This program is funded by California utility customers and administered by Pacific Gas and Electric Company, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison Company, and Southern California Gas Company under the auspices of the California Public Utilities Commission.

www.savingsbydesign.com
Energy-efficient buildings happen by design. They happen because they make sense to the owner, to the design team, to the bottom line, and to the environment.

**S A V I N G S  B Y  D E S I G N**

is a program to encourage high-performance nonresidential building design and construction. Sponsored by Pacific Gas and Electric Company, Sacramento Municipal Utility District, San Diego Gas & Electric Company, Southern California Edison, and Southern California Gas Company, **S A V I N G S  B Y  D E S I G N** offers building owners and their design teams a wide range of services:

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**S A V I N G S  B Y  D E S I G N** offers these services to nonresidential new construction projects that fall under California’s Title 24 energy-efficiency standards, as well as other commercial, industrial, and agricultural projects that are not covered by the standards. Projects must be located within the service territories of:

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Contact your utility’s **S A V I N G S  B Y  D E S I G N** representative early in the design process to determine funding availability, to receive program information specific to your project needs, and to enhance your project’s energy-efficiency potential.
Savings By Design offers assistance to make buildings more energy efficient. The program is organized around two alternative approaches to energy efficiency:

**WHOLE BUILDING APPROACH**
Used for projects where the design team can integrate energy-efficient solutions early in the design phase. The Whole Building Approach produces the most energy-efficient and cost-effective building systems.

**SYSTEMS APPROACH**
Used for performance-based analysis for less complex buildings, where design of the energy systems is done at different phases, or where one energy system predominates.

Savings By Design provides four distinct benefits to program participants to facilitate the design and construction of energy-efficient facilities:

1. **DESIGN ASSISTANCE**
   Design assistance is available to building owners and to their design team, regardless of the design approach, and is matched to the needs of the project. Under the Whole Building Approach, design assistance may involve support to the design team in developing a building energy simulation model, preparing a report for the owner on recommended design modifications, and facilitating the integration of any modifications into the final building design. Under the Systems Approach, design assistance may include recommendations for efficient equipment, consultation on enhanced design strategies, or provision of sample specifications.

2. **ENERGY DESIGN RESOURCES**
   Energy Design Resources supports the efforts of design teams by providing energy efficiency information, design tools, and training opportunities. A valuable palette of energy design tools and resources that help make it easier to design and build energy-efficient commercial and industrial buildings in California are freely available for exploration and download at www.energydesignresources.com.

3. **OWNER INCENTIVES**
   Financial incentives are available to owners when the efficiency of the new building exceeds the minimum Savings By Design thresholds, generally 10% better than Title 24 standards. These incentives encourage owners to make energy efficiency a goal in their new buildings, and help to defray some of the costs of energy-efficient building components. Owner incentives are determined in different ways, depending on whether the Whole Building or the Systems Approach is used.

4. **DESIGN TEAM INCENTIVES**
   To support the extra effort for integrated energy design and to reward exceptional design accomplishments, Savings By Design also offers financial incentives to design teams. These incentives can provide a substantial value to the project. Design team incentives are paid directly to the design team, and are in addition to the incentives the owner receives.
TWO APPROACHES TO ENERGY EFFICIENCY

1. THE WHOLE BUILDING APPROACH

OWNER INCENTIVES

The *Whole Building Approach* is the preferred method of estimating energy savings within *Savings By Design* because it enables the design team to consider integrated, optimized energy-efficiency solutions. Integrated systems that balance electric and gas use may produce a building that offers greater health, comfort, and productivity for its occupants, while being less costly to build and operate for the owner.

The *Whole Building Approach*, in addition to informing the design process, calculates the estimated total annual energy savings for the building compared to the Title 24 minimum requirements. The analysis can be prepared by the design team, or by an energy consultant provided by the utility, using an approved computer tool. Incentives range from $0.10 - $0.25 per annualized kWh savings, and $0.34 - $1.00 per annualized therm savings as the design becomes more efficient. The maximum incentive per project is $150,000.

DESIGN TEAM INCENTIVES

*Savings By Design* fosters a team approach to the design of energy-efficient buildings. By working together to integrate the systems within a building, architects, engineers, lighting designers, energy consultants, owner’s representatives, and others can more effectively design efficient facilities that may qualify for design team incentives. These incentives are offered to encourage teams to explore these higher levels of energy efficiency, to help offset some of the added costs inherent in investigating and specifying enhanced options, and to ensure the inclusion of energy-efficient features in a new construction project.

