



Cost containment reserve: features and design issues

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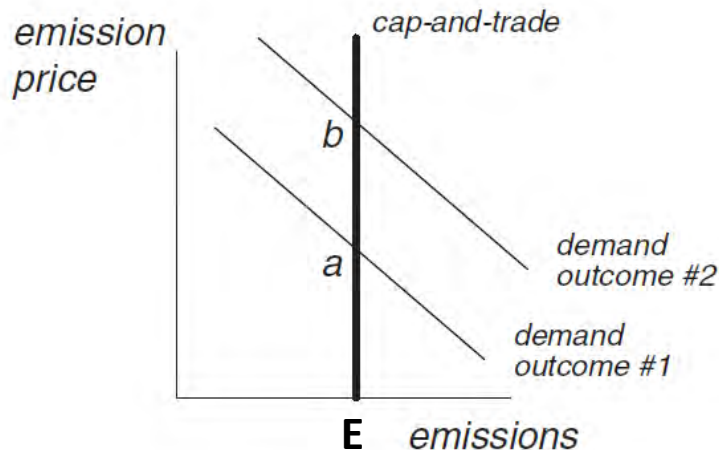
RGGI Learning Session on Flexibility Mechanisms

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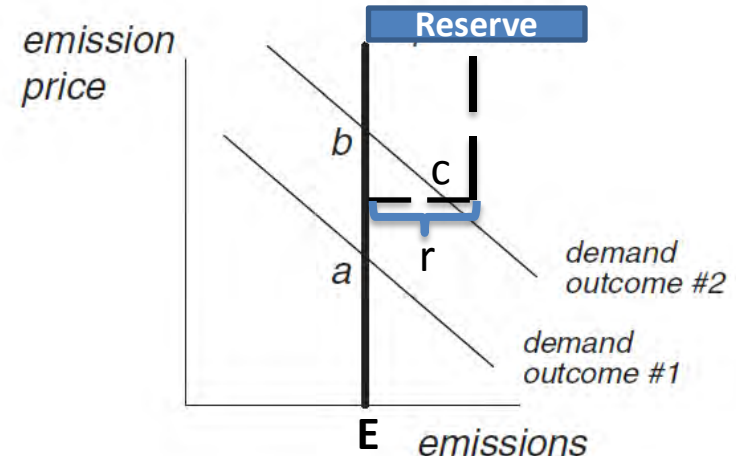
Is there a tradeoff between cost ceiling and emissions ceiling? Yes



Cap and trade without reserve

Cap fixed (E)

