



C.A.S.H. High Performance Schools Committee

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CALIFORNIA'S
COALITION
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SCHOOL HOUSINGSM



*Cesar E. Chavez Education Center (Oakland USD)
Courtesy of VBN Architects*

Photograph by Michael Bruk

High Performance Schools Getting Started

New Funding Available for High Performance Schools

Proposition 1D set aside **\$100M** to encourage the construction of high performance schools. Funding is available for both new construction and modernization projects. The applications run through a special process at DSA and may include new projects, projects currently under review or previously approved projects. The Office of Public School Construction (OPSC) will process DSA-approved funding applications and provide adjustments to your district's base per-pupil grants for high-performance features in the project. The High Performance Schools Grant (HPSG) Program mirrors the adopted guidelines of the Governor's Green Action Team, which uses the "**CHPS Standards**" as the basis for measuring all projects for conformance to the state's high performance schools goals. This guide is intended to help districts get started in the program and provide basic information regarding the program and resources to assist and encourage districts to participate.

What is a high performance school?

High Performance schools are healthy, comfortable, energy and resource efficient, safe, secure and easy to operate and maintain. Numerous studies indicate that High Performance criteria help districts provide healthier learning environments which can lead to higher test scores, retain quality staff and increase daily attendance. High Performance, commonly referred to as "Green" or "Sustainable" construction also reduces environmental impacts and conserves our precious resources for future generations. High Performance schools are easier to maintain and cost less to operate.

What are the benefits of a high performance school?

High Performance schools create superior teaching and learning environments, with improved academic performance, healthier indoor air quality, and lower district maintenance and operating costs. Scientific studies of classroom daylighting showed substantial increases in student test scores when compared to rooms using only artificial lighting. Attention to better acoustics in CHPS classrooms also contributes to a better learning environment. Projects which greatly exceed California Title 24 Energy standards and increase water efficiency are the best example of buildings that will lower district utility costs over time.



*Daylit corridor & interior classroom windows
Madera Elementary School WCCUSD
Hamilton + Aitken Architects*

Cesar E. Chavez Education Center

Photography by Alice Sung, Greenbank Associates



What is CHPS?

The Collaborative for High Performance Schools, (“CHPS”) was formed in 2000 to assist in the design of High Performance schools and improve the energy efficiency, sustainability, and environmentally sensitive operation of California’s schools. School facilities that meet the criteria not only perform better but provide an environment that promotes higher performance in students and staff through higher attentiveness and lower absenteeism. It is a private, not-for-profit organization with board members from the major utilities, state agencies, architects, and school districts. The board also has input from manufacturers. CHPS provides information and services to school districts and design teams and is the source of the six volume CHPS Best Practices Manuals. Districts and individuals should consider joining CHPS and C.A.S.H. to stay apprised of current information and technical assistance available. Membership will provide access to ongoing technical information and resources for districts.

How does the High Performance Schools program work?

New construction or modernization projects must meet design criteria promoting “...efficient use of energy and water, natural lighting and indoor air quality, and recycled

HPGP

Example

- New 1,000 student middle school
- 44 points verified by DSA
- Basic Grant calculation:
 $\$8,546 \times 5.08\% = \434.14 per student add
 $\$8,546 + \$434.14 = \$8,980.14$
 $\$8,980.14 \times 1,000 = \$8,980,140$
 $\$434.10 \times 1,000 = \$434,140$ additional

materials.” Your school’s design is scored using the “CHPS Best Practices Manual Vol. III: Criteria.” After certification by your design team, DSA will review and score the applications. OPSC will then process an augmentation to your per-pupil grant based upon how many points your project receives. New construction projects must score a minimum of 28 points – and starting in August 2007 – must score a minimum of 32 points. The grant increases range from 2% to 10%. Modernization projects must meet criteria requirements based upon the scope of work. They must score a minimum of 25 points using the CHPS Criteria.

What To Do First

- **Learn More** – Attend C.A.S.H., CHPS, OPSC and DSA high performance related workshops, hire experienced professionals, review and use the CHPS Best Practices Manual Vol I: Planning (downloadable at CHPS website) to begin to understand the planning process for implementing high performance features in District projects.

High performance Web site resources at a glance

C.A.S.H – www.cashnet.org Information on upcoming workshops, programs, resources.

CHPS – www.CHPS.net The basic source for high performance schools information. Six volume Best Practices Manual available to download.

DSA – www.dsa.dgs.ca.gov Continue checking the DSA website for information regarding the HPSG. DSA may conduct field audits during construction to verify implementation of the high performance criteria as indicated in the application.

OPSC – www.opsc.dgs.ca.gov Program information and updates, grant augmentation information for high performance schools.

