ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

SUBMITTED VIA REGULATIONS.GOV
Via Federal eRulemaking Portal at: www.regulations.gov (IRS REG–117631–23)

February 26, 2024

CC:PA:LPD:PR (REG–117631–23)
Room 5203
Internal Revenue Service
P.O. Box 7604
Ben Franklin Station
Washington, DC 20044

The Honorable Janet Yellen
Secretary
U.S. Department of the Treasury
1500 Pennsylvania Ave, NW
Washington, DC 20220

The Honorable Jennifer Granholm
Secretary
U.S. Department of Energy
1000 Independence Ave, SW
Washington, DC 20585

John Podesta
Senior Advisor to the President for Clean Energy Innovation and Implementation
The White House
1600 Pennsylvania Ave, NW
Washington, DC 20220

Re: ACES Delta Comments in Response to Notice of Proposed Rulemaking Section 45V Credit for Production of Clean Hydrogen: REG-117631-23

The Inflation Reduction Act (IRA) was enacted to encourage investment in clean energy projects to help the U.S. meet climate goals and strengthen energy security. As one of the world's first and most advanced large-scale green hydrogen project developers, ACES Delta shares those goals, however, the Section 45V proposed regulations, without change, will materially impair its ability to advance its projects and the IRA goals. ACES Delta, located within a regulated utility service territory with no control over its power supply, is unable to satisfy the requirements of the proposed regulations creating a significant hurdle for future

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

advanced large-scale green hydrogen projects, and risking the "lift-off" of the clean hydrogen industry contrary to the core objectives of Section 45V.

****

ACES Delta, LLC ("ACES Delta") is pleased to submit these comments to the U.S. Department of Treasury ("Treasury") and Internal Revenue Service ("IRS") in response to requests for public comment included in the notice of proposed rulemaking published on December 26, 2023 (the "NOPR") containing proposed regulations (the "45V Proposed Rules") relating to the production tax credit ("PTC") for clean hydrogen established by Section 45V under the IRA.

Background and Purpose for ACES Delta Comments.

ACES Delta is a joint venture between Mitsubishi Power Americas, Inc. and Magnum Development, LLC (now 100% owned by Chevron U.S.A.). ACES Delta is currently constructing and will be the operator of its initial green hydrogen project through an affiliate project company, Advanced Clean Energy Storage I, LLC ("ACES I"), an electrolysis and storage facility that, when paired with onsite large scale salt cavern storage, will store over 300 gigawatt-hours of clean energy. ACES Delta will ultimately have enough storage capacity to store clean energy sufficient to power the entire U.S. western grid for multiple days.

Situated at the intersection of several major transmission lines in Delta, Utah and at the core of the Western Electricity Coordinating Council ("WECC") control area, the ACES I project is interconnected to the balancing authority area of the Los Angeles Department of Water and Power ("LADWP") with anticipated ACES I project electrolyzer expansion to also be connected within the LADWP balancing authority area. In contrast, for other ACES Delta projects and expansion outside the scope of the ACES I project, additional electrolyzers are expected to connect to the PacifiCorp East balancing authority area, with Rocky Mountain Power, a division of PacifiCorp and part of Berkshire Hathaway Energy ("RMP"), supplying the retail power.

The ACES I project is fully contracted to the Intermountain Power Agency ("IPA"), an interlocal entity and political subdivision of the state of Utah. Specifically, through a tolling arrangement, IPA delivers renewable energy to the ACES I project to convert to hydrogen which energy is then returned to IPA to fuel IPA's IPP Renewed and under construction 840 MW gas turbine combined-cycle power plant.[1] In addition to ACES I, ACES Delta is planning to develop other

[1] Under this tolling arrangement, ACES I provides a renewable energy conversion and storage service and at no point purchases or takes title to any of IPA's renewable energy products but rather converts IPA's provided energy to hydrogen through its electrolyzers to be delivered back to IPA. Apart from such energy conversion, all of ACES I's power for operations and maintenance will be purchased from RMP.

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

projects where it will purchase and receive renewable energy for its production and sale of hydrogen. Because ACES Delta's facilities are situated within RMP's Utah Public Service Commission ("PSC") regulated service territory, such energy purchases must be from RMP.

