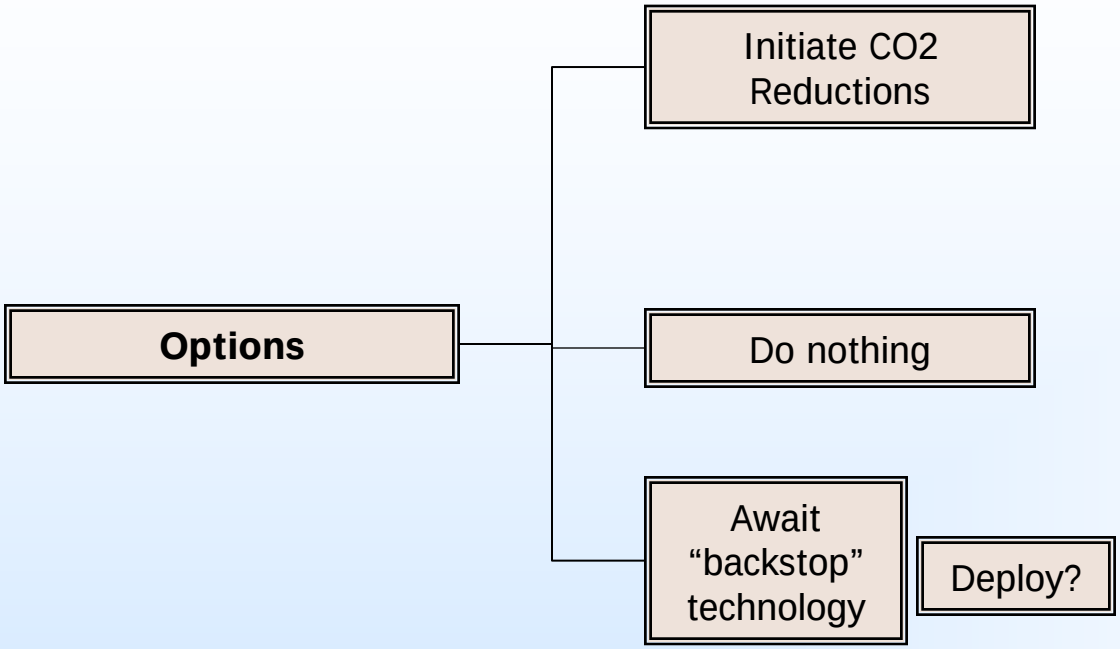
Climate Policy



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