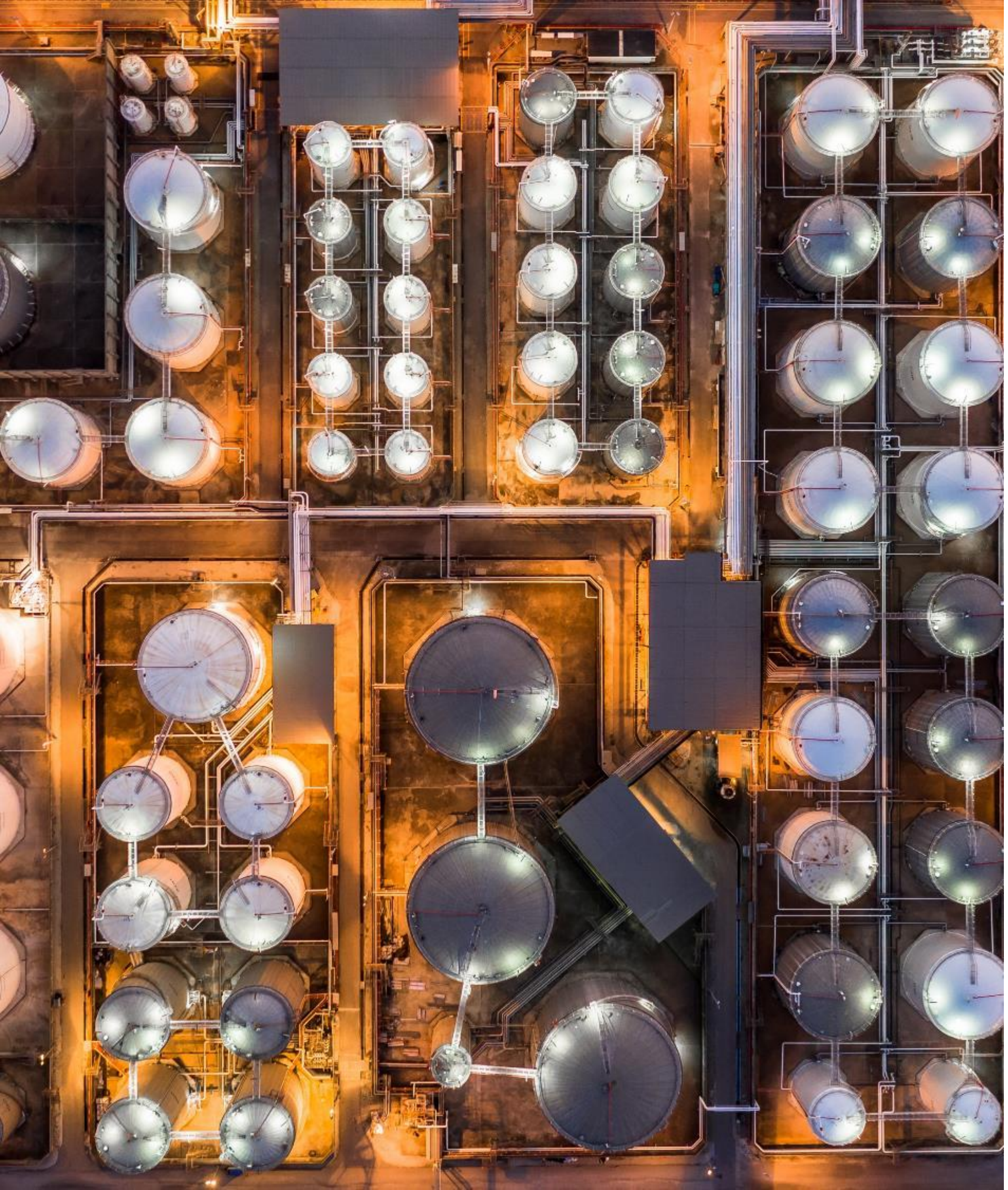
How Federal Policy Is Driving the Energy Transition