Operating in two separate DOE deliverability regions with different regulatory frameworks, together with regulated and limited available energy markets in the West make the Energy Attribute Certificates ("EACs") eligibility criteria under the 45V Proposed Rules simply not feasible for ACES Delta's future projects.

Specifically, these comments outline why the 45V Proposed Rules' incrementality, hourly temporal matching and deliverability eligibility requirements for EACs are currently not feasible, with no path to feasibility, for ACES Delta and other projects operating in service territories that are not able to participate in wholesale energy markets. For ACES Delta to achieve its full green hydrogen production potential, it will be bound to operating in a regulated utility market. Under the 45V Proposed Rules, the lack of eligible EACs in such a regulated market structure will increase green hydrogen production costs, impede adoption by customers, and create significant barriers for project financing, diminishing the prospects of delivering the clean hydrogen needed to support IRA objectives. Complex and significant infrastructural and operational adjustments, which must also be consistent across multiple power grids and systems, would be needed for EACs in such regulated systems to be eligible under the 45V Proposed Rules. Such adjustments would take a significant amount of time (likely well past 2028) and expense without an identified private or public sector path for funding. Such delay and expense are unnecessary since there are already established EACs practices in place that would support the IRA Section 45V objectives.

Informed by its experience with existing clean hydrogen projects, ACES Delta asks that Treasury consider the proposed recommendations outlined in this letter when issuing its final Section 45V regulations to best support the legislative intent of the Section 45V credits and ensure a more flexible, adaptable and effective framework for green hydrogen projects in regulated service territories where energy delivery is outside of a project's control.

Summary of ACES Delta Recommendations.

ACES Delta proposes the following recommendations as reasonable and practical paths to compliance with and to further the objectives of Section 45V for viable projects like ACES Delta operating within a regulated utility service territory with no ability to procure and manage its energy supply on an hourly basis:

1. Annual time matching requirements for projects that begin construction prior to 2032. Temporal matching requirements under Section 45V should be modified to include more flexible options. More granular time-matching may be achieved once technology,

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

regulatory, and market mechanisms are made available to support the implementation of more stringent requirements.

2. Adopt emissionality method which assesses the net emissions impact of hydrogen production as a proxy to the 45V Proposed Rule's temporal matching and incrementality criteria.
3. Align the boundaries of the deliverability regions to reflect the physical transmission interconnectedness of the U.S. West states and how the entire region manages load, transmission reliability and energy trading.
4. Allow a 10% curtailed energy safe harbor to meet the incrementality requirement.

ACES Delta is One of the Largest Green Hydrogen Projects in the World but Depends on a Single Public Utility for its Power Supply.

ACES Delta's strategic location, at the intersection of several major transmission lines within the WECC provides access to tens of millions of customers. Our large-scale salt cavern storage capabilities, puts ACES Delta in a unique position to support the decarbonization efforts of utilities and other traditionally hard-to-abate sectors. By providing utility-scale storage, ACES Delta enables a reliable, proven, and economic solution for optimizing the increasing volumes of renewables onto the grid.

As previously mentioned, ACES Delta is currently constructing and will soon operate the ACES I state-of-the-art clean electrolytic hydrogen production and storage facility. This facility comprises a 220-megawatt bank of electrolyzers for producing hydrogen, and two salt caverns capable of storing roughly 5500 metric tons of hydrogen per cavern (equivalent to over 300 gigawatt-hours of clean energy) for long-term/seasonal use. This hydrogen will be used by IPA as part of its IPP Renewed Project located adjacent to the ACES I project to replace a soon to be retired 1800 MW coal-powered power plant. The IPP Renewed project's new 840 MW hydrogen-capable gas turbine combined-cycle power plant will blend up to 30% hydrogen with natural gas upon commencement of commercial operations in 2025. Ultimately, IPP Renewed is intended to be fueled by 100% hydrogen. Beyond the ACES I project, ACES Delta has the capacity for at least 60 additional salt caverns and related electrolyzers, representing almost 9000 gigawatt-hours, enough to power the entire western U.S. grid for ~6 days. This illustrates the true potential and scale of the ACES Delta project for clean energy storage and hydrogen production.