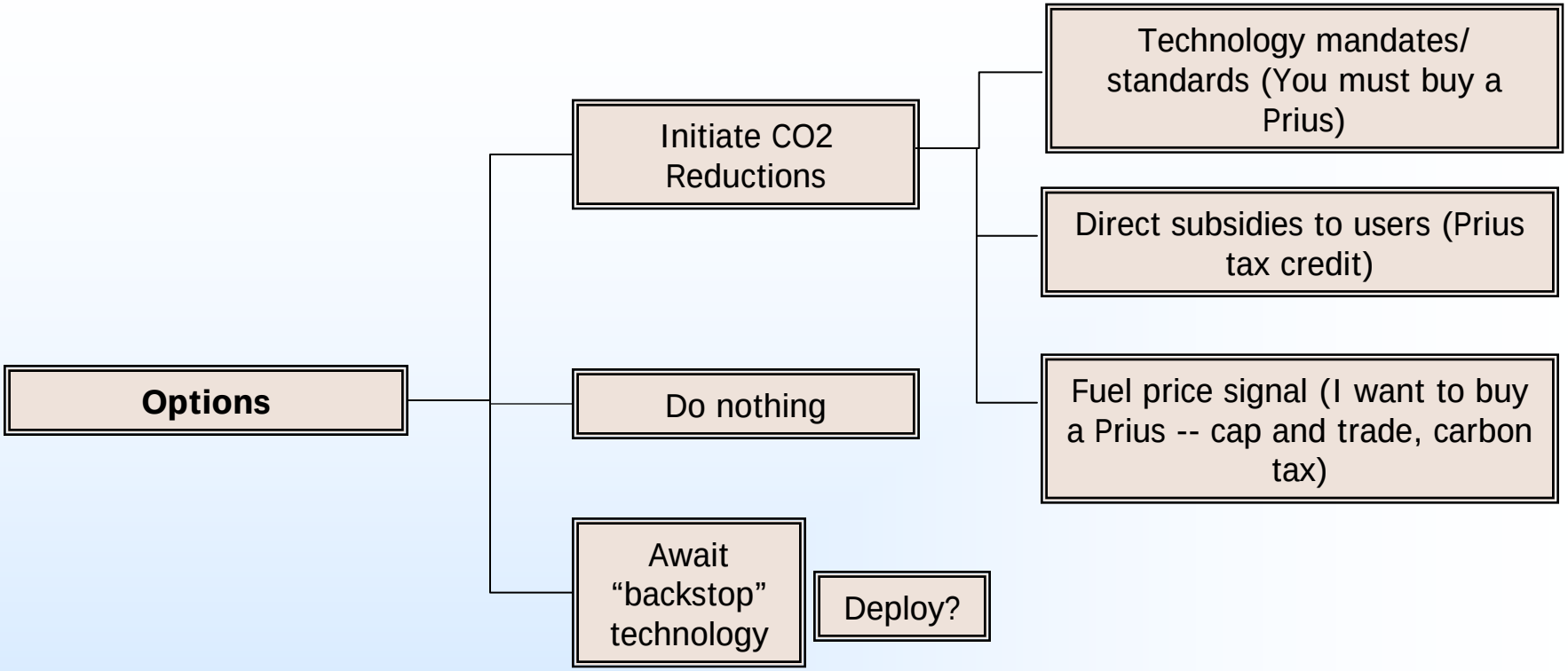
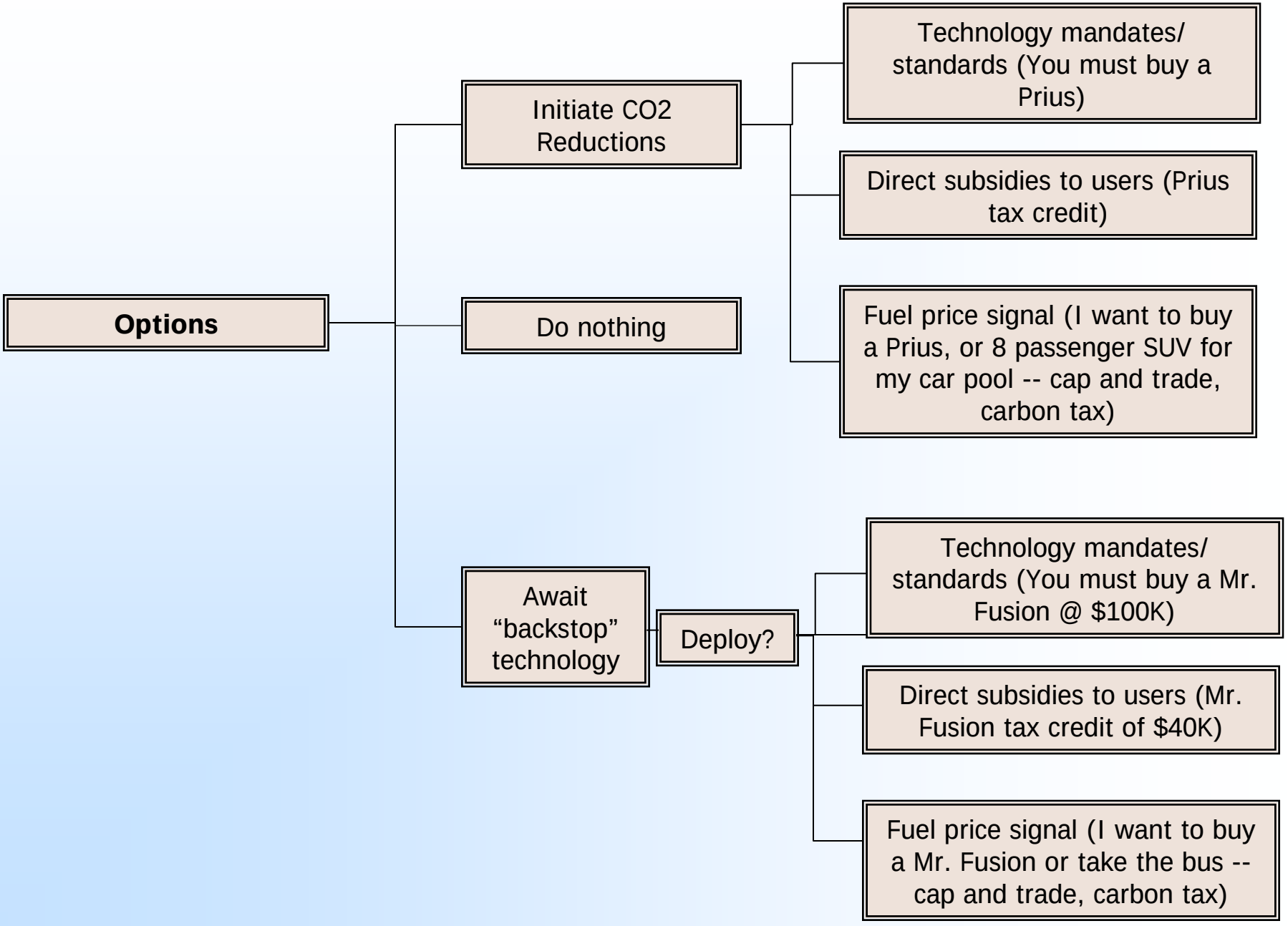


