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2024-11-01 GHC Comments on Scope of RPS Eligibility Guidebook Final Clean

Additional submitted attachment is included below.

November 1, 2024

The Honorable David Hochschild, Chair
California Energy Commission
1416 Ninth Street
Sacramento, CA 95814

RE: GHC Comments on Proposed Scope for the RPS Eligibility Guidebook, Tenth Edition (Docket No. 21-RPS-02)

Dear Chair Hochschild,

The Green Hydrogen Coalition ('GHC') is appreciative of the CEC's leadership and prudent stewardship of the RPS program for many years; as well as its prompt attention to the implementation of AB 1921, even before the bill is in effect.

The GHC is a California educational 501(c)(3) non-profit organization that was formed in 2019 to recognize the game-changing potential of "green (renewable) hydrogen" to accelerate multi-sector decarbonization and combat climate change. The GHC's mission is to facilitate policies and practices that advance green (renewable) hydrogen production and use across all sectors of the economy to accelerate a carbon-free energy future and a just energy transition.

Renewable hydrogen has been a key resource/component of the RPS program for many years, appearing in California's clean energy planning frameworks and policy discussions since the early 2000's when hydrogen was included as a clean fuel in California's *Hydrogen Highway Network* in 2004. This marked the start of renewable hydrogen's recognition as a zero-emission fuel within California. Renewable hydrogen is a key component of the 9th Edition of the RPS Eligibility Guidebook, issued in 2017.

Renewable hydrogen has been and should continue to be an RPS-eligible fuel. Removing it from RPS eligibility was not the intent of AB1921.

The language proposed in the Commission's October 18 Notice and Request for Comments on Proposed Scope for the *RPS Eligibility Guidebook* states that AB 1921 "eliminates hydrogen used in fuel cells as an RPS eligible resource". This was not the intent of AB 1921 – Renewable Hydrogen used in fuel cells has been eligible in the RPS for many years. Excluding renewable H2 was never a topic in any committee hearing associated with AB 1921 and indeed is unsupported by the legislative history of AB 1921. None of the legislative committee analyses suggested that hydrogen derived from RPS

eligible resources should be deleted from RPS eligibility. The Assembly Utilities and Energy Committee proposed revisions to AB 1921 to clarify that linear generators were already RPS eligible and to ensure that the bill did not enable the use of fuels that are derived from fossil fuels.[1] As the analysis suggested, "the committee may wish to preserve the author's intention of clarifying existing RPS-eligibility but remove the addition of new fuel types into the RPS."[2] The committee analysis also identifies that fuel cells using hydrogen derived from RPS eligible resources are already considered RPS eligible and did not otherwise suggest amendments to change this fact.[3] In summary, the committee analysis argued for clarifying RPS eligibility, and explicitly recognized fuel cells using hydrogen are RPS eligible.

The intent of AB 1921 was to explicitly add linear generators to the list of RPS eligible equipment/facilities.

The intent of AB1921 was to add linear generators powered by renewable fuels to the list of RPS-eligible facilities. Linear generators, unlike traditional rotating generators, use a back-and-forth motion to produce electricity and can operate on various renewable fuels, such as biogas, hydrogen, and ammonia. By officially classifying these generators as eligible for the RPS, the bill allows facilities using linear generators to receive RPS eligibility, provided they are utilizing renewable fuels. AB1921 is aimed at supporting the state's climate goals by modernizing and updating RPS technology diversity and eligibility, thus providing the state with a key new technology in its toolkit to produce RPS eligible renewable energy.

California's electric sector requires clean, firm, dispatchable renewable power to maintain grid reliability and resiliency, especially in response to climate change-driven challenges.

With the energy transition retiring dispatchable fossil resources and shifting the electric grid to increasing dependence on weather-dependent variable renewables, there is an increasing need for clean firm dispatchable resources to ensure electric system reliability and resiliency. The need for resources to maintain electric reliability is clear. The impacts of climate change have resulted in more frequent grid stress events in the state, where increasing and unprecedented temperatures regularly challenge system reliability. These environmental stresses are also occurring during a time of unprecedented electric load growth from transportation and building electrification including new electric vehicle charging demand, new data center demand and other new industrial loads. This is an environment where imports from the Northwest are less available due to their own grid stress events, water availability patterns for hydroelectric resources are shifting, and the replacement of

[1] Assembly Utilities and Energy Committee analysis of AB 1921, bottom of page 3.
[2] Id at page 4.
[3] Id. at page 3, footnote 8.

dispatchable fossil resources with solar and wind limit the flexibility of system operators to respond to grid stress.

