The Clean Energy Tax Credit Landscape

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The EFI Foundation delivers evidence-based, pragmatic solutions to the world's toughest energy challenges

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Guided by thorough research and grounded in pragmatism, we provide rigorous analysis, actionable policy recommendations, and innovative strategies that shape the future of energy.

The EFI Foundation bridges evidence, markets, and policy to drive progress toward a prosperous energy future.

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Reports and Policy Papers
based on our independent analyses identifying actionable ways to decarbonize the global energy economy

40+
Opinion Pieces
published in major media outlets, including The Wall Street Journal, The Economist, The Boston Globe, and Los Angeles Times

12
Congressional Testimonies
on subjects including global energy security, the critical mineral supply chain, carbon dioxide removal and storage, and the needs of the 21st century energy workforce

100+
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in-person and virtually, many of which are available for the public to view online

70
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with a network that offers deep experience across a broad range of energy and policy topics

12+
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inspired by our work, including the establishment of the U.S. DOE's Office of Clean Energy Demonstrations

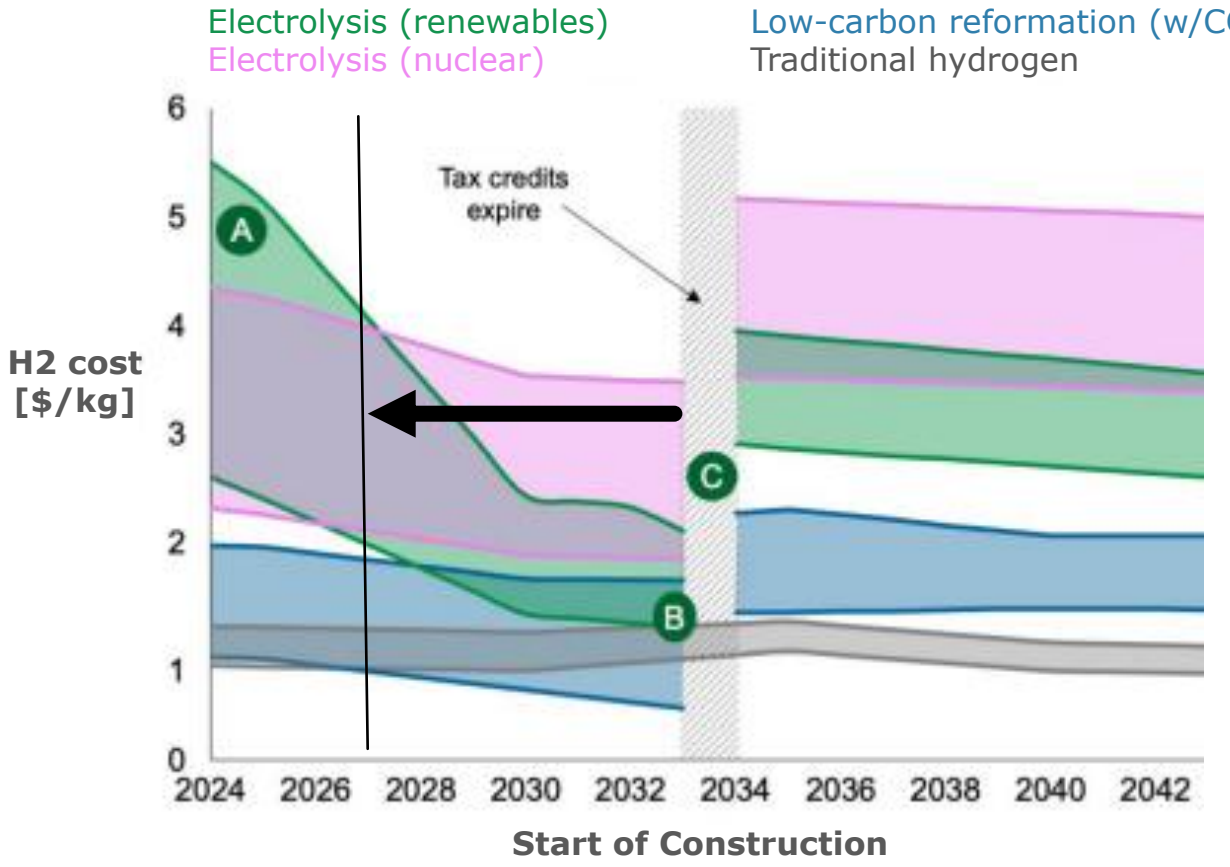
Executive Summary

Industry	Reaction to OBBBA Tax Credit Changes
Hydrogen	Generally negative, cooling effect
Carbon Management	Generally positive, especially for CO2 utilization projects
Biofuels	Generally positive, but potentially harmful to Sustainable Aviation Fuel industry growth and competitiveness
Nuclear	Generally positive, potential concerns for long-term investments and challenges of FEOC compliance

Hydrogen: The shortened 45V credit period reduces low carbon hydrogen's cost competitiveness

- The 45V production tax aims to **enable low-carbon hydrogen to be competitive with traditional hydrogen** on a cost basis.
- Shifting the expiration date of tax credit eligibility from 2033 up to 2027**, inhibits the ability of low carbon hydrogen production to reach competitive and affordable costs** for offtakers.
- These changes have **larger impacts on green and pink hydrogen production** due to higher costs and inability to use another credit (e.g., 45Q).

Cost of low carbon hydrogen compared to traditional production

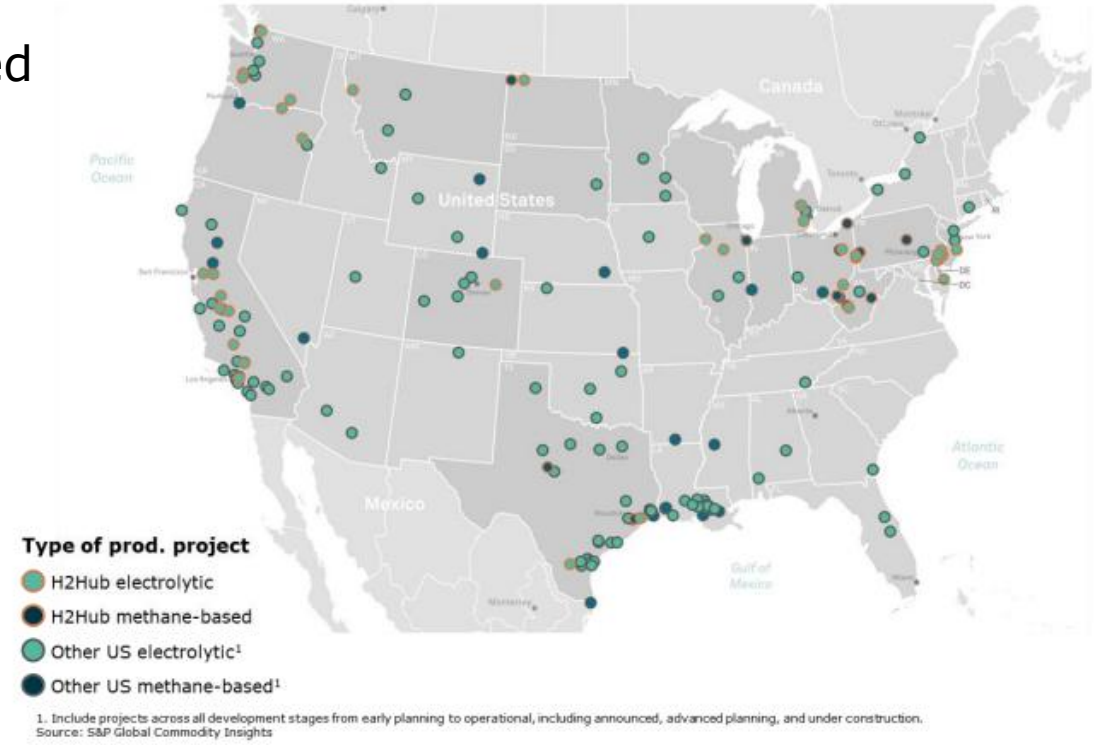


Source: DOE Pathways to Commercial Liftoff: Clean Hydrogen (Dec. 2024)

