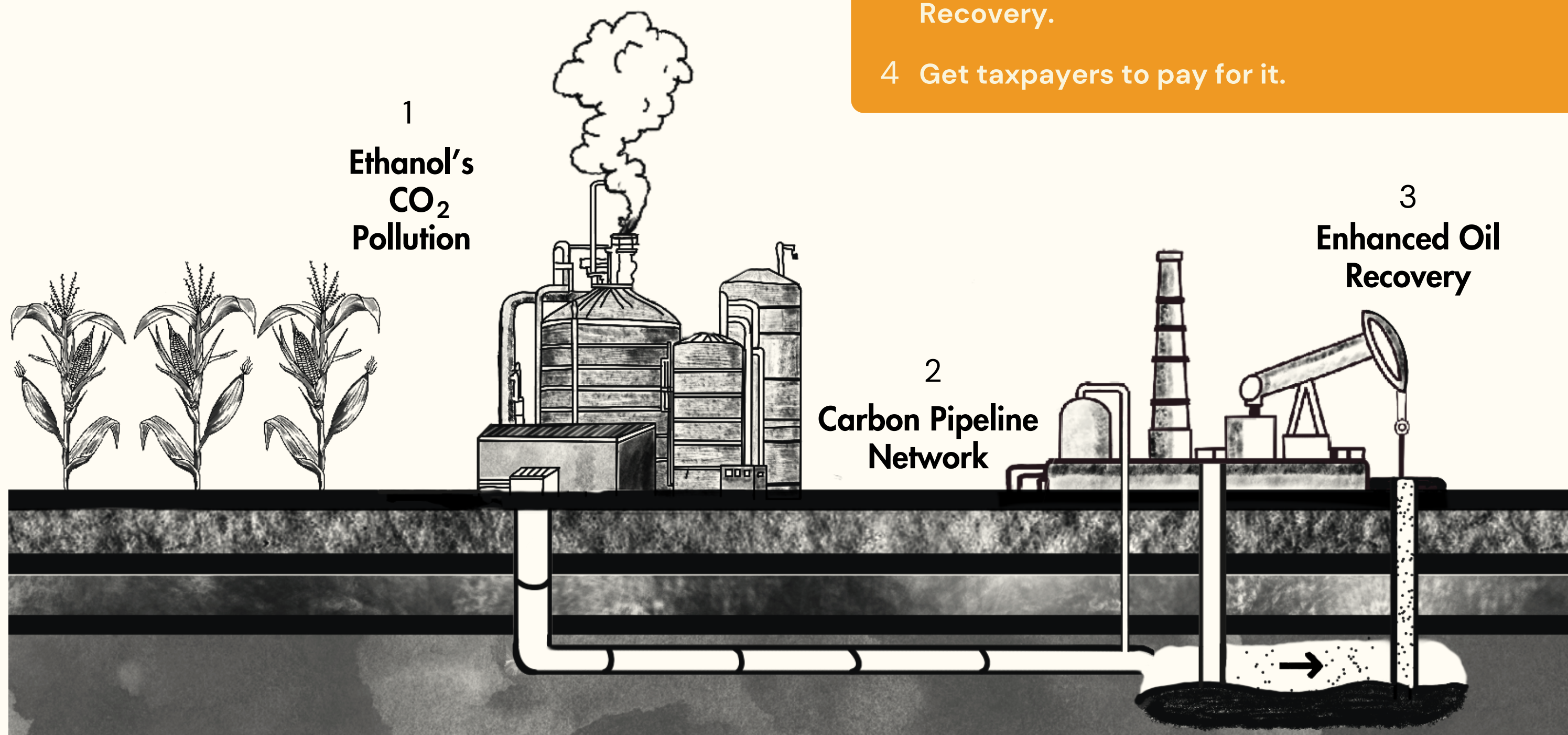


Fossil Fuel's Quiet Business Model

THE MORE YOU BURN THE MORE YOU EARN

THE BUSINESS MODEL:

- 1 Capture CO₂ from ethanol production.
- 2 Build a network of pipelines through the midwest to ferry the CO₂ through the ground.
- 3 Don't tell people you will inevitably inject that CO₂ into low-producing oil wells to push out more oil -- something called Enhanced Oil Recovery.
- 4 Get taxpayers to pay for it.



4 Policies supporting this business model *

Federal Level – 45Q Tax Credit

Section 45Q provides a tax credit for capture and storage of CO₂ that would otherwise be emitted.

