



407 Sansome St., 4th floor
San Francisco, CA 94111

RE: 3Degrees comments in response to the proposed regulation (REG-117631-23) related to the credit for the production of clean hydrogen and the clean fuel product credit.

To: U.S. Internal Revenue Service, submitted electronically via www.regulations.gov.

Submitted by:

Helen Kemp
Senior Associate, Regulatory Affairs
3Degrees Group Inc.
235 Montgomery Street, Suite 320
San Francisco, CA 94121
hkemp@3degrees.com

Date: February 26, 2024

RE: 3Degrees comments in response to the proposed regulation (REG-117631-23) related to the credit for the production of clean hydrogen and the clean fuel product credit.

3Degrees appreciates the opportunity to contribute feedback on the U.S. Treasury Department and Internal Revenue Service's (IRS) (together, "the Agencies") proposed regulation related to the tax credit for the production of clean hydrogen (§45V).

3Degrees is a leading provider of comprehensive clean energy and carbon reduction products, programs, and services that enable organizations and individuals to transition toward a low-carbon economy. To this end, 3Degrees serves hundreds of corporate and institutional customers who voluntarily purchase hundreds of thousands of megawatt-hours (MWh) of renewable electricity products annually from generators across the globe. 3Degrees also supports clean technology companies in maximizing the decarbonization impact of their products and helping meet government decarbonization and clean technology mandates. This includes working with renewable energy generators in providing qualifying renewable energy credits (RECs) to meet renewable portfolio standards (RPS) and advising on clean fuels consumption under clean fuels standards (CFS). Additionally, 3Degrees serves as a carbon credit project developer and has worked closely with more than 50 projects to quantify and validate emissions reductions.

3DEGREES' COMMENTS

3Degrees' comments are focused on the requests for comment on the design of EAC and RNG Certificate requirements. 3Degrees' comments are informed by over two decades of navigating verification of greenhouse gas emissions and validation of renewable electricity usage across voluntary and mandatory programs.

We applaud the Agencies for proposing a “book-and-claim” accounting approach to substantiate renewable electricity from non-contiguous renewable electricity generators as an energy input to hydrogen production. The following comments provide our recommendations for further shaping the requirements around the use of EACs under §45V.

I. EAC Requirements

Comments requested on whether 1 MWh of production electricity should equal 1 MWh EAC or receive a different treatment to account for transmission and distribution line losses.

It is well-established that one REC represents one MWh of renewable energy generation. The White House Council on Environmental Quality defines a REC as “the technology and environmental (non-energy) attributes that represent proof that 1 [MWh] of electricity was generated from an eligible renewable energy resource” (The White House Council on Env’t Quality, Implementing Instructions for Exec. Order 14057, available at https://www.sustainability.gov/pdfs/EO_14057_Implementing_Instructions.pdf). This principle is integral to the functioning of current regulatory schemes (e.g., state renewable portfolio standards) that rely on RECs to track renewable generation on a MWh basis. Additionally, any granular geographic requirement that is embedded in the rule as part of the Agencies’ approach to additionality will serve to mitigate marginal transmission and distribution line losses that might occur over longer delivery distances.

Comments requested on the proposed 5% allowance approach, particularly with respect to balancing administrative feasibility and burden with accuracy of identifying circumstances with a low risk of induced grid emissions. This includes whether 5% is the appropriate magnitude for an allowance and whether the 5% should apply to all existing minimal-emitting electricity generators in all locations or a subset and for what reasons.

3Degrees is supportive of a 5% allowance for qualifying hydrogen facilities to purchase EACs from existing minimal-emission electricity generators, whether or not from the electricity generators that would otherwise curtail their output. We see this as an appropriate maximum magnitude based on the data and assumptions outlined by the Agencies in the proposed rule. This allowance would provide an adequate level of flexibility for existing non-emitting resources to participate in the market for §45V-eligible EACs with minimal risk of materially increasing grid emissions at any particular time.

We strongly recommend that the Agencies clarify that such existing resources that supply EACs under the 5% allowance must still meet the same geographic requirements (i.e., the regions proposed in §1.45V-4(d)(2)(vi)). This standard would ensure that the benefits of non-emitting generation are realized reasonably proximal to qualifying hydrogen production and would be practical from a tracking and administrative perspective.

Comments requested on whether the duration of this transition rule to hourly matching is appropriate, including specific data regarding current industry practices, the predicted timelines for development of hourly tracking mechanisms, and the predicted timeline for market development for hourly EACs.

We believe that the proposed requirement for hourly EAC matching to begin in 2028 is premature. The vast majority of EAC tracking systems do not currently support 24/7 procurement and there is not yet market-wide agreement on how exactly to implement hourly matching from a tracking and accounting perspective. It is imperative that the §45V regulations do not establish requirements that are impractical or impossible to meet.

