Avina Clean Hydrogen Inc. is a US based developer of green hydrogen and derivative projects. The company was founded in 2019 and is headquartered in New Jersey. Avina has 30 employees and is developing 3GW of green hydrogen and derivative projects. The first project is expected to become operational in 2024 (10MW hydrogen production & refueling infra project in Southern California for the mobility market). The other 4 projects are in FEED stage and are being targeted to achieve FID by the end of 2024.

Considering our significant experience in developing green hydrogen and derivative projects, we believe our comments provide a realistic view of challenges that are being faced by developers as we navigate the current set of 45V rules. Bottom line is that we see the currently proposed 45V guidelines to have a significant negative impact on the development of green hydrogen sector. We request the relevant authorities to take the following into account:

- **Hourly REC market is not established today and would take at least 3-5 years to develop:** For projects seeking to bring production online in 2027/2028 timeframe, financial investment decisions (FID) have to be made in 2024 or early 2025. The currently proposed rules make it extremely challenging to attract financing as lenders are uncertain about the availability and cost of hourly credits.
- **High interest rates and rising construction costs make it further challenging to get projects to FID:** Green hydrogen projects are facing significant competition from other projects in the US (primarily Blue hydrogen, LNG, and other oil & gas projects). Engineering & construction firms are capacity constrained and considering the first of kind nature of these projects, they are either deciding not to bid or are adding significant contingencies. Moreover, the cost of qualified labor and other construction materials have increased significantly since the IRA was announced.
- **Electrolyzer technologies are not proven; investors are concerned about performance degradation in hourly matching era:** Several cases of electrolyzer performance degradation have been reported when electrolyzers have performed on intermittent power supply. Our concern is that in order to meet 45V rules, investors would see performance degradation as a significant risk and as such make project FID extremely challenging.
- **Currently proposed 45V rules favor Blue hydrogen and ammonia projects over green hydrogen projects**: Because the customers in Asia and other parts of the world are more focused on low carbon hydrogen/ammonia and considering where the natural gas prices are today, Blue ammonia/hydrogen projects stand to gain significant share of new development at the expense of green ammonia/hydrogen projects. This is particularly true because of the generous 45Q tax credit. This development could have a ripple effect on the development of electrolyzer supply chain and other R&D efforts that are required to meet the $1/kg cost target that the DOE has set for 2030.
- **Alignment with EU Renewable Fuels of Non-Biological Origin (RFNBO) regulations:** The 45V guidelines' current annual matching proposal is more stringent than the EU's RFNBO framework. The EU requires monthly matching until 2029, transitioning to hourly matching in 2030 (with optional adoption from 2027). Aligning with the EU's lead will support global trade, stimulate innovation, and preserve competitiveness.
- **Grandfathering provisions for under-development facilities:** Understanding the difficulties in implementing hourly tracking for current facilities under development, we suggest:

- Phased implementation: Our proposal is to grandfather all projects that come online by 2028 to have annual matching without additionality requirements.

We believe the US clean hydrogen market will be strengthened and more effective by adopting grandfathering rules and harmonizing with the EU's RFNBO framework. This will facilitate domestic production, foreign commerce, and long-term sustainability.

Thank you for your consideration.

Sincerely,

Avina Clean Hydrogen Inc.