In such an environment, renewable hydrogen, used in repowered thermal electric generators, fuel cells and linear generators can deliver clean, firm, dispatchable power to support the grid and supplement wind and solar resources, limiting the need for significant renewable over-build. Renewable hydrogen fueled dispatchable capacity and energy can work in concert with other forms of energy storage resources to ensure reliable operations across timescales. The LA100 study by the National Renewable Energy Laboratory conducted rigorous scenario modeling analysis to evaluate a pathway to 100% renewable electricity for Los Angeles. NREL found that meeting this target is achievable, and wind and solar resources, supported by battery storage, can serve most of the energy need. However, renewable firm capacity, powered by a clean fuel such as renewable hydrogen, will be key to maintaining reliability and affordably meet the final 10-20% of energy needs. Absent this, Los Angeles would require a significant overbuild of renewable generation, and even then, would likely not be able to meet energy reliability needs due to its constrained transmission and distribution system.[4]

Climate change is also increasing other risks to society and the grid, leading to the potential for multi-day grid contingency events. This includes increased wildfire risk from electric grid infrastructure that necessitates responses such as multi-day Public Safety Power Shutoffs (PSPS events). During these PSPS events, the grid needs resources to maintain frequency and provide back-up power to critical loads. Today, backstop for multi day contingency events is provided by dispatching fossil fueled generation. Renewable hydrogen, by displacing fossil fuels, can play an important role in ensuring renewable grid resiliency.

In a contingency event where centralized generation or transmission capacity is unavailable, for example, due to wildfires, renewable hydrogen can fuel dispatchable RPS-eligible facilities to meet load and maintain grid frequency, keeping the grid operational. In a situation where the grid does get disconnected, a renewable hydrogen powered resource can serve as a black start resource to bring the grid back up. In the California Independent System Operator's (CAISO) annual Summer Loads and Resources Assessment for 2022, it found that contingency measures it had taken had avoided outages. However, given increasing demand and potential climate related risks, CAISO found that the grid continued to have a high degree of vulnerability during summer months. CAISO cited that new resources are moving in the right direction, but the grid continues to fall short of meeting its

[4] "Powering California's Future with Clean, Affordable and Reliable Energy," California Municipal Utilities Association, 2022 (p. 16)

reliability risk target for 2022.[5] This has changed somewhat in 2024, given more moderate temperatures and increased hydro availability, but CAISO still identifies potential extreme and emergency events as posing critical grid risk.[6]

In addition to being a resiliency resource for the grid, because it can be locally stored, renewable hydrogen can also serve as a resiliency resource for critical loads, providing *renewable* multi-day back up generation using RPS-eligible facilities such as gas turbines, linear generators and fuel cells to maintain electricity supply to critical loads. For example, the Calistoga Resiliency Center will leverage clean hydrogen and energy storage to enable a cost-effective clean microgrid that can provide 8.5 MW of power over 48 hours to the local community during Public Safety Power Shutoff events.[7] It will power downtown Calistoga and nearby areas, keeping critical facilities such as fire stations and police stations operational during PSPS events. [8] Further, because the Calistoga Resiliency Center includes onsite hydrogen storage assets, in the event of an outage that exceeds 48 hours, the Center can simply arrange to have additional hydrogen fuel delivered to extend its duration. ARCHES' success in landing a $1.2billion grant from DOE will catalyze the build out of California's renewable hydrogen supply, so hydrogen demand for projects like the Calistoga Energy Center can indeed be renewable. The Calistoga Resiliency Center demonstrates how California can move away from our dependency on gas and diesel for emergency backup generation.