- **Engage the Community** – Lead a discussion of high performance schools with a broad group including district staff, architects, school board members, maintenance and operations staff, teachers, parents and students.
- **Educate your team – Key Stakeholders in the district – such as your superintendent, chief business officer, and facilities director.** Help them to understand that new district policies, and high performance features in your projects, will eventually lead to lower operating costs for the General Fund and improved student academic performance.
- **See what other districts have done** – Network with districts that have adopted high performance school resolutions and have successfully navigated the process. Touring a CHPS certified school is a great way to understand what building high performance schools is all about!

Districts which have completed CHPS-certified high performance schools include:

- Oakland Unified School District
- San Diego City Unified School District
- Tahoe Truckee Unified School District
- Los Angeles Unified School District
- Healdsburg Unified School District
- San Pasqual School District
- Long Beach Unified School District

- **Begin the process** by encouraging School Boards to adopt a broad set of policies, which will be applicable at all sites, to encourage resource efficiency and sustainability. The more comprehensive the district's approach the more points are added to your project application for funding.
- **Get a copy of the "CHPS Best Practices Manual Volume III: Criteria"** to understand how the district's projects will be rated and where to begin focusing your efforts. A sample "scorecard" will be available on the DSA web site.
- **To be most effective** the process should start prior to beginning the site selection and design efforts.



Courtyard of Cesar Chavez Elementary School

Photograph by Cristian D. Costea

Implementing High Performance Schools in your District

The Basics. As your district begins a high performance schools design and construction process you're going to need some basic adjustments to your documents and processes.

- **RFQ's/RFP's.** Make sure you reference high performance design experience as a requirement for the team. Requests for Fee Proposals will need to include time for the team to complete any additional design and/or analysis elements and to score and certify the project to DSA.
- **Architect Contract.** Your contract with the architect should reference specific high performance schools design responsibilities. You may want to reference specific goals. Example: be clear about requirements for the team to provide analysis and documentation related to exceeding Title 24 standards.
- **Plans.** The construction documents must include all required information regarding the high performance elements of the project. It's important to provide ongoing coordination and review during the design process to make sure the goals are being met.
- **Commissioning.** Incorporate commissioning in documents; RFP for commissioning agent; remember it is required for the HPSG program!
- **Specifications: Technical Divisions.** Your material and equipment specifications will need some changes to incorporate green building standards. Work on your district standards to update those and with your architect on each project's specific requirements.
- **Specifications: Front Ends.** Remember you're going to need to update your Division 0 & 1 specs to successfully implement a high performance school project. For example, work with your team to update the substitution section to ensure that no product substitution is made that would not be certifiable under the CHPS standards. Don't be in a position of losing points through substitutions during construction! Consider including CHPS compliance as a special condition of the construction contract.
- **Construction.** There are new opportunities during the construction phase which can provide additional points for the district. Get your construction manager involved in understanding how to implement a construction IAQ

Management Plan. Demolition and construction recycling requirements are a part of any high performance project – the construction team needs to learn about monitoring and reporting on these efforts.

- **Closeout.** High performance schools have specific closeout requirements, including “Commissioning” of building systems. You’ll want to update your specifications to incorporate new closeout requirements. Be clear about who is responsible for these requirements. And, allow adequate time for the buildings to be ready for occupancy with new requirements for Indoor Air Quality.

- **Other District Policies & Operations.** There are a number of other district departments and programs which provide additional points under the CHPS criteria. For example, **school construction projects** in your district must have a comprehensive recycling program in place with space for separation, collection and storage of recyclables. You’ll also get extra points for working with **Purchasing** to meet “Energy Star”[®] requirements for equipment in the project. There are specific requirements for **Maintenance** plans and funding which earn extra points for the district.

Navigating the approval process for High Performance Schools

The DSA Application Process

As of the publication date of this document the DSA detailed application processes are not available. However, you should monitor the DSA website homepage to access the most current information www.dsa.dgs.ca.gov. DSA is committed to working with the district’s architectural and engineering teams to ensure that the goals of the High Performance Schools Program are met.

Below is a general description of what we believe will be the DSA review process. You should monitor the DSA website for the official instructions.

- 1) Submit plans and specs to your DSA regional office for approval.
 - On the intake form, indicate that the project is to be reviewed under the high performance schools Program.
 - Include with your plans the High Performance Schools Grant (HSPG) application form when it becomes available on the DSA website.
 - Include all project certifications and documentation – scorecard, district resolutions, budget certifications, etc.
- 2) In addition to the regular DSA submittal to the regional office it is anticipated that your A/E team will also submit one set of plans, specs, and high performance documentation directly to the Sacramento DSA High Performance Review team where the project will be reviewed. Requests for additional information or questions will be coordinated through the design team.
- 3) Upon approval by the DSA review team, the A/E will receive an approval letter from DSA indicating the total criteria points awarded.
 - This will be the basis for OPSC’s increases to your basic grants.
- 4) DSA may conduct field audits during construction to verify implementation of the high performance criteria as indicated in the application.

