

Green Architecture Economic Justification

By Todd Jersey

The purpose of this “white paper” is to describe the major economic benefits available for designing and building green buildings. In addition, several case studies are referenced which provide evidence to the economic benefit statements. Lastly, financial incentives are summarized on the federal, state, and local level.

Economic Benefits of “Going Green”

There is a general perception that building “green” delays project schedules and raises capital and operational cost. However, if done properly, building green can actually reduce capital costs.

Reduction in Operating Costs: Efficient energy, water, and waste systems reduce maintenance and operating costs. Green buildings generally use 50% - 75% less energy than conventional construction. Owners, therefore, do not have to suffer from reduced cash flow when energy efficient systems cost more to install up front.

Reduced Risk and Increased Productivity: The EPA has ranked indoor air pollution as one of five top environmental threats to human health. Building green reduces the risk of liability and can reduce insurance premiums for contractors and building occupants. Moreover, energy efficient buildings increase productivity anywhere from six to sixteen percent by decreasing absentee rates and improving the quality of work.

Faster Approvals: Generating early community support for projects can significantly speed up approvals. In fact, streamlining approvals has become a driving strategy behind the green building movement. Preserving on-site wetlands or natural areas and offering public spaces can reduce maintenance costs, generate positive press, and enhance the project in the eyes of the community.

Financial Incentives: On the Federal level, many financial incentives are provided for the construction of green commercial buildings, including: Corporate Deductions; Corporate Depreciation Acceleration; Corporate Exemptions; Corporate Tax Credits; and Grant and Loan Programs. For residential construction, financial incentives are available for: Personal Exemptions and Tax Credits; and Alternative Fuel and Vehicle Incentives. Moreover, most states and local municipalities offer: Green Building Incentives; Leasing/Lease Purchase Programs; Grant and Loan Programs; Production Exemptions; Rebates; Personal Deductions; and Property Tax Exemptions.

Marketing Advantages: Advertising costs can be significantly reduced by utilizing press coverage of new green building projects. The media is generally interested in sustainable construction and will promote projects.

Examples of Green Building Projects in the Western U.S.

Gaia Napa Valley Hotel and Gaia Anderson Valley Hotel

Todd Jersey Architecture projects, the Gaia Napa Valley Hotel received the world's first Gold LEED certification for a commercial hotel. Due to this certification, American Canyon City Council agreed to give the green hotel up to \$1 million in transient occupancy tax rebates over the first four years of operation. Gaia Anderson Valley, currently under construction, received a waiver by the city on the \$100,000 environmental impact fee, in part because a green hotel may encourage tourists to stay longer.

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Adobe Office Buildings, San Jose

To date, Adobe has completed 64 projects, spent nearly \$1.4 million on energy conservation and related projects, received \$389,000 in rebates from local and state agencies, and reduced annual operating costs by \$1.2 million. This 9-month payback gave a return on investment (ROI) of 121%.

Ridgehaven Green Office Building, San Diego

The Ridgehaven Building uses 65 percent less total energy than its nearly identical neighbor, yielding a savings of more than \$70,000 in annual utility costs. This equates to \$1 / sq. ft. in annual savings.

VeriFone, Costa Mesa

VeriFone reduced energy consumption by 59 percent, decreased employee absenteeism by 47 percent, and increased employee productivity by 5 percent. VeriFone's investments in the building's green features achieved a return on investment of over 100 per cent, with a payback of less than one year.

Clackamas High School, Portland Oregon

School officials anticipate the building will use 44 percent less energy and save the school district at least \$69,000 per year in energy costs. Total costs for the LEED certified Silver building were \$117 per square foot, compared with \$140 for a typical high school.

About the Author

Todd Jersey is the founder and principal of Todd Jersey Architecture, an architectural firm highly regarded as a pioneer in the green architecture movement. TJA offers a full suite of green architectural services including smart cost-effective design solutions, LEED administration, and use of the latest green products and technologies. Todd is based in Berkeley, California and has been developing, refining, and implementing green building systems and strategies for over 20 years throughout northern California. The firm's green building projects include mixed-use and creative re-use projects, condominiums, homes, hotels, schools, public buildings, historic renovations, churches, and retail stores. Todd is the first architectural firm in the world to achieve a LEED Gold certification for a green commercial hotel project.

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