



ALERTS

U.S.' National Clean Hydrogen Strategy Is Knocking And The IRS Is Holding The Keys To The Kingdom

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Highlights

- The U.S. has made extraordinary progress toward developing and implementing the National Clean Hydrogen Strategy in a few short years, moving from concept to appropriation, public-private planning, and interagency coordination, and more recently toward selection, funding and construction of regional clean hydrogen hubs
- The looming impediment to further progress is the IRS delay in issuing guidance on the qualification for and calculation of Section 45V Clean Hydrogen Production Tax Credits and the applicable definition of clean hydrogen
- It is important for the IRS to issue guidance on Section 45V as soon as possible, as that direction may have significant effects on the economic viability of proposals for green hydrogen production, and the amount of emission reductions that can be realized

The development of the domestic market for clean hydrogen is central to

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achieving the Biden administration's goal of a 100 percent clean electrical grid by 2035 and net-zero carbon emissions by 2050. In June 2023, the administration [launched a three-pronged National Clean Hydrogen Strategy and Roadmap](#) with a goal of achieving affordable clean hydrogen for a net-zero future and a sustainable, resilient and equitable economy:

- **Targeting strategic, high-impact uses for clean hydrogen**, which will ensure that clean hydrogen will be utilized in the highest benefit applications. The goal is to achieve 10 million tons/year of clean hydrogen by 2030, 20 million by 2040, and 50 million by 2050.
- **Reducing the cost of clean hydrogen** by catalyzing innovation and scale, stimulating private sector investments, and developing the clean hydrogen supply chain. In addition to providing funding, substantial tax credits are being made available to achieve \$2/kilogram hydrogen pricing by electrolysis by 2026 and \$1 kilogram hydrogen pricing overall by 2031.
- **Focusing on regional networks** by establishing six to ten regional clean hydrogen hubs (H2Hubs) for large-scale clean hydrogen production and supply to facilitate overall market liftoff and regional opportunities for equity, inclusion, and environmental justice. The 2021 Bipartisan Infrastructure Law (BIL) included \$8 billion in funding for development of those hubs and related infrastructure.

As plans for the regional hubs were being rolled out, the administration recognized that in addition to the inducements provided to encourage production, [demand-side incentives are also needed](#) to assure prospective users that they would be able to secure long-term commitments for low-cost hydrogen. In early July, the [administration made a course correction](#) to fill this gap by providing an additional \$1 billion investment from the BIL funding for demand-side support.

In recent months, the Department of Energy (DOE), working with the administration and other agencies, has made substantial progress [implementing the National Clean Hydrogen Strategy](#) and a number of significant milestones are targeted yet this year. Additionally, the administration recently announced formation of a Hydrogen Interagency Task Force (HIT) to facilitate collaboration by federal agencies on execution of the national clean hydrogen strategy.

Notwithstanding these extraordinary accomplishments on an accelerated timeline, continued progress toward the goal of affordable hydrogen has been stymied by the IRS' delay in issuing guidance on the qualification for and calculation of the Section 45V Clean Hydrogen Production Tax Credit. Prompt action by the IRS is critically important, as the agency's guidance on the definition of "clean" hydrogen for tax purposes may have a significant impact on the economic viability of H2Hubs and development of the domestic hydrogen market, and the potential to timely achieve the Strategy's emission reduction and net zero goals.

Announcement of Regional H2Hub Selections Expected This Fall

In September 2022, the DOE [opened applications for \\$7 billion in funding](#) to create H2Hubs across the country. The first stage of this application process required Concept Paper submittals by Nov. 7, 2022. In these Concept Papers, applicants requested nearly \$60 billion in federal funding, roughly eight to nine times the size of the DOE's \$6 billion to 7 billion solicitation. Applicants' proposed projects included, in aggregate, more than \$150 billion of their own capital alongside the DOE's federal investment.

In December, the DOE notified those who submitted Concept Papers that they were either [encouraged or discouraged](#) from submitting a full application. Of the total 79 concept paper submitted, 33 were encouraged and 46 discouraged.

Applications for the H2Hubs were due on April 7, 2023. The DOE has not released a list of applicants, but based on press reports, at least 20 hubs submitted final applications. The DOE is assessing the applications based on its rigorous merit review process that considers five basic criteria listed in the [funding opportunity announcement](#): technical merit, financial viability, the envisioned speed and strength of construction, the qualifications of the applicants, and plans to bring benefits to local communities and disadvantaged areas.

Selection notifications are expected to be issued this fall, and award negotiations are expected to take place in late 2023 and early 2024. Phase 1 work, which will encompass initial planning and analysis activities to ensure that the overall H2Hub concept is technologically and financially viable, with input from relevant local stakeholders, is projected to take place over 12 to 18 months after selection. DOE funding of up to \$20 million will be available for Phase 1 for each selected H2Hub project, with a 50 percent minimum cost share requirement.

The Structure and Process for Implementing Demand-Side Support Is Taking Shape

The administration's announcement that \$1 billion would be made available for demand-side support was accompanied by a [Notice of Intent](#) (NOI) from the DOE to collect information about how to structure the program (i.e., what kind of entity or entities should implement the initiative), and what kind of demand-side support mechanism would be most effective.

The DOE Office of Clean Energy Demonstrations (OCED) presented the [results of the NOI](#) on Aug. 31, 2023. A substantial majority of the 118 responses received by the July 24, 2023, deadline supported the need for demand-side support and for utilizing a single independent implementing entity with a national scope to oversee and implement the initiative. The DOE will release an RFP shortly to find an independent qualified nonprofit entity, with a goal of finalizing an agreement with that entity in the first quarter of 2024.

