KING & SPALDING

# Client Alert

Corporate, Finance and Investments

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# Hydrogen-Related Provisions of the Inflation Reduction Act of 2022

The Inflation Reduction Act of 2022, passed by the Senate on August 7, 2022, includes a number of provisions projected to result in significant investments in domestic energy production and manufacturing, and reduce carbon emissions by roughly 40 percent by 2030. The legislation is expected to pass the House by the end of the week of August 7, without changes, and to be signed by President Biden soon after passage.

The Act amends the Internal Revenue Code by extending or adding clean energy provisions intended to achieve the Biden Administration's emissions goals. Among other things, the Act extends and expands energy tax credit provisions that have supported the growth of the renewable energy sector and, more recently, have promoted carbon capture, utilization and sequestration.

The Act finally gives hydrogen a strong foundation to play a significant role in the global economy. Hydrogen production, storage and utilization all receive multiple tax benefits. These are summarized here. The Act's revenue raising and other provisions are addressed in a separate client alert.

## *EXECUTIVE SUMMARY*

The Act actively promotes hydrogen by:

- introducing a 10-year production tax credit (**PTC**) for "clean hydrogen" with a corresponding election to claim the investment tax credit (**ITC**) in lieu of the PTC;
- making "energy storage technologies" eligible for the ITC with a definition specifically including hydrogen;
- revising the "clean vehicle" credit for passenger vehicles and introducing a substantial credit for clean commercial vehicles, a key use case for hydrogen; and

- reviving and expanding the alternative fuel station credit which will foster more hydrogen fueling stations.

The Act also introduces new tax credit multiplier concepts based upon satisfying certain prevailing wage/apprenticeship, domestic content and/or location requirements. The Act adopts the direct pay in lieu of credits concept but only in limited circumstances. Finally, the Act permits taxpayers to "sell" certain tax credits through a tax-free transfer mechanism.

## *CLEAN HYDROGEN PRODUCTION TAX CREDIT*

Section 45V of the Act creates a new 10-year PTC for clean hydrogen. Section 45V is similar to the existing Section 45 PTC for renewable electricity and permits taxpayers to elect the ITC in lieu of the new Section 45V PTC.

Clean hydrogen is defined by reference to the lifecycle greenhouse gas emissions rate achieved at a qualifying hydrogen production facility. The emissions rate cannot exceed 4 kilograms of $CO_2$e (carbon dioxide equivalent) per kilogram of hydrogen. The emissions rate also affects the amount of available credits. The credit amount equals $0.60 per kilogram if the facility produces qualified clean hydrogen that results in lifecycle greenhouse gas emissions of less than 0.45 kilograms of $CO_2$e per kilogram of hydrogen; if the $CO_2$e level is between 0.45 kilograms and 4 kilograms, the credit is available but at a lower credit rate.

The PTC applies to clean hydrogen produced after 2022 at a qualifying facility on which construction starts before 2033. Hydrogen must be produced in the U.S., in the ordinary course of the taxpayer's trade or business, and in compliance with other requirements as determined by the Secretary of the Treasury. The PTC appears to apply to all hydrogen produced in the U.S., even if such hydrogen is exported.

The clean hydrogen PTC/ITC is available even if the electricity used to generate the hydrogen comes from renewable energy sources claiming the existing renewable energy PTC/ITC under Sections 45 and 48. The two sets of credits are independent. However, a taxpayer cannot claim both the clean hydrogen PTC under Section 45V and the carbon capture credit under Section 45Q if the relevant facility includes carbon capture equipment and the taxpayer receives the 45Q credit.

The Act introduces a new credit amount multiplier concept. The $0.60 per kilogram headline credit rate can be increased by up to 500% if certain prevailing wage/apprenticeship and other requirements are satisfied. If satisfied, the PTC will be $3.00 per kilogram of clean hydrogen. Bonus credits up to 10% of the PTC/ITC are also available if certain domestic content requirements are satisfied or the facility is located in an "energy community". It appears that bonus credits can be stacked. Each of the multiplier concepts is discussed in more detail below.

## *ADDITION OF HYDROGEN STORAGE TO DEFINITION OF "ENERGY STORAGE TECHNOLOGY"*

The Act expands the scope of the Section 48 energy ITC by adding "energy storage technology" to the categories of energy property eligible for the credit. Qualifying storage technology includes "property (other than property primarily used in the transportation of goods or individuals and not for the production of electricity) which receives, stores, and delivers energy for conversion to electricity (or, in the case of hydrogen, which stores energy), and has a nameplate capacity of not less than 5 kilowatt hours." This provision places hydrogen storage facilities on equal footing with other energy storage technologies (such as batteries and thermal energy storage facilities) in terms of the availability of tax credits.

