

Energy Intelligence Premium Weekly

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Energy Transition: US Climate Leap, But More Work to Do

The recently signed Inflation Reduction Act breaks the US' climate policy stalemate, offering crucial fiscal supports and policy certainty this decade. Renewables deployment will likely still lag Europe and China, our analysis shows, but significant incentives for carbon capture and storage (CCS) and hydrogen could have a multiplier effect on their uptake post-2030.

- **The Act offers significant emissions reductions, but 2030 climate goals require more action.** The legislation's \$369 billion in clean energy spending could translate to 40%-plus reductions in US greenhouse gas emissions by 2030 relative to 2005, US policy watchers suggest, against a 26% base-case reduction, per Princeton University. Largest-ever extensions to wind and solar tax credits, incentives for energy efficiency and EVs, and methane regulations will drive reductions, with CCS and hydrogen building momentum for more significant post-2030 deployment. Projected emissions cuts fall shy of Biden's 50% target, but we see the gap potentially bridged via: (1) aggressive state renewable electricity mandates; (2) faster cost reductions in areas like EVs and CCS, accelerating uptake; (3) policy stability driving material private clean energy investment; and (4) nonlegislative federal action, like stricter tailpipe emissions standards.
- **CCS received a wish list of incentives, with potentially game-changing support for direct air capture (DAC).** The US now boasts the world's [most comprehensive CCS policies](#), complete with significantly higher tax credits (see table), "direct pay" incentives, lower carbon-capture thresholds and extended deadlines. Per Princeton, CCS deployment in the US could now tally 200 million tons/yr by 2030 — equivalent to the IEA's previous base-case for global deployment by 2050 — and as high as 450 million tons/yr by 2035. DAC credits [are not far](#) from today's most optimistic cost estimates of \$200/ton and could prove game-changing, given the potential for faster cost reductions via standardization and location-agnostic advantages allowing for rapid adoption.
- **Incentives heavily favor green hydrogen over blue.** Despite bipartisan support for CCS and the law's technology agnosticism, the Act's incentives offer minimal direct support to "blue" hydrogen derived from natural gas and deploying CCS. Blue hydrogen is likely only eligible for a fraction of the \$3/kg maximum production tax credit, experts tell us, and life-cycle analysis scrutinizing upstream emissions could render the available credit moot for some projects. Blue hydrogen projects cannot claim both CCS and hydrogen credits. "Green" hydrogen derived from renewables, on the other hand, receive significant uplift, with the credit largely closing the cost gap with higher emitting, cheap "gray" hydrogen. Proponents say US support for green hydrogen is now on relatively equal footing with the EU, but accelerated adoption would depend on the US' wider renewable electricity build-out.
- **Methane regulations have crucial protections from US policy flip-flopping.** The Act includes the US' [first federal fee](#) on methane and marks its most substantial action following last year's pledge to cut such emissions by 30% by 2030. The fee — starting at \$900/ton in 2024, rising to \$1,500/ton by 2026 — will not apply to smaller emitters or minor infrastructure leaks, and significant gaps remain around monitoring and proper accounting. But the mechanism offers regulatory certainty and a level playing field for bigger emitters already facing heightened stakeholder pressures. Compliance with forthcoming methane rules can exempt companies from the fee, incentivizing monitoring and equipment upgrades. Critically, the fee is structured as a backstop; if methane rules become watered down or scrapped, exemptions to the fee end.
- **The Act offers the US a path to select clean-tech leadership, but with limited diplomatic sway.** The law does more to catch the US up on existing Paris goals than give credibility in future global climate talks — although policy certainty lessens the risk of continued reversals in US climate action. Lengthy permitting, NIMBYism and fragmented transmission will likely keep the US' renewable electricity deployment behind Europe, while China's state-backed clean technology push provides formidable competition. Still, the US' history of rapid entrepreneurial investment should not be overlooked as a potential multiplier of its new clean energy momentum, in our view. The Act positions the US as a CCS leader, potentially facilitating more rapid global deployment to hardest-to-abate sectors, particularly in other producer states. China is quickly cutting green hydrogen costs and deploying renewables, but the US could bridge the gap leveraging well-networked industries and repurposing infrastructure to foster its own rapid hydrogen build-out.

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Energy Intelligence EXPERTS

Bridget DiCosmo
Reporter
+1 202 662 0710
bdcosmo@energyintel.com

Ronan Kavanagh
Senior Correspondent
+44 (0)20 7518 2217
rkavanagh@energyintel.com

Philippe Roos
Senior Reporter
+33 6 2286 3776
proos@energyintel.com

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CCS 45Q Tax Credits See Significant Hike

(\$/ton)	Previous Credit	Credit Under Inflation Reduction Act
Point Source CCS-to-EOR*	\$50	\$60
Point Source CCS-to-storage	50	85
DAC-to-EOR	50	130
DAC-to-storage	\$50	\$180

*EOR = enhanced oil recovery. Credits assume prevailing wage and other employment requirements are met. Significant reductions in credits if not. Source: Energy Intelligence, Inflation Reduction Act

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Energy Intelligence Premium CONTACTS**Sales:**

Geoff Wright
Global Head of Sales & Marketing
+1 646 616 0836
gwright@energyintel.com

Content:

Casey Merriman
Editor, EI Premium
+1 832 687 8770
cmerriman@energyintel.com