Geologically sequestered: \$85/ton

Geologically sequestered w/ EOR: \$60/ton

State Level – LCFS

A Low Carbon Fuel Standard assigns transportation fuels a CI (Carbon Intensity) score: Higher CI-scored fuels accrue deficits that fund credits for lower CI-scored fuels. One way to lower a CI score is to capture CO₂ pollution and move it by pipeline for “storage” or EOR.

Fossil Fuel's Quiet Business Model Impacts our Water and Climate

Ethanol**

- 5% of MN's total surface area is dedicated to ethanol production
- Industrial farming practices – CAFOs and row crops – have led to rising nitrate levels in drinking water across the state
- Emissions from ethanol are likely up to 24% worse than gasoline

Pipelines***

- Building pipelines is inherently destructive to aquifers, surface water, trees, land, and family farmers.
- CI (carbon intensity) scores often fail to incorporate the emissions from EOR.
- 2000+ miles of Carbon Capture Utilization and Storage (CCUS) pipelines are proposed across the midwest, including in Minnesota.
- Once in operation, leaks and explosions present a constant danger to people and ecosystems

Enhanced Oil Recovery****

- Oil companies are desperate for CO₂ to inject into the ground to get more oil out of their marginally producing wells.
- 13 out of 15 Carbon Capture facilities are used for Enhanced Oil Recovery.
- Both EOR and sequestration processes leak CO₂ into the atmosphere, adding to the lifetime emissions of these methods

Fossil Fuel's Quiet Business Model - End Notes

* Policies Supporting This Business Model

- "State policies that reduce the carbon intensity of transportation fuels, particularly LCFS policies, could complement federal incentives in stimulating private investment in carbon capture and CO2 pipeline development. In some cases...the potential value of carbon credits from that policy alone could drive project deployment, with or without additional federal policy. In addition... other emerging state and provincial policies could incentivize the deployment of carbon management outside those jurisdictions, especially for ethanol producers that deliver and sell their fuels into California and other markets."
Capturing and Utilizing CO2 from Ethanol: Adding Economic Value and Jobs to Rural Economies and Communities While Reducing Emissions – White paper prepared by the State CO2-EOR Deployment Work Group and authored by the Great Plains Institute, Dec. 2017
<https://betterenergy.org/wp-content/uploads/2017/12/Capturing-and-Utilizing-CO2-from-Ethanol.pdf>

** Ethanol

- "5% of MN's total surface area is dedicated to ethanol production" – **Map: How Minnesota's land is used**
<https://minnesotareformer.com/2022/07/26/map-how-minnesotas-land-is-used/>
- "Industrial farming practices – CAFOs and row crops – have led to rising nitrate levels in drinking water across the state" – **Press Release: Environmental groups petition EPA to use emergency authority to address imminent threat to drinking water from nitrate pollution in SE Minnesota**
<https://www.mncenter.org/press-release-environmental-groups-petition-epa-use-emergency-authority-address-imminent-threat>
- Emissions from ethanol are likely up to 24% worse than gasoline – **Environmental outcomes of the US Renewable Fuel Standard**
- <https://www.pnas.org/doi/10.1073/pnas.2101084119>

*** Pipelines

- CI (carbon intensity) scores often fail to incorporate the emissions from EOR. – **Minority Report on the Clean Transportation Standard Work Group Report to the Legislature**
https://drive.google.com/file/d/1uOh6o5T13LGKgwrmrJzoAGwsAq_eAl5F
- 2000+ miles of Carbon Capture Utilization and Storage (CCUS) pipelines are proposed across the midwest, including in Minnesota. – **Carbon Pipelines MN** <https://curemn.org/carbon-pipelines-mn/>
- Once in operation, leaks and explosions present a constant danger to people and ecosystems – **Carbon Dioxide Pipeline Test (Video)** <https://vimeo.com/669188665>

**** Enhanced Oil Recovery

- Oil companies are desperate for CO₂ to inject into the ground to get more oil out of their marginally producing wells. – **North Dakota Department of Mineral Resources warns more CO2 needed to sustain oil production long-term** <https://www.kfyrtv.com/2023/08/16/north-dakota-department-mineral-resources-warns-more-co2-needed-sustain-oil-production-long-term/>
- 13 out of 15 Carbon Capture facilities are used for Enhanced Oil Recovery – **Carbon Capture and Storage in the United States** https://www.cbo.gov/publication/59832#_idTextAnchor000
- Both EOR and sequestration processes leak CO₂ into the atmosphere, adding to the lifetime emissions of these methods – **Estimating geological CO2 storage security to deliver on climate mitigation**
<https://www.nature.com/articles/s41467-018-04423-1>