The ITC for energy storage technology is also subject to the credit multiplier concept. The headline ITC rate is 6% of qualified costs. This credit rate can, however, be increased by up to 500% (up to a credit rate of 30%) if certain requirements are satisfied, including the prevailing wage and apprenticeship requirements discussed below.

Bonus credits up to 10% are also available if domestic content and the “energy community” conditions are satisfied. It appears that bonus credits can be stacked. Each of the multiplier concepts is discussed in more detail below.

### *TRANSPORTATION RELATED CREDITS*

Sections 25E, 30D and 45W promote battery and hydrogen fuel cell vehicles, potentially generating additional hydrogen demand. The Section 30D tax credit for “clean vehicles” extends to both electric and hydrogen fuel cell vehicles. However, the credit will be subject to “critical materials” and “battery component” limitations that are expected to impact battery electric vehicles. A credit up to $7,500 is available for qualified purchases of new battery or hydrogen fuel cell powered vehicles. The Act eliminates an existing phase out that occurs when a manufacturer sells 200,000 vehicles.

Section 45W introduces a significant tax credit for commercial vehicles. The credit covers up to 15% of the cost of certain commercial clean vehicles. The credit is subject to a per-vehicle limit of $7,500 in the case of a vehicle weighing less than 14,000 pounds, and $40,000 for a larger vehicle and subject to other credit limitations. Unlike many other business credits, taxpayers may not sell this tax credit pursuant to the new transferability provisions discussed below.

The Act revives and greatly expands Section 30C, a currently expired tax credit for alternative fuel refueling property. As amended, Section 30C provides credit of up to 30% of the property’s qualifying cost with a cap of $100,000 per unit. As with the ITC, the headline credit rate is 6% with the potential for increase to 30% if the prevailing wage/apprenticeship requirements are met. Significantly, the cap applies on a per item basis rather than aggregating all items at a location as a single refueling property. In effect each charger at a location can be a separate unit for this purpose.

### *NEW PREVAILING WAGE AND APPRENTICESHIP REQUIREMENTS GOVERNING AMOUNT OF CREDITS*

Certain of the Act’s credit provisions are limited such that only 1/5th of the specified credit amount is available as to a particular facility *unless*:

- the facility’s maximum net output is less than 1 MWac; *or*
- construction of the facility began before (or within 60 days after) the release of Treasury or IRS guidance on the implementation of the prevailing wage and apprenticeship requirements; *or*
- the prevailing wage and apprenticeship requirements are satisfied.

To meet the prevailing wage requirements, laborers and mechanics employed by contractors and subcontractors in the construction, alteration or repair of a facility must be paid wages at not less than prevailing rates as determined by the Secretary of Labor. The apprenticeship requirement generally specifies that (1) certain labor hour requirements for the construction, alteration or repair of the facility must be performed by apprentices and (2) for contractors with more than four employees, one in every four employees employed by contractors or their subcontractors must be engaged in a qualified apprenticeship. Failure to satisfy the wage and apprenticeship requirements may be cured through additional payments to the affected workers and to the government. These requirements vary slightly for different credits and some exceptions apply.

### *“ENERGY COMMUNITY” BONUS CREDIT*

Certain bonus credits may be available for facilities constructed in an “energy community.” The Act defines “energy communities” as including brownfield sites, areas with significant employment (post-1999) related to extraction,

processing, transport, or storage of coal, oil or natural gas, or any census tract (or adjoining tract) that had either a coal mine close after 1999 or coal-fired electric generating unit retire after 2009.

### *DOMESTIC CONTENT REQUIREMENT*

Bonus credits may be available if specified domestic content requirements are satisfied as to a particular facility. To satisfy these requirements, taxpayers must certify that any steel, iron or manufactured product that (upon completion of construction) is a component of the facility was produced in the U.S. Manufactured products are deemed to have been produced in the U.S. if 40% of the costs of the manufactured products are attributed to components mined, produced or manufactured in the U.S. (a 20% threshold applies for offshore wind facilities).

### *DIRECT PAYMENTS IN LIEU OF CREDITS*

The Act provides for an election for direct payment in lieu of a tax credit for many of the credits it establishes or extends. The election must be made separately for each facility, project or item of eligible equipment.