While some states in the Western United States offer access to competitive markets for electric customers and the ability for load to participate in organized markets, Utah does not.[2] As a

[2] For example, retail choice available in some markets provides customers with the ability to select the source of their electricity and obligates the local electric utility to deliver this purchased electricity to the customer. In most states (including Utah) and for most customers across the U.S., retail choice is not an option. Nineteen states and the District of Columbia offer some form of retail choice to one or more customer class (residential,

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

customer of RMP, a vertically integrated utility, ACES Delta is generally obligated to accept all electrical service from RMP alone. That means that ACES Delta must purchase unbundled RECs to qualify its production under Section 45V.[3] Since ACES Delta does not have the ability to contract for its own power supply in Utah, its only path to comply with temporal matching, deliverability and additionality eligibility requirements of the 45V Proposed Rules would be to purchase unbundled RECs.[4] This strategy is not feasible for temporal matching for two reasons: 1) there currently is no unbundled REC market with sufficient granularity and participation for eligibility compliance and it is unlikely that such a market will develop; and 2) ACES Delta would still be required to make production decisions without knowing if there will be an eligible REC available to purchase in the corresponding hour.

Key Features of the EAC Market Support Flexibility in 45V Proposed Rules.

The temporal matching eligibility and qualification criteria for EACs under the 45V Proposed Rules are not only unworkable as further described in these comments but are also far stricter and constraining than requirements for other decarbonization focused clean energy programs.

EACs are legal instruments that represent exclusive claims to the attributes of a unit of energy. Renewable Energy Certificates ("RECs") are a form of EACs that serves as a contractual mechanism to establish claims for electricity purchases from specific sources of clean energy generation. RECs represent the renewable energy attributes of one megawatt-hour (MWh) of renewable electricity generated and delivered to the electricity grid. RECs are created when a qualifying renewable resource delivers energy to the grid.

RECs serve as a crucial means of certifying that the purchased power was generated by a qualifying source, that the renewable energy attributes are not claimed by more than one entity, and that the attribute is retired and removed from circulation when used for compliance. The market price for RECs represents the marginal green premium (i.e., the incremental price needed for a new clean energy project to be economic) for the next clean energy resource,

commercial, industrial, and transportation). In aggregate, only 10% of customers are currently receiving electricity service via retail choice. For supporting evidence, see EIA Form 861, for 2022 which may be found at https://www.eia.gov/electricity/data/state/.

[3] We note that while ACES Delta may have some limited options to direct RMP under RMP's Schedule 32 or Schedule 34 so-called "Green Tariff" to procure renewable energy from specific renewable energy facilities, RMP sources power for these Green Tariffs from a variety of renewable sources such as wind, solar, hydropower, geothermal, or other resources deemed to be appropriate by RMP and the Utah PSC without any consideration as to whether these resources adhere to the 45V Proposed Rules EAC eligibility criteria, and these Green Tariff structures are not currently robust enough to provide a complete solution for ACES Delta projects. Moreover, the Schedule 32 Green Tariff is capped at 300 MW under state law.

[4] It is important to note that since PacifiCorp's two balancing authorities are currently in separate DOE Regions, it is likely that green power booked to the Green Tariff may be generated in the PacifiCorp West balancing authority, which is mapped to the Northwest DOE Region.

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

which provides a visible price signal to renewable energy developers of the value of clean energy over and above what can be realized through the sale of electric energy and capacity in wholesale electricity markets.

There are ten regional systems used for tracking REC creation and transfer, all of which register basic information about each MWh of renewable generation in that region and issue RECs to the generator, signifying that a MWh of renewable electricity has been delivered to the grid. Each REC has a unique ID and can only be owned by one account holder at a time, avoiding ownership disputes and preventing double counting. Furthermore, REC 'retirement' is a universal and indispensable means for demonstrating compliance with both voluntary and mandatory clean energy goals such as state Renewables Portfolio Standards ("RPS").

