Welcome to the ‘CCUS for Net-Zero’ seminars, hosted by UKCCSRC

These sessions are for government employees and UKCCSRC Early Career Researcher (ECR) members exclusively.

Please remain muted and with your camera off during the presentation. If you would like to ask a question or join the discussion in the Q&A following the presentation, you can use the chat function, raise your hand or unmute yourself.

Please note: all presentations (not the Q&As) will be recorded as a resource for use on our website.

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CARBON CAPTURE & THE INFRASTRUCTURE BILL: AN UPDATE FROM WASHINGTON, DC.

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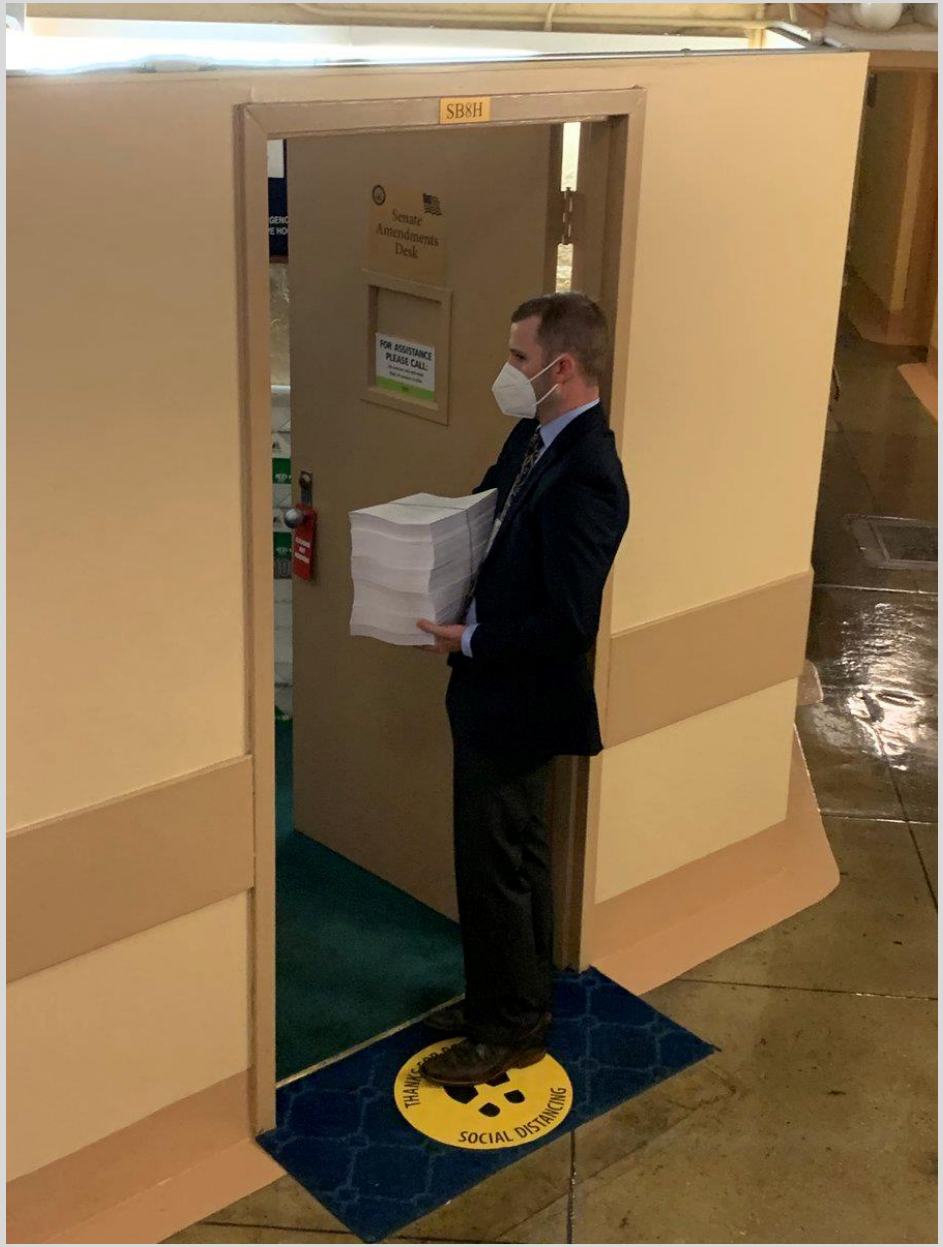
Third Way



FINALLY… WE HAVE A BIPARTISAN INFRASTRUCTURE DEAL (BID)

Photo source: @LACaldwellDC

2,702 pages of bill text were released around 9pm on Sunday 1st August, 2021. Full text available here.

Passed in the US Senate 69-30; 10th August, 2021.

CARBON CAPTURE RELATED ELEMENTS IN THIS BILL

$1.2 Trillion bipartisan infrastructure package; aka **Infrastructure Investment and Jobs Act**; historic investments in 'hard' infrastructure *and clean energy technologies*.