Another element to consider in regard to the need for grid reliability and resiliency is the question of how a multiday outage might impact energy affordability for Californians and our economy? In the absence of abundant, clean dispatchable fuel, ratepayers and consumers will continue to rely on fossil fuel resources to provide back-up power to critical loads[9] and electric system operators to maintain system reliability and resiliency.[10] Increasing volatility in fossil fuel prices can lead to price shock, leading to a significant negative impact on the affordability of energy supply. In the summer of 2022, elevated temperatures led to unprecedent system load (driven by air conditioning). This was coupled by lower than expected solar and wind output, and limited energy imports due to hot

[5] California ISO. "2022 Summer Loads and Resources Assessment." May 18, 2022. https://www.caiso.com/documents/2022-summer-loads-and-resources-assessment.pdf
[6] California ISO. "2024 Summer Loads and Resources Assessment." May 8, 2024. https://www.caiso.com/documents/2024-summer-loads-and-resources-assessment.pdf
[7] Energy Vault. "Project – Calistoga Resiliency Center." Accessed October 3, 2024. https://www.energyvault.com/projects/calistoga.
[8] Balaraman, Kavya. "Energy Vault Starts Building Green Hydrogen Storage Project." PV Magazine International, February 28, 2024. https://www.pv-magazine.com/2024/02/28/energy-vault-starts-building-green-hydrogen-storage-project/.
[9] For outage durations beyond the reach of commercial battery systems.
[10] For large scale spinning reserve and contingency reserve needs that cannot yet cost-effectively be fulfilled by battery systems.

temperatures in the Northwest. This significantly escalated real-time market prices as typically uneconomic generation resources that run on fossil fuels were turned on. In this situation, the prevailing price of the fossil fuel used to operate these resources set the market clearing price and the cost to use these expensive resources and the resulting higher cost of maintaining supply was ultimately born by ratepayers, in addition to increased emissions.[11] A renewable fuel alternative like renewable hydrogen will help mitigate the impact of these fossil fuel price shocks, not only for natural gas, but also for other liquid fossil fuels as it can directly displace gasoline and diesel in other sectors.

Moreover, scalable renewable fuels like renewable hydrogen leverage California's abundant renewable resources. Electrolytically produced renewable hydrogen from wind and solar provides a useful source of new consumption (electricity demand) for storing intermittent renewables and will reduce the need to curtail (or waste) renewable power when renewable production exceeds demand. The ability to match intermittent renewable generation with new electric demand from electrolysis production will also minimize the overbuilding of renewable infrastructure, allowing for a more balanced, efficient and affordable grid. It should also be noted that electrolysis equipment can also be flexibly operated, and if grid connected, can thus provide valuable ancillary services to the grid. Renewable hydrogen produced from organic waste pathways leverage California's abundant biomass feedstocks that cannot be composted, recycled or repurposed. Today, these biomass resources are either trucked to a landfill or burned in open air, at tremendous cost to communities and the environment. Converting these resources to renewable hydrogen not only displaces fossil fuel end use, but also can help cities all over the state better manage their waste disposal costs.

The ability to leverage California's vast and diverse renewable resources to produce renewable fuels for our power sector collectively supports a more resilient, sustainable energy future for California. Renewable hydrogen enables California to store our vast renewable energy resources for later deployment and conversion back to renewable electricity via fuel cells, linear generators and gas turbines. Not only will this help us achieve our RPS and SB 100 goals, but it will also help to accelerate deep decarbonization of other sectors and reduce California's reliance on fossil fuels.

[11] Public Advocates Office. "Preliminary Analysis of California's Resiliency During The September 2022 Heat Wave." https://www.publicadvocates.cpuc.ca.gov/-/media/cal-advocates-website/files/press-room/reports-and-analyses/220922-caladvocates-sept-22-heat-wave-analysis---full.pdf

In addition to linear generators, gas turbines powered by renewable hydrogen and other renewable fuels can help ensure electric sector affordability by repurposing existing infrastructure.

California's electric sector faces challenges in maintaining affordability while embracing innovative technologies. Integrating new advancements, like linear generators, and adapting and repurposing existing gas turbines to utilize renewable hydrogen is a strategic approach to enhance innovation, cost-effectiveness, and grid reliability. Gas turbines in particular represent a cost-effective mechanism to achieve large-scale green firm power, by cost-effectively repurposing existing infrastructure and limiting the immediate need for significant new firm generation capacity. Gas turbines operating on renewable hydrogen also represent an important source of green grid-scale inertia, a grid service that is increasingly needed with the retirement of spinning generation and increased deployment of inverter-based renewable resources. Indeed, the loss of system inertia has long been identified as a critical challenge in maintaining grid reliability in a clean energy future.

