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USC Comments on the 2026 - 2027 Clean Transportation Investment Plan

Additional submitted attachment is included below.

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MORK FAMILY DEPARTMENT OF CHEMICAL
ENGINEERING AND MATERIALS SCIENCE

May 19, 2026

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California Energy Commission

Docket 26-ALT-01

1516 Ninth Street

Sacramento, CA 95814

RE: 2026-2027 CLEAN TRANSPORTATION INVESTMENT PLAN UPDATE

The University of Southern California (USC) appreciates the opportunity to submit public comments regarding the California Energy Commission's (CEC) Draft 2026-2027 Investment Plan Update for the Clean Transportation Program. As a leading research institution at the forefront of advanced energy conversion technologies, USC is committed to developing innovative, scalable solutions that support California's ambitious climate and carbon-reduction goals.

I. The Missing Link: Balancing Dispensing Infrastructure with Renewable Production

An evaluation of the current draft Investment Plan reveals a singular focus on the dispensing of funds related to electricity for EV charging and of hydrogen fuel. While expanding such deployment for infrastructure is critical, the plan is notably lacking in dedicated funding for the production of electricity or hydrogen from localized renewable sources.

Both hydrogen fueling and high-power EV dispensing networks require substantial amounts of electrical power. In the absence of integrated local fuel and electricity generation capabilities, these systems rely exclusively on grid power. California's electrical grid is already significantly strained, a vulnerability exacerbated by the rapidly growing power demands (e.g., commercial data centers) and the broader electrification of existing infrastructure and economy. Expanding charging and fueling infrastructure without expanding upstream renewable power generation capabilities poses an acute risk to grid stability and undermines the net greenhouse gas (GHG) benefits of transport electrification.

II. The Untapped Potential of Waste Biomass for Hydrogen Production

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Agricultural and forestry biomass waste represents a massive, largely untapped source of clean baseload renewable power and hydrogen fuel production. Over the past decade, a significant portion of California's biomass power plant fleet has been decommissioned, triggering a waste disposal crisis for agricultural residuals - one that has been further aggravated by the implementation of comprehensive open-field burning bans. Simultaneously, high-hazard forest zones face a dangerous accumulation of woody biomass with no viable commercial outlets. These same waste streams — forest residuals and agricultural by-products — are precisely the feedstocks that advanced conversion technologies can efficiently transform into clean hydrogen & electricity.

Proven technologies exist today for the clean, highly efficient thermochemical and biochemical conversion of biomass wastes into these fuels and electricity. Furthermore, advanced technologies capable of direct hydrogen production from biomass feedstocks are mature and ready for commercial demonstration.

III. USC Technological Innovation & Proven Capabilities

USC has developed and holds intellectual proprietary patents on multiple advanced energy conversion systems. Chief among these is the Reactive Adsorption system (RAS) system which produces and extracts, fuel-grade hydrogen from syngas produced via biomass gasification. This breakthrough is currently being successfully demonstrated at commercial scale under the following CEC grant:

Grant ARV-23-001: This project utilizes biomass derived from high-hazard forest waste and urban woody residuals at a dedicated demonstration facility in Fresno, California. Demonstration data compiled to date confirms that the USC RAS system efficiently and reliably produces high purity, fuel-grade hydrogen from syngas, proving that local production can successfully support clean transportation demands.

IV. Recommendations for the 2026-2027 Investment Plan

To ensure that California builds a resilient, truly zero-emission transportation ecosystem, USC respectfully submits the following recommendations:

- **Allocate Targeted Funding for Advanced Biomass-to-Electricity:**

Dedicate a meaningful portion of the $95.2 million Clean Transportation Program budget to the commercial demonstration and deployment of technologies that produce clean electricity from waste biomass. This will provide dedicated, grid-independent power directly to localized EV charging networks with fuel production capabilities.

- **Repurpose Unspent Funds for Direct Hydrogen Production:**

Reallocate unspent hydrogen refueling infrastructure funds, alongside a meaningful portion of the annual $95 million allocation, specifically to support the commercial demonstration and scaling of direct biomass-to-hydrogen conversion technologies

- **Reform Scoring Criteria to Remove Penalties for Distributed Renewables in Future GFOs:**

Recent solicitations, such as the Depot Charging GFO, capped distributed renewable funding at 25% of the grant and structurally penalized applicants for integrating on-site renewables by prioritizing lowest cost-per-port over lifecycle GHG benefits. The CEC should eliminate these barriers so that projects incorporating clean production methodologies are rewarded rather than penalized.

- **Bridge the Federal Funding Gap with State Leadership:** With anticipated contractions in federal DOE funding for early-stage renewable energy infrastructure, state-level leadership through the CEC is essential to sustain the commercialization pipeline for proven California-developed technologies. Targeted bridge funding now will prevent the loss of critical demonstration momentum.
- **Support Wildfire Risk Reduction Through Biomass Utilization:** The Investment Plan should recognize that such projects directly serve California's wildfire risk reduction goals by providing a commercial outlet for high hazard waste biomass. Funding criteria should acknowledge and reward these dual environmental benefits accordingly.

Conclusion

California has a unique opportunity to deploy technology at a commercial scale to simultaneously address fuel generation, grid resilience, agricultural waste management, and wildfire risk reduction. USC respectfully urges the Commission to incorporate dedicated support for biomass derived fuel & electricity production into the 2026-2027 Investment Plan, and to structure future GFOs to reward integrated renewable production.

Thank you for your consideration of these technical insights and recommendations as the Commission finalizes this pivotal investment plan.

Sincerely,

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