

0

70

0



zero-energy homes

Today's building industry is dramatically affected by the increasing cost of energy, inefficient building methods and the high cost or unavailability of capital. As a result, many forward-thinking developers and public agencies are seeking new options to build energy efficient, cost effective, and rapid-production housing. ZETA delivers a unique solution to meet the needs of these market leaders. Through our off-site rapid production facility, we produce net zero energy, multifamily homes for urban and sustainable communities. Our precision-built housing exceeds the quality and performance of site-built homes at no additional cost while minimizing resources, waste and CO₂ emissions. We invite you to join us in the growing market for zero-energy, high-quality homes. Together, we can transform the conventional method of housing construction to [a technology-driven model that meets the demands of the future.](#)

think zero

zero energy
zero time delay
zero additional cost

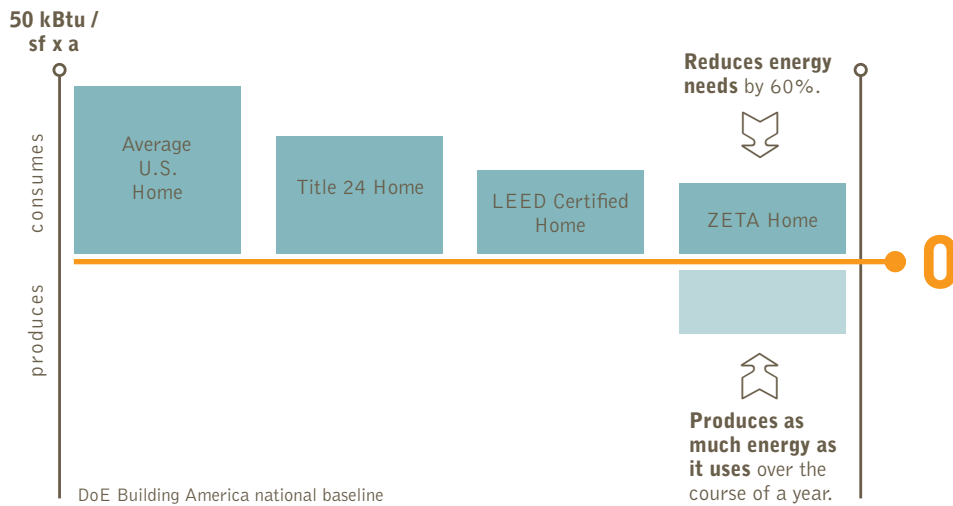
ZETA

the next generation of housing

ZETA homes exemplify the next generation of housing. Combining advanced energy efficiency systems with green technologies, our homes operate at net zero energy – meaning they produce as much energy as the occupants consume over the course of a year, while minimizing carbon emissions. Enlightened financial and consumer markets are assigning greater value to zero energy homes. The next generation will demand it. ZETA is at zero today.

ZERO ENERGY

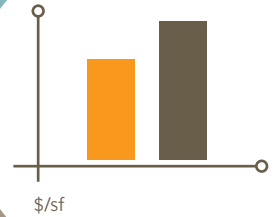
Buildings account for about 40% of national energy consumption, 70% of electricity consumption and nearly half of all greenhouse gas emissions annually in the U.S. ZETA's zero energy homes provide one of the first nationally scalable solutions to these unsustainable environmental impacts. Using a whole-systems design approach, high-performance materials and an innovative mechanical core, ZETA homes require 40%–60% less energy overall and 65% less energy for heating, cooling and hot water than a comparable structure (based on data published by ZETA's partner: U.S. Department of Energy's Building America program). To achieve net zero energy, ZETA homes use grid-tied photovoltaic systems and other clean energy sources.



COST

ZETA homes are designed to use significantly fewer resources than comparable standard homes. Our precision-building process decreases construction waste by approximately 30% compared to site-built construction. Shorter construction time reduces holding costs and improves opportunities to secure construction financing. Efficient fabrication reduces labor time and associated costs. And, ZETA provides every developer and public agency with a fixed budget for construction, delivery and installation – no surprises, no cost overruns.

