LCFS: WHAT'S THE GOAL?

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Current low-carbon options are expensive or not really low carbon

- Cellulosic biofuels are very expensive with uncertain path to getting near cost competitive
- Corn ethanol near cost competitive, but not low carbon and can't scale to really solve any problem
  - And has little or no impact on gasoline price, despite RFA claims
- The cost competitive bar is getting harder to reach due to new hydrocarbon technologies
- It would get much harder if the world ever scaled back oil use by a very significant amount => oil prices would crash

So fuels policy is all about innovation

- Pricing the externality is step 1 in spurring innovation
  - Anything else, including the LCFS, is picking winners (or losers)
  - Pricing the externality will also reduce fuel usage overall IF retail prices are allowed to reflect it -- more fuel efficient ICE vehicles and lower VMT (low-hanging, cost-effective, fruit)
- But picking winners is sometimes necessary
  - Especially if we aren't willing to price the externality accurately, which would likely be a very high price
  - Even if we *are* willing, intellectual property spillovers support funding basic research to develop alternative fuels
    - Funding basic research requires picking winners
  - Alternative (or addition) to funding basic research is demand-pull innovation policies, such as subsidies or mandates
    - These aren't less costly than tax or cap and trade. The cost is just less transparent.

LCFS versus cap-and-trade

- C&T (or carbon tax) requires paying for ALL carbon in the fuel, doesn't implicitly subsidize fuels below baseline level, like LCFS. C&T/tax sends more accurate price signal.
- By allowing trades across sectors, C&T/tax does less picking of winners
  - C&T/tax could be limited to transportation if you wanted to force reductions there (*ie*, pick losers), possibly to force innovation
- Both LCFS and C&T/tax have problems with leakage/reshuffling/life-cycle analysis
- C&T is likely to have bigger impact on consumption behavior (by driving up fuel prices more)
- C&T is more likely to generate revenue for the government, but politics could change that

Policy must focus on long-run goal

- Current renewables won't solve the GHG problem at a politically acceptable cost, so we need innovation
- Pricing GHGs creates innovation incentives, but only if the price is high enough
- Mandates and subsidies may help spur innovation, particularly if GHG price is too low
  - BUT the focus should be on long-run goals and innovation, not incremental changes and dead-end technologies
- Hard to argue that taking small steps with existing technologies is by itself a productive policy
  - Must be tied to promoting innovation