



National Sustainable Buildings Workshop, Ann Arbor, October 8-9 1999

Case studies and presenters

Case Study 3: **Ridgehaven Green Building Demonstration Project, San Diego, CA**

Presenter: **Adam Saling**

Location: 9601 Ridgehaven Court
San Diego, CA 92123

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Summary of Project (in part from <http://www.usgbc.org/resource/ridge.htm>)

This case study describes the "greening" of Ridgehaven, the City of San Diego Environmental Services Department's (ESD's) new 73,000 square foot headquarters building. Despite constraints like a limited municipal budget, a tight time schedule, and mandated public bidding procedures, the design team succeeded in making energy efficiency, IAQ, resource efficiency, and the environmental impacts of construction and building operations primary design determinants. Use of "green" design techniques in the renovation of the existing structure at Ridgehaven significantly increased energy efficiency, indoor air quality (IAQ), and decreased the project's environmental impact. The demonstration program was accomplished with the assistance of PTI (Public Technology Inc.), EPRI (Electric Power Research Institute), SDG&E (San Diego Gas & Electric Company), and GTek (Gottfried Technology Inc.). EPRI, SDG&E, and GTek worked with the ESD and its design team, managing a comprehensive analysis of energy efficiency options for Ridgehaven. The evaluation featured computerized energy modeling, and life-cycle based financial analysis to optimize the energy system design.

Environmental criteria for materials selection were:

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| -Minimal chemical emissions | -Avoid carcinogens and toxins |
| -Low-VOC materials assembly | -Recycled content in the product |
| -Material recyclable after useful life | -Recycling in the manufacturing process |
| -Durability of the product | -Sustainable and renewable resources |
| -Inhibit biological contaminants | -Preference for local building materials |

SDG&E set an energy usage benchmark of 9 kWh/ft²/yr (kilowatt-hours/square foot/year) for the project. Preliminary operating data for July through November of 1996 shows energy usage declining as the building systems are commissioned. When the data for a full year of operations is available, it is likely that the annual average will fall below the 9 kWh/ft²/yr SDG&E benchmark. Achieving this goal places the Ridgehaven building among the most energy efficient buildings in San Diego, operating more than 47% below the estimated level of consumption for a comparable California Title 24 energy code compliant building (17 kWh/ft²/yr).



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Bio

Adam Saling, formerly Project Manager, City of San Diego

Adam Saling is a graduate of San Diego State University, with a major in Industrial Management. He joined the City of San Diego in 1966 as a Management Analyst, performing a variety of assignments in finance, organization and operation analysis. After a promotion to Supervising Analyst, he supervised a staff group, reviewing departmental budgets, and performing organization and problem analyses for the City Manager.

In 1989, he was assigned as Fiscal Administrator, supervising a staff group and managing the Enterprise Fund of the Environmental Services Department. In 1994, the City acquired a 73,000 sqft office building for the department. At Mr. Saling's recommendation, the City decided to renovate the building as a "green" or "sustainable" building.

Mr. Saling was assigned as Project Manager, coordinating the renovation project with the department, the design team, energy efficiency consultants, the contractor, and San Diego Gas & Electric who became a partner in the project. The project was completed in 1996.

Mr. Saling retired from the City of San Diego in 1999 to pursue personal interests and consultation services.