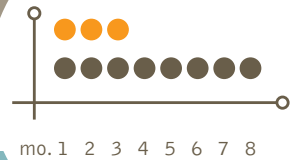
- ZETA
- Standard Construction



TIME

ZETA homes are constructed and delivered 60-80% faster than site-built homes. Construction of the foundation and the units occurs in parallel rather than linearly. And with an off-site facility and a just-in-time inventory system, there are no weather delays, material shortfalls, worker downtimes, or unanticipated site issues that cost valuable time.

- ZETA
- Standard Construction



SUPERIOR PERFORMANCE

ZETA's precise construction process and building innovations produce homes that are more comfortable, healthier, and more energy efficient than site-built homes. Off-site fabrication reduces the opportunity for mold and moisture; special soundproofing design and building products enhance livability, an important consideration in urban infill; and a range of systems and materials ensure high levels of indoor air quality and consistent ambient temperatures. Numerous energy and water saving strategies are employed for maximum sustainability.

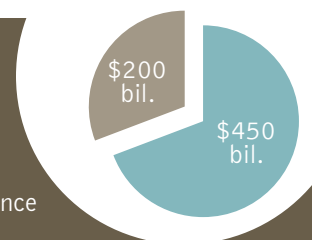
REDUCED RISK

As a vertically integrated company, ZETA offers a single-source solution – from design and engineering through fabrication, delivery, installation and performance monitoring. ZETA partners receive higher quality and lower priced homes; reduced responsibilities, risk and liability; and greater control over schedule and budget.

- Waste, delays & mistakes
- Construction

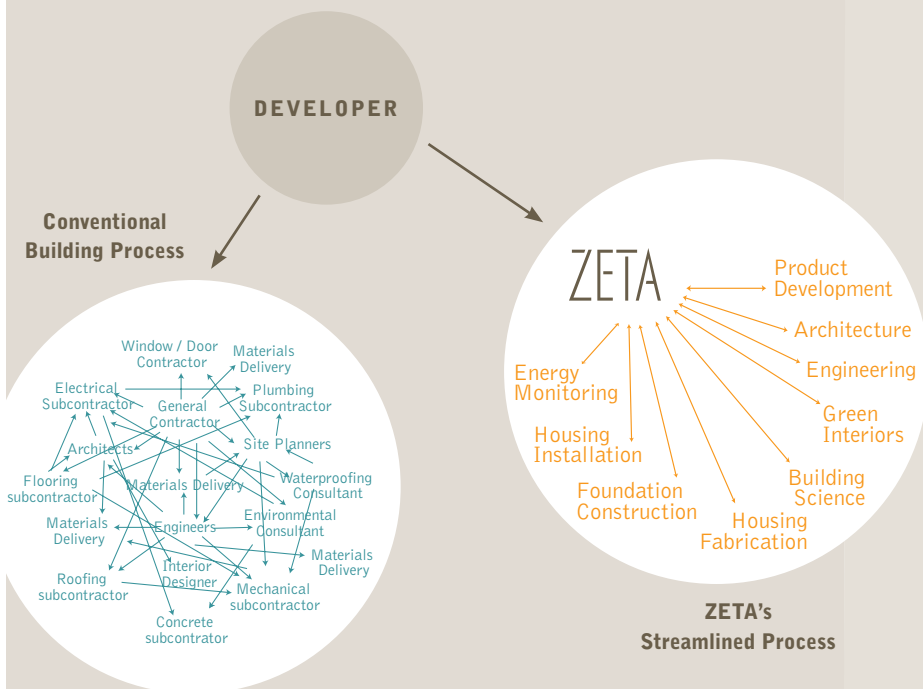
*Source: The Economist

Total U.S. Building Industry



a better way to build

ZETA brings innovation and efficiency to every step of the building process. Conventional building is a fractured process involving multiple designers and subcontractors. The result often is uneven quality and increased costs from waste and inefficiencies. In contrast, ZETA design and construction is performed by one entity, realizing the full promise of integration. This whole-systems approach to the design, construction and operation of buildings means that architectural, mechanical and structural systems are designed together with better precision, fit and operational efficiency.