Climate Policy



Narrowing the field

~~Technology mandates/ standards (You must buy a Prius)~~

Picking winners, wasting money @ $150/ton CO2

~~Direct subsidies to users (Prius tax credit)~~

With budget deficits?

~~Await back-stop technology (Mr. Fusion)~~

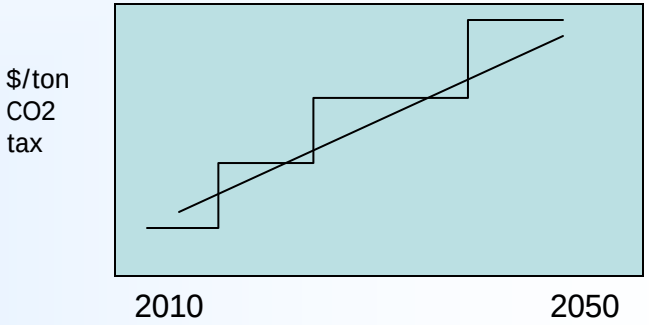
How long? What probability? Risk of missing?

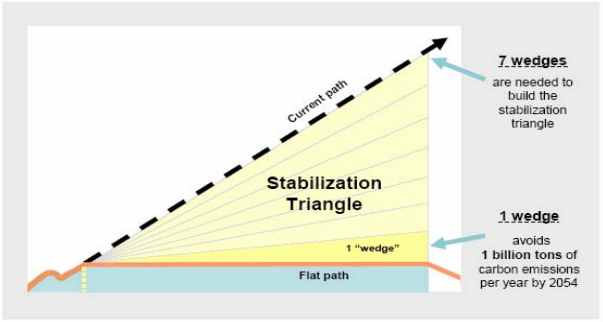
Fuel price signal (I want to buy a Prius -- cap and trade, carbon tax)

Lower probability of "bad things" happening. (Jacoby) Princeton's wedges. (Pacala-Socolow)

Carbon Tax

- "Tax" is political poison
- What level of tax to get "needed" reductions?
- Difficulty of raising taxes over time – must re-fight each battle





Cap and trade

- How allocate allowances?
- How manage price risks?

Allowance allocation choices

Cap and Trade on CO2

Economists

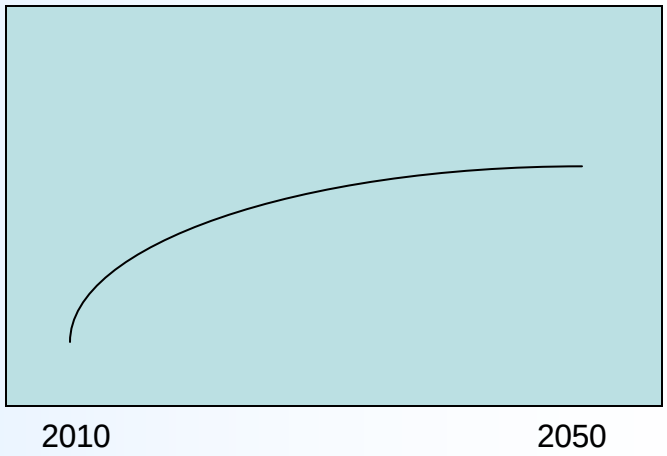
Upstream to mines, wells & terminals? Thousands of participants.