May 2023



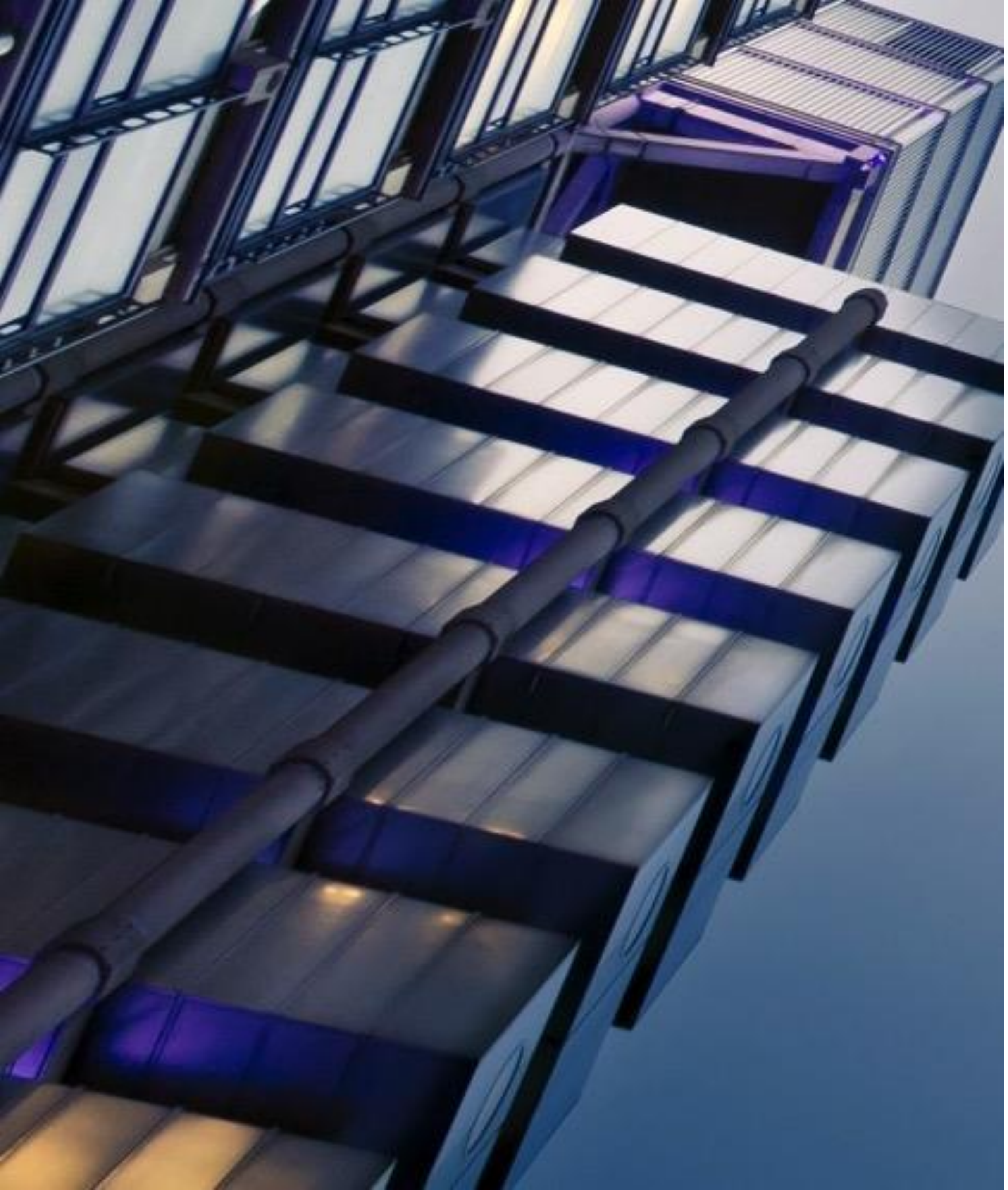
Unprecedented Support for the Energy Transition

Through the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA), Congress has provided unprecedented support for private investment in technologies that combat climate change:

- *Direct funding – $62 billion*
- *Loans and loan guarantees – $40 billion*
- *Tax credits – estimated at more than $250 billion, but could end up much higher*

Studies: federal IRA subsidies, and impacts, will greatly exceed congressional estimates

- Goldman Sachs re IRA impact - *'Third Energy Revolution'*
  - IRA will provide $1.2 Trillion of incentives by 2032
  - Could encourage $11 Trillion of clean energy investment by 2050
  - Estimated $3 Trillion of investment in clean energy by 2032
    - This is two times the total investment in U.S. shale over last 15 years
  - Biggest impact in Transportation Sector (EVs, Biofuels, SAF)
  - Renewables not including nuclear, hydro will be 44% of total US generation by 2030 and 80% by 2050
- JCT – Itself has raised 10 year estimate of IRA green energy credits to $570 Billion



What are the intended impacts of these two laws?