QUALITY & DURABILITY STANDARDS

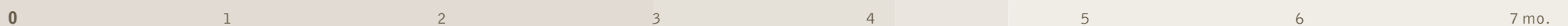
By fabricating off-site and employing proprietary innovations for the building envelope and mechanical systems, ZETA achieves higher quality while reducing waste and cost. We start with dry lumber and frame indoors with jigs and pre-cut material to produce structures with better dimensional control, strength and rigidity. Installing waterproofing, flashing, insulation, windows, siding, and other high performance materials off-site allows for better control, greater worker access and an efficient fabrication sequence, in turn producing a building envelope that is more reliable than conventional construction. And, most interior finishes are installed in the factory, further improving quality and reducing cost.

PRECISION BUILDING & LEAN MANUFACTURING

Our Bay Area fabrication facility serves the entire Northern California market. The processes employed by the dedicated factory team reflect the latest lean manufacturing techniques, assuring the highest quality construction combined with high efficiency and minimal waste. ZETA's designs leverage CAD/CAM design documentation, enabling precision building techniques at ZETA suppliers and inside the ZETA fabrication processes. ZETA's direct factory flow assures that material handling is minimized and build quality and efficiency is maximized. In addition to ZETA's quality control at every step, ZETA uses an independent inspection team to verify build quality at sub-assembly and final assembly levels. ZETA's modules are 95% completed in the factory and then shipped to the site for installation on ZETA's permanent foundation. The ZETA fabrication process includes parts and assembly tracking for every module so that field performance and reliability can be linked to original sources.

MEETS & EXCEEDS CODES & STANDARDS

ZETA homes meet and exceed local and State of California building codes and energy efficiency standards for permanent site-built construction and for modular construction, in addition to exceeding Title 24 by 50%. In accordance with the State of California Department of Housing & Community Development's modular housing policies, third-party building inspectors evaluate and provide the seal of approval for off-site construction at ZETA's factory. Local building departments inspect and approve the on-site construction of the foundation, utility connections and the finished home.



offsite

ZETA design

CD's and permitting

ZETA module construction

ship

sitework/foundation

installation

plug-in

onsite

designed for customization

ZETA homes are highly flexible and adaptable to each client's request. Our full-service team works directly with developers and public agencies to customize ZETA's exterior and interior designs to the local architectural vernacular or development profile. Many different building types are available in architectural styles ranging from European and American traditional to modern.



ZETA NET ZERO

- Passive solar design
- External shading
- Day-lighting
- Thermal storage foundation
- Supplemental rigid insulation
- Air-to-air heat exchanger
- Heat pump
- Wastewater heat recovery system
- High performance insulation
- Ultra high performance, low-e windows – R-5 and higher
- High efficiency lighting
- Energy Star appliances
- 100% photovoltaic power
- Automated energy optimizer controller
- Commissioning & testing in third-party labs

ZETA HEALTH

- Integrated fresh air system
- HEPA filters
- Natural ventilation
- Low VOC finishes
- No added formaldehyde
- Cellulose insulation
- Sound attenuation
- High indoor air quality – GreenGuard Certified
- Mold & moisture prevention strategies:
 - Rain-screen siding system
 - Mold resistant and dry lumber
 - Mold resistant drywall
 - Commercial flashing techniques
- Hardwood and low-cement concrete floors
- Indoor air quality construction management plan
- Pre-occupancy building flush out

ZETA GREEN

- FSC certified lumber
- Resource efficient framing
- Low cement, high flyash concrete
- Recycled cellulose insulation
- Engineered lumber
- Sustainable finishes
- Fiber cement siding

Type

- Housing
- Live/work
- Urban mixed-use
- Cabins

Style

- Traditional
- Modern
- Victorian
- American Craftsman

Site Plan

- Medium to high-density
- Zero lot line urban infill
- Sustainable new communities
- Military base conversion

