

**DOCKETED**

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**Rewiring America Comments - CalSHAPE Upgrade & Repair Phase**

*Additional submitted attachment is included below.*

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Commissioner Andrew McAllister  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814

**Re Comments on 01/12/23 Staff Workshop: CalSHAPE Ventilation Program HVAC Upgrade and Repair Grants**

Dear Commissioner McAllister:

Rewiring America thanks the California Energy Commission (CEC) for the opportunity to comment on the Staff Workshop on the CalSHAPE Ventilation Program HVAC Upgrade and Repair Grants. **We write in strong support of the CEC proposal ([option 1 on slide 23](#)) that CalSHAPE HVAC Upgrade and Repair Grants be used for only the installation of zero-emission equipment. We also recommend that CEC prioritize underserved communities for CalSHAPE funding.**

**All-Electric HVAC Equipment:**

California stands no chance of meeting its nation-leading statutory goal of achieving carbon neutrality by 2045 unless our public school buildings and grounds are at the forefront of that effort. Our 10,000 K-12 schools — more than 730 million square feet of buildings on nearly 125,000 acres of land — comprise one of California’s largest sectors of public infrastructure, representing billions of dollars of state and local investment. Given that some facilities investments have lifespans of more than 30 years, we must ensure that our current actions accelerate progress toward our climate goals.

Upgrading school HVAC systems with electrification and advanced filtration technologies can reduce indoor and outdoor air pollution, keep California’s schools open, and ensure healthy learning environments for students — all while cutting operating costs. And as California warms, electrified HVAC systems can provide vital cooling services to reduce the inequitable effects of extreme heat, and act as resiliency and cooling centers for entire communities.

For the upcoming Upgrade and Repair (U&R) phase, CalSHAPE estimates that HVAC system replacement will cost \$1M to \$2M per school, meaning the \$192M available will be able to fund 80-190 projects (slide 15). With 10,000 schools in California, we need to get going on electrification as quickly as possible. CalSHAPE’s proposal is critical to begin making progress.

We understand concerns that some districts are located in colder regions and may be worried about moving away from gas; however, commercially available electric equipment has improved immensely and can function well in all of California's climate zones.

Further, we recognize concerns about increased costs from electrical service upgrades, heavier units that might trigger Division of the State Architect reviews, and increased staff training. These barriers make it all the more important that CalSHAPE use its funding to learn how to overcome common challenges. For example, during the Prop 39 Zero Net Energy Pilot Program, engineers worked with a high-efficiency rooftop equipment manufacturer to shed weight in a mounting system. This kept the unit within the original weight class, avoiding DSA review ([see page 40 of the final report](#)). If CalSHAPE funds 80-190 all-electric projects, more creative solutions will emerge and be pursued. It will be important to have CalSHAPE document what it learns through these HVAC programs.

#### *Prioritizing Underserved Communities:*

Rewiring America supports designating first-round U&R funding exclusively for underserved communities (slide 18). CalSHAPE should consider selecting projects rather than following a first-come, first-served system. Projects could be selected based on replacement cost estimates from the A&M reports to fit within the Not to Exceed Award Options (slide 32).

In addition, districts could be selected based on the number of replacements needed. The hardest step for a district upgrading HVAC in multiple schools may be replacing the equipment in the first school due to inexperience. If CalSHAPE can help facilitate the first replacement in a given district, subsequent school upgrades in the district will be easier to complete.

CalSHAPE could also provide technical assistance to help districts take advantage of additional state and federal funding programs for HVAC, and other related projects that would help offset the operating costs of an HVAC upgrade, particularly federal funds for solar.

#### *Costs And Limits:*

Rewiring America believes the Project Cost Award Option (slide 30) must cover enough of the project cost to get work done quickly. Ideally, this would be 100% coverage. CalSHAPE's goals should be to give districts momentum and experience with this work, and to establish case studies of successful school HVAC electrification for the state and country.

If CalSHAPE stays with a first-come-first-serve application process instead of selecting districts by need as recommended above, then the 80-190 sites should be spread among as many districts as possible. For Application Limits (slide 33), Rewiring America suggests "1 application with 2 sites each," and those applications should be restricted to underserved communities given that only 80-190 schools out of 3,643 eligible schools can be upgraded with current funding levels.

Ideally, the data collected and the success of the program will encourage the state to further fund this promising HVAC upgrade program.

*Data sharing:*

Given the scarcity of electric school retrofit examples in California and nationally, 80-190 CalSHAPE-funded electric retrofit projects would build a valuable database of project costs and equipment needs. Ideally, CalSHAPE will collect and share this information on project costs, to benefit future school electrification budgeting processes in California and elsewhere. This would be enormously helpful for planning how to electrify all of California's schools, in line with current state law that targets a fully net zero economy by 2045.

CalSHAPE has already built a robust database of California school HVAC equipment, with 3,643 schools and 169,000 HVAC systems inventoried from the initial rounds of the Assessment & Maintenance (A&M) phase (slide 15). Rewiring America strongly encourages CalSHAPE to make this data available, searchable, and downloadable – and we are eager to collaborate on ideas for how to best do this.

In summary, we thank the CEC for its vision, leadership and diligent efforts to protect students' health, meet California's clean energy goals, and our heat pump deployment targets. We applaud this proposal greatly. We look forward to continued engagement with the CEC as the state decarbonizes its building stock.

Sincerely,

Ari Matusiak, CEO