3Degrees recommends a phased-in approach that supports the goal of implementing a temporal requirement and reduces the risk of unaccounted-for emissions. We suggest that a truly transitional and more realistic schedule for §45V's temporal requirement would be structured as follows: (1) allow annual matching through 2027; (2) require either quarterly or monthly matching beginning in 2028, and assess the current status of hourly matching capabilities in that year; and (3) require hourly matching beginning in 2030. This approach would ensure that the EAC industry and market have time to establish the necessary technical and functional capacity to support accurate incremental time-based accounting.

Comments regarding the proposed incrementality requirement.

In order to provide increased market accessibility and certainty, 3Degrees is supportive of extending the proposed requirement that generation must come from facilities with a COD within 36 months of the hydrogen facility's placed in service (PIS) date (§1.45V-4(d)(3)(i)(A)). Our assessment is that a **48-month** window would better support early development of the §45V-based EAC market, particularly in these early years of eligibility.

Because many clean hydrogen facilities' intended PIS dates are still far in the future, it is extremely difficult to predict whether a currently-new non-emitting electric generation facility will be able to meet the 36-month COD window. In the near term, this will require prospective hydrogen producers to potentially buy EACs from renewable projects that have yet to come online. This, combined with the fact that it is difficult for generators that are not yet operational to commit to fulfilling a particular hydrogen facility's demand, creates a level of uncertainty that makes forward contracting highly risky. A 4-year incrementality requirement would ensure that investments made in renewable generation now are more secure by reducing risk and maintaining market stability.

II. RNG Certificate Requirements

How broadly available and reliable are existing electronic tracking systems for RNG certificates in book and claim systems? What developments may be

required, if any, before such systems are appropriate for use with RNG certificates used to claim the section 45V credit?

The M-RETS Tracking Platform is a renewable resource tracking system that has expanded beyond RECs to track other environmental attributes and energy commodities, including certificates to support transactions of biomethane. These certificates are called renewable thermal certificates (RTCs). The M-RETS system has been capable of transacting RTCs since 2020 and is being leveraged by a number of policies and programs across the U.S. to substantiate procurement and delivery of biomethane, including clean fuels standards, utility requirements to procure biomethane, and voluntary biomethane offers for gas consumers. The M-RETS system does not require third-party verification and currently allows “medium MMBTU” renewable natural gas projects that do not clean their biogas to pipeline specification to generate RTCs. We would recommend additional requirements from the Agencies that ensure gas is pipeline injected and third-party verification occurs.

More information can be found at

<https://www.mrets.org/m-rets-renewable-thermal-tracking-system/>.

How should RNG or fugitive methane resulting from the first productive use of methane be defined, documented, and verified?

The proposed “first productive use” standard has several potentially negative consequences and does not take into account the realities of the biogas industry. Biogas projects have very high operating costs relative to other renewable energy projects. If incentives change, which is likely in the volatile renewable fuel standard and clean fuel standard markets, projects could be stranded and no longer able to cover their operating costs (even if the capital has already been installed).

3Degrees echoes the comments submitted by the American Biogas Council, which state that a “first productive use” requirement “overly restricts otherwise eligible biogas and RNG feedstocks that could support clean hydrogen production and ignores the fact that there are numerous reasons an existing biogas facility may switch ‘productive uses’ including, but not limited to, the expiration of existing contracts, like power purchase agreements.” If a first productive use standard is used, quickly allowing stranded projects to qualify should be a priority. If this is the case, we suggest that the Agencies define “first productive use” as RNG that is produced based on an offtake agreement signed within 48 months of the beginning of hydrogen production, rather than within the same or later taxable year as the relevant hydrogen facility’s PIS date.

Further, 3Degrees urges the Agencies not to assign a default fossil-based carbon intensity (CI) score to RNG that is not “first productively used,” however defined. This fails to recognize the CI reduction benefit of RNG compared to fossil natural gas that is realized regardless of whether the methane was previously captured and used at the project host.

Are geographic or temporal deliverability requirements needed to reflect and reduce the risk of indirect emissions effects from biogas and RNG or fugitive methane use in the hydrogen production process? If so, what should these requirements be and are electronic tracking systems able to capture these details?

On the deliverability front, geographic restrictions should not be implemented as part of any regulation regarding the use of RNG certificates for book-and-claim accounting pursuant to §45V. Because North America only has one common carrier pipeline network, any hydrogen facility connected to the pipeline should be able to use book-and-claim accounting with any RNG facilities connected to the North American network.

RNG is more readily stored than electricity, and therefore deserves more temporal flexibility than the requirements applied to electricity. A temporal requirement will not materially impact the indirect emissions associated with RNG use, so we would encourage the Agencies to be as unrestrictive as possible. We support the American Biogas Council's suggestion that any MMBtu that is pipeline injected in a certain calendar year may be booked-and-claimed within that year or the next.