To qualify for design team incentives, the team uses the *Whole Building Approach* and a computer simulation model to optimize their design. The model calculates the energy savings of the building compared to the Title 24 baseline. The design team qualifies for incentives when the building design saves at least 15%. Design team incentives range from $0.05 - $0.083 per annualized kWh savings and $0.187 - $0.333 per annualized therm savings as the design becomes more efficient. The maximum incentive per project is $50,000.

DESIGN TEAM OPTIONS

Two tracks allow design teams to select a level of analysis and reporting appropriate to their projects:

**Track A participants** submit a summary report of one qualifying proposed integrated design. Projects exceeding Title 24 by at least 15% will receive design team incentives upon construction completion and verification. Design teams submitting Track A projects that perform at least 25% better than Title 24 are now eligible to receive 50% of the incentive upon utility acceptance of the proposed design. The balance of the incentive will be paid upon construction completion and verification.

**Track B participants** submit a comprehensive report of the parametric and economic integrated design analysis that was undertaken to explore the potential of a fully integrated design. Upon utility acceptance of a proposed design that exceeds Title 24 by at least 15%, design teams will be eligible to receive 50% of the incentive upon utility acceptance of the proposed design. The balance of the incentive is paid upon construction completion and verification.

WHOLE BUILDING INCENTIVE RATES

Electric Incentive Rates/Annualized kWh Savings
Gas Incentive Rates/Annualized Therm Savings

- **OWNER** - $150,000 maximum
- **DESIGN TEAM** - $50,000 maximum

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OWNER - $150,000 maximum
DESIGN TEAM - $50,000 maximum
The Systems Approach is a simplified method to optimize energy-efficiency choices. Each building system can be designed to achieve greater efficiency as a whole rather than as a collection of components. It’s straightforward and the design team may find it more appropriate for their project.

Using a simplified energy simulation modeling tool, your Savings By Design representative can help your team identify system options and quickly estimate the associated potential savings. At the same time, your Savings By Design representative can identify which systems qualify for potential owner incentives.

DAYLIGHTING SYSTEMS
Daylighting has a major impact on a building’s functionality from many perspectives, not only on energy costs associated with illumination and space conditioning, but it also may enhance the building’s comfort, ambience, and the productivity of its occupants.

INTERIOR LIGHTING SYSTEMS
Interior lighting is a major component of any building’s energy use. Thoughtful attention to illumination requirements within the building, along with thorough specifications for efficient components and appropriate controls, can substantially minimize energy usage while enhancing the functionality of interior spaces.

HEATING, VENTILATION, AND AIR CONDITIONING SYSTEMS
The design of high-performance HVAC systems includes specification of high-efficiency equipment and controls that regulate the system to allow operation only when it’s needed. Thoughtful consideration of the interactions of all system elements can substantially increase comfort for building occupants while cutting costs for the building owner.

SERVICE HOT WATER SYSTEMS
The use of high-efficiency natural gas hot water heaters can help to round out an overall approach to energy savings in the building design. Facilities that use large amounts of hot water can see substantial savings when a high-efficiency system is used.

OTHER SYSTEMS AND PROCESSES
A variety of process systems and controls not regulated by Title 24 can be considered for the Savings By Design program. Current industry practice is used to establish a reference point from which estimated energy savings are determined for manufacturing, refrigeration, food processing, mechanical ventilation systems, and other systems and processes.

Note: Projects will also receive $100 per peak KW saved for all measures, subject to all applicable caps.
HOW DO I PARTICIPATE?

A Savings By Design representative will work with you throughout the entire process to explain the program opportunities, coordinate the utility’s design assistance services, guide the application and agreement process, verify installation of the measures, and deliver the incentives when all requirements of the program have been met.

PARTICIPATION PROCEDURES

1. Contact the utility early in the design process to initiate participation. Go to www.savingsbydesign.com for contact information.
2. Once a Letter of Interest is submitted, work with your Savings By Design representative to determine the most appropriate approach.
3. Make integrated energy-efficiency a project goal and explore a variety of options during the design phase.
4. Submit required documentation to validate the energy-efficiency design enhancements.
5. Sign the offered incentive agreement that reserves funds for your project.
6. Assure that elements of the design are included in the completed building.
7. Notify your Savings By Design representative, upon completion of your project, to schedule an onsite verification of the energy-efficiency features.
8. Receive your incentive check, and enjoy the ongoing benefits of an energy-efficient facility.

Incentives are not guaranteed and are only available for projects which meet the minimum energy-efficiency requirements of the program and satisfy all other program requirements set forth in the Program Agreement and Documents. All participants must sign these documents and submit the required documentation. Both owner and design team incentive payments are contingent upon site verification.
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