Price varies directly with demand $[a, b]$

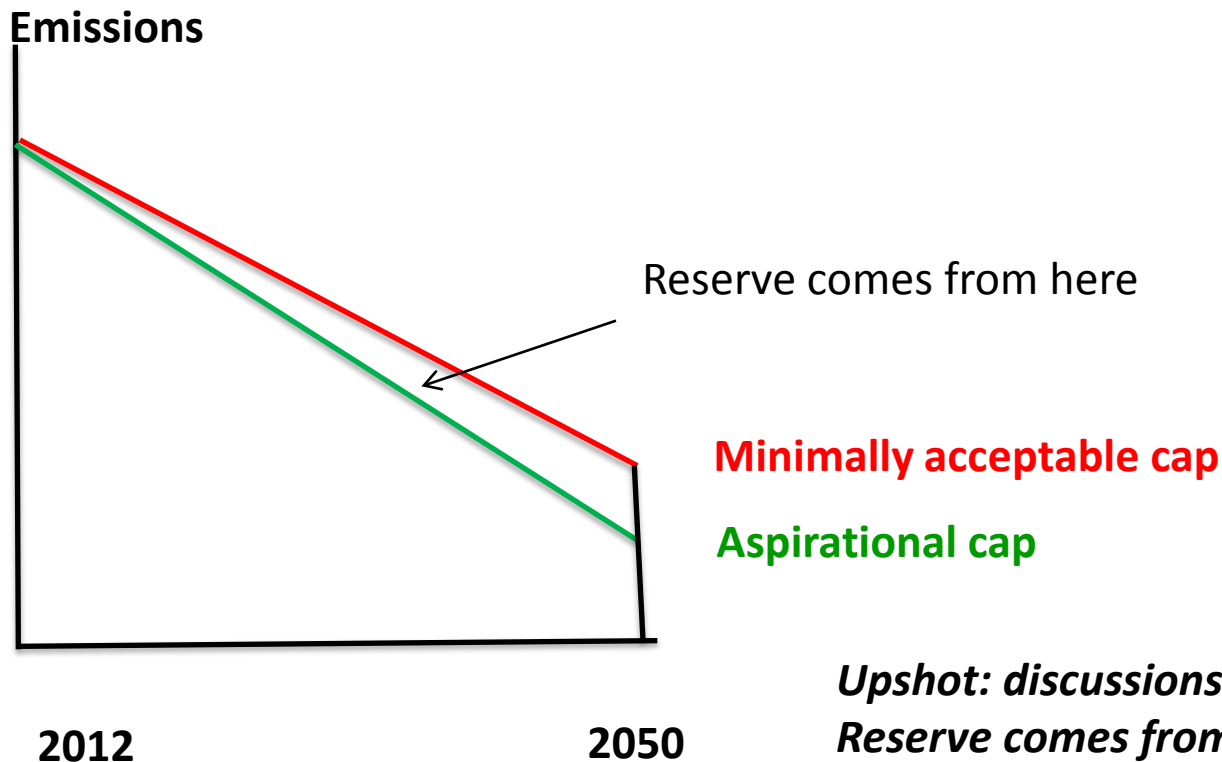


High demand scenario with reserve

- Lower price ($c < b$)
- Higher emissions ($c > E$)
- Still a ceiling ($c < E + r$)



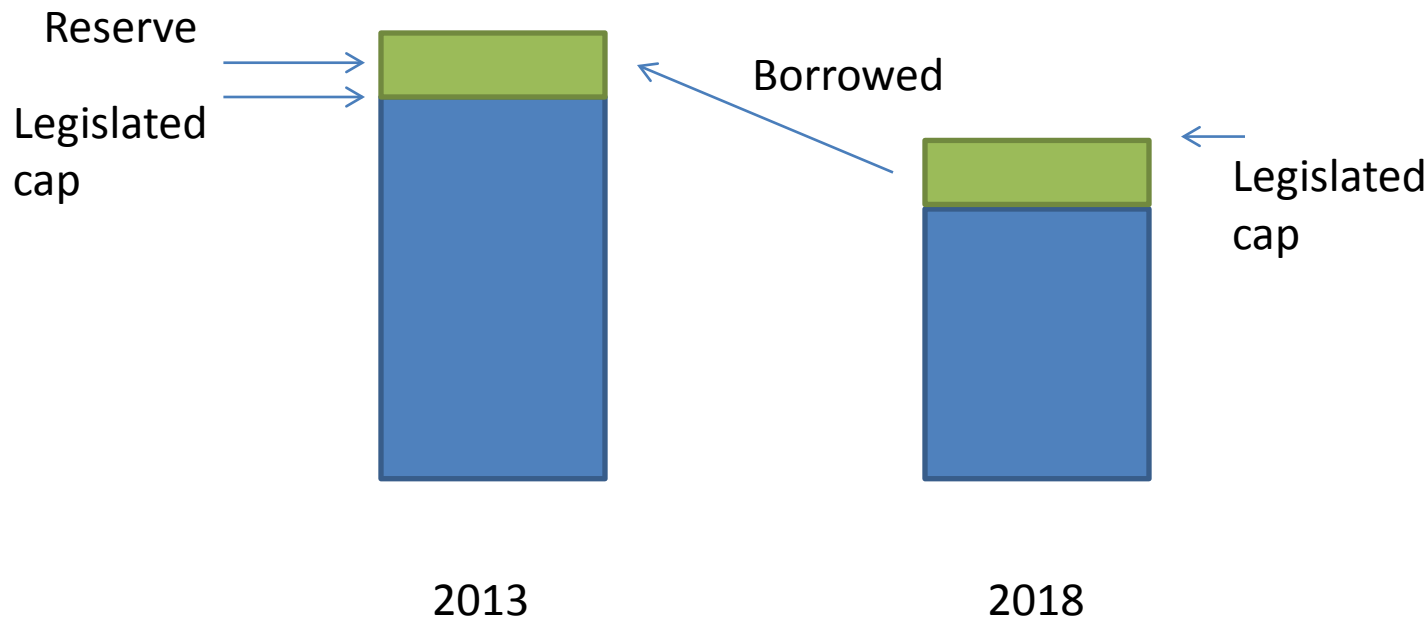
Where do allowances in the reserve come from?



*Upshot: discussions about whether the Reserve comes from “inside” or “outside”
The cap are a bit of a shell game ...*



Issue – reserve built from future cap aka “system borrowing”



Tightening of future cap makes banking allowances more attractive – drives up current price
Makes current cost containment more difficult



How do allowances from the reserve enter the market?

- Dallas mentioned several options
 - Auction probably the most efficient
- Other alternatives
 - Targeted purchase rights (call options)
 - Coupons (“attached” to an allowance – right to purchase X more units at fixed price)



Is harmonization among participating states necessary?

- If a subset of states create a reserve and trade continues across states, then the reserve effectively serves all states



Interaction with offsets?

- Offset triggers (as in current rules) can only work if there is a robust supply of “out of market” offsets ready to come into RGGI market and soften prices



How big does a reserve need to be?

- Simulation modeling results for federal legislation proposals (joint work with P. Maniloff at Duke, in review)
 - total reserve of slightly less than 1% of the cumulative cap was sufficient to protect against most price risk
 - Perhaps [1.5-3] larger if there is not a robust offset market
- Applicability to RGGI?
 - Current cap surplus suggests little current/recent likelihood of reserve triggering (if there were one)
 - Offsets not active, would rely more on reserve if triggered