

Infrastructure Investment and Jobs Act: Laying the Foundation for Energy Transition

Key takeaways for infrastructure and energy investors

The Infrastructure Investment and Jobs Act (the IIJA) recently signed into law follows through on President Biden's commitment to reinvest in American infrastructure, by appropriating approximately USD65 billion to new and expanded programs that will drive investment and innovation in clean and renewable energy sources, power transmission and energy storage solutions.

While many of President Biden's proposed programs to directly support renewables are contained to the Build Back Better Act, currently under consideration in the Senate (for more information on the Build Back Better Act, see our article at <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/us-house-ways-and-means-committee-build-back-better-act>), the IIJA nevertheless contains a number of initiatives aimed at improving energy efficiency and reducing the greenhouse gas (GHG) impact of the American energy sector and the broader economy. The IIJA directs the U.S. Department of Energy (DOE) to develop and implement new clean energy standards, as well as grant, loan and incentive programs to drive investment in new projects and efficiency upgrades in existing energy and manufacturing facilities.

The bill also focuses on defraying the impact of the clean energy transition on regions and communities that depend on carbon-intensive energy production and resource extraction, which are most likely to see short-term contraction as a result of the clean energy transition. The IIJA presents a wide range of opportunities for private investors that are willing and able to propose projects that meet the clean energy and ESG-related priorities of the IIJA, especially if these projects can be geographically and demographically aligned with the IIJA's attempts to spur investment in these regions. Owners of existing conventional and renewable energy assets may have a competitive advantage in identifying and proposing these projects.

In this article, the first of a series exploring the impact of the IIJA across sectors, we identify the provisions of the IIJA which we believe to be of the greatest interest to energy investors, as well as potential opportunities and industry developments these provisions will drive. Additional information regarding the IIJA's impact on the electric grid and its EV charging provisions will be explored in a subsequent article.



Material Energy Provisions of the IIJA

Many of the new energy programs introduced by the IIJA make funds available in the form of grants to fund projects or upgrades associated with energy efficiency, GHG emission reduction or investment in clean energy technologies (all of the grant programs detailed in this article are available to private entities via applications that the DOE will develop and publish, unless otherwise noted). While historically, some grant programs have had the effect of reducing the need for private capital to fund projects, nearly all of the IIJA's grant programs prioritize proposals that leverage private sector investment and include collaboration with industry and private capital. These grants can help provide additional funding for projects that might otherwise have gaps in their capital structure or difficulty securing adequate upfront investment.

Hydrogen Demonstration Projects

The IIJA includes over USD10bn in grants to fund projects that demonstrate and support the commercial viability of clean hydrogen technologies. The flagship initiative is a USD8bn grant program to construct at least four "Regional Clean Hydrogen Hubs." Eligible projects must demonstrate at least one of the following:

- production of clean hydrogen from fossil fuels
- production of clean hydrogen from renewable energy
- production of clean hydrogen from nuclear energy
- end-use of clean hydrogen in electric power generation
- end-use of clean hydrogen in the industrial sector
- end-use of clean hydrogen in residential and commercial heating applications
- end-use of clean hydrogen in the transportation sector

These grants give priority to projects located in natural gas-producing regions. If coupled with the proposed clean hydrogen tax credits in the Build Back Better Act these programs would combine to form a significant subsidy to the build-out of hydrogen projects at all life cycle stages. These programs will also provide opportunities for investors that own existing transportation infrastructure in natural-gas producing regions to pursue ESG-friendly conversions of existing assets to incorporate clean hydrogen processes.

Carbon Capture Infrastructure

The IIJA includes over USD8bn in grants related to carbon dioxide capture, transportation, utilization and storage (CCUS). A number of these programs will be of interest to private investors, including:

- USD2bn for secured loans and grants to carbon dioxide transportation infrastructure projects. Eligible projects must have total project costs above USD100 million and use U.S.-manufactured materials where such materials are available and will not increase costs by more than 25%
- USD2.5bn for grants to construct large-scale carbon sequestration projects. Eligible projects must have a goal of sequestering at least 50 million metric tons of carbon dioxide over the life of the project
- USD3.5bn for grants to construct four "regional direct air capture hubs." Eligible projects must have capacity to capture and sequester or utilize at least one million metric tons of carbon dioxide from the atmosphere annually