- Huge multiplier of private investment in clean energy
- Sharp drop in CO_2 emissions
  - DOE predicts carbon emissions will fall 40% from 2005 levels by 2030
  - Transportation, manufacturing and residential emissions all affected
- Multiple workforce impacts
  - Double the U.S. manufacturing jobs in the low carbon energy sector
  - More union jobs
  - More focus on diversity, equity and inclusion
- Benefits to disadvantaged communities
  - 40% of IIJA benefits to target such communities

IIJA Financial assistance awards

- Direct funding provided to carry out research, development, demonstration and commercialization of new technology – across the energy spectrum.
  - The Government is trying to speed the pace of the transition to low carbon energy sources.
- Direct funding is awarded through a competitive process.
- There is a cost share obligation of 20% for research and development projects, 50% for commercial scale demonstrations.

What has Congress agreed to fund in the IIJA?

In short, a little bit (or a lot) of everything, e.g.,

- Carbon capture
- Advanced and decarbonized manufacturing
- Hydrogen “hubs”
- Hydropower, wind and solar enhancements
- Energy storage
- Preservation of nuclear energy infrastructure
- Grid upgrades, resilience and reliability
- Battery manufacturing, materials, and recycling
- Critical minerals development
- EV charging infrastructure
- Clean energy investment in underserved communities
- Workforce training for clean energy jobs

What is new and different in the IIJA approach?

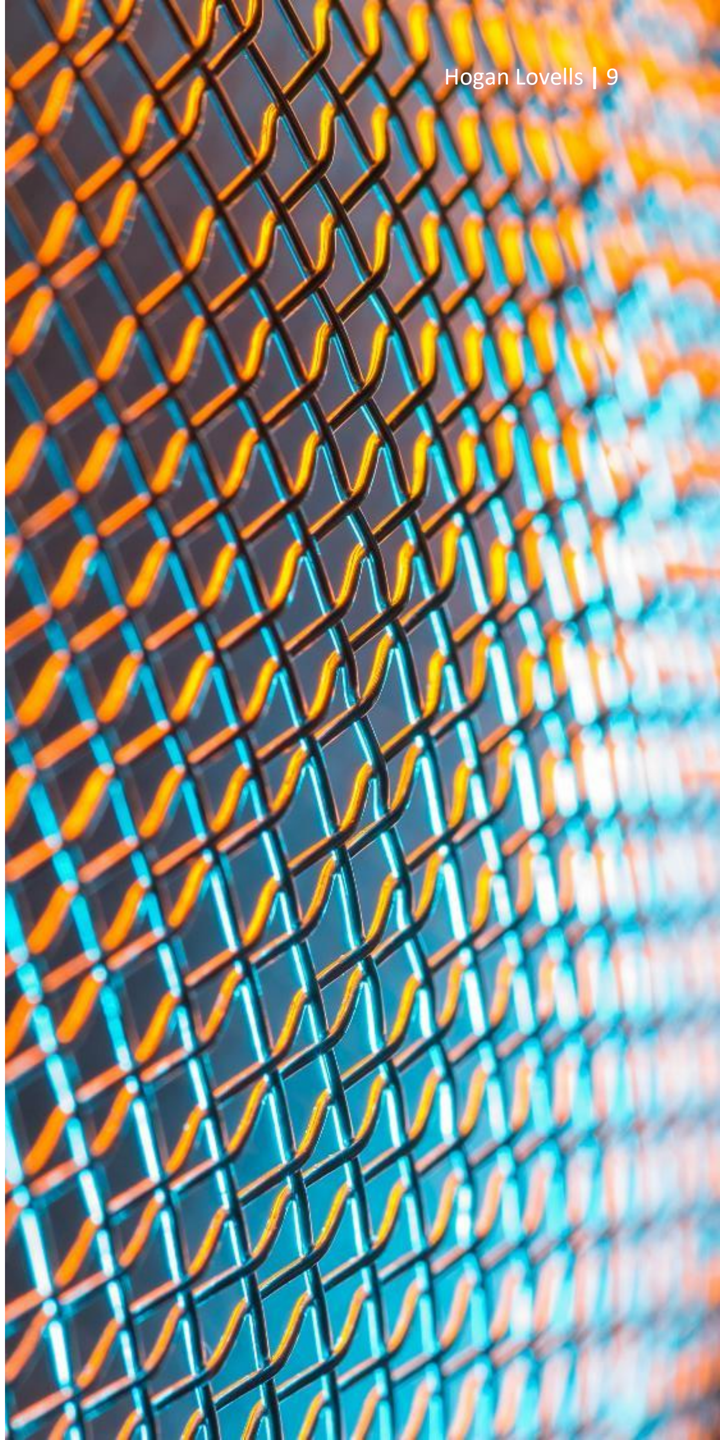
- The magnitude of the undertakings:
  - $9 billion to support regional hydrogen hubs – with a vision of a whole new hydrogen fuel economy
  - More than $7 billion for grid "resilience" and energy storage – with a vision of an electrified economy
- The sweeping reach:
  - Industrial decarbonization for hard to decarbonize industries, including steel, aluminum, cement, food and beverage
  - The transportation sector: cars, trucks, aviation, marine
- The number and nature of the policy strings
  - The rules of the road are fundamentally different for those who accept IIJA funding

