**Additional Resources**

The AIA California Council provides a rich collection of resources for clients at www.aiacc.org/design-is-good-business. Among these are resources specifically related to building energy use, including:

- Savings by Design
- The Business Case for Green Building
- Green Schools Investment Guide
- “The Dollars and Sense of Greening Existing Buildings”

Other topics addressed in the resources for clients include selecting an architect, understanding the architect’s compensation, and forms of project delivery. The AIA California Council welcomes your suggestions for additional resources; please contact Nicki Dennis Stephens, ndennis@aiacc.org.

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**OPTIMIZING ENERGY USE IN BUILDINGS**

**In a time in which resources are increasingly dear—and in which buildings are among the largest consumers of resources—it makes sense both financially and environmentally to use energy wisely. Doing so is not just a matter of specifying individual items like low wattage light bulbs. The greatest savings and most enjoyable spaces come from the insightful coordination of a host of considerations: a well-planned and -oriented building will need fewer bulbs to begin with.**

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**DESIGN IS GOOD BUSINESS**

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**DESIGNING FOR VALUE**

One way to appreciate the value of design is to consider the difference between a to-do list and a design:

**To do list:**
1) Exercise.
2) Eat right.
3) Spend more time with kids.

**Design:** Plant an organic garden with the kids.

Note how this design adds lots of other good things to the list—things that hadn’t even been thought of—like:
4) Pass on knowledge and skills to the kids;
5) Learn new knowledge and skills;
6) Stop worrying about that jackass in the office;
7) Fight global climate change . . .

Architects turn to-do lists into designs. They coordinate the countless elements of a building so that each performs at its highest level and all together perform even better.

**Design doesn’t add value, it multiplies it.**

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**FINDING THE RIGHT ARCHITECT**

Your building can do much more than keep the rain off your business; it can advance your business plan. To capture the full value of a capital program, engage your architect in a discussion of your business goals, with your business leaders.

- The earlier you incorporate energy saving strategies in the design of your building, the less you’ll spend and the more you’ll save.
- Energy efficiency begins with the placement and orientation of the building on its site.
- There is almost always a direct correlation between energy cost savings and environmental benefit.
- California building codes demand high-performance—which is what you want.
- The initial costs of improving a facility through better lighting, heating and cooling systems can be offset exponentially by the productivity gains of a more productive workforce.
The Packard Foundation

The David and Lucile Packard Foundation’s headquarters in Los Altos, designed by EHDD Architecture and the Integral Group, is a Net Zero Energy building: it produces as much energy as it consumes. Among its features:

• It utilizes “chilled beams,” ceiling elements through which water, chilled at no cost by the night air, is circulated during the day to cool the spaces.
• It is highly insulated, with triple-element glazing, eliminating the need for perimeter heating.
• Occupancy and light level sensors throughout the building and site optimize lighting efficiency.
• Solar photovoltaic panels offset 100% of the building’s remaining energy consumption.

The base building (not counting such added costs as custom doors crafted from fallen eucalyptus trees from the Presidio of San Francisco) is designed as a “replicable shell” at a cost of $477 per square foot. This building shell, which includes roof, walls, windows, heating, cooling, plumbing, elevator, and solar panels, should achieve Net Zero Energy in a similar climate zone and LEED certification in any climate.

The project also saves energy through a Transportation Demand Management Plan. This careful analysis of parking demand, coupled with bike racks, shuttles to public transit stations, and a paid-for taxi service for employee family emergencies, allowed the elimination of a planned underground garage, saving $8 million and an estimated 25% of embodied carbon emissions.

Adapted from ULI San Francisco District Council Sustainability Committee Best Practice Case Study, authored by Andrew Northrop.

Merritt Crossing

Richard Stacy, FAIA, of Leddy Maytum Stacy Architects, describes their Merritt Crossing Senior Apartments as “a great example of how sustainable design can have a real and positive impact on the lives of disadvantaged seniors.” He continues,

“Strategies for enhancing daylighting, views, ventilation, and air quality all contribute to a healthy and comfortable living environment. A well-integrated community room and bay-friendly garden courtyard establish a sense of community through activities like gardening, tai chi, and communal dining. Energy conservation measures, such as the high-performance building envelope and renewable energy systems, help to minimize and control future energy costs for residents on limited incomes.”

In the design of the exterior, the architect has coordinated simple elements to achieve complex goals. Windows that reach to the ceiling bring daylight deep into the building’s interiors, reducing the use of electric lighting, while offering wonderful views. In the benign climate of Oakland, vegetation will quickly spread from balcony planters across the southwest-facing screen wall, simultaneously lessening street noise and providing visual privacy and shading.

More sophisticated technology contributes, as well. A rooftop solar system provides more than 70 percent of the building’s hot water; a high-efficiency central water heater provides the rest. Rooftop photovoltaic panels provide 56,000 kilowatt-hours of electricity annually, offsetting 38 percent of the common area electrical usage.