01

CCUS DEMONSTRATIONS & PILOT PROGRAMS

Includes provisions for CO_2 transport and storage infrastructure; funding for carbon capture demonstration projects, FEED studies; grants for the commercialization of products and technologies utilizing CO_2; funding for geological storage wells and State permitting program grants.

02

CARBON REMOVAL/DIRECT AIR CAPTURE

Includes prize for commercial and pre-commercial Direct Air Capture (DAC) projects; creates a program for regional DAC hubs – four hubs with funding over the next five years.

03

HYDROGEN RESEARCH & DEVELOPMENT

Sets definitions for 'clean hydrogen'; re-establishes a strategy and road map to facilitate large-scale production of clean hydrogen; creates several hydrogen RD&D programs with substantial funding over the next 5 years.

CARBON CAPTURE, UTILIZATION & STORAGE, AND TRANSPORTATION INFRASTRUCTURE.

01

CARBON CAPTURE TECH

Authorizes **$100M** funding for FY 2022-26; expands DOE's Carbon Capture Technology program; includes FEED for CO_2 transport infrastructure necessary to deploy CCUS technologies

02

CO2 TRANSPORT FINANCE

Authorizes **$2.1B** funding over 5 years (2022-2026); establishes finance program to provide flexible, low-interest loans and grants for CO_2 transport infrastructure; plus facilitate private sector investment.

03

CARBON STORAGE

Authorizes **$2.5B** funding over FY 2022-26 for expanding DOE's Carbon Storage Validation & Testing program; includes large-scale commercialization of new and expanded sequestration projects; plus **$55M** for states permitting program of wells.

04

CARBON UTILIZATION

Roughly **$310.141M** funding authorized for 5 years (2022-26); establishes grant program for state & local governments to procure and use products from captured carbon oxides; includes development of standards and certifications to support commercialization of carbon oxide products.

CARBON REMOVAL PROGRAMS & DIRECT AIR CAPTURE.

01

CARBON REMOVAL HUBS

Authorizes **$3.5B** funding for projects over FY 2022-26; includes development of four regional direct air capture hubs; at least 2 regional DAC hubs in fossil fuel producing areas; each hub should have the capacity to capture min 1 million metric tons of atmospheric CO2 annually.

02

DAC PRIZES

Authorizes **$115M** for Direct Air Capture competitions; includes pre-commercial and commercial projects.

HYDROGEN RESEARCH AND DEVELOPMENT PROGRAMS.

01

HYDROGEN HUBS

Authorizes **$8B** funding over the period FY 2022-26; establishes 4 regional clean hydrogen hubs to demonstrate production, processing, delivery, storage and end-use of clean hydrogen.

02

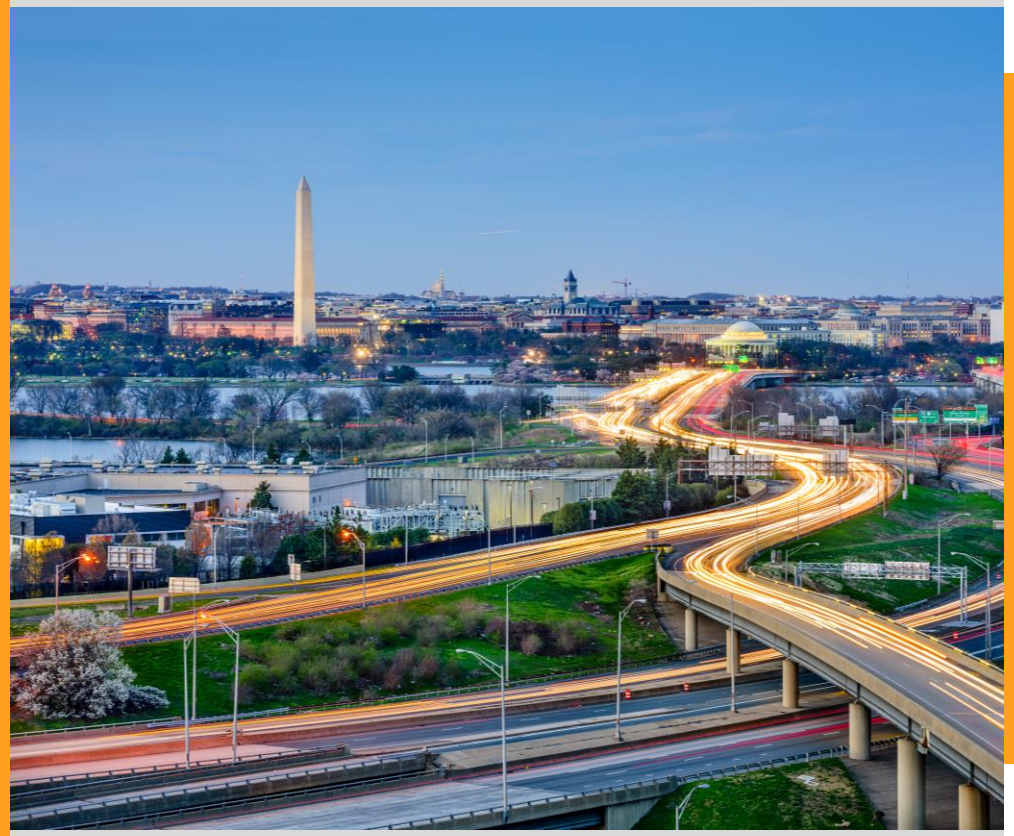
HYDROGEN SUPPLY CHAINS

Authorizes **$500M** for the period FY 2022-26; creates program for hydrogen manufacturing and recycling to support domestic supply chains.