Policy Strings

Buy America

- **The IIJA:** “none of the funds made available for a Federal financial assistance program ***for infrastructure*** . . . may be obligated unless all of the iron, steel and manufactured products, and construction materials used in the project are produced in the United States.”
  - On its face, Buy America applies only when the prime recipient is governmental or non-profit entity.
  - If a project serves the public, it is likely infrastructure.
  - A privately owned manufacturing facility is probably not covered by the requirement, but . . .
- For ***non-infrastructure projects***, there is a Buy America preference.
  - DOE has emphasized that all awards are subject to a Buy America preference that it will take into account in its evaluation of applications.

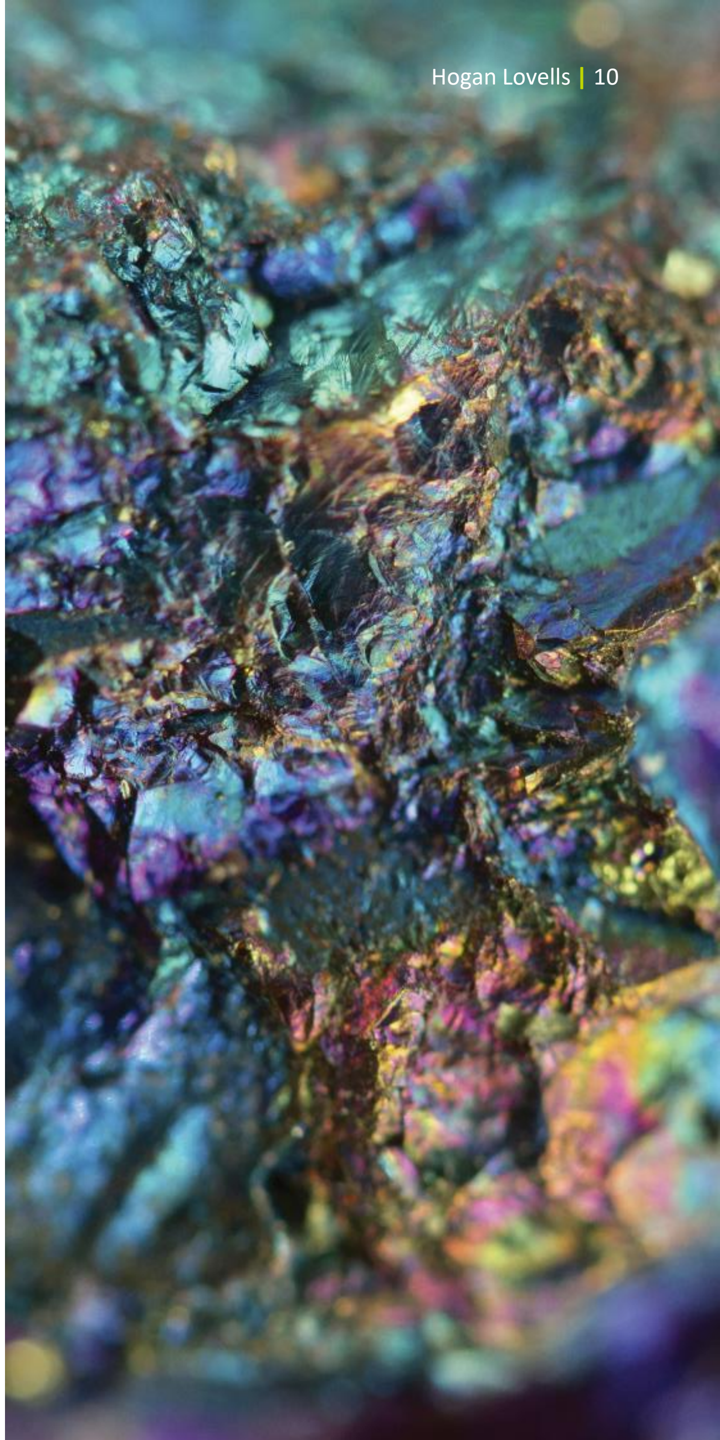
Parties seeking funding must consider supply chain issues.