In addition, there was substantial support for pay-for-difference or "market maker" mechanisms in which the DOE makes up the gap between buyer willingness-to-pay and market-determined pricing as the most effective method for demand-side support. There was also support for stacking demand-side measures with other forms of support (e.g., 45V tax subsidies and cooperative agreements). While there were a number of

different views on the specifics of implementation, there was an overall recognition that “executing a demand-side mechanism will require a high level of operational ability and commercial contracting and market expertise to be successful.”

The OCED is currently planning to finalize the demand-side support mechanism with the independent entity and obligate funds by the end of the third quarter of 2023.

The Administration Has Launched a New Hydrogen Interagency Taskforce

During an August 18, 2023 stakeholder webinar on the “National Clean Hydrogen Strategy and Roadmap and Interagency Collaboration,” the White House, DOE, and multiple federal agencies announced the launch of a new [Hydrogen Interagency Task Force \(HIT\)](#). This collaboration builds upon the Interagency Task Force on Hydrogen, authorized in the Energy Policy Act of 2005, which required the Secretary of Energy to coordinate across agencies.

According to Mary Frances Repko, White House deputy national climate advisor and co-chair of the new interagency task force:

“The HIT will ensure that we fully leverage the strengths and capabilities of the U.S. government to develop technologies, implement policy, and overcome barriers to building a clean hydrogen economy. Under the HIT umbrella, agencies will cross efforts—will coordinate our efforts across all of these areas including outreach. That means ramped up engagement with tribal communities and other historically underserved communities plus engagement across the spectrum of stakeholders from industry to academia to labor unions.”

The roles of the initial group of 11 participating agencies collaborating to further advance a whole-of-government approach to clean hydrogen are included in the [U.S. National Clean Hydrogen Strategy and Roadmap Interagency Collaboration](#) memo. As part of the Aug. 18 [presentation](#), the agencies expanded upon HIT’s working group structure and focus areas and the priorities of the Hydrogen Joint Strategy Team, and undertook a deep dive into examples of and opportunities for cross agency collaboration and activities.

The three main interagency focus areas are: supply and demand at scale; infrastructure, siting, and permitting; and analysis and global competitiveness (including national strategy and commercial liftoff analysis). All of these cross cutting efforts will support the BIL program to build regional clean H2Hubs across the country to create networks of hydrogen producers, consumers, and local connective infrastructure to ramp up scale and accelerate the domestic use of hydrogen to decarbonize.

The IRS Missed a Key Deadline for Issuing Guidance on the Clean Hydrogen Production Tax Credit

The [Inflation Reduction Act of 2022](#) (IRA) includes a number of clean energy tax credits and other [financial incentives for hydrogen and fuel cell projects](#). These provisions extend a number of existing federal tax credits,

increase some existing credits, or create new federal tax credits.

The new Section 45V Clean Hydrogen Production Tax Credit is among the most ambitious of these and is central to development of domestic hydrogen production. Section 45V gives qualified projects that begin construction before 2033 a tax credit for 10 years after startup with up to a \$3 credit per kilogram. Projects can also elect to claim up to a 30 percent investment tax credit under Section 48. The level of the credit provided is based on carbon intensity of production. For example, to secure the maximum Section 45V credit, the clean hydrogen production process has to emit 95 percent less CO₂ than hydrogen produced by fossil fuels.

Prospective hydrogen producers have been awaiting the IRS and Department of the Treasury guidance on how a facility qualifies for the Section 45V credit and determines the amount of credit it receives. The guidance was due by mid-August 2023 (the one year anniversary of the IRA) but has been delayed until [later this year](#), at least in part by the heated debate over the definition of “clean” (or green) hydrogen for tax purposes.

On Aug. 29, 2023, the Treasury Department and the IRS released [proposed regulations](#) regarding the prevailing wage and apprenticeship requirements for increased energy credit or deduction amounts under Section 45V, but that proposal does not address the key clean hydrogen definitional issue.

This definitional dispute has driven a recent flurry of [competing advertising](#) about how clean green hydrogen must be to qualify for Section 45V credits. Environmental groups are pressing for stringent requirements for hydrogen to qualify as clean and green, while industry is pushing for lesser restrictions and a more flexible definition that would lead to broader availability of the credits.

In its most recent report on [Electric Sector Emissions Impacts of the Inflation Reduction Act](#) issued Sept. 12, 2023, EPA acknowledges that the yet to be issued guidance about Section 45V tax credits will affect investment decisions, which in turn will affect emission reductions. Given the huge potential dollar swing resulting from these positions, and the potential environmental consequences, IRS guidance on this definitional issues is of paramount importance for prospective hydrogen producers.

Takeaways

The progress that the federal government has made toward developing and implementing the National Clean Hydrogen Strategy in a few short years, and particularly this past year, has been remarkable. Strategy implementation has already moved from concept to appropriation, public-private planning, and interagency coordination - has included course corrections to account for economic practicalities - and is moving toward selection, funding and construction of the regional H2Hubs.

While the road has been relatively smooth and clear, there is a looming traffic jam: Potential producers and their lenders may hold off on finalizing hydrogen supply project commitments because they cannot assess the economics of their investment until they receive guidance from the IRS on

Section 45V Clean Hydrogen Production Tax Credits. IRS guidance or a rulemaking on the qualification for and calculation of Section 45V tax credits will be critically important, particularly regarding the applicable definition of clean hydrogen, as it may have significant impact on hydrogen projects' economic competitiveness, the corresponding viability of regional H2Hub proposals for production of green hydrogen, and the prospects for timely achievement of the emission reduction goals provided for in the National Clean Hydrogen Strategy.

For more information, please contact the Barnes & Thornburg attorney with whom you work or Bruce White at 312-214-4584 or bwhite@btlaw.com.

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