

October 25, 2013

California Energy Commission
Docket Office
1516 Ninth Street
Sacramento, CA 95814

California Energy Commission

DOCKETED
13-CCEJA-1

TN # 72224

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RE: Docket Number 13-CCEJA-1 - Comments on Prop 39

Dear California Energy Commission,

Global Green USA is writing to provide comments on the 2013 Proposition 39 Program Implementation Draft Guidelines. We thank the California Energy Commission (CEC) for giving stakeholders an opportunity to provide comments.

Global Green commends the CEC for a thoughtful and detailed set of program guidelines that recognizes the unique challenges that schools face. However, we urge the CEC to include more emphasis on measuring, tracking, and prioritizing the non-energy benefits (NEBs) that can come from a school energy upgrade; to refine how NEBs are calculated under the SIR; to expand the list of NEBs; and to create a statewide inventory of energy usage for school facilities.

NEBs Should be Tracked Under the Program

Non-energy benefits are often viewed as the indirect benefits that result from an energy upgrade, such as improved indoor air quality, lighting, comfort, and acoustics. In addition to being intrinsically important in their own right, NEBs lead to cost savings beyond a lower energy bill. As the Prop 39 Program Implementation Draft Guidelines note, “The non-energy benefits are expected to provide savings, avoided costs, and other monetary benefits. For example, the health benefits of improved indoor air quality... may improve student and teacher health and result in reduced absenteeism.”

Prop 39 creates a unique opportunity to gather, store, and analyze non-energy benefits and how they affect students and teachers. However, the current draft Prop 39 regulations make no attempt to track these non-energy benefits before and after the energy upgrade, and in doing so, miss a chance to capture valuable information. While NEBs have been tracked in various case studies around the world, there is currently no comprehensive database for this information.

The CEC should require that schools track NEBs in order to receive funding, in the same way that they are required to track their energy usage before and after the Prop 39 energy upgrade. This information will be relevant to some of California’s other statewide goals and programs, such as California’s Comprehensive Energy Efficiency in Existing Buildings Program (AB 758). Additionally, tracking NEBs can give schools valuable information about which investments truly deliver the most benefits, and how they should prioritize future investments.



There are key data points that schools can measure to track NEBs. Classroom conditions can be determined by measurements of indoor air quality (ppm of CO₂), thermal comfort (temperature measured in degrees Fahrenheit and using a percentage of relative humidity), lighting (lighting levels measured in foot-candles), and acoustics (background noise measured with HVAC on in dBa). Measurements could then be compared to the relevant targets called out by ASHRAE 55-2010 (thermal comfort), ASHRAE 62.1-2010 (CO₂ levels), IESNA Lighting Handbook 10th Edition (foot-candles), and ANSI S1260-2010 (HVAC on dBa levels).

One easy and succinct option is to track this information through the Operations Report Card (ORC), a tool created jointly by Global Green USA and the Collaborative for High Performance Schools (CHPS), and funded in part by the CEC. The ORC guides users through several benchmarking steps, including gathering school-wide buildings/systems data, conducting an occupant survey, collecting classroom measurements, completing ENERGY STAR Portfolio Manager and performing water fixture and waste audits. The tool then generates a customized report card with information on indoor air quality, energy efficiency, visual quality, acoustics, thermal comfort, water conservation, and waste reduction. The tool was designed to be simple enough for students to use, and would be an easy addition to the benchmarking that schools are already required to perform under current Prop 39 regulations.

At the very least, the CEC should put information on their Prop 39 website about NEBs and about the importance of tracking this information, along with a link to the ORC, which can be found on the CHPS website.

The Savings to Investment Ratio Should Include NEBs, But Should Work Towards Refining the Percentage

Improved classroom conditions have been shown to increase test scores and student performance, increase teacher retention, significantly reduce carbon emissions, and decrease asthma attacks among students. It is therefore crucial that NEBs be part of the program's cost-effectiveness formula under the Savings to Investment Ratio (SIR), and we support the CEC's decision to include it as a 3 percent addition. However we urge the CEC to work towards attaining a more accurate number. By using the ORC or a similar tool to measure baselines, the CEC should be able to gather enough information to create a more accurate percentage for future SIR formulas for this program and others.

The List of NEB's Should Be Expanded

We also urge the Commission to expand their list of current non-energy benefits. Page 47 of the draft regulations list NEBs as "improved lighting quality, improved acoustics, improved indoor air quality, improved occupant comfort, and improved health and safety." These are all key NEBs, and we suggest that "decreased greenhouse gas emissions" also be included. Buildings account for 48% of all greenhouse gas emissions nationally, and reducing this percentage will be

key to the fighting climate change. Reducing the threat of climate change directly benefits Californians by decreasing the risk of sea level rise, fire, floods, water shortages, extreme heat and cold, and much more.



The Program Should Result in a Statewide Inventory of Energy Usage in School Facilities and Help Establish a Baseline for Energy

The draft regulations state, “as part of the project evaluation an LEA must ‘benchmark’ to determine the energy use intensity (EUI) of any school or site that receives Proposition 39 program funding...results must include total energy cost/square footage/year and annual total Kbtus/square footage/year.” The regulations further state that “LEAs must report between 12-15 months after the completion of the first energy expenditure plan... the estimated amount of energy saved, accompanied by specified energy consumption and utility bill cost data for the school or site where the project is located... the facility’s energy intensity before and after project completion ...”

It is unclear what the CEC plans to do with this information, but we strongly urge the CEC to create a database to store, track, and analyze this information, and to make it available to key stakeholders or the public. The state has an unprecedented opportunity to create an inventory that could be used by energy managers, non-profit, school facilities managers, CEC and CPUC staff, and decision makers across the country. Statewide information about school energy usage has never been collected on this scale, yet this type of information is crucial to developing effective energy efficiency priorities and programs. Schools will already be collecting this important information, and it would once again be a missed opportunity to collect this information without creating a searchable database that those who work in the school, energy, and building sectors could use.

Global Green USA is a non-profit environmental organization that has been working on greening schools for more than a decade. We were the official green advisors for LAUSD and SFUSD, and have helped more than 55,000 students and teachers thrive in high-performance schools that save money and improve test scores. We have also helped secure \$100 million in bond monies for green schools in California, and drafted green school criteria for Louisiana following Hurricane Katrina.

We thank the Commission for its work on this issue, and we hope we can be an ongoing resource as you continue to develop this program.

Sincerely,

A handwritten signature in black ink, appearing to read "Mary Luevano".

Mary Luevano, Policy Director

Global Green USA