What is the Buy America requirement?

White House guidance explains:

- *Iron and steel* are produced in the United States when *all manufacturing processes*, from melting through final coating, *occur in the United States*.
- A *manufactured product* is produced in the United States if the product was manufactured in the United States and the cost of the components that are mined, produced or manufactured in the United States is *greater than 60 percent of the total cost*.
  - Note that, until recently, the test was 55%; this content requirement will go up in steps to 65% by 2024 and then to 75%.
- *Construction materials* are manufactured in the United States if all the manufacturing processes for the construction material occurred in the United States.
  - De minimis non-domestic additions to construction materials should be OK.



Buy America Waivers

- **Waivers are available, but an applicant must show:**
  - Applying Buy America requirements would be inconsistent with the public interest;
  - The types of iron, steel, manufactured products, or construction materials are *not reasonably available in sufficient quantities or of a satisfactory quality*; or
  - The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will *increase the cost of the overall project by more than 25 percent*.

- **The showing must include a detailed justification, including:**
  - Market research and solicitations for compliant U.S. products,
  - The non-U.S. products are essential,
  - The country of origin of non-U.S. products, and
  - Impacts if the waiver is not granted.

Waiver requests are subject to public comment and OMB review. Granted waivers are public.

Other domestic content requirements

- Where project funding will be spent matters:
  - All work performed under awards must typically be performed in the United States. The prime recipient must flow down this requirement to its subrecipients.
- Foreign travel costs may not be allowable, except with express approval:
  - This includes Fly America and Cargo Preference Act requirements.
- Who gets the project funding matters:
  - The proposed prime recipient and subrecipient(s) must be domestic entities.
  - There may also be a requirement that the recipient of funding be U.S. owned.
  - Foreign workers on the project may have to be approved.

Waivers may be available for good cause shown.

“Equity” terms of funding agreements

- Strong emphasis on equity considerations:
  - 40% of the funds appropriated under the IIJA must be spent in disadvantaged communities.
  - The benefits can take many forms, including improvements to the environment, hiring women-owned and minority-owned subcontractors, particularly small businesses.
  - Diversity, equity, inclusion and accessibility is expected in hiring and contracting.
- Specific, measurable commitments tied to milestones are required on the equity issues.
  - An equity plan is a key element of a funding application
- Under many awards, there is a prohibition on project participants who are also participants in a foreign talent recruitment program.
- There must be approved cybersecurity and a conflict-of -interest plans.

Watch for new requirements, see, e.g., employer-provided day care obligation on certain recipients of CHIPS Act funding.

Davis-Bacon Act requirements for construction contracts

- Projects under the H2Hub FOA require all laborers and mechanics employed by any subrecipient or contractor/subcontractor for construction, alteration, or repair work funded by the FOA to be paid wages not less than those prevailing on similar projects in the locality.
  - This is determined by the Secretary of Labor pursuant to the Davis-Bacon Act.
  - The prime recipient must flow down these provisions into any applicable subrecipient awards or subcontracts. The prime recipient is responsible for compliance with these standards.

Other workforce policies

- There may be a requirement for investing in workforce education and training, including registered apprenticeships.
- There will likely be a requirement of neutrality towards union organizing efforts.
- There will likely be an expectation of hiring from the community, particularly in disadvantaged neighborhoods.

DOE is including in funding agreements now being negotiated under the IIJA specific milestones for these kinds of items.

Standard Terms and Conditions

Some standard terms and conditions may come as a surprise

- Specific obligations are imposed with respect to subcontracting, with a strong emphasis on prescriptive methods of competitive subcontracting.
- By law, the ***Government has presumed ownership of IP*** created under a funding agreement, unless the agreement is with a small business or non-profit.
  - Large businesses can seek waivers of the Government ownership.
  - Even with a waiver, the Government gets a royalty-free license for *Government uses*.
  - U.S. manufacture obligation for subject inventions: The Recipient agrees that any products embodying any subject invention or produced through the use of any subject invention will be ***manufactured substantially in the United States*** unless the Recipient can show to the satisfaction of DOE that it is not commercially feasible.
- Many requirements “flow down” to all project participants.

For CLE Credit, the code is 323250.

