

New 45Q Capture Rate Percentage Requirements Threaten Our Ability to Meet Climate Goals

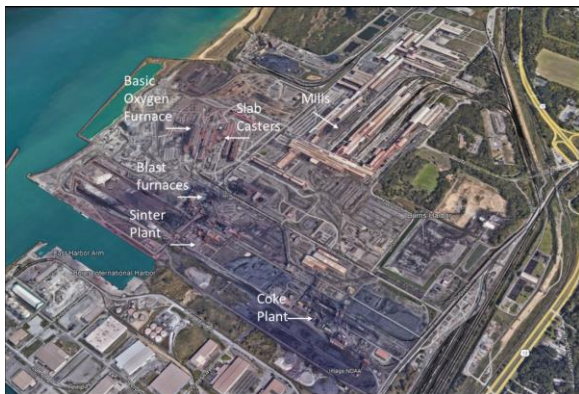
To claim 45Q credits, the Clean Energy for America Act and draft Ways and Means clean energy tax legislation would require, for the first time, that power plants capture 75% of facility-wide emissions, and that industrial facilities capture 50% of facility-wide emissions. **These proposed restrictions will not drive any additional carbon capture. Instead, they will deliver a *knockout blow* to the 45Q program's ability to incentivize carbon management deployment and to deliver the emissions reductions essential to meeting the Biden Administration's climate goals and supporting negotiations at COP26 in Glasgow.**

Industrial facilities are often complex and hard-to-decarbonize, with numerous separate emissions sources. Industrial facilities will use a combination of approaches to reduce CO₂ emissions, including carbon capture. In some instances, carbon capture might work best for preventing 90% of emissions from a few large sources at a plant that, in total, are less than 50% of all emissions. By applying the percentage capture requirement, many industrial facilities that would otherwise be able to deploy carbon capture to reduce emissions will not be able to do so.

Power plants often consist of several separate electric generating units. For projects to be commercially viable, 90%+ capture will typically be applied on the newest units with the longest remaining life but will not be applied on older units that may be close to retirement. Capture often will need to be applied one unit at a time to enable learning from each subsequent project, and so that entire power plants are not offline for long periods. Because this new provision would require the entire plant to install capture at the outset, it will completely prevent carbon capture at many power plants.

By dramatically reducing the number of industrial and power plants decarbonizing with carbon capture, **the provision will have no emissions benefit**—it will only prevent carbon capture projects on sources that may otherwise be economically viable and will result in less carbon captured than would otherwise be the case.

Burns Harbor, Indiana



The plant's 7 million metric tons of annual CO₂¹ emissions are scattered across a vast, complex operation shown in the picture. They come from large and small sources, including blast furnaces, coke ovens, boilers, sinter plant operations, basic oxygen furnaces, and flares.

In a plant this complex, emission sources are often addressed one or two at a time. For example, in 2020, DOE awarded Burns Harbor almost \$1.5 million to develop plans to capture 50%-70% of the emissions from the plant's blast furnaces.² This effort would capture a substantial quantity of carbon, about 2 million tons per year. But under the new House and Senate bill provisions, **none of this carbon would qualify for 45Q, even though it would be among the largest capture projects in the United States!** That's because 2 million tons of captured carbon is less than 50% of the plant's total emissions.

1. EPA Flight data, 2019
2. Project Landing Page, DOE, <https://netl.doe.gov/project-information?p=FE0031937>

Archer Daniels Midland Decatur, Illinois

Corn processing plants can create many products besides ethanol. They can produce corn syrups, corn oil, citric acid, yeast, starches, fructose, dextrose, and many other products. These complex facilities have multiple emissions points, such as the fermentation process and the natural gas heaters, which create flue streams that are often not retrofitted all at once.

The Archer Daniels Midland plant in Decatur illustrates the impact of these facility-wide percentages. This carbon capture project is the largest saline storage project in the United States. While the capture unit at this plant is removing 95% of the carbon from the ethanol stream it manages, these 500,000 to 1 million metric tons of carbon dioxide only account for less than 25% of the facility-wide emissions.

If the facility-wide percentage thresholds go into effect, capture projects like this one in Decatur could **cease to operate, increasing carbon emissions.**