Roof line

- Gabled
- Flat
- Shed
- Winged

Density

- 3-4 stories over podium parking
- 2-3 stories over below grade foundation

Site-built add-on's

- Porches
- Decks
- Overhangs
- Atriums

Finishes

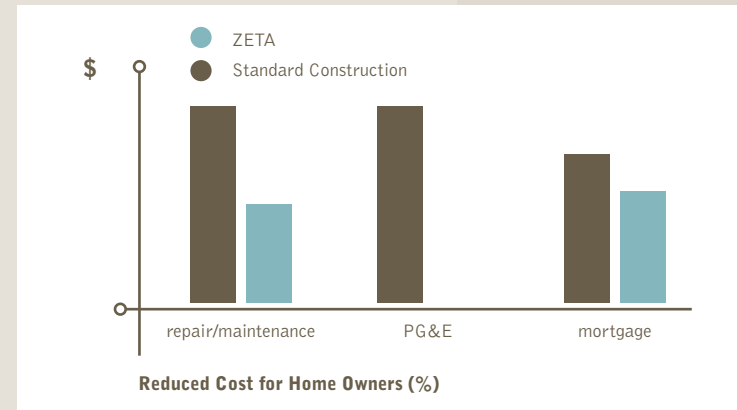
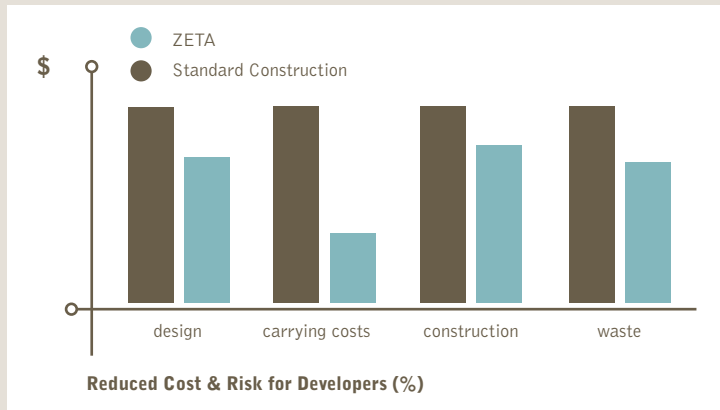
- Sustainable
- Recycled
- Non-toxic
- Highly durable
- High-end and moderate-priced

Stair Type

- U-Shape
- L-Shape
- I-Shape
- Z-Shape

Energy

- Net Zero
- Carbon Neutral



DEVELOPERS

ZETA offers significant benefits to developers, including reductions in risk, cost and time, and predictable delivery schedules. Our net zero energy homes offer a competitive advantage in the marketplace, a single-source solution from design through completion, expert workmanship, high performance and increased marketability. ZETA homes exceed state and local building codes, achieve LEED Platinum ratings, and meet new mandates for zero energy residential buildings. ZETA works in partnership with developers by collaborating on design and engineering and developing joint marketing collateral. Using our proprietary utility core (electrical, plumbing, and HVAC) ZETA townhomes, condos and stacked flats are efficiently connected and installed in zero lot line infill sites and can be stacked to two, three or four stories.

HOMEOWNERS, TENANTS & NEIGHBORHOODS

ZETA homes are attractive, affordable, comfortable, healthy and durable – key considerations in today’s real estate market. And, with a lower initial price, lower operating cost and lower repair and maintenance, homeowners will be delighted. A ZETA home’s annual electricity bill nets to zero, protecting the owner from rising energy costs. A ZETA home can achieve LEED Platinum-rated, costs less to buy and less to maintain and repair, year after year. A ZETA home gives the occupants the best possible health and comfort from a consistent temperature, high indoor air quality, controlled acoustics and a toxin-free environment. Building off-site results in less disruption to the neighborhood. Sustainable materials and varied finishes create distinctive homes and vibrant neighborhoods that are aesthetically inviting.