Please complete and send the affirmation form with the code to ClientCLE@hoganlovells.com within 5 days of the event.

The form was emailed to confirmed RSVPs yesterday and will be sent again to attendees tomorrow.

Inflation Reduction Act – Clean Energy Tax Incentives

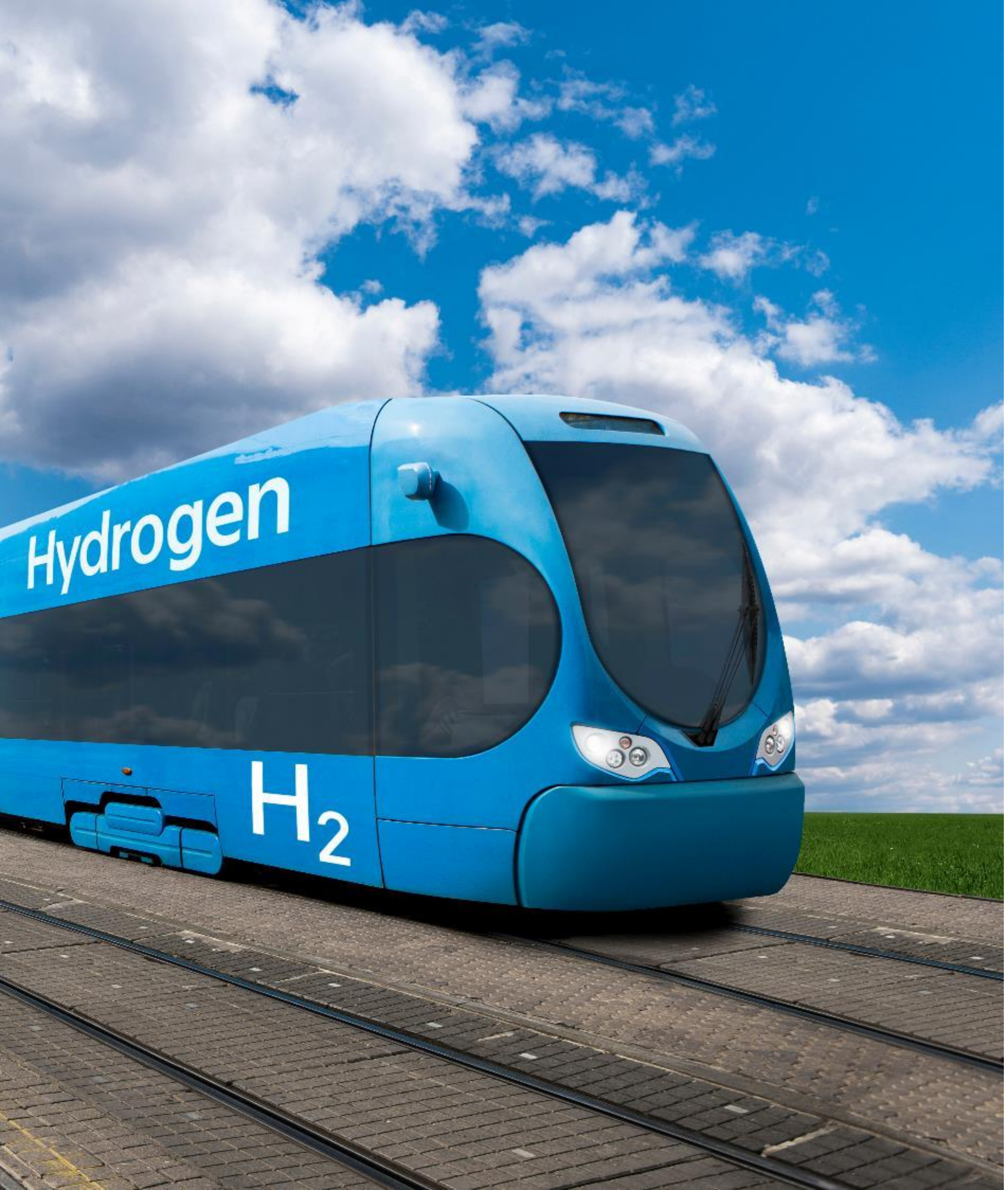
- Significant tax incentives for
  - Clean electricity production facilities
  - Clean fuel production
  - Hydrogen production facilities
  - Carbon capture and sequestration
  - Electric and other clean fuel vehicles
  - US production of solar cells/wafers etc., battery cells/modules, mining and processing of critical minerals, etc.