The IIJA also includes grants and directives to states and federal agencies to expand and streamline permitting for underground carbon sequestration projects, and to purchase the products of carbon utilization programs, creating more offtake demand for investor-led projects. These opportunities, as well as the IIJA's emphasis on prioritizing projects in fossil fuel-producing regions, represent prime opportunities for investors with conventional energy portfolios to avoid assets becoming stranded as a result of the clean energy transition. The CCUS sector provides abundant potential for conversion and alternative utilization of existing conventional energy infrastructure and expertise:

- Pipelines will need to be constructed or modified to transport carbon dioxide to sequestration facilities and processing hubs – carbon dioxide injection has already been used for enhanced oil extraction, and these processing, transportation and storage techniques will be necessary for the construction of the transportation projects supported by these grants
- Depleted natural gas fields can be repurposed as carbon sequestration sites for long-term storage of captured carbon – firms with existing portfolios of subsurface rights and expertise in geological assessment will have an advantage in identifying and securing these sites
- Conventional energy generation facilities, as well as carbon-intensive industries like concrete and steel production, can provide consistent supply for offtake by CCUS projects which is necessary to secure financing and fund operations over the lifetime of the projects

Battery Materials and Domestic Production

The IIJA includes over USD6bn in grants available to private firms for a new Battery Material Processing Grant Program, and a new Battery Material Manufacturing and Recycling Grant Program, which provide up to USD50m per grant for retrofitting or upgrading existing facilities and up to USD100m per grant to construct new commercial facilities that manufacture, recycle or process raw materials for use in batteries used by electric vehicles or the electric grid. Priority is given to recipients that are located in the U.S., are owned by U.S. entities, and provide job opportunities in communities that are low-income, rural or have had fossil fuel jobs displaced. These programs, as well as the potential extension of the Investment Tax Credit to cover energy storage technology in the Build Back Better Act, will provide significant boon to projects that expand the battery supply chain. Investors can pursue projects with confidence that the market demand in this sector will remain high for the foreseeable future, driven by expanded adoption of electric vehicles and intermittent renewable energy sources.

Nuclear and Hydroelectric Incentives

The IIJA's support for decarbonisation and clean energy infrastructure is not limited to new programs, and also includes payments to existing clean energy generation facilities. These include over USD700m in incentive payments, available to hydroelectric dams, to support investments that improve efficiency, enhance grid resiliency or reduce environmental impact. They also include a new USD6bn civil credit program that will offset operating losses for nuclear reactors otherwise projected to cease operation due to economic non-viability, to prevent the clean energy they generate from being replaced with carbon-intensive energy from conventional sources. These programs have the potential to significantly alter the economic outlook of applicable facilities and the potential returns associated with purchasing or investing in their owner-operators.

Investing in Post-Carbon Economic Development

A number of grant programs in the IIJA are aimed at driving investment and job creation in regions and among communities that are dependent on carbon-intensive energy production and resource extraction, as a means to reduce negative externalities in these communities from the clean energy transition. In addition to the clean hydrogen and battery grants discussed above, the IIJA includes:

- USD750m in grants for retrofitting industrial facilities with upgrades that reduce GHG emissions, available to firms that (i) have fewer than 500 employees, (ii) have gross annual sales under USD100m, and (iii) are located in census tracts that contain closed coal mines or coal-fired power plants
- USD500m in grants for construction of non-wind clean energy projects on current or former mine land. Each of these programs give priority to applicants with the highest prospect of creating jobs for workers displaced from manufacturing and coal industries
- USD500m in grants to public-private partnerships that provide energy efficiency improvements, renewable energy technologies or alternative fuel vehicles to schools
- USD250m to create a revolving loan fund that will provide funds for commercial and residential energy audits, as well as for energy upgrades and retrofits recommended by such audits

The availability of these funds may improve the economic outlook for projects and portfolio companies located in applicable regions, or that are able to provide products and services for these programs – in making investment decisions about where to build new clean energy projects (and acquiring land for such projects), investors should consider whether they can choose locations and portfolio companies that are able to benefit from these programs.





New Energy Standards

The IIJA includes provisions directing the DOE to develop and implement new codes, standards, and best practices relating to energy efficiency and clean energy production. These include updated building energy efficiency codes, and a uniform standard for projects to qualify as “clean hydrogen” and receive funding from related DOE grant programs. Active engagement with the process of determining the standards, via public comment and direct engagement with the DOE through industry advocacy groups, will allow stakeholders to ensure that new standards are practical, achievable and meet commercial, as well as technological and sustainability requirements.

Further Information

We will continue to monitor the implementation of the IIJA and related infrastructure regulations, and will continue to publish articles exploring the potential opportunities associated with the IIJA. If you have any questions or are interested in learning more, please reach out to the A&O team.

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