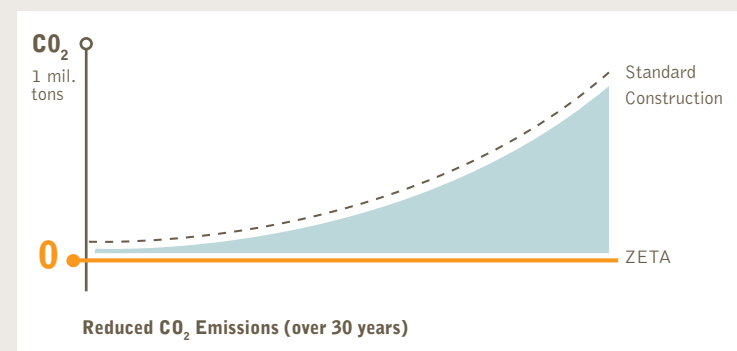
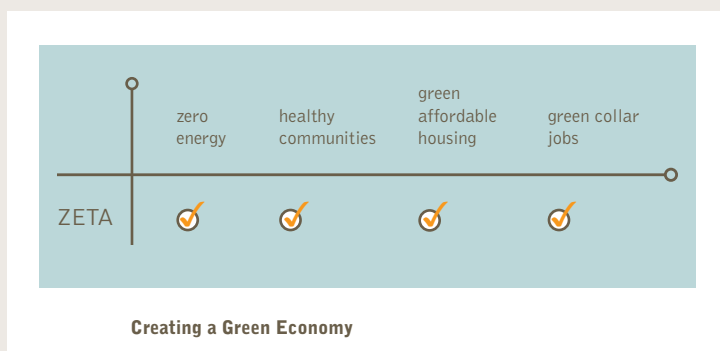
the ZETA advantage

CITIES & COUNTIES

By partnering with ZETA on local economic development and community revitalization projects, public agencies are taking a leadership position in the country’s emerging green economy. Our homes exceed the most rigorous local government environmental standards as well as meet state energy efficiency and CO₂ mandates on the horizon. Competitively priced units help agencies achieve affordable housing goals. Flexible configurations and designs – including infill development, live/work space, mixed-use, extended family units or other uses – increase density without compromising the livability and revitalization of urban communities. ZETA developments and fabrication facilities stimulate the local economy, providing local construction contracts, increased sales and property tax revenues, and green collar jobs. In short, ZETA facilitates rapid transformation of urban neighborhoods to improve quality of life and environmental quality in the community.

STATE, FEDERAL & GLOBAL

ZETA provides leadership for the state and federal transformation to the new green economy. We not only reduce negative environmental impacts associated with building construction, operation and maintenance but also demonstrate one scalable solution to climate change. With less reliance on fossil fuels, a single ZETA home saves nine tons of CO₂ emissions annually, as compared with traditional housing. Building off-site reduces construction waste by approximately 30%, in turn reducing pollution and shrinking the carbon footprint associated with new houses. Finally, today’s ZETA home meets state and federal policies and mandates requiring zero energy residential construction by 2020.

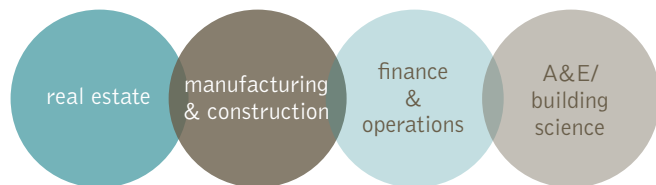


ingenuity, innovation & integration

Inside ZETA are experts in real estate, building sciences, design, engineering, green technology, modular housing, manufacturing and sustainable community planning. We work as a team to provide a turnkey solution to zero energy home development. Our research and development group —zLab— is advancing the next generation of zero energy homes. ZETA holds pending patents related to structural integrity and transportability, thermal control, HVAC systems, and streamlined fabrication and installation.

MEET THE TEAM

ZETA's executives are distinguished leaders in sustainable real estate development and green building technology. The firm's integrated, multidisciplinary team represents four industry sectors.



Naomi Porat, CEO

Leading expert in sustainable real estate development and experienced executive-level manager of socially responsible business enterprises. Depth of expertise in planning and development of urban land use projects that achieve economic, social and environmental sustainability. Twenty years of experience, with portfolio of projects across the U.S. focusing on large, mixed-use development; affordable housing; rehabilitation and reuse of military sites; and other urban revitalization projects. Cofounder of the Institute at the Golden Gate; previously COO of Global Homes, International; principal at Porat Consulting and Sedway Group. MBA, Yale University; Master in City & Regional Planning, UC Berkeley; BA Stanford University.

Marc Porat, Chairman

Silicon Valley business leader, internationally recognized for pioneering work in the information and green technology sectors. Has initiated and led a number of notable ventures since 1983, including a group of companies created to help mitigate global warming and achieve a net zero energy, low-carbon global economy. Chairman of Serious Materials, and Chairman and CEO of CalStar Cement, both clean tech enterprises. Previously with Apple Computer's Advanced Technology Group, Chairman & CEO of General Magic (an Apple spin-out) and Perfect Commerce, and founder of Private Satellite Network. MA, Economics and Communications, Columbia University; Ph.D., Stanford University.

