Message

From: DeFigueiredo, Mark [DeFigueiredo.Mark@epa.gov]
Sent: 12/8/2020 1:25:47 PM
To: Kobelski, Bruce [Kobelski.Bruce@epa.gov]; McEvoy, Molly [mcevoy.molly@epa.gov]; Wiser, Nathan [Wiser.Nathan@epa.gov]; Feuer, Daniel [Feuer.Daniel@epa.gov]; Newman, Sharon [Newman.Sharon@epa.gov]; Miller, Melinda [miller.melinda@epa.gov]; Goodiel, Elizabeth [Goodiel.Elizabeth@epa.gov]
Subject: RE: Invitation | Unearthing Potential: The Future of US Geothermal Energy | Tuesday, December 1, 10:00 AM

ICYMI – Inside EPA Climate article on the Atlantic Council CCS webinar.

https://insideepaclimate.com/daily-news/center-right-group-urges-biden-epa-speed-permitting-ccs-wells

DAILY NEWS
Center-Right Group Urges Biden EPA To Speed Permitting Of CCS Wells
December 7, 2020
A group that endorses "conservative" clean energy policies is urging the incoming Biden administration to speed EPA permitting of carbon dioxide injection wells by reviewing its standards for long-term CO2 storage and allowing oil recovery projects to follow less prescriptive well requirements in at least some cases.

The group, ClearPath, suggests such a streamlining effort to avoid a potential permitting "logjam" under EPA's Class VI rules for its underground injection control (UIC) program. Those standards focus on long-term CO2 sequestration for carbon capture, use and storage (CCUS) projects not focused primarily on oil and gas production.

More lenient Class II rules, meanwhile, can be used for projects tied to enhanced oil recovery (EOR) operations, though in some cases projects might be required to "transition" from the Class II requirements to the Class VI standards.

ClearPath says its call to review the Class VI rules and allow wider use of Class II is a logical outgrowth of Congress' 2018 expansion of the "45Q" tax incentive for CCUS projects and the Biden administration's pledge to significantly curb greenhouse gases.

The group says streamlining EPA's permitting program can supplement ongoing efforts to expand states' role in CCUS permitting as well as expanded funding already being provided to EPA for permitting activities.

"There is just going to be significant internal reform and work and streamlining to do by the next administration just within EPA and its process," ClearPath Executive Director Rich Powell told a Nov. 30 Atlantic Council webinar on ways the federal government could boost its support for CCUS.

Powell said EPA's effort should aim to get to the "same level of rigor and certainty in the [permitting] outcome but find a way to do that a lot faster."

He cited the multi-year process Archer Daniels Midland (ADM) faced to obtain the first permit issued under the Class VI program, for an ethanol plant in Illinois. "ADM has said publicly they would be reluctant to do another one given how difficult that process was."

While Powell's remarks did not detail potential streamlining approaches, ClearPath in response to a follow-up query from Inside EPA referenced prior agency commitments to periodically revisit its Class VI program as a starting point.

The group also cited National Petroleum Council recommendations issued in December 2019 and updated this year, which include calls for regulatory improvements to EPA's UIC program.

That group -- convened by the Energy Department and including major oil companies, non-governmental organizations and academics -- suggested that EPA work with states and others to develop a process for determining, based on

injection pressures or the amount of CO2 injected, when an EOR project must transition to more stringent Class VI requirements, or alternatively that environmental risk is low enough to allow continued use of the softer Class II rules.

The Atlantic Council discussion of federal CCUS policy comes amid pledges by Biden officials to pursue efforts to decarbonize the power sector by 2035 and the broader economy by mid-century. Unlike some environmental groups, Biden has expressed openness to technologies such as CCUS as part of a broader effort to decarbonize the economy.

EJ Concerns

The event also showcased tensions over the regulatory approaches necessary to achieve such long-term climate goals.

Many climate policy experts call CCUS a critical GHG strategy, but some environmental advocates are hostile to it out of concern it could slow a transition from fossil fuels or skirt concerns of environmental justice (EJ) communities affected by CCUS projects or related infrastructure, such as CO2 pipelines.

Erin Burns, the policy director of Carbon 180 -- a group focused on carbon removal technologies -- said during the event that she and Powell "probably have different perspectives on what needs to change on the regulatory side" on streamlining issues. Burns also noted that EJ concerns have historically been left out of discussions related to CO2 projects.

"We need to be talking to communities where this is going to be deployed," she said, rather than leaving these issues to be an "afterthought."

Burns and Powell, however, agreed that CCUS and related projects could be warmly embraced by local communities on environmental or jobs grounds, alluding to technology being demonstrated at the Net Power project in Texas for retrofitting a natural gas power plant to curb both GHGs and criteria pollutants.

Powell also warned of the need to address EJ concerns without slowing an array of projects needed for both CCUS carbon projects and the broader move toward lower carbon energy, including CO2 pipelines and power transmission lines. He added that EJ can also be an "accelerator" of such projects when local communities consider them to have jobs and environmental benefits.

"The interlinked issues of regulatory reform and streamlining and addressing very important EJ issues are going to be the make-or-break not only for carbon capture but the entire energy transition," Powell said.

Multi-Pronged Approach

He also argued EPA's need to streamline its Class VI process is part of a multi-pronged approach for boosting CCUS at the agency. Other components include further approval of state programs to "take some of that caseload off of EPA," and the fact that Hill appropriators have already provided additional permitting resources to EPA.