The inclusion of renewable hydrogen for use in all RPS eligible facilities in California's RPS is a significant and urgently needed market signal that will boost demand for renewable hydrogen and stimulate investment and modernization of existing thermal generation production facilities, including existing merchant-owned generators that can convert from natural gas to renewable hydrogen fuel.

Most thermal power plants can already operate on up to a 30% blend of natural gas and renewable hydrogen and many can be fully converted to 100% hydrogen fuel. Load serving entities' ability to plan for and procure renewable clean firm dispatchable power from these facilities will be an important additional resource for achieving RPS and SB 100 goals. Merchant owned and operated powerplants utilizing renewable hydrogen will also create an important additional demand driver for scaling renewable hydrogen production, driving down cost and enabling faster conversion from fossil fuels to renewable hydrogen economywide. The ability to procure renewable firm dispatchable power will also be an important tool in our long-term integrated resources planning toolkit. As scaled production continues, renewable hydrogen costs will decrease, enabling its faster adoption and use across various sectors, such as transportation and industrial operations, as a renewable alternative to fossil fuel use. In this regard, the use of renewable hydrogen in RPS eligible facilities including gas turbines is an important catalyst and urgently needed market signal for economywide energy transition.

Gas turbines are an important Tier 1 end use of renewable hydrogen within the ARCHES Hydrogen Hub.

The state was recently notified that it eligible to receive $1.2 billion in funding from the U.S. Department of Energy to accelerate the ARCHES (Alliance for Renewable Clean Hydrogen Energy Systems) hydrogen hub. Using renewable hydrogen in gas turbines is an important end use in the ARCHES portfolio of projects and offers a substantial opportunity for large-scale off-take, capitalizing on California's abundant but often curtailed renewable hydrogen resources. To fully leverage this opportunity, it is essential to clarify the eligibility of facilities using renewable hydrogen under the RPS. This step is critical for Tier 1 ARCHES projects to proceed within the timeframe allowed by the DOE grant, ensuring that California can realize the full potential of this clean energy resource. The CEC's 10th guidebook revision is extremely timely for ARCHES' success.

With the passage of AB 1921, the definition of renewable hydrogen can and should be broadened to apply to all RPS eligible facilities, including not only fuel cells but also linear generators and gas turbines.

AB 1921 directs the Commission to include linear generators and provides the CEC with an opportunity to clarify the definition of eligible renewable fuels. Fuel cells and gas turbines are already eligible facilities, provided they utilize renewable fuels. AB 1921 defines eligible fuels as "fuels described in this paragraph that otherwise meet the requirements of this subdivision" Hydrogen can be produced from all eligible fuels mentioned in this paragraph, thus, any fuel produced from these eligible resources should be deemed as renewable for the purposes of the RPS: solar, wind, geothermal, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology, whether directly supplied or supplied through the electricity grid.

As part of this RPS guidebook revision, the CEC should clarify that hydrogen produced from eligible feedstocks, including the use of grid-supplied renewable electricity, should be treated as renewable, consistent with guidance provided in its historic definition of renewable hydrogen in the 9th edition of the guidebook issued in 2017.

The CEC's 9th edition RPS Guidebook clarified that Qualified Hydrogen Gas includes hydrogen that *"was derived from a non fossil-based fuel or feedstock or eligible renewable energy resource"* and "*electricity that was used to derive the hydrogen is not also counted toward an RPS compliance obligation or claimed for any other program as renewable generation"*. This language prevents the double counting of renewable energy credits.

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Fuel Cells Using Qualifying Hydrogen Gas (9th edition, page 13)
A facility converting hydrogen gas to electricity in a fuel cell may qualify for RPS certification if the hydrogen was derived from a non-fossil-based fuel or feedstock through a process powered using an eligible renewable energy resource. The electricity generated by a facility using this type of hydrogen gas is eligible for the RPS only if the electricity that was used to derive the hydrogen is not also counted toward an RPS compliance obligation or claimed for any other program as renewable generation. The applicant must submit information on the hydrogen production process as part of the application.

As part of the 10th RPS guidebook revision, the CEC has a timely opportunity to comprehensively update and clarify its definition of Qualifying Hydrogen Gas to include not only linear generators but also other facilities that have been historically part of the RPS provided they operated on renewable fuels.