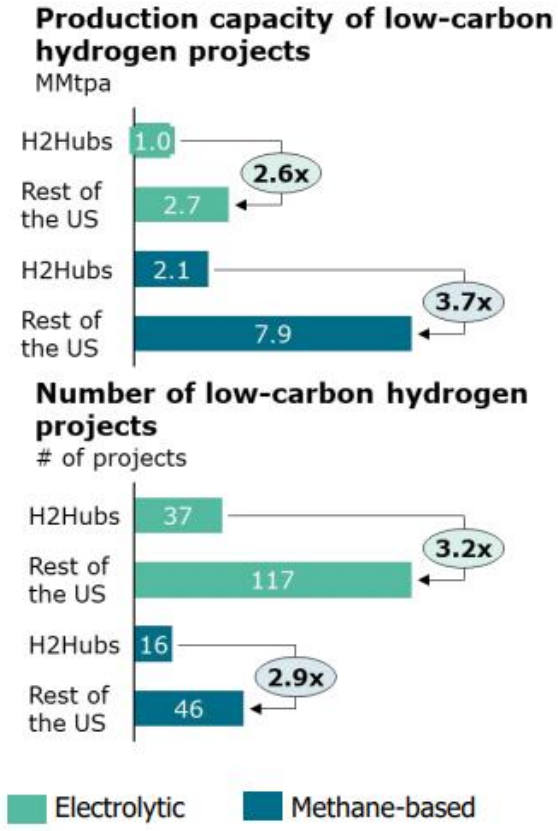
Hydrogen: Broadly, policy uncertainty has cooled investment and led to many project cancellations

- Slow implementation of original 45V final guidance hindered hydrogen project development across the United States.
- As of June, over 50 projects (~20%) had already been cancelled.
- Many hydrogen projects are still in early development stages and likely unable to begin construction by 2027, potentially leading to more cancellations.

52 projects have already been canceled or are dormant, often due to policy uncertainty



1. Include projects across all development stages from early planning to operational, including announced, advanced planning, and under construction.
Source: S&P Global Commodity Insights



Source: EFI Foundation, (June 2025)

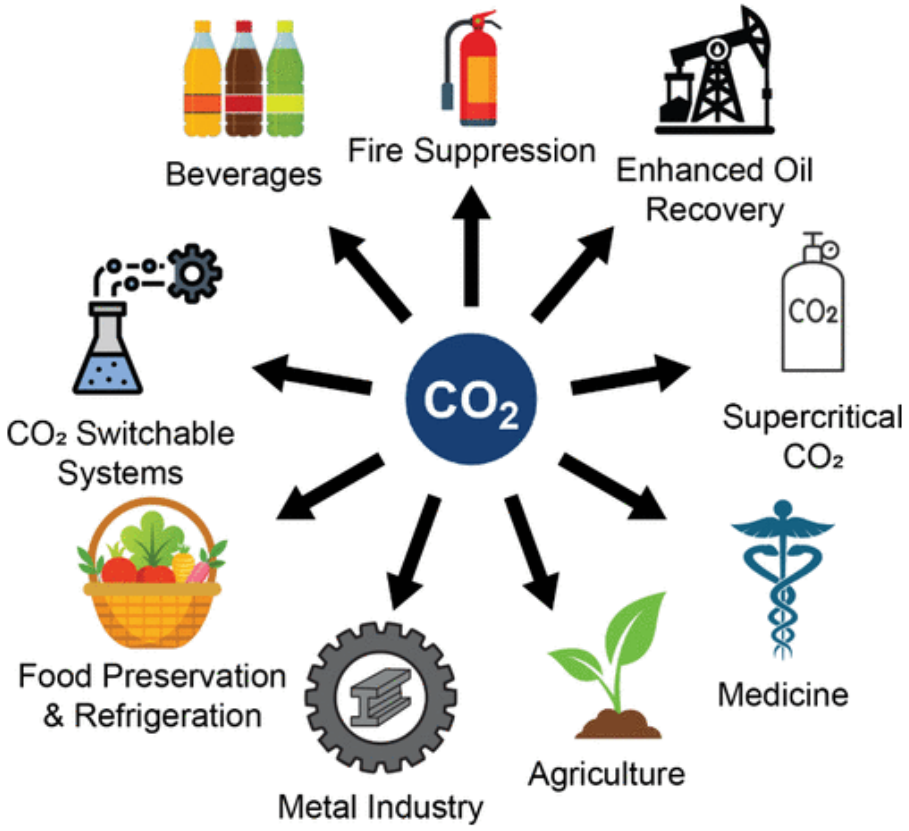
Carbon Management: OBBBA aids nascent carbon capture industry and incentivizes use of credit for enhanced oil recovery and utilization of CO2 (over storage)