With respect to state programs, Powell noted that Wyoming and North Dakota already have been granted Class VI primacy and that other states have applied for such status. "Texas is not yet one of them, but it needs to be one of them," he said.

ClearPath in its response adds: "We think EPA should actively look for ways to streamline the process based on lessons learned. This could also be accompanied by reasonable deadlines, e.g., internal timelines and deadlines that would give more certainty to project developers."

The group further notes that the agency is already required to reevaluate its program periodically, alluding to the agency's pledge in its original 2010 Class VI rule to implement an "adaptive" rulemaking approach that anticipates potential revisions in six years.

"It hasn't done that, which you might say is understandable due to lack of historic commercial development interest and budget resources," the group says. "But now is the time to re-examine the issue, given increased support from Capitol Hill appropriators, the expansion of 45Q, complementary state policies and corporate carbon removal commitments that are driving new interest in CCS projects."

The call to reevaluate the Class VI standards parallels a suggestion by Hunton Andrew Kurth attorney Fred Eames, who has long worked on CCUS issues.

Eames argued in May that policy changes to EPA's Class VI rules are necessary due to depressed oil markets as a result of the coronavirus pandemic. That pressure boosts the need to focus less on EOR projects to store captured CO2 and more on non-producing storage options.

Eames also called for examining the requirements for injection wells, incuding those related to post-injection monitoring of a site as well as financial assurance requirements. -- Doug Obey (dobey@iwpnews.com)

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From: DeFigueiredo, Mark
Sent: Tuesday, November 24, 2020 12:04 PM
To: Kobelski, Bruce <Kobelski.Bruce@epa.gov>; McEvoy, Molly <mcevoy.molly@epa.gov>; Wiser, Nathan <Wiser.Nathan@epa.gov>; Feuer, Daniel <Feuer.Daniel@epa.gov>; Newman, Sharon <Newman.Sharon@epa.gov>; Miller, Melinda <miller.melinda@epa.gov>; Elizabeth Goodiel (Goodiel.Elizabeth@epa.gov) <Goodiel.Elizabeth@epa.gov>
Subject: FW: Invitation | Unearthing Potential: The Future of US Geothermal Energy | Tuesday, December 1, 10:00 AM

Headline event outlined below isn't GS but maybe of interest to those with interest in geothermal wells. For my GS friends, see 45Q webinar at the bottom of the email.

From: Atlantic Council Global Energy Center <energy@atlanticcouncil.org>
Sent: Tuesday, November 24, 2020 9:21 AM
To: DeFigueiredo, Mark <DeFigueiredo.Mark@epa.gov>
Subject: Invitation | Unearthing Potential: The Future of US Geothermal Energy | Tuesday, December 1, 10:00 AM

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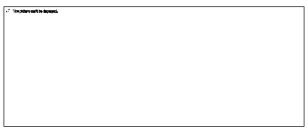
Tuesday, December 1, 2020
10:00 - 11:00 am EST



Keynote remarks by

H.E. Thórdís Kolbrún R. Gylfadóttir
Minister of Tourism, Industry, and Innovation
Government of Iceland

A conversation with

H.E. Thórdís Kolbrún R. Gylfadóttir
Minister of Tourism, Industry, and Innovation
Government of Iceland

The Hon. Daniel R Simmons
Assistant Secretary, Office of Energy Efficiency and Renewable Energy
US Department of Energy

Alexander Richter
Managing Director
Iceland Renewable Energy Cluster; Iceland Geothermal

Ann Robertson-Tait
President
GeothermEx

Katherine Young
Laboratory Program Manager, I-Geoscience
National Renewable Energy Laboratory

Moderated by

Ragnheiður Elín Árnadóttir
Former Icelandic Minister of Industry & Commerce;
Nonresident Senior Fellow
Atlantic Council Global Energy Center

Please join the Atlantic Council Global Energy Center on **Tuesday, December 1** at **10 AM EST** for an informative public discussion with US and Icelandic experts on the future of geothermal energy in the United States.

While intermittent solar and wind have expanded rapidly across the United States, vast baseload geothermal resources remain almost entirely untapped, with less than 1 percent of total US geothermal electricity potential estimated to have been exploited. Geothermal heat is a reliable and cost-effective form of baseload energy and an energy-efficient option for district heating and cooling, not to mention a potential power source for various industrial processes. And with strong government and private sector support, in addition to technological advancement, geothermal energy could scale up and expand beyond the Western United States and across the country to the nation's economic and environmental benefit. Policy advancement for US geothermal energy would serve as a catalyst for clean tech innovation and climate action, and provide emissions reductions, cleaner air, energy security, job creation, new market growth, and bipartisan opportunities for renewable energy development.

This event will highlight lessons learned from Iceland, the world's geothermal industry leader, and will focus on the current potential for US geothermal development; the challenges to geothermal growth and scale; as well as the role of fossil energy companies, Enhanced Geothermal Systems technologies, and government policy in geothermal development. And on the heels of the US election, panelists will explore how the Biden-Harris Administration and Congress can support geothermal growth as part of coronavirus recovery and the energy transition.

Please join this conversation via Zoom, which is accessible through your web browser, the Zoom desktop or mobile app, and by phone. If you wish to join the question and answer period, you must join by app or web. Please register here to receive further information on how to join the virtual audience.

Upcoming Global Energy Center Events

- *The future of 45Q: Carbon capture policy in the Biden-Harris Administration* | Monday, November 30, 2:00 pm EST

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