All state-specific clean energy programs created to date utilize RPS. The RPS have annual or multi-year compliance periods for which RECs may be used to verify progress, reflecting real-world uncertainty around inter- and intra-annual timelines for project development, load growth, and renewable output.[5] There has been an increasing interest in the use of time-stamped hourly RECs, as the '24x7' clean energy goals have grown in popularity. However, this concept has not been widely adopted and most RECs today are not time-stamped at the hourly level. Furthermore, the literature regarding the emissions benefits of hourly matching is new, thin, and contested.

For the purposes of Section 45V, Treasury should look to the experience from the design and implementation of existing clean energy programs where EACs without the restrictions in the 45V Proposed Rules are being used effectively to achieve decarbonization goals, instead of setting unique EAC qualification requirements for Section 45V that can only be met by significant and costly infrastructure and operational changes without sufficient evidence of their effectiveness.

[5] For example: https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-power-procurement/rps/rps-compliance-rules-and-process/60-percent-rps-procurement-rules.

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

ACES Delta Cannot Meet the Qualifying Criteria for EACs under the 45V Proposed Rules for Reasons Outside of its Control.

Key Issues with Hourly Temporal Matching.

1. **Hourly matching EACs are unavailable to ACES Delta and there is no line of sight to availability by 2028.[6]**

   The planned projects by ACES Delta are a concrete example of the impracticality of implementing hourly EACs by 2028 in a regulated energy market. ACES Delta's ability to obtain "green" electric energy from RMP is confined to RMP's Green Tariff. Under RMP's Schedule 34 Green Tariff RMP would contract with renewable projects on behalf of ACES Delta and provide the associated RECs without any consideration as to whether such RECs met the 45V Proposed Rule EAC eligibility criteria. Consequently, ACES Delta lacks any means to procure bundled EACs which would match the electrolyzer load on an hourly basis. Any adaptation of RMP's Green Tariff to dovetail with the EAC system and provide for hourly matching by 2028—or at any point—would necessitate RMP to deploy significant resources and technology, subject to regulatory approvals, all of which are beyond ACES Delta's control.

2. **Implementing hourly tracking for RECs would be inconsistent across regions, require significant resources and costs and cause unnecessary timing delays.**

   Before hourly matching could be possible, REC tracking systems would first need to have consistent hourly tracking systems. Existing foundational energy infrastructure and regulatory frameworks are primarily tailored for REC tracking intervals less frequent than hourly. System administrators generally agree that transitioning to hourly tracking would involve significant hurdles, including required comprehensive system upgrades, verification protocol modifications (including the need to align with state RPS compliance programs), and new regulations.[7] The willingness and readiness of stakeholders to embrace a consistent change to hourly tracking are mixed, with few regions currently equipped for hourly data tracking and low demand for hourly tracking for current REC purposes.[8]

---

[6] As noted in the NOPR, hourly EACs are not currently available. *See* Page 48 of 45V Proposed Rules: https://public-inspection.federalregister.gov/2023-28359.pdf.

[7] *See* Center for Resource Solutions (CRS) Readiness for Hourly Report – https://resource-solutions.org/wp-content/uploads/2023/06/Readiness-for-Hourly-U.S.-Renewable-Energy-Tracking-Systems.pdf ("CRS Report").

[8] We note that the CRS Report estimates a 1–2-year phase-in period (3-5 years for WREGIS) *once* the decision to implement hourly tracking has been made. To be workable under Section 45V, all REC tracking systems

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

Recognizing these current obstacles, any final rules should delay temporal matching requirements until all REC tracking systems are able to demonstrate readiness.

3. **Hourly matching REC markets are likely to be highly illiquid and potentially unworkable.**

Hourly REC markets introduce complexity and potential illiquidity, escalating compliance costs. These markets, influenced by the inherent variability of renewable energy and the static nature of grid infrastructure, struggle with precise hourly REC-to-load matching. In regions like Utah, utility pricing models aimed at balancing demand do not align perfectly with the unpredictable output of renewable sources, complicating real-time supply and demand adjustments. Direct contracts for renewable resources become the primary compliance strategy, requiring entities to closely align hydrogen production with the generation profiles of contracted renewables. However, this doesn't eliminate the risks tied to hourly matching due to the post-facto determination of supply, demand, and prices in an hourly EAC market. This market structure leads to either an oversupply, driving prices to zero, or undersupply, spiking prices to penalty levels. This extreme price volatility and the challenge of adjusting in real-time hinder reliance on secondary markets for eligible RECs, raising the risk of non-eligibility not from a lack of renewable investment but from the granularity of renewable generation's unpredictability and forecasting limitations.