Andrew Silverman, VP Real Estate & Development

20 years experience in real estate development, including design, financing, project management and strategic planning for national portfolio of residential, commercial and industrial properties. Completed \$250 million in residential and mixed-use development, with a focus on urban infill housing.

Laura Blair, Director of Project Development

Urban economist, more than 20 years experience in affordable housing, redevelopment, sustainable master planned communities and urban planning. Conducted market analyses for reuse of large-scale public and private properties, and financial feasibility studies for high-density pedestrian-oriented housing.

Steven Spademan, SVP Manufacturing Operations / QC & QA

More than 28 years experience in manufacturing and product engineering. Managed team responsible for worldwide quality of Dell computers, applied leading edge quality tools and systems to reduce costs by over \$50 million annually. Served as plant manager for large Dell factories and for Allied Signal's 600-person aircraft systems factory. Led 330-person factory team at IBM.

Bill Malpas, Director, Construction Management

General contractor, 33 years experience in production housing, custom homes, downtown mid-rises, manufacturing design and machine technology. Managing partner and president of firms building multi-unit residential infill conversions; foreman at Plant Builders; QA inspector at highly automated semi-trailer factory.

Stefan Schneider, Manufacturing Engineer

Swiss engineer specializing in CAD/CAM for the housing manufacturing industry. Extensive experience in highly automated housing manufacturing in Europe and North America.

Shilpa Sankaran, VP Business Operations

Expert in business strategy and operations for companies ranging from sustainable housing start-ups to Fortune Global 1000 corporations. 15 years experience in process optimization, cost control, strategic planning, technology strategy and project management for Global Homes International, PricewaterhouseCoopers, Sapient Corp., General Motors, Wells Fargo Bank, AAA, Nike and others.

Dave Mar, Principal Structural Engineer

Spearheading sustainable design in structural engineering, specializing in high performance seismic and lean construction methods of residential construction including factory-built housing, medium density wood-frame over parking podium housing and high density post-tensioned concrete housing. Lectures at the engineering departments of UC Berkeley, Stanford and the Lean Construction Institute.

Daniel Smith, Principal Architect

More than 30 years of sustainable design and alternative building systems development, including use of renewable and environmentally sensitive materials, passive solar design, gray water systems and comprehensive green design and award-winning design with LEED certification. Led more than 400 residential, community and commercial projects in the San Francisco Bay Area.

John Straube, Principal Building Scientist

Internationally recognized expert in sustainable, energy-efficient, healthy and durable buildings. Focus on building enclosure design, moisture physics, whole building performance, and development of new building systems and products. Lead consultant for DOE's Building America Program, founding principal of Balanced Solutions Inc.

Sandra Slater, Principal Green Interior Designer

Specialist in environmentally sustainable interior design, with projects featured in numerous national and international journals, books and television programs; lauded as a leader in environmental design for more than 10 years.

Taeko Takagi, Product Development Designer

Specializes in sustainable architecture, real estate development and product/brand identity. Worked as a designer and manager on large mixed-use projects with Holliday Development, David Baker and the U.S. National Renewable Energy Laboratory.

a better way to live

Imagine living in a home that is aesthetically striking, environmentally sensitive and good for your health. Filled with natural light, beautiful finishes and delightful ambient temperature. A home that is comfortable and quiet. A model of quality, performance and durability. Imagine a home that sparks the imagination and illuminates a better way of living. Imagine ZETA.



LEED



GreenPoint Rated



Home Energy Ratings



GreenGuard Institute



Energy Star



EPA Air Plus



DOE Building America Program



California HCD Factory-Built Housing



California Public Utilities Commission



Department of Energy



Green Building Program



Modular Building Systems Association



Product group from well-managed forests, controlled sources and recycled wood or fiber

www.fsc.org Cert no. XX-XXX-XXXX
© 1996 Forest Stewardship Council



As a participant in the U.S. Department of Energy's Building America Research Program, ZETA is bringing advanced residential building energy systems and sustainable building materials to the mass market at zero additional cost.