The GHC suggests updating and clarifying the definition of Qualifying Hydrogen Gas in the 10th edition of the RPS Guidebook as follows:

~~*Fuel Cells Using*~~ *Qualifying Hydrogen Gas:*
An RPS-eligible facility converting hydrogen gas to electricity ~~*in a fuel cell*~~ *may qualify for RPS certification if the hydrogen was derived from a non-fossil-based fuel or feedstock through a process powered using an eligible renewable energy resource. These feedstocks can include solar, wind, geothermal, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology. The electricity generated by a facility using this type of hydrogen gas is eligible for the RPS only if the electricity that was used to derive the hydrogen is not also counted toward an RPS compliance obligation or claimed for any other program as renewable generation, whether directly supplied or supplied through the grid. The applicant must submit information on the hydrogen production process as part of the application*

RPS eligible facilities include fuel cells, linear generators, and gas turbines consistent with PU Code 25741 and PU Code 399.12 (addition of linear generators per AB 1921)

There are three key rationales supporting the GHC's proposed modification:

- Rationale #1: the impacts of climate change are no longer theoretical. The RPS is an important policy in our fight against climate change, and now more than ever it will provide an urgent and needed market signal to drive scaled renewable hydrogen production and scaled use in the power sector, increasing grid reliability and resiliency. Expanded use of renewable hydrogen in the power sector will not only accelerate our transition away from fossil fuels and help California achieve an affordable, reliable and resilient power sector, but also help accelerate renewable hydrogen production at scale, driving cost reduction and its expanded use in other sectors. The urgency and timing of this RPS Guidebook revision is paramount, particularly for ARCHES success.
- Rationale #2: Fuel cells and gas turbines have always been part of RPS-eligible facilities, provided they operate on eligible renewable fuel. With passage of AB 1921, linear generators must now be added to the list of eligible facility types.
- Rationale #3: Renewable Hydrogen can and should be treated as an 'enhancement to eligible facilities.' An "eligible renewable energy resource" is defined, in relevant part, as a "renewable electrical generation facility," Cal. Pub. Util. Code § 399.12(e), which is a facility that uses "biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology." Cal. Pub. Res. Code § 25741(a)(1) (*emphasis added*). The CEC has found that an addition or enhancement to an eligible renewable facility includes energy storage technologies using pumped-storage hydroelectric so long as "the electricity used to pump the water into the storage reservoir qualifies as RPS-eligible." CEC RPS Eligibility Guidebook, Chapter 3.F. at p. 41 (9th Rev. Ed.) (CEC Guidebook).

Like a pumped hydroelectric storage facility, a fuel cell, linear generator, or gas turbine would utilize renewable fuel (pumped water in the case of the storage facility and renewable hydrogen in the case of the fuel cells, linear generators, or gas turbines). To qualify, the renewable hydrogen must be derived from certified, eligible renewable energy resources. Thus, consistent with Section 25741(a)(1) of the California Public Resource Code, a fuel cell, linear generator or gas turbine operating on renewable hydrogen fuels as defined above would qualify as an addition or enhancement to an existing RPS-eligible facility.

GHC's recommendations for implementing AB 1921 and treating renewable hydrogen as an enhancement to eligible facilities are consistent with prior statute that directed the Commission to consider green electrolytic hydrogen an eligible form of energy storage.

Per SB 1369 (Skinner, 2018) regarding green electrolytic hydrogen and resulting PU code 400.3:

> ***SEC. 2.***
> *Section 400.2 is added to the Public Utilities Code, to read:*
> *For the purposes of this article, "green electrolytic hydrogen" means hydrogen gas produced through electrolysis and does not include hydrogen gas manufactured using steam reforming or any other conversion technology that produces hydrogen from a fossil fuel feedstock.*
>
> ***SEC. 3.***
> *Section 400.3 is added to the Public Utilities Code, to read:*
> *The commission, State Air Resources Board, and Energy Commission shall consider green electrolytic hydrogen an eligible form of energy storage and shall consider other potential uses of green electrolytic hydrogen.*

As the production of renewable hydrogen scales up, partial accounting (e.g., allowing the facility to use a combination of renewable and non-renewable hydrogen) is necessary. Leveraging existing systems like WREGIS for multi-fuel reporting and the CEC's RPS verification processes for biomethane offers a practical basis for implementing RPS eligibility standards for renewable hydrogen with minimal additional complexity.