OBBBA increases credit for point-source carbon capture (CCS/CCUS) and direct air capture (DAC) operations which utilize captured CO2 rather than permanently store it.

$85/ton CO2 for **<u>all</u>** eligible point-source carbon capture (e.g., at power plants, certain industrial facilities)
was $60/ton if CO2 was utilized rather than stored

$180/ton CO2 for **<u>all</u>** eligible Direct Air Capture
was $130/ton if CO2 was utilized rather than stored

- Preserving this credit for CCS and DAC supports growth of an early industry.
- Increasing credit for utilization incentivizes utilization over storage as storage is costly while utilization can be profitable for the industry.



Graphic Source: American Chemical Society, LeClerc et al. (Dec. 2024)

Biofuels: 45Z updates limit Sustainable Aviation Fuel's competitiveness

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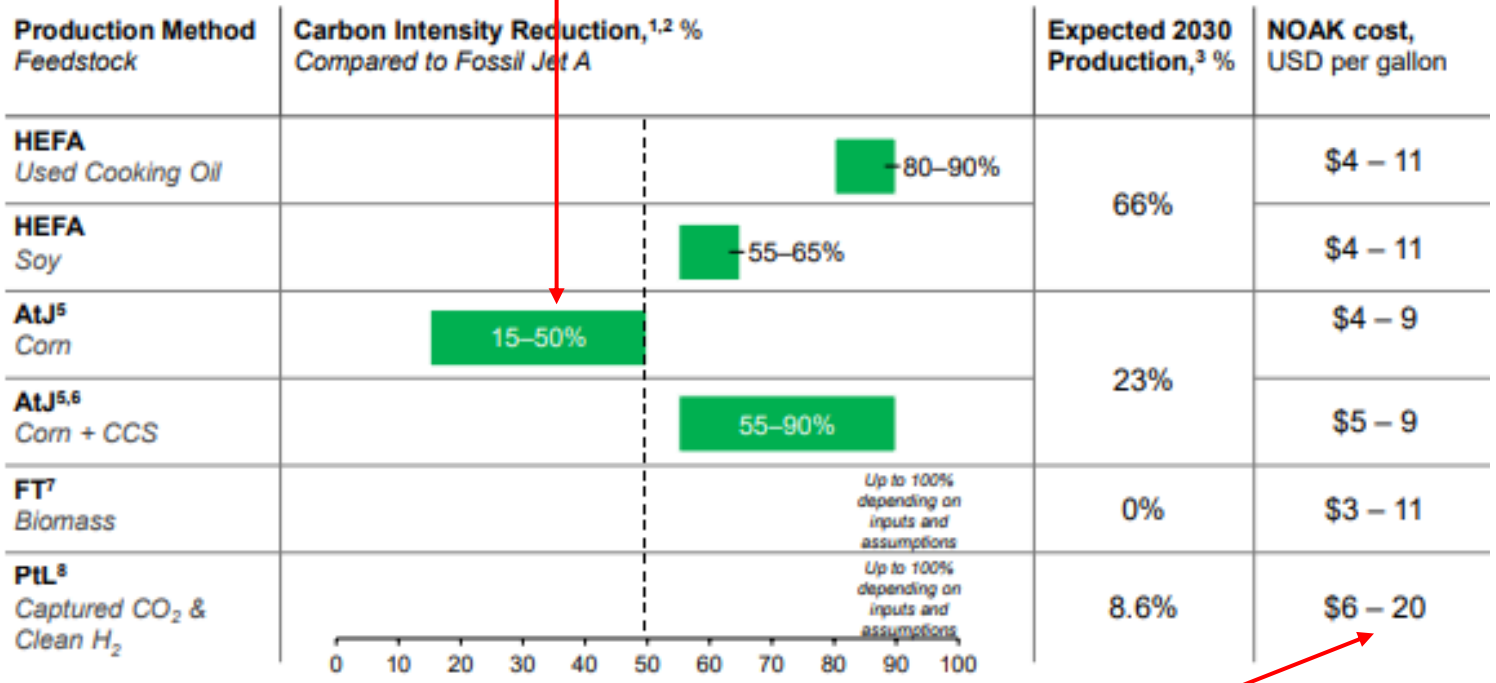
OBBBA changes relevant to biofuels:

- 45Z Clean Fuel Production Tax Credit extended to 2029
  - Fuel produced after this year must be exclusively derived from North American feedstocks
  - Eliminates increased credit maximum ($1.75 vs $1.00/gallon) for Sustainable Aviation Fuel (SAF)
  - Removes penalty for indirect land use change (ILUC)
- OBBBA revives and doubles the 40A Small Agri-biodiesel credit through 2026

May see reduced CI scores for higher credits but will may not be competitive on global markets with different CI requirements.

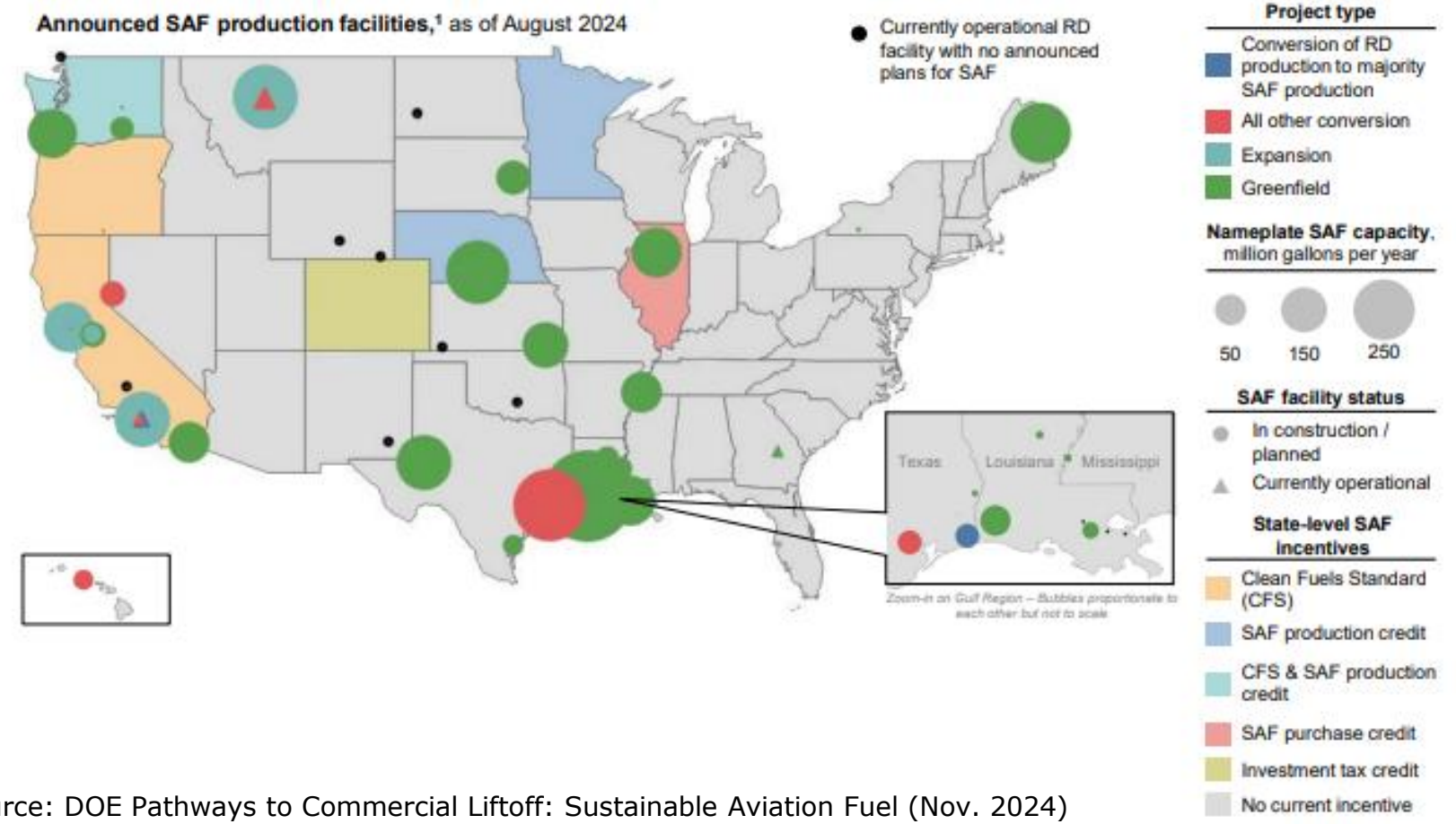


Cost 2-10x higher than fossil jet ($2 USD per gallon)

Source: DOE Pathways to Commercial Liftoff: Sustainable Aviation Fuel (Nov. 2024)

Biofuels: 45Z updates could favor renewable diesel over SAF production

Some states are stepping in where federal policy has gaps. Illinois, for example, compensates jet fuel users when they purchase SAF—an approach that could help build early demand.
States are experimenting with a range of policy designs



Source: DOE Pathways to Commercial Liftoff: Sustainable Aviation Fuel (Nov. 2024)

Producers must constantly choose between RD and SAF based on economics, and many SAF-only companies have gone bankrupt because SAF is costlier to produce and cannot reliably earn enough revenue. **In today's market, *you simply can't pay more for feedstock than the producer next to you*.**

Insights from EFI Foundation Low Carbon Fuels Bootcamp for Congressional Staff

Nuclear: OBBBA preserves tax credits, but may shorten eligibility window

OBBBA largely preserves, and in some areas strengthens, mechanisms for nuclear energy deployment.

- Energy community bonus expanded to nuclear regions *10% bonus under 45Y to include nuclear communities*
- No FEOC rule for existing reactors claiming 45U (Zero-Emission Nuclear Production Tax Credit) in final OBBBA language

However, OBBBA shortens the tax credit-phase out runway which may weaken long-term investment for nuclear energy projects

- IRA previously tied credit phase-outs to emissions targets – credit would remain until electricity emissions fell below 75% of 2022 levels (likely 2030s or 2040s)
- OBBBA begins phase out in 2034, will full phase-out after 2035.

As with other clean energy technologies, FEOC implementation creates uncertainties

- Projects using 48E (ITC) and 45(Y) must avoid fuel, components, or technical assistance from any foreign entity of concern. (Russia, China, Iran, North Korea)
- Starting in 2026, compliance will require detailed supply chain audits, procurement adjustments, and timely, clear guidance from the U.S. Treasury.

Thank you!

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