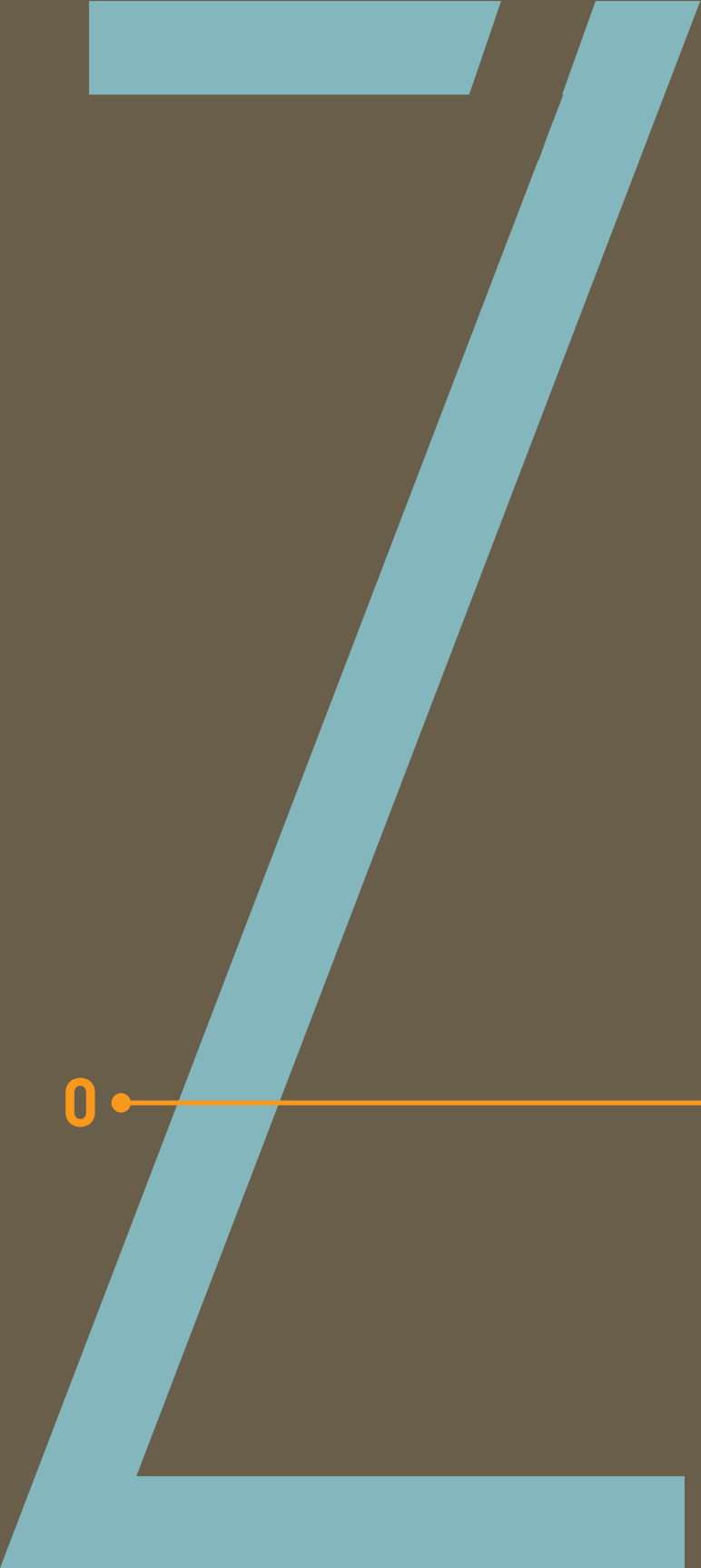
ZETA provides third-party commissioning and verification to achieve these certifications and public policies.

Information contained in this brochure is provided for general reference only. ZETA reserves the right to revise estimates and assumptions presented herein.

ZETA

ZETA
848 Folsom Street, Suite 201
San Francisco, CA 94107
T 415.946.4084
F 415.651.9481
info@zetacommunities.com
www.zetacommunities.com
zero energy homes

0



0.