4. **Hourly matching will increase hydrogen production costs and impede the ability to finance projects.**

Even without accounting for the variability inherent to renewable energy generation, mandating procurement of clean energy in every hour of operations raises procurement costs significantly. In a recent study completed for the American Council on Renewable Energy (ACORE), it was found that hourly matching can increase the cost of hydrogen production by up to 108% (i.e., 2.1x) relative to an annual matching framework, even without accounting for idiosyncratic forecast error.[9] This level of cost increase would disadvantage the green hydrogen industry and suppress the 'liftoff' that Section 45V aims to realize.

The growth and success of the green hydrogen industry relies upon available financing mechanisms requiring certainty and predictability. Any unpredictability created from

would first need to align on such a decision which would remain subject to the overcoming the multiple hurdles noted in these comments and in the CRS Report.

[9] Energy and Environmental Economics, Inc., & American Council on Renewable Energy (2023). https://acore.org/wp-content/uploads/2023/04/ACORE-and-E3-Analysis-of-Hourly-and-Annual-GHG-Emissions-Accounting-for-Hydrogen-Production.pdf.

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

hourly matching requirements would act as a significant barrier to green hydrogen projects securing necessary financing, threatening and delaying the IRA's objectives to grow the hydrogen industry. Policies that provide broader matching flexibility would significantly reduce the risks associated with forecast error and production variability accommodating requirements for financing.

In light of these challenges, it is evident that hourly tracking of EACs is not a comprehensive or efficient solution for the challenges of accurately measuring carbon dioxide abatement from clean energy purchases. Without significant advances in grid modernization, regulatory reforms, and the cultivation of new technologies and market mechanisms, hourly matching will increase the financial risks developers and investors face in procuring the Section 45V tax credit due to generation and load alignment uncertainties. This weakens the ability for industry to support the emissions reductions goals of the IRA.

Key Issues with Deliverability.

1. **ACES Delta cannot control the boundaries of the electric system within which it is located.**

   ACES Delta is strategically located within the proposed boundaries of the Mountain region, which encompass RMP's current service area.[10] Present alignment with the proposed region boundaries, however, does not guarantee future compliance. Alterations in RMP's service territory, which have occurred in the past, might jeopardize ACES Delta's eligibility under the deliverability requirement for qualifying EACs. The stringent criteria set forth in the 45V Proposed Rules poses a risk to ACES Delta, as future changes beyond our control could inadvertently lead to the loss of tax credits impairing the ability to finance new projects.

2. **Proposed deliverability boundaries would restrict the development of a larger green hydrogen ecosystem for decarbonizing the U.S. West.**

   ACES Delta can be an integral solution to decarbonization of power and other hard to abate sectors across the WECC region which is interconnected by large transmission lines that intersect across Western states. Stringent deliverability requirements in the 45V Proposed Rules that divide the WECC into the 4 deliverability regions would significantly impede the growth of this nascent ecosystem.

   A compelling case in point is ACES I – ACES Delta's collaboration with IPA to supply green hydrogen for IPA's IPP Renewed project as described above in the comments. The renewable energy to be converted to hydrogen through ACES Delta's electrolyzers is

[10] RMP provides service in Utah, Wyoming, and Idaho.

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

likely to come from several different regions: (i) solar from the Southwest and California region during the summer; and (ii) wind from the Mountain and Northwest regions. ACES I is intended to absorb this excess renewable energy and store it on a seasonal and regional basis. Existing transmission lines and arrangements will facilitate deliverability of this energy. The proposed regions disable this key decarbonization project from meeting the PTC requirements under the 45V Proposed Rule. Such a result is contrary to the objectives of the IRA.