Initially, fuel cells, linear generators, and gas turbines ('RPS Eligible Facilities') may not operate on 100% renewable hydrogen as these production volumes are still ramping up, particularly with ARCHES recent success with its confirmation of a $1.2 billion award from the DOE Hub application. Over time, these RPS Eligible Facilities can be upgraded to utilize 100% renewable hydrogen. As detailed in Chapter 3.B of the CEC's Guidebook, certified facilities "may use one or more nonrenewable energy resources to generate electricity" in addition to RPS-eligible renewable resources (CEC Guidebook at p. 28). Like such facilities, and in accordance with the CEC Guidebook, RPS Eligible Facilities operating on a blend of renewable hydrogen would measure the energy content of each energy resource that it utilizes as fuel and calculate the electric generation attributable to the RPS-eligible source (in this case, renewable hydrogen produced as described above). In other

words, if an eligible facility is using a blended fuel, **only** that portion of the electric generation that is attributable to the renewable fuel should be counted toward RPS eligible generation.

Additional guidance may be required for the de-minimis quantity associated with hydrogen production. To illustrate, the RPS Eligibility Guidebook states that "facilities using non-renewable energy resources in excess of the de-minimis quantity may continue to claim a de minimis quantity of the facility output attributable to non-renewable energy resources as RPS-eligible if the total contribution of the non-renewable energy resource does not exceed 10 percent of the total energy inputs." (CEC Guidebook at p. 32). For renewable hydrogen production, the CEC may need to clarify that de minimis quantities of non-renewable energy sources would include auxiliary grid loads for renewable hydrogen production, provided that such loads do not exceed 10 percent of the total energy input.

GHC recommends adding a "hydrogen verification" section, similar to the biomass feedstock verification in Chapter 2.B of the RPS Eligibility Guidebook. This would account for hydrogen's unique production pathways and would safeguard against unintentional Portfolio Content Category (PCC) and Long-Term Procurement Requirement (LTR) circumventions.

An additional verification section in the guidebook needs to be developed to ensure that RPS limits on PCC3 RECS are enforced. This verification for renewable hydrogen would ensure renewable hydrogen does not serve as a mechanism to bypass RPS limits on PCC3 (10%) and short-term (35%) RECs.

Under current regulations, SB X1-2 restricts PCC3 RECs to 10% of RPS compliance, aligning CA's RPS claims with physical power generation feeding directly into the grid. As hydrogen becomes RPS eligible, it is essential to verify that either the output of the generation using renewable hydrogen, or the input energy used for its production meets PCC standards to prevent any unintended circumvention of these PCC3 limits. Further, SB 350's LTR mandates that 65% of RPS claims arise from facilities contracted for at least 10 years. Therefore, the feedstock for hydrogen production should consider LTR compliance to avoid unintentionally bypassing these long-term requirements.

GHC recommends that the CEC incorporate a verification step for the renewable energy resources (inputs) used in renewable hydrogen production.

This step could evaluate the energy input allocation, RPS eligibility, PCC category (PCC1, PCC2, PCC3), and contract duration (long-term vs. short-term). This composition could then be applied to

the generation output of the hydrogen to maintain the feedstock composition and ultimately hold utilities responsible for the sources they use. This would also give utilities the flexibility and freedom to choose their input resources in a manner that is most reliable and cost effective for its ratepayers.

All RPS-eligible facilities operating on RPS eligible fuels including renewable hydrogen must comply with California's world-leading emissions standards.

RPS eligibility for linear generators (per AB 1921) and all existing RPS eligible facilities (fuel cells and gas turbines) operating on renewable hydrogen does not imply that these facilities are exempt from other requirements. Importantly, all facilities must comply with California's world-leading emissions standards to receive a permit to operate. California's world-leading emissions standards are key to ensuring the environmental integrity of all resources and must be enforced, regardless of the fuel used.

Thank you for your consideration of these comments. The GHC looks forward to collaboration with the CEC and other stakeholders on next steps.

Respectfully submitted,

Janice Lin, Founder and President, GHC

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