Behavioralists

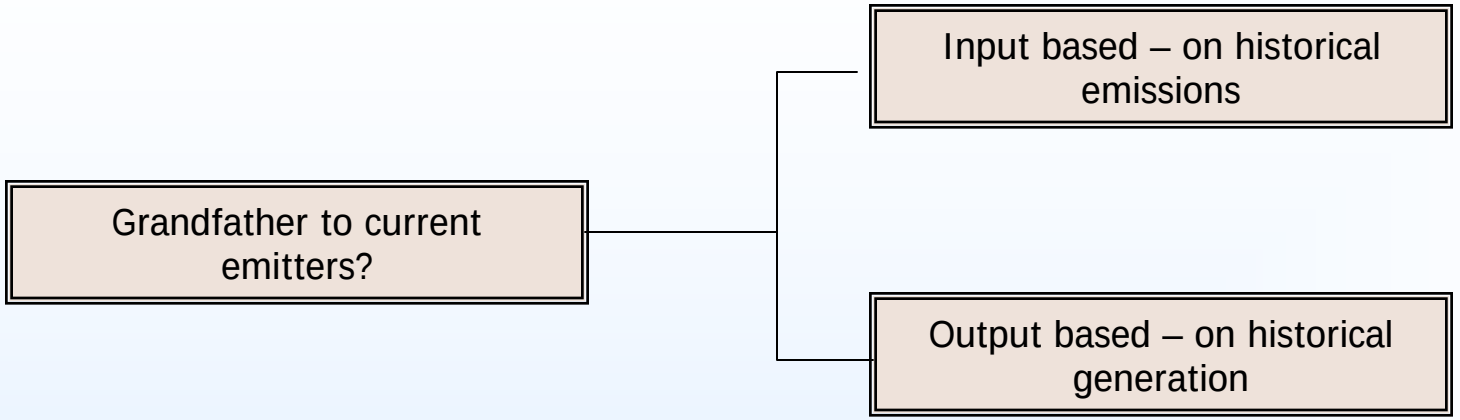
Downstream to utilities, factories and large energy users? Millions of emitters.

- Grandfather to current emitters?
- Grandfather with phase out to auction? (compensation for lost value)
- Auction?

The UK example: Determining an acceptable energy input per loaf of bread.



Grandfathering choices



- Output based, preferred by nukes and gas generators. Will accelerate move to gas, putting even more pressure on prices.
  - Double win for nukes, gas generators get relief on low cost gas gamble gone wrong
- Input (fuel) based, preferred by coal users. Less impact on gas prices – both policies will increase gas use.

Grandfathering questions

- Most models assume decisions made on marginal costs, not average cost (utilities' regulatory legacy). (Burtraw -- RFF)
- Grandfathering, if treated like other emission allowances, could dampen price impacts in utility sector, pushing greater CO2 reductions onto other sectors of economy
- Could this cause much higher CO2 price than forecast by macroeconomic models?
- May accelerate de-industrialization in US, hurting longer term utility growth prospects?
- Issue may not be widely understood

Price signal link to tax reform?

- Proceeds from policy to create carbon price (tax or cap) can be recycled to federal budget (Smith-CRA)
- A de facto national consumption or sales tax
  - Theoretically, more economically efficient with fewer negative impacts than income taxes
- If forced to raise taxes, would this be a more attractive alternative?
  - Regressivity problem
  - Differential state impacts

Political & Economic Risks of Cap

- Uncertainty in allowance price forecast
- EU seeing about 20 Euros/ton (anticipated about 7)
- Allowances flow through directly to electricity prices
- McCain Lieberman could plausibly cause rate increase of 20-30% in first year.
  - 20 more acceptable than 30.
  - 2020 range from about 25 to 100% increase
- Large rate increases in short time could cause program rejection
- Escalating price cap for first 20 years eliminates high price scenario
  - Most of the reductions at much less costs (Morgenstern and Pizer – RFF)
- When will climate advocates have another chance if the first effort blows up?