Proposed Recommendations – For Each of the Issues Described Above, There Are Solutions.

As discussed above, feasibility and cost implications of hourly matching are in opposition to the intent of the Section **45V PTC to spur lift-off of the clean hydrogen industry. Additionally, the** 45V Proposed Rules concerning **deliverability and incrementality could severely restrict or delay ACES Delta and IPA, from achieving the goal of 100% green hydrogen for IPP renewed.**

To address these issues, ACES Delta proposes the following recommendations:

1. **Temporal Matching Flexibility Until Hourly is Feasible for All Projects.**

   Flexibility could be achieved by matching renewable contributions to electrolysis demand over an extended period, such as annually. This approach would better align with the inherent variability of renewable output and the operational realities of grid management enabling more effective and scalable integration of renewables into the grid, enhancing overall system efficiency and environmental benefits.

   ACES Delta recommends that annual matching be allowed until temporal matching is feasible to implement for customers in regulated markets without retail choice, or that such customers are excluded from temporal matching requirements. If the entities responsible in practice for the implementation of temporal matching are unable to develop the capability to fulfill their obligations by 2032, the earliest year when IRA tax credits may be declared to begin their phase-out period, the commencement of the temporal matching requirement should be postponed until such systems are fully operational and accessible for utilization. Allowing for a transition period to temporal matching will ensure that projects like ACES Delta's project will continue operating under the original compliance guidelines and produce the strongest environment for responsible industry growth.

2. **Allow the use of Emissionality as a proxy for Temporal Matching and Incrementality Issues.**

   Emissionality (sometimes referred to as carbon matching or locational marginal emissions netting) is a methodology for assessing the net emissions impact of hydrogen production. Under this approach, three steps are necessary – First, the marginal emissions associated with an electrolyzer's operations are calculated by summing the product of its power

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

consumption and the marginal emissions rate on the grid in every hour; Second, the marginal emissions avoided through procurement of new clean energy sources are calculated by summing the product of this new generation and marginal emissions rates; and, Third, over a pre-decided period of time (e.g., one year), the two values are compared to assess the net emissions impact on the grid. Then, if the emissions impact of the electrolyzers are found to be greater than the emissions abatement of the generators, the electrolyzer would be required to procure and retire RECs to make up the difference. Emissionality is a workable proxy, particularly for projects unable to access wholesale energy markets or restricted by a regulated utility service territory tariff, to the 45V Proposed Rule's eligibility criteria of temporal matching, and incrementality.

Emissionality emphasizes the actual emission reductions achieved by a project or policy, making it an ideal fit for assessing compliance with the intent of the IRA – to reduce greenhouse gas emissions – and qualification for Section 45V PTCs. This approach evaluates the direct impact of using renewable energy in hydrogen production and its broader effect on emissions, ensuring that hydrogen production contributes to economy-wide emission reduction goals in direct proportion to its growth as an industry.

Unlike temporal hourly matching, which requires strict and unworkable synchronization between renewable energy generation and hydrogen production, emissionality allows for more flexibility in sourcing clean energy in the pursuit of and focused upon emissions reductions. Emissionality is also likely to be less costly than temporal matching to implement.

Unlike the 45V Proposed Rules for incrementality, emissionality creates a direct incentive for green hydrogen production to utilize surplus renewable energy that would otherwise be "spilled" via curtailment, thereby leveraging an incremental source of emissions reduction from existing renewable assets by maximizing the output of zero-carbon resources.[11]

Unlike the 45V Proposed Rules for deliverability, emissionality allows hydrogen producers to procure clean energy supplies outside of their utility service territory as currently defined, which removes the obstacle to compliance facing customers in regulated and vertically integrated utility markets which lack customer choice. This aligns better with existing electricity grids, many of which do not equip consumers to manage the real-time balancing required by temporal matching on a monthly or hourly basis.

By taking advantage of existing systems for tracking emissions, such as available data on locational marginal emissions, emissionality will be less complex and less costly to implement than the 45V Proposed Rules. Furthermore, emissionality's focus on overall

[11] For more details on emissionality calculations, see the "carbon matching" approach described here: https://tcr-us.com/uploads/3/5/9/1/35917440/paths_to_carbon_neutrality_white_paper_april23.pdf.