03

HYDROGEN ELECTROLYZERS

Authorizes **$1B** for the period FY 2022-2026; establishes a demonstration, commercialization and deployment program with the aim to reduce the cost of clean hydrogen production from electrolyzers.



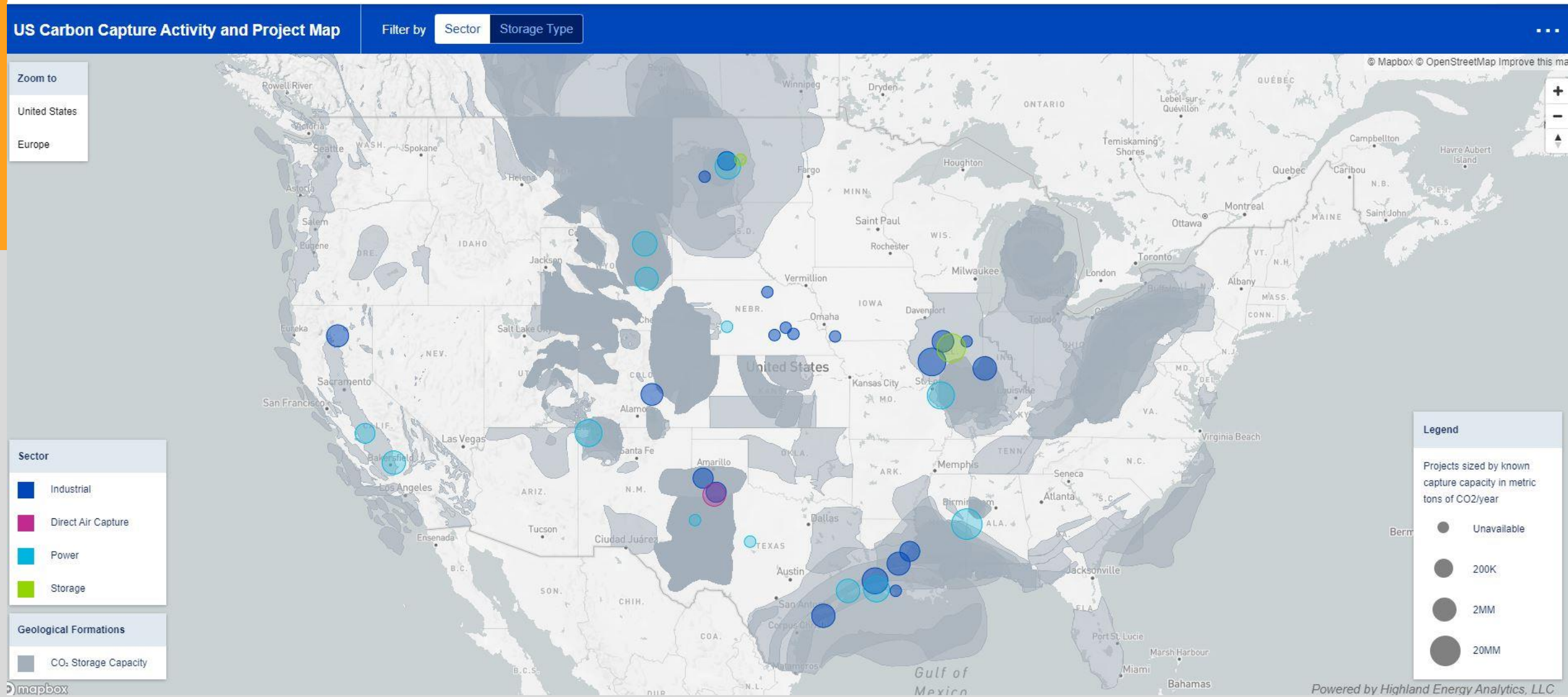
BEYOND THE BID...

Tax & Financial Incentives (these provisions are most likely to be included in budget reconciliation process):

- Budget reconciliation ($3.5 trillion) package expected to be finalized in September 2021
- Increase 45Q credit value for industrial and power projects to $85 per ton of CO2 for saline storage; $60/ton for EOR storage and carbon utilization; and for DAC to $180/ton for saline storage and $130/ton for EOR storage and carbon utilization.
- 10-year extension of 45Q commence construction window
- Direct pay option for 45Q and other clean energy and industrial tax credits without discount
- Aim is to encourage more industrial CCUS projects & DAC

US CARBON CAPTURE PROJECTS

Interactive Map Source: [Clean Air Task Force]



READ THIRD WAY'S MEMO ON THE BID HERE.

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THIRD WAY