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# SDG&E Energy Innovation Center

Project Update

September 13, 2010

# EIC Vision & Key Aspects



The Vision for the SDG&E Energy Innovation Center (EIC)\* is:

To be a highly regarded showcase facility where customers learn about energy efficiency, alternative fuel transportation, and clean generation. It will offer an array of seminars, demonstrations, and consulting services to help businesses find the most cost-effective and energy-efficient solutions.

Key Aspects:

- LEED Certification (Goal: Platinum)
- Interchangeable advanced technology integrated throughout the facility
- Lighting Demonstration
- Commercial Demonstration Kitchen
- Smart Green Home
- Flexible Seminar Room (Group size 30- 200)
- 100kW PV system in parking area (Solar Trees)
- Plug-In Electric Vehicle Charging Stations

\*The Energy Innovation Center was formerly referred to as the Energy & Environmental Center



# EIC Location and Existing Conditions

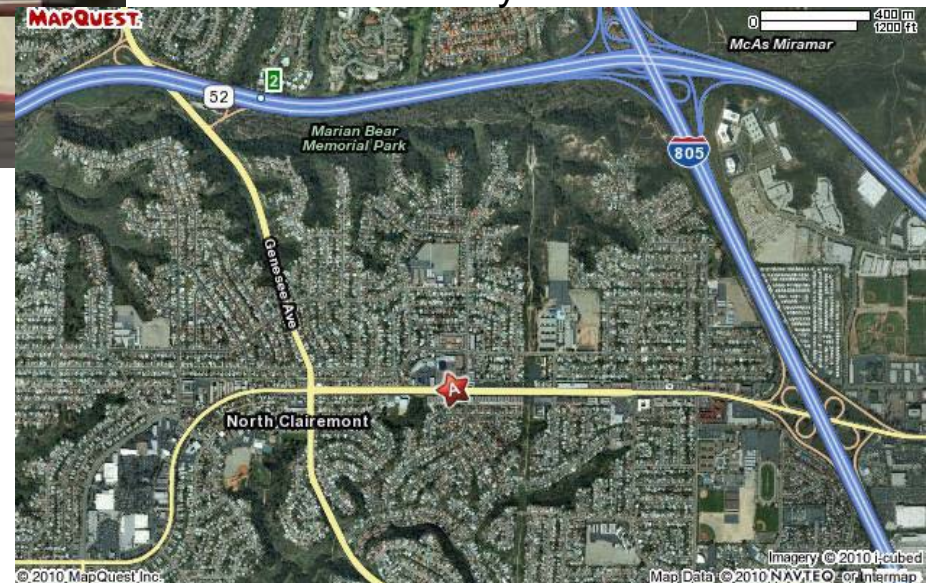


The project site is a vacant building located in the Diane Center shopping center on Clairemont Mesa Blvd. The space is 27,000 sf, includes ample parking, and is located in a mixed commercial/residential neighborhood.

## Existing facility entrance



The facility is accessible by the 52 and 805 freeways



# EIC Location – Aerial View



# Architects Hanna Gabriel Wells



## Hanna Gabriel Wells Transforms Grease Pit into Design Hit



Chip Fox, SDG&E

A project close to their hearts – and their spreadsheets – earned the designers, owners and occupants of a rehabilitated building triple honors at AIA San Diego's 2009 Design Awards program on May 9. ARCHITECTS hanna gabriel wells – led by principals Randy Hanna, AIA, Jim Gabriel, AIA, and Matt Wells, AIA – won a Merit Award for exemplary design, a COTE-SD (AIA San Diego's Committee on the Environment) Award for sustainable architecture, and the 2009 SDG&E® Energy-Efficiency Integration Award for uniting top energy performance with outstanding design.

The architects put the environmental ethos of "reduce, reuse, recycle" to work in their own studio, a former auto-repair shop built 54 years ago on the corner of Bacon Street and Santa Monica Avenue in Ocean Beach. The site is only two blocks away from the previous offices of ARCHITECTS hanna gabriel wells, fulfilling the partners' desire to stay in the "OB" community and making it easier to keep tabs on construction progress.

### Imagination helps flesh out "great bones"

"It looked like it hadn't been cleaned since 1955, when it was built, but the building had great bones," says Hanna. "We've always run our office as a studio, and the space lent itself to the kind of collaborative approach we take. We thought that, with a little bit of imagination, it could go a long way."

It took more than imagination, however, to water-blast decades of grime away ("It looked like mud running down the walls," Hanna recalls) and to grind the oil-scaled concrete floors down to the desired level and smoothness (a laborious four-day process). More than 80% of the construction waste was recycled or salvaged.

The project also reflects an early decision by the owner/architect to reuse an existing building and incorporate environmentally sustainable features such



Photo courtesy of ARCHITECTS hanna gabriel wells

**BEFORE:** The architects' studio emerged from an auto repair shop that "looked like it hadn't been cleaned since 1955," says Randy Hanna, AIA, "but the building had great bones."



© 2009 Neil Mahon Photography

**AFTER:** Operable windows replaced garage bay doors, capturing ocean breezes for natural ventilation.



© 2009 Neil Mahon Photography

At the entrance to their award-winning studio are the principals of ARCHITECTS hanna gabriel wells from left to right: Matt Wells, AIA, Jim Gabriel, AIA, and Randy Hanna, AIA.

as energy efficiency. The consultant team included SDG&E, which helped ARCHITECTS hanna gabriel wells realize the project's energy-saving potential and is monitoring the results through three programs: Savings By Design, Sustainable Communities and Emerging Technologies.