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

emission reduction is fully aligned with the policy objectives of the Section 45V and makes it economically flexible, allowing for the use of cost-effective renewable resources without being limited to specific operational hours.

Emissionality enhances the environmental credibility of the hydrogen economy by linking the growth of this industry to a tangible demonstration of emissions reduction. This provides a broader, more flexible framework that closely aligns with the overarching policy objective of emissions reductions, making it a more appropriate measurement methodology in the context of green hydrogen production as a proxy for certain 45V Proposed Rule's eligibility criteria for EACs.

3. **Expanded Regions to Address Deliverability and Incrementality.**

It is vital to expand the proposed boundaries of the deliverability regions in the U.S. West to appropriately account for the electrical inter-connectedness and interdependence of the Western states. Established balancing authority areas based markets like the Western Energy Imbalance Market (WEIM) and the Western Energy Imbalance Service market (WEIS), which are within the WECC, or a projects ability to demonstrate physical connectivity to a resource, should be used to the define the boundaries of the deliverability regions. Adoption of these boundaries or qualifying physical connectivity would enable existing market systems, which have been developed and refined over many years, to support implementation of Section 45V regulations.

Incorporating these established boundaries into the Section 45V framework will facilitate smoother integration and adoption of green hydrogen technologies and reinforce our commitment to ongoing emissions reduction by taking advantage of existing transmission systems and market mechanisms. This adjustment would align a Section 45V final rule more closely with the realities of current energy markets and infrastructure, thereby maximizing the potential impact of the tax credit in driving toward environmental goals.

As with the 45V Proposed Rules on deliverability, expansion of the regions through which incrementality can be demonstrated would significantly increase the ability of entities like ACES Delta to comply with the incrementality requirement. However, one additional step is necessary to support deliverability compliance: allow entities like ACES Delta to document and demonstrate 'best efforts' at procuring new resources when the facility cannot access a whole energy market so that, where these efforts are insufficient to change the behavior of the relevant utility in a vertically integrated market, incremental procurement may be allowed outside of the defined regions for the purpose of meeting Section 45V deliverability and incrementality requirements.

4. **Allowing curtailed renewable electricity to meet the Incrementality requirement.**

ACES DELTA
3165 E. Millrock Dr., #330
Holladay, Utah 84121
801-993-7001

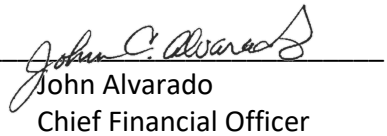
Section 45V regulations should allow for satisfaction of the incrementality requirement through a per se allowance of 10% of the generation from renewable energy sources placed in service before January 1, 2032. This approach is a good practical starting point particularly to support projects which are under development or are expected to proceed in the near-term and would be challenged in meeting the incrementality requirement due to long renewable project development timeline and interconnection queues. This approach to verifying incrementality can be refined by using market indicators such as locational marginal prices which can be a proxy for delivery/consumption of energy that is both renewable and would otherwise be curtailed (and hence incremental).

Conclusion

The world is at a critical juncture in our transition to clean energy and the IRA has created a potential pathway for the U.S. to meet its climate goals. Advanced clean energy production and storage solutions, such as offered by ACES Delta, are a key component to timely achieving those goals. But, in order to adequately progress towards those goals there must be a regulatory framework that rewards innovation, minimizes cost increases, works within established and successful programs like existing EACs and imbalance markets, and facilitates smooth project financing and capital investment. To support ACES Delta and its projects and incentivize similar investments involving hydrogen conversion and storage services, Treasury and the IRS must ensure such a regulatory framework that will permit these types of projects to fully monetize the tax incentives Congress intended to provide. To this end, we urge Treasury and the IRS to adopt the recommendations contained in this letter and implement final regulations that will advance rather than impede projects such as ACES Delta.

We appreciate your consideration of our requested guidance.

Respectfully Submitted,

By: 

John Alvarado
Chief Financial Officer
ACES Delta, LLC