses target/options with highest expected efficiency (or with “acceptable” cost)
  – Program is implemented

• Problem (ex post)
  – Even “trusted” estimates are likely to be off once program takes off
    • Mean/trend
    • Un-modeled fluctuations

• Adaptive measures needed?
NOx OTC Current Vintage Price

Source: Presentation, Billy Pizer RFF
Historic Prices From Point Carbon June 17, 2010

Kyoto

Global economic crisis hits
Why do allowance prices vary?

- **Fundamentals**
  - Allowance demand uncertainty
    - Economic growth
    - Pace and cost of low carbon technology
  - Supply uncertainty
    - Offsets
  - Policy shifts

- **Fluctuations**
  - Weather
  - Macroeconomic factors (growth, exchange rates,...)
  - Energy markets

- **Hedging/speculation?**
Goldilocks Paradox

• Don’t want prices “too high”
  – Excessive cost burden on households and businesses
  – Trade flow disruption
• Don’t want prices “too low”
  – May not generate sufficient investment
  – Foregone cheap reductions
• Want it “just right”
“Getting it Right” options

• Rein in high prices
  – Safety valve: hard price ceiling
  – Allowance Reserve Auctions: flexible price ceiling

• Prop-up low prices
  – Hard price floor

• Price “collar” tries to do both
Waxman-Markey: Flexible collar

- **Hard price floor**
  - Regular auction will set a reservation price of $10
    - Government will not sell allowances for less than this
  - Rising at 5% per year

- **Flexible price limit: Strategic reserve**
  - Initial: ~ 2.5 billion tons set aside within long-term cap
  - Cost containment auction at a “reserve” price
    - 2012: $28, Rising at 5% (double the projected price)
    - 2015 -> 36 month rolling average of market price
  - Annual limits on use (5%, 10% of cap)
  - Replenishable with international offsets (REDD),...
  - Flexible? Price not absolutely guaranteed
A View of the Waxman/Markey Reserve

Emissions

Reserve comes from here

Minimally acceptable cap
Aspirational cap

2012 2050
Kerry/Lieberman: Discount Window

- **Hard price floor**
  - Regular auction will set a reservation price of at least $12
  - Rising at 3% per year

- **Discount Window to access strategic reserve**
  - Initial: 4 billion tons set aside within long-term cap
  - Right to purchase up to 15% of compliance at set price
    - 2012: $25, Rising at 5%
  - Replenishable with government purchased offsets, 80% ratio
  - No banking when access window
  - No sales of allowances within 90 days of window purchase
Refinement options

• Reserve Modifications
  – Size of reserve
  – Reserve price points
    • Change initial reserve price
    • Drop rolling average approach
  – Move decisions to discretionary board
  – Triggered by something else other than a price spike.