

# Some Economic Aspects of 45Q

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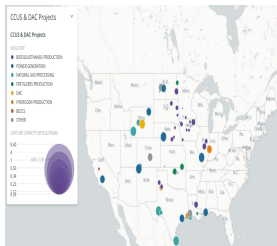
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# Carbon realities

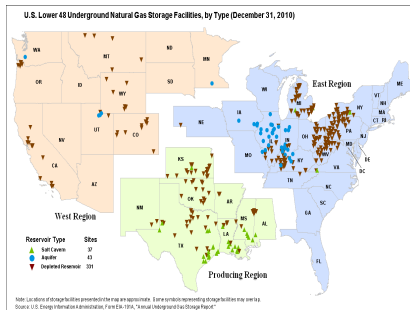
- little private market interest in captured carbon
  - EOR as an exception
  - some evidence this leads to quasi-permanent sequestration
- if want to increase capture and sequestration need some form of public incentives
- capture continues only so long as incentives continue
  - ambivalent on previously sequestered carbon
- we also care about (costly) infrastructure
  - incentives for investment in such infrastructure is linked to anticipated future revenues

# Where will we sequester?



- Deployed capacity is small.
- But U.S. has more CCUS capacity than any other nation, as well as majority of planned capacity.
- 19 projects operating at commercial scale, many under development (Global CCS Institute 2024).
- Mostly industrial sector, but also electricity generation.

Center for Climate and Energy Solutions (C2ES). 2023. [U.S. carbon capture and direct air capture projects](#).



- subsidies vs. carbon taxes
  - tax is “equal opportunity offender”
    - all sources, solutions placed on equal footing
    - impact on costs is transparent, unlike standards or subsidies
  - well known that carbon tax achieves a given goal in least cost manner
    - alternative schemes are more costly
    - tradeoff against political expediency
- short term vs. long term
  - subsidies can raise ongoing commercial standing of weaker, dirtier firms
  - (partially) shields them from competition
  - likely discourages exit
    - shifts future industry portfolio
    - on aggregate, future is dirtier than with carbon tax

# Can this be fixed?

- carbon tax
- less bad alternative strategy? ... e.g. investment tax credit
  - encourages enhanced development of relatively clean sector
  - “scissor” policy
    - carrot up to some point, stick thereafter
    - requires determination of inflection point