Timing of IRA Tax Incentives

- Extensions of preexisting clean electricity, clean fuel credits already in effect
- New energy storage, biogas property, microcontrollers credit took effect January 1, 2023
- New advanced manufacturing production credit took effect January 1, 2023
- New hydrogen production credit also took effect January 1, 2023
- New EV credit formula in effect as of April 17, 2023
- New “tech neutral” clean electricity credits and clean fuel credits take effect in 2025
- Almost all credits run to 2032, generally for projects under construction by the end of that year
- New 45Z clean fuel credit is effective only for fuel produced from 2025 through 2027
- New 45X advanced manufacturing production credit runs through 2029, with phase-out over next 3 years
- Extension of 48C credit (like grant program) runs until $10 billion is allocated

Conditions of IRA Tax Incentives

- Clean electricity, clean fuels credits, energy storage and related credits, hydrogen credit all require compliance with :
  - The same Davis Bacon prevailing wage requirements as under IIJA
  - Apprenticeship program requirements
- New "tech neutral" credits based on carbon footprint/intensity factor
  - 45Y clean electricity PTC, 48E clean electricity ITC, 45V hydrogen PTC or ITC and 45Z clean fuels production credit all provide credit based on Carbon intensity factor under Argonne GREET model
  - 45Y and 48E, GREET CI must be zero or below
  - 45V hydrogen GREET CI must not be higher than 4 kg/CO2e per kg/H2 (25% of credit) and must be less than 0.45 Kg/CO2e for the full credit ($3/kg, indexed for inflation)
  - 45Z clean fuels credit is formulaic – GREET CI must be below 50, is $1/ gallon at zero, and higher with negative CI (e.g. $2/gallon at CI of -50)



Transferability, Refundability

- Virtually all IRA clean energy tax credits are transferable, to any entity, in exchange for cash
- Virtually IRA tax credits are refundable (i.e., apply for and receive a check from the Treasury) to governmental and tax exempt entities
- Select IRA tax credits are refundable to any entity, including taxpaying entities – 45Q carbon capture sequestration credit, 45V hydrogen production credit, and 45X advanced manufacturing production credit

Bonus credits

- Domestic content
- Energy communities

48C credits – grant pretending to be tax credit

- IRA Section 48C investment tax credits
  - Extends a program originally part of the 2009 Recovery Act and extended in 2014
  - Provides $10 billion in investment tax credits for "advanced energy projects"
    - $4 billion is reserved for "energy communities," i.e., communities that have had a coal mine or a coal-fired power plant shut down
      - Many hundreds of locations meet that test: more than 500 coal mines and nearly 300 coal-fired power plants.
      - The program will proceed in rounds: $4 billion is allocated to Round 1, 40% of which will be allocated to energy communities.
  - Also includes funding for processing or reclaiming critical minerals
  - Credits will be 30% of qualifying investment provided Davis Bacon and apprenticeship requirements are met; *6% if those requirements are not met*

What technologies and projects qualify under 48C?

