zero net energy

ZNE for Developers & Real Estate Professionals

A ZNE building produces as much energy as it consumes over the course of a year

ZNE Real Estate Professionals:

As the real estate market continues to prosper, more buyers are looking, and they are looking for the best value, Zero Net Energy (ZNE) buildings provide compelling selling points.

- **Better Product:** ZNE buildings have first-rate architectural, mechanical and environmental design, resulting in more comfortable spaces and highly productive workplaces.
- **Long-Term Value:** These buildings offer significant savings to owners through lower utility bills and operations costs. ZNE buildings earn higher resale value as growing demand for ZNE buildings exceeds available supply.
- **Market Advantage:** When you help prospective buyers and tenants understand the multiple financial benefits of ZNE, you build credibility by demonstrating your knowledge of leading market trends. Establishing your firm's experience and expertise in ZNE will be a market advantage now and into the future.

ZNE for Developers:

Beyond the environmental benefits of reduced carbon and greenhouse gas emissions, ZNE buildings provide substantive business advantages. They offer superior interior environments for occupants and reduced operating and equipment replacement costs. Your customers should understand these attractive features can reduce vacancy and turnover while increasing lease up rates and resale value. This can grow their bottom line while providing valuable brand recognition in a competitive building market.

- **Reduced Risk:** ZNE performance helps reduce exposure to risk by ensuring that an asset is more resilient, has higher employee and tenant retention, is less exposed to energy price swings, and enjoys higher rents.
- **Better Leasing & Occupant Retention:** ZNE buildings have faster lease up rates, which increase likelihood of quickly achieving stabilized occupancy and higher tenant retention rates.
- **Reduced Operating Costs:** As triple net leases[1] are now the standard, decreased utility rates and lower maintenance costs are more attractive to lessees. Reducing mechanical equipment sometimes frees up additional leasable space. Throwing In the extra space can keep overall market rents for superior buildings more competitive while still increasing cash flow.

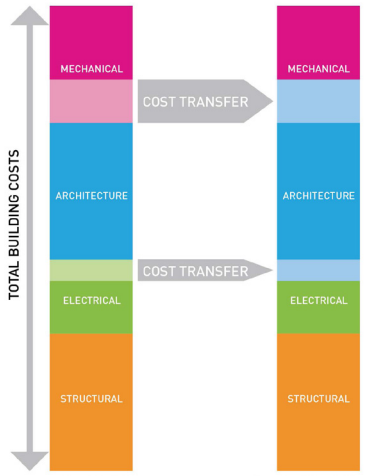

Figure 1: Cost Transfer, Courtesy of Tom Hootman

- **Codes and Regulations:** Building codes and regulations in California and other states are quickly evolving toward ZNE. Builders and contractors with the expertise and capacity to supply ZNE buildings to business leaders and home buyers right now can gain the market advantage that comes with innovation. They also hedge the future costs of trying to keep up with future codes and standards.
- **Better Financing & Incentives**[2]: Lenders are increasingly rewarding real estate companies and development projects with sustainable features with more attractive debt terms. Techniques like Green Leasing and Green Financing incentives are becoming more available to developers and are appealing to potential occupants who are invested in their buildings from inception. Attractive incentives are available through local utilities and state efficiency programs to offset ZNE design, planning, research and construction costs, including incentives for renewables.

1 Triple Net Leases: http://www.investopedia.com/terms/n/netnetnet.asp
2 Competitive Advantage to Green Financing: https://www.fanniemae.com/content/fact_sheet/competitive-advantage-green-financing.pdf
3 Figure 1: http://usgbc-sd.org/Resources/Documents/2013_Conf_ZEZW/ZEZW1a_Keynote_THootman.pdf

PROJECT PROFILE

435 Indio ZNE Office Retrofit | Sunnyvale, CA

"We're getting a little bit of premium on rent, but the main way it pays off is the value of the building is higher and you generate additional revenue from reduced operating costs and faster lease up times… It's a pretty strong economic case for a building of this size."

– Kevin Bates, President of SHARP Development on 435 Indio Way[4]

435 Indio Way[4] is a retrofit of a single-story, 31,759-square-foot building in Sunnyvale, CA[5], that the developer, Sharp Development Company, viewed as test for the feasibility of ZNE. Sharp Development Company President Kevin Bates has already developed more than 2.5 million square feet in Silicon Valley, but the economic model and lease structure he developed for 435 Indio demonstrated an entirely new approach. The three main pillars of Kevin's design philosophy break new ground in developing the business case for ZNE retrofits.

1. You can drive down operation and maintenance costs through careful equipment selection and design.
2. Tenants will want to take advantage of the building's natural daylight by maintaining open plan offices, reducing demolition and interior remodeling costs.
3. Tenants will be willing to pay higher premiums for a well-designed, high-performance space.

Using an integrated design approach, the owner, developer, and design team worked together to create a successful and highly replicable model for ZNE retrofits in office buildings. Design features include rooftop photovoltaics, occupancy sensors, passive daylighting and natural ventilation. An energy dashboard in the lobby increases occupant engagement around energy use.

Resources:

- NBI's 2016 List of ZNE Buildings: newbuildings.org/2016-zne-list/
- NREL Cost Control Strategies for ZNE Buildings: nrel.gov/docs/fy14osti/62752.pdf
- How to Calculate and Present Deep Retrofit Value: rmi.org/retrofit_depot_deepretrofitvalue
- Savings by Design: savingsbydesign.com/zero-net-energy-zne-resources
- ZNE Communications Toolkit: newbuildings.org/resource/zero-net-energy-communications-toolkit/
- Net Zero Energy Buildings Whole Building Design Guide: wbdg.org/resources/netzeroenergybuildings.php
- Profiting from the Sun, a guide to financing solar offices for real estate developers: pointenergyinnovations.com/profiting-from-the-sun/

4 Getting to Zero Database - 435 Indio Way: http://newbuildings.org/resource/getting-to-zero-database/#70753
5 A Real Estate Developers Business Case for Net Zero: http://www.integralgroup.com/blog/a-real-estate-developers-business-case-for-net-zero/
6 435 Indio Way Case Study: https://buildingdata.energy.gov/project/435-indio-way

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