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Internal Revenue Service
1111 Constitution Avenue, N.W.
Washington, D.C. 20224

August 3, 2020

Re: Comments to REG-112339-19

Dear Internal Revenue Service:

On behalf of LanzaTech, please find attached comments in response to the request for comments on the proposed regulations contained in Notice of Proposed Rulemaking REG-112339-19 regarding section 45Q of the Internal Revenue Code), published at 85 Fed. Reg. 34050 (June 2, 2020).

We commend Treasury and the IRS for crafting well-reasoned regulations that retain the integrity of the statute while recognizing the commercial realities that any regulations must accommodate in order to get projects off the ground.

Respectfully submitted,



Jennifer Holmgren
Chief Executive Officer

August 3, 2020

**Comments of LanzaTech
in Response to
Notice of Proposed Rulemaking
IRS REG-112339-19**

LanzaTech respectfully submits these comments for your consideration in response to the Internal Revenue Service (IRS) Notice of Proposed Rulemaking (NPR), 85 Fed. Reg. 34050 (June 2, 2020). Specifically, LanzaTech appreciates the opportunity to comment in support of the IRS proposed regulatory definition of “qualified carbon oxide” at §1.45Q-2(a). LanzaTech encourages the IRS to finalize the rules consistent with the NPR with regards to the definition of “qualified carbon oxide” and the earning of carbon oxide sequestration credits for the purposes of IRS Code §38. As evidenced in the plain language of the statute, Congress clearly intended to limit the availability of the carbon oxide sequestration credit to just that, carbon oxide inputs (*i.e.* carbon monoxide and carbon dioxide.) Below we offer background on LanzaTech and our interest in the NPR and detail our support for the IRS proposal.

Background

By way of background, LanzaTech is headquartered outside of Chicago, Illinois and has scale up and microbe manufacturing facilities in Soperton, Georgia. It is a leading biofuel company that has pioneered gas fermentation as a platform to utilize the carbon in industrial emissions and other waste resources to make low-carbon chemicals and renewable fuels that reduce or replace fossil fuels while creating jobs and revenues in heavy manufacturing and other sectors. LanzaTech continues to create high level jobs in the United States, having grown from 2 U.S. employees in 2010 to more than 150 U.S. employees today, with additional staff overseas. By leveraging waste resources, LanzaTech’s solutions mitigate carbon emissions from industry without adverse impact to food security or land resources, significantly reducing air pollution and life cycle GHG emissions. LanzaTech’s unique process, currently protected by over 828 granted patents and 409 pending patent applications, utilizes waste carbon oxides to produce sustainable road and aviation fuels as well as platform chemicals that are building blocks for everyday products such as rubber and plastics.

LanzaTech is committed to creating jobs in the United States and reducing our industrial pollutants here at home. LanzaTech works extensively with the US Department of Energy (DOE), the Federal Aviation Administration (FAA), and the US Department of Agriculture (USDA) to develop transformational CCU fuels and chemicals from waste gases. Our collaborations extend to the DOE National Labs, including Pacific Northwest National Lab, Argonne National Lab, and Oak Ridge National Lab. The Section 45Q credit provides a meaningful contribution toward advancing deployment of LanzaTech technology at a commercial-scale in the U.S.

Comments

On its face, IRS Code §45Q, entitled “*Credit for carbon oxide*,” applies only to a carbon oxides. 26 USC §45Q. The statute defines “qualified carbon oxide” specifically in terms of “carbon dioxide” or “other carbon oxide” that is “captured from an industrial source,” “would otherwise be released into the atmosphere as an industrial emission of a greenhouse gas or lead to such release,” and “is measured at the source of capture and verified at the point of disposal, injection, or utilization.” 26 USC §45Q(c)(1). As such, only carbon dioxide and carbon monoxide, a precursor to carbon dioxide, satisfy the definition of “qualified carbon oxide.” Carbon monoxide either forms carbon dioxide upon combustion, which is then released to the atmosphere or bonds with oxygen in the air to form carbon dioxide if released directly into the atmosphere,

The IRS correctly recognizes in the NOPR that the statutory definition of “qualified carbon oxide” is “clear due to the broad acceptance and use of the term by industry participants, environmental groups, and stakeholders.” It requires no further explanation or expansion. As such, LanzaTech supports the IRS proposal to adopt in its regulations a definition essentially verbatim to statute. *See*, 26 CFR §1.45Q-2(a), 85 Fed. Reg. 34053, (proposing a regulatory definition for “qualified carbon oxide.”) Thus, carbon dioxide and carbon monoxide are the only two qualifying input gases for a carbon oxide sequestration credit.

While the statute requires consideration of other greenhouse gases (GHGs) in determining the lifecycle analysis (LCA), 26 USC §45Q(f)(5)(B)(ii), this does not expand the boundary of the LCA to include other components of industrial emissions as inputs for a carbon oxide utilization process or create an opportunity for additional GHGs, such as methane, to serve as the basis for a taxpayer to earn a credit for carbon oxide sequestration. As the IRS rightly recognizes, “[a]lthough the section 45Q credit is only available with respect to qualified carbon oxides, all greenhouse gas emissions are taken into account under this analysis. 85 Fed. Reg. 34056.

LanzaTech supports the IRS proposal to adopt an LCA approach that will be “subject to a technical review by the DOE, and the IRS, in consultation with the DOE and the EPA” and “base the calculation of the amount utilized is based on an analysis of lifecycle greenhouse gas emissions.” 85 Fed. Reg. 34056, 34058. However, it is important for the IRS to confirm that the scope of the LCA begins with the carbon oxide inputs only, and not include other greenhouse gases that may also be present in an industrial gas stream. In the case of utilization, this should assure proper calculation of the amount of the qualified carbon oxide that was captured and permanently isolated from the atmosphere, or displaced from being emitted into the atmosphere, through use of a process described in section 45Q(f)(5)(A). *See generally*, 26 USC §45Q(f)(5)(B) (providing a methodology to determine the amount of qualified carbon oxide utilized by the taxpayer.)