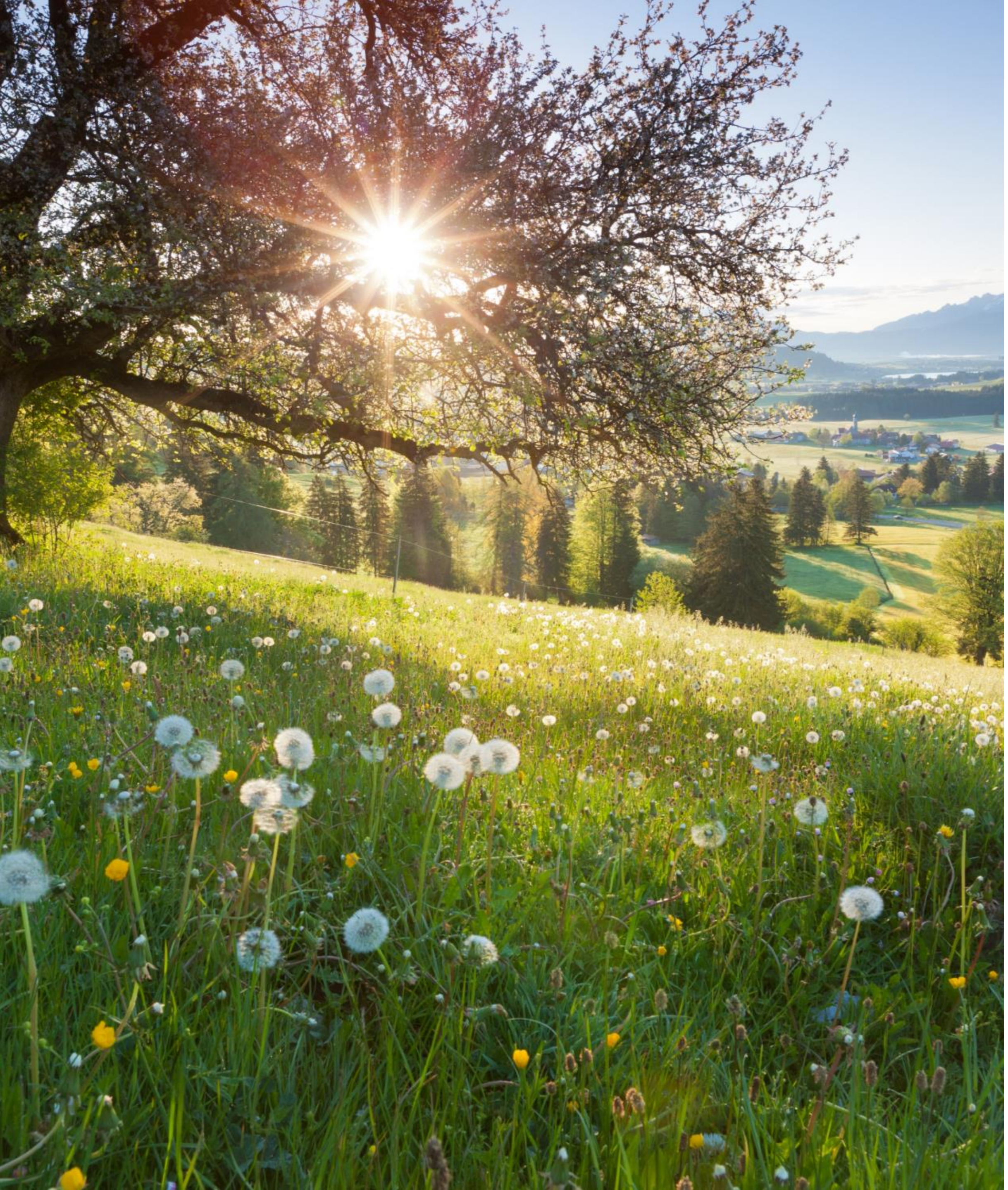
- Treasury has issued a *6-page single spaced list of qualifying advanced energy projects.* The focus is on manufacturing equipment to promote the clean energy economy, e.g.,
  - Equipment to convert sun, wind, water or geothermal heat to energy
  - Grid modernization equipment
  - Vehicle electrification equipment, including the manufacture of EV chargers
  - Equipment to support carbon capture, removal, storage or use
  - Refining equipment to create renewable transportation fuels
  - Critical minerals processing equipment
  - Ultra energy efficient equipment
  - Equipment to produce hydrogen

How will 48C work?

- Treasury and DOE partner on the 48C credits.
- DOE will begin accepting first round “concept papers” on May 31. Ends July 31.
  - Based on the concept papers, DOE will encourage or discourage full applications.
    - Parties may pursue full applications whether or not they receive encouragement to proceed.
  - Based on the full application, DOE will make recommendations to Treasury, in ranked order for each round of applications.
- Treasury will allocate credits based on DOE’s rankings for as long as the money lasts.
  - Those receiving allocations have two years to certify that they have completed and placed in service a qualifying project.
    - The allocations expire if the certifications are not made.
    - The project must be built in substantially the location and as described in an application.
    - Credits may transfer to a successor in interest.
    - Applicants can qualify for progress payments, but they are subject to recapture.
- No “double-dipping” is allowed for parties who receive other taxes credits under the IRA.

More guidance to come

- By the end of May, DOE and Treasury will provide further guidance on Round 1.
  - This will include additional details on what is required in a full application.
- For those whose projects cannot be placed in service within two years of a Round 1 application, additional guidance will also be issued for future rounds.
  - Those who are rejected in Round 1 can also re-apply, addressing any weaknesses DOE identifies in an optional debriefing offered to those who are denied allocations.



Upcoming webinars

- We will be continuing our series relating to IIJA, IRA and clean energy with sessions on prevailing wage and apprenticeship issues and guidance from our employment practice and energy innovation investment beyond wind and solar, including the topics of fission and fusion, hydrogen and sustainable fuels from our energy practices.

Questions?

Please send the affirmation form with the correct CLE code to ClientCLE@hoganlovells.com within 5 days of the event.

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