Other firms focused on the project's energy performance included Brummitt Energy Associates Inc., energy consultant; Drew George & Partners Inc., Leadership in Energy and Environmental Design (LEED®) Green Building Rating System® consultants; L.A.I. Zammit Engineering, electrical engineer; McParlane & Associates Inc., mechanical engineer; and Naturalworks Inc., natural ventilation consultant.

### On track to achieve "Net-Zero Energy" status

The renovated, 4,475-square-foot, one-story building performs 60% better than required under California's 2005 Title 24 baseline standards for energy efficiency – even before taking into account the renewable energy produced by rooftop solar photovoltaic panels and a solar water-heating system. Energy-efficiency measures include: operable windows and skylights for both natural ventilation and daylighting; mechanically operated solar shades; and strategically placed photocell controls for maximum daylighting.

Because the building is designed to generate as much energy as it consumes, it's on track to achieve "Net-Zero Energy" use status – possibly the first "Net-Zero" office building in SDG&E's service area.

### NEW: Incentives increased to \$550,000 per project

For information about Savings By Design incentives, technical assistance and training opportunities, visit [sdge.com/savingbydesign](http://sdge.com/savingbydesign). As of Jan. 1, 2009, the Savings By Design program offers incentives of up to \$550,000 per nonresidential new construction project – as much as \$500,000 in owner incentives (up from \$150,000 last year) and up to \$50,000 in design team incentives. The program helps design teams and building owners produce nonresidential buildings that perform better than required under California's Title 24 energy-efficiency standards. Commercial building alterations and additions that are subject to the Title 24 standards – such as renovations of existing buildings and tenant improvements to shell buildings – also may be eligible.

The Savings By Design program is funded by California utility customers and administered by SDG&E under the auspices of the California Public Utilities Commission.

By Chip Fox, Manager, New Construction Programs  
San Diego Gas & Electric®

Matt Wells, Principal  
Jim Gabriel, Principal  
Kristin Shultz, Project Manager

Architects HGW was selected to design the facility and site improvements.

The firm offers:

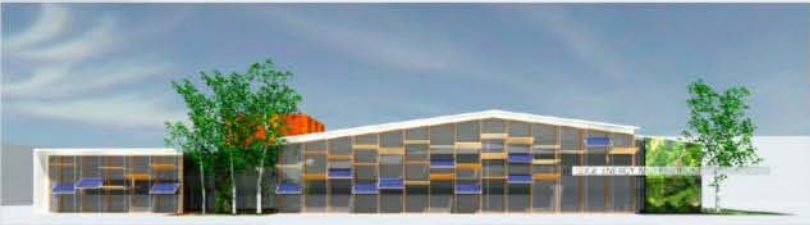
- Deep LEED Experience
- Familiarity with SDG&E Programs
- Clear understanding of SDG&E's project goals





Exterior Design Concepts  
(High-level concepts to remain; details will likely  
change)

# HGW's Site Concept – Aerial View



The aerial concept shows focused areas of demonstration.

Highlighted in the site concept are demonstration opportunities related to:

- Transit and access
- Renewable generation/Smart

Grid

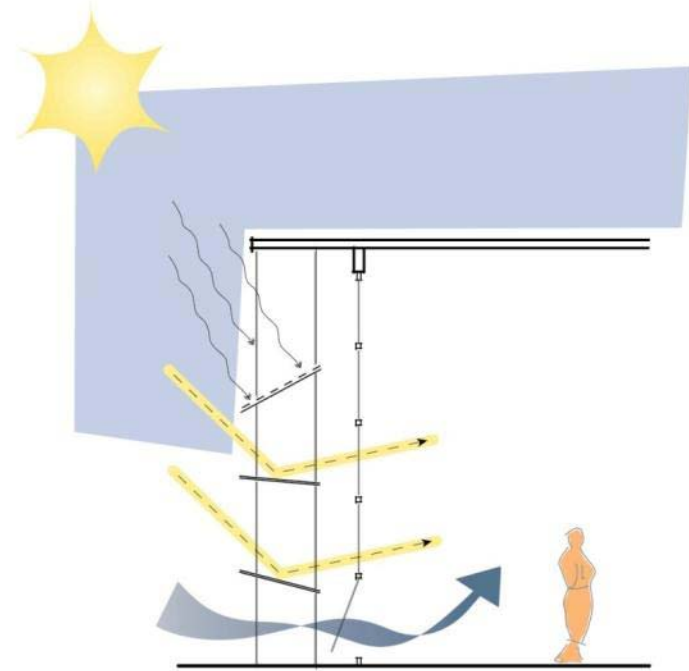
- Building envelope
- Heating, cooling and ventilation
- Lighting and day lighting

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# Facility Entrance



# Façade Detail



## front façade section

- passive ventilation
- day lighting: light shelves
- photovoltaic panels
- enhanced visibility
- shading of envelope

# Interior Features



The interior of the EIC offers:

- A generous lobby that will include:
  - Informational kiosks and displays
  - A library for computer touch-down and resource lending
- A “Smart Green Home” featuring:
  - Advanced residential technologies for lighting, HVAC, alternative transportation, appliances and demand response
  - A 36-person classroom
- Niches for exhibits and displays located in high-traffic locations along the main corridor
- A 200-person seminar room, which can be divided into three distinct classrooms
- A Commercial demonstration kitchen and classroom to test high-efficiency cooking equipment
- A courtyard, open to the sky, to provide daylight and natural ventilation to the building through three retractable glass door systems.



# Project Timing and Contact Information



EIC Grand Opening: May 2011

If you would like more information about the EIC, please contact:

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Would you like to see your product showcased at the EIC?  
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