

MEMORANDUM

DATE: July 7th, 2023
Where: CSIS Youtube Channel
TO: Cynthia Williams
FROM: JP Gutierrez
SUBJECT: Low-Carbon Hydrogen: Tax Credits & Emissions Intensity

Overview:

The event is about the future of hydrogen and low-emissions hydrogen in the United States. I came across this event through the Center for Strategic and International Studies, also known as CSIS, youtube channel. I found it by looking through their youtube channel. The main speaker leading the event is named Joseph Majkut and he is the Director of Energy Security & Climate Change Problems at CSIS.

Summary:

Joseph Majkut starts off the event by saying that the United States is making substantial investments into low-emissions hydrogen in the wake of the Inflation Reduction Act and Infrastructure Investment and Jobs Act. He then claims that low-emission hydrogen is an important part of the net 0 energy system. He then asks the question “Is this a place where the US can take a lead in developing a strategic low energy carbon energy resource and will the US be able to leverage its natural resources to contribute to the growth of a low carbon hydrogen industry which will help meet climate and our energy goals?” Joseph Majkut then announces with the help of a CSIS member, will introduce three experts that are going to navigate the conversation ranging from the intellectual to commercial.

The first introduces his colleague Jane Nakano, a senior fellow at CSIS in the energy program. Jane Nakano then started to moderate the conversation. She introduces Aaron Bergman, a fellow for the Resources of the Future.

Aaron Bergman opens up with some slides to support his talk about the incentives for fossil-fuel-based hydrogen. He begins talking about the two tax credit for fossil fuels, which includes the 45V Tax Credit for Hydrogen Production, a new tax credit under the Inflation Reduction Act, and the 45Q Tax Credit for Carbon Dioxide Sequestration, a tax credit that's value increased under the Inflation Reduction Act. He then provides an image showing the process of life cycle emissions of hydrogen production. He shows that natural gasses, coal, and electricity do have emissions of methane and CO₂ into the atmosphere through leakage. He then shows the audience a chart about the different prices one can see when using the 45V Tax Credit. Jane Nakano, after Aaron Bergman stops talking, introduces Alex Dewar, a managing director and partner at the Boston Consulting Group. Alex Dewar starts by saying that natural gas or other hydrocarbons with CCS-driven hydrogen is critical for the future. He says that it is a real material opportunity to scale up production and emerging uses of low-carbon hydrogen going forward. He then claims that CCS is the majority component here and is the most important decarbonization lever to derive a low-carbon hydrogen molecule from any fossil sources. CCS will account for 70 to 80% of the emissions reduction from the current conventional gray hydrogen production. He says CCS use with low-carbon hydrogen is a relatively mature and scalable technology versus other alternative methods.

Jane Nakano, after Alex Dewar finished his segment, introduces Matt Reeves, the New Products and Strategy Integration Manager at ExxonMobil. Jane says that he was brought in for a commercial perspective. Matt Reeves states that the overarching message concerning hydrogen policy is the consistent transparent value of carbon that is technology neutral when done on a life cycle assessment basis. He goes on to explain what Tech Neutrality is and why it is important. He says it means a policy that allows all hydrogen sources to compete on a level playing field just based on carbon intensity. He continues to say that it is important because it produces the maximum GHG reduction for the lowest cost to society. Additionally, Matt says that society's ability to predict the future of energy, but this industry's ability to innovate when presented with a problem is very good. Their goal is to find the problem and let industry innovate to fix it and Tech Neutrality is the key to that.

The rest of the event goes into question being asked by Jane and the audience.

Comments:

What I thought was interesting is how there is a commercial aspect that was presented at the event. This changed my view on the commercial side and made me have more hope on climate issues. I originally thought that the commercial side wouldn't want to innovate and stay the same and this event changed my view on them.

Attachments

<https://www.youtube.com/watch?v=0Rpd9j3tEUU>