



DOCKET

09-OII-1

DATE _____

RECD. 9/9/2009

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 09-OII-1
1516 Ninth Street
Sacramento, CA 95814-5512

VIA: US Mail and Electronic Mail (docket@energy.state.ca.us)

RE: Docket Number 09-OII-1 and Order Instituting Informational Proceeding – American Recovery and Reinvestment Act

Dear California Energy Commission:

Project FROG is a San Francisco, CA based company that designs and builds high performance, green building systems for schools. Project FROG has been following the implementation of the American Recovery and Reinvestment Act (ARRA) in California and would like to share with the CEC some of our observations. We encourage CEC to provide funding opportunities that provide energy efficiency and renewable energy opportunities to our schools.

Based on our participation during CEC workshops, we understand that it is possible for cities and counties receiving Energy Efficiency and Conservation Block Grant (EECBG) and State Energy Program (SEP) funds to include school energy efficiency projects meeting the applicable thresholds as part of the funding proposals. However, we also acknowledge that school construction funding is only one of many projects that could be considered. Project FROG believes that by failing to fund the replacement of aging portable classrooms with energy efficient and renewable energy-ready classrooms, California is missing an opportunity to increase the energy efficiency of our schools and realize significant energy savings.

[Green Schools: Smart Choice for California's Future](#)

[Green Schools](#)

One of California's top funding priorities should be to replace aging, toxic, and demoralizing portable trailer classrooms with advanced high-performance classrooms. The benefits of such classrooms fit multiple priority policy objectives set forth in the ARRA. For example, funding high-performance classroom projects will create local technology and construction jobs, reduce the impact of high energy costs on school budgets, decrease pollution, reduce health care costs, and, perhaps most importantly, improve student performance, health and safety with a long-term sustainable education solution.

[Current authorization status](#)

California Energy Commission (CEC) has been allocated \$275.6 million for energy efficiency and renewable energy programs. Once CEC has awarded formula funds under the State Energy



Program and the Energy Efficiency and Conservation Block Grant Programs, CEC will have discretion to administer remaining funding for energy efficiency and renewable energy projects. Due to the severe state budget shortfalls, ARRA funds available to school districts have been used to balance budgets and keep as many teachers employed as possible. Although school districts were authorized to use remaining funds for activities such as school modernization, renovation, and repair of public school facilities, including those activities consistent with a recognized green building rating system (such as LEED), in most cases, there were no remaining funds after the budget balancing and teacher retention decisions were made. Investing a portion of CEC's discretionary ARRA funds in the long term health, safety and improved education of California's children is necessary to keep California's students competitive in the global economy.

Timing of economic impact

ARRA requires states to use the federal funds in a short time frame. Green school redevelopment impacts would be felt within 3 months both by creating construction jobs and by training local professionals in sustainable building practices, thereby preparing them for the future. Green building also supports related local jobs such as manufacturing, and will help stimulate the clean technology industries needed to achieve green performance standards in buildings.

Need in California

Of the 305,754 grades K-12 classrooms used in California, approximately 30%, or 80,000 – 85,000, of classrooms are portables. In 2007-2008, California's overall school inventory includes approximately 69% classrooms that are over 25 years old.¹ Therefore, based on this information and the state directive during the years 1990 – 1998 to use 30% of construction funding towards portable classrooms, it can be estimated that over 50,000 portable classrooms in California are between 15 - 25 years old. In addition to the fleet age of portable classrooms, these portables bring with them associated health and safety concerns for the students and faculty.² These concerns include exposure to air pollutants including volatile organic compounds ("VOCs"), inadequate outdoor air exchange and ventilation, moisture and mold sources, excessive noise levels and inadequate lighting.

Green building related health and safety benefits

Green schools have been shown to improve test scores, cognitive processing, collaboration skills, and the use of learning technologies. Green buildings improve air quality, thermal comfort, and daylight use, all with no VOC emissions. Reductions in student and teacher illness and mental fatigue have also been shown as associated benefits of green schools.

Green building related consumer energy savings, energy security, emissions reduction, reliability, etc.

Using the Commercial Building Energy Consumption Survey (CBECS), the average educational building uses 22.4 kWh/sq ft/year. Based on independent energy modeling, a Project FROG

¹ See California Department of Education website: <http://www.cde.ca.gov/ls/fa/sf/facts.asp>

² See California Environmental Protection Agency November 2004 report: <http://www.calepa.ca.gov/publications/Reports/Mandated/2004/PortableClass.pdf>



classroom can achieve approximately 75% better energy savings, or approximately 5.6 kWh/sq ft/year. Emissions reductions, health benefits and energy security benefits are concomitant with these energy reductions, and accrue directly to school districts. Green school buildings are therefore fiscally sound investments that provide operational savings and reduce overall facility costs by 50% or more compared to traditional designed and built facilities. Using ARRA funds to assist schools will also help reach DOE's goal to have new schools reduce energy requirements by 50% and existing schools to reduce their energy requirements by 30%. If these goals are realized, DOE estimates that there will be a total energy savings of 0.002 quads of energy resulting in \$14 Million in energy savings by 2020 (across 700 schools).³

Ready to go

One of the requirements for states using ARRA funds is for projects to be "shovel ready." California DSA has already pre-certified certain green building solutions like ours, allowing over-the-counter permitting. Companies that use LEED Silver Standard as a baseline for construction will assist in the approval of any non-pre-certified aspects. Construction is efficient – companies like ours using efficient construction technologies such as shop-based inspections and pre-testing of products expedite the site inspection requirements. These efficient construction technologies allow Project FROG's building systems to be assembled on-site in approximately 6 weeks. Moreover, the Project Frog classrooms are pre-certified by the DSA, saving months of project approval time, and allowing construction to be completed within 6 months of contract execution.

Conclusion

Project FROG will continue to work with school districts, cities and counties to explore funding opportunities available through EECBG and SEP awards for energy efficient aspects of new school construction. In addition, Project FROG encourages the CEC to explore whether CEC discretionary funds may be used for direct grant awards to schools for energy efficient and renewable technology aspects of new school construction.

Project FROG welcomes the opportunity to work with CEC. Please do not hesitate to contact me should you have any questions.

Sincerely,

Margot Biehle

Project FROG

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³ Margo Appel, DOE's Energy Smart Schools Program, webinar, 2009.