The OPSC Process of Securing Funding

The link to the OPSC application submittal process, including forms and information on grant augmentation Amounts for specific points in the program, is available on the OPSC website homepage.

OPSC submittal and funding process is as follows:

- 1) Submit your project application for funding to OPSC, with all required plans, specifications, and documentation.
 - On the **SAB 50-04** check the box for “*High Performance Rating Points*” under “New Construction (or Modernization) Additional Grant Request.”
 - Enter the number of points certified by DSA after their review.
 - District representative certification has been added to the 50-04 that the District has considered the feasibility of using designs and materials for high performance schools in the project.
- 2) OPSC will provide their review and calculation of the grants.
- 3) The District will need to keep all documentation of the project’s criteria and approval by DSA to be ready to respond to OPSC audits.
- 4) Funding is subject to availability of funds. \$100 million in incentives is contained in the Prop. 1D Bond, however, there are no provisions for an “unfunded list” in the event the program is oversubscribed.

A Practical Guide to BUILDING High Performance Schools

Design teams, including architects, engineers, and green-building consultants have been working to make high performance schools a reality in California for many years. These individuals and firms have been through the process. Here's some of their collective wisdom.

Practitioners Tips:

- 1) Planning.** Early in the planning process, define the level of high performance goals the District wants to achieve.
 - Including references to high performance schools/green schools may assist in Bond campaign material.
 - Update Educational Specifications and Program Standards.
 - When selecting a school site, where possible, use the HPRC as a standard for acceptable sites.
 - When planning for new school sites, be sure to reference the CHPS site standards.
- 2) Design.** Translate high performance goals into specific requirements very early in the design process and continually monitor progress in meeting the goals.
 - Fill out a CHPS scorecard with the design team at the start of the project as a concrete way to establish project high performance goals.
 - Review the scorecard at each phase of the design to ensure goals are being met.
 - When laying out new school sites, make sure to reference the CHPS site standards.
- 3) CHPS Points.** Remember the more points, the higher the incentive grants from the State.
 - Focus on meeting all "Prerequisites." These are required elements all projects must meet. Many are basic, and required as a part of any project whether or not it is high performance. But some prerequisites may require the district to make operational changes – see "Create Water Use Budget" prerequisite.
 - Work with the team to understand the "cost" and "value" of points for specific items. Some points are easy to achieve, others have costs potentially far beyond any additional funds.
- 4) Use all available resources.**
 - Engage the district's utility company and participate if available in the Savings By Design program or similar program.
 - District's and design teams will earn an additional incentive from this program for exceeding the energy code. Exceeding the code will also earn CHPS points and reduce future energy costs www.savingsbydesign.com.
 - Participate in the Energy Commission's **Bright Schools Program**. The Bright Schools Program can help a district set energy efficiency goals and can guide the design team in achieving these goals www.energy.ca.gov/efficiency/brightschoools.
 - Consider registering and verifying your project through CHPS.
- 5) Keep it simple!**
 - High performance schools use basic principles of sustainable design – like orienting the building to minimize glare while maximizing daylight potential for classrooms. These simple steps earn points and don't cost anything to implement.
 - Be wary of high-tech "bells and whistles" in any school project.
- 6) Educate the users.** Provide for a simple, consistent means of educating your building's users on the "how and why" of high performance schools.
 - Teachers and staff at the sites will need to understand building systems – they're a key part of making this work.
 - Train M&O, custodial and other facilities staff on high performance features to keep reaping the rewards, and include them in the planning process.
- 7) Educate the Construction Community.**
 - Communicate high performance goals to contractors and other critical members of the construction team.
 - Monitor construction – your project inspector will need to be in the loop to ensure that each item certified is properly installed or provided.

FAQ (Frequently Asked Questions)

► How much will it cost overall (planning, design, construction) to implement the high performance concept?

- The new state program recognizes that there are some costs to districts to implement high performance features in their projects. C.A.S.H. and CHPS have been working together to ensure that some assistance is made available to districts as they begin building high performance schools.
- Many studies indicate that the net additional cost to build high performance schools can be minimized by early planning and clear definition of goals so that the green standards are built into the project from the beginning.

► Can we really earn points for a District Resolution?

- Yes, having the district's board pass a resolution incorporating the CHPS standards into your facilities program is an important political statement about

the community's interest in building green schools. The CHPS website has sample resolutions and also has a list of districts that have passed resolutions.

► What is Commissioning and when should it happen?

- Commissioning is the owner's assurance process, during design and construction, of ensuring that building systems and equipment perform as designed.
- Commissioning has traditionally been a part of the building acceptance process, occurring after the completion of construction. High performance schools projects use a more pro-active approach of beginning the commissioning process during the design phase to ensure ongoing reviews of the documents to reflect the design intent centered on the inclusion of high performance features. Basic commissioning during construction is a prerequisite.



Photograph by Cristian D. Costea



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