The direct payment election is generally available to tax-exempt entities, state or local governments (or their political subdivisions), the Tennessee Valley Authority, an Indian tribal government, or any Alaska Native Corporation. Other taxpayers may only elect direct pay for credits established by Sections 45V (clean hydrogen), 45Q (carbon capture and sequestration), and 45X (advanced manufacturing production credit).

### *TRANSFERABILITY OF CREDITS*

The Act introduces a new concept – the ability to directly sell tax credits. Taxpayers may make an annual election to transfer all (or any portion) of an eligible credit to an unrelated taxpayer, provided that consideration for such transfer is paid in cash. This consideration is not included in the transferor's gross income and is not deductible by the transferee. Any taxpayer other than persons entitled to direct payments are entitled to transfer the credits. The credit is taken into account in transferee taxpayer's first taxable year ending with, or after, the taxable year of the transferor taxpayer.

The transferability of tax credits is new. This provision may not eliminate traditional tax equity structures, as it does not address the monetization of tax depreciation benefits, and the long-term effects of moving to a free transferability model for certain tax credits is unclear.

### *ADDITIONAL FUNDS FOR DEPARTMENT OF ENERGY PROGRAMS THAT COULD SUPPORT HYDROGEN PROJECTS*

The Act provides approximately $70 billion in new funds to the Department of Energy (**DOE**) Loan Program Office (**LPO**).

- The Act provides an additional $40 billion in funding to the Title XVII Loan Guarantee Program administered by the LPO to support U.S. energy infrastructure development. It also provides the LPO with $3.6 billion "for the costs of guarantees made under the Title XVII Loan Guarantee Program, section 1703 of the Energy Policy Act of 2005 (42 U.S.C. 16513)." This would permit the LPO to pay down guarantee fees associated with the Title XVII Loan Guarantee Program.

- The Act also amends the Title XVII Loan Guarantee Program and allocates $5 billion to support energy infrastructure reinvestment financing under the LPO. This support would come in the form of guarantees, including refinancing, for projects that "[(a)](1) retool, repower, repurpose, or replace energy infrastructure that has ceased operations; or [(a)](2) enable operating energy infrastructure to avoid, reduce, utilize, or sequester air pollutants or anthropogenic emissions of greenhouse gases." For the purposes of this section, energy

infrastructure is defined as “a facility, and associated equipment, used for (1) the generation or transmission of electric energy; or (2) the production, processing, and delivery of fossil fuels, fuels derived from petroleum, or petrochemical feedstocks.” A project under subsection “(a)(1) that involves electricity generation through the use of fossil fuels shall be required to have controls or technologies to avoid, reduce, utilize, or sequester air pollutants and anthropogenic emissions of greenhouse gases.” (The $5 billion allocated to support energy infrastructure reinvestment financing under the LPO is in addition to the amounts described above.)

## *SUPPORT FOR APPLICATION OF ADVANCED TECHNOLOGY IN NONPOWER INDUSTRIAL OR MANUFACTURING FACILITIES*

The Act authorizes DOE to provide more than $5.8 billion in grants, rebates, direct loans and cooperative agreements on a competitive basis for up to 50% of project costs to install advanced industrial technology designed to accelerate the reduction of greenhouse gas emissions to net zero (these would be available through September 30, 2026). Funding support would be made available for domestic, nonfederal, nonpower industrial or manufacturing facilities engaged in energy-intensive industrial processes, such as production of iron, steel, steel mill products, aluminum, cement, concrete, glass, pulp, paper, industrial ceramics and chemicals.

## *NEXT UP – RULEMAKINGS AND FUNDING OPPORTUNITY ANNOUNCEMENTS*

Once the Act is signed into law, the several federal agencies (Treasury, DOE, Labor) given responsibilities for fleshing out implementation details will need to undertake a number of rulemakings. They can be expected to seek public comment on proposed definitions of terms used in the Act, detailed implementing regulations, and guidance intended to fill in legislative gaps. Interested stakeholders will want to engage the administering agencies to advocate for their interests and participate in notice-and-comment opportunities provided by the agencies.

For new and expanded programs, such as the $5.8 billion Advanced Technology in Nonpower Industrial or Manufacturing Facilities Program, DOE can be expected to follow the procedures it has used in rolling out Bipartisan Infrastructure Law funding programs by issuing Funding Opportunity Announcements in the coming months to solicit applications in specific areas of interest. Stakeholders interested in participating in DOE programs, in particular, should be alert to these solicitations and should begin considering how they plan to respond.

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