

# Local Governments Strategies for ZNE

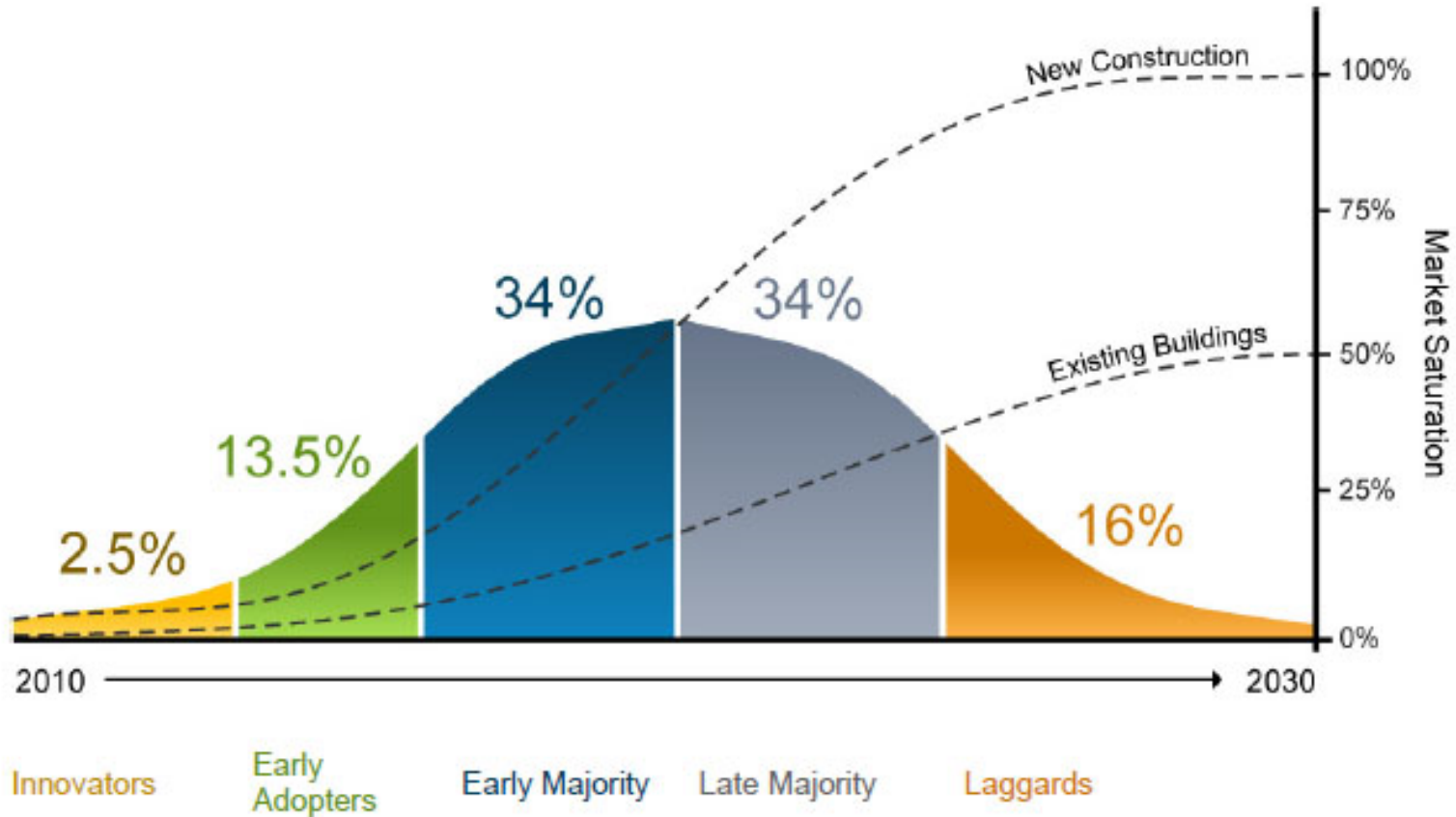
*Heather Flint Chatto, New Buildings Institute*



energy  
upgrade<sup>®</sup>  
CALIFORNIA

zero net energy

# Early Adopters: You are the Leaders helping advance California's ZNE Goals



# ZNE EARLY ADOPTERS

pursuing ZNE projects, plans or policies



## Leading CA Cities & Counties

- Alameda
- Berkeley
- Lancaster
- County of Santa Clara
- Dublin
- Hayward
- Huntington Beach
- Los Altos
- Long Beach
- Los Angeles County
- Sacramento
- San Diego
- San Francisco
- San Jose
- San Leandro
- San Mateo County
- Santa Barbara County
- Santa Monica
- Sebastapol
- Sonoma County

# ZNE EARLY ADOPTERS

pursuing ZNE projects, plans or policies



## State Government

- DGS
- DMV
- CA Dept of Corrections
- Caltrans
- ARB
- Employment Dept.
- CA Lottery

## Federal Government

- NASA
- Army

# ZNE for Local Governments



*When government leads,  
the people will follow...*

## Why ZNE?

- **Innovation & Leadership** - Zero energy buildings present important leadership and commitment to the public, as well as responsibility in wise use of energy resources, and innovation of what can be done in the built environment.
- **Resiliency** – Government facilities often serve as community centers for refuge in times of emergency;
- **Long Term Savings** in efficiency, cost, operations, climate
- **Alignment with Policy Goals** – Local Climate Action Plans, State Energy Efficiency Strategic Plan goals



# Motivations to Pursue ZNE

- **State Policy/Executive Order**
- **Stabilize energy costs and lower GHG**
- **Renewable Energy Goals**
- **Leadership & demonstration**
- **Help promote ZNE** to professional design community and owners
- **Building project in progress** with high performance goals
- **Increasing uncertainty about cost and availability of energy**, risk management for financing operations and long term sustainability

*“There is increasing uncertainty about the cost and availability of purchased energy to operate existing and new facilities. These uncertainties pose risks to institutional finances, operations and long-term sustainability.”*

# ZNE for Local Governments



*When government leads,  
the people will follow...*

## Strategies:

- Engage leadership to set ZNE Goals & Targets
- Adopt a formal policy for ZNE
- Establish a ZNE Task Force
- Solicit Feasibility Studies for Capital Projects
- Initiate one or more ZNE Pilots
- Amend contract RFP/RFQ Requirements for ZNE performance goals and priorities: for contractors, performance targets, required specifications, documentation and persistence



# How are Local Gov doing ZNE?

## Strategies:

- Piloting ZNE projects
- Community building renewal (assessing existing local building stock to find opportunities).
- Look at what is coming up for capital improvement projects and pilot or upgrade systems and structures to get to ZNE.
- Consider DMV's approach to pursue ZNE on all new projects now and skip the pilots.
- Resiliency Planning - Identify "critical facilities" as priority projects; pair up with FEMA or other hazard mitigation funding
- Demonstration of leadership in building technologies





# What Buildings Make Sense for ZNE?

## Most Building Types are feasible

- Low-Mid-Rise Office Buildings
- Service Buildings
- Warehouses
- City Halls
- Recreation & Environmental Centers
- Libraries
- Low Occupancy Buildings/Facilities

## Priority Buildings

- New buildings/campuses
- Buildings needing major replacement, big energy hogs, buildings where systems are needing major retrofits



# How are Early Adopters Getting to ZNE?

## Strategies:

1. **Explore creative funding opportunities for ZNE:** EPIC, Savings by Design, technology demonstration, bonds, establish efficiency reserve funds.
2. **Establish Incentives for ZNE buildings:** permitting fast track, fee waivers, low cost loans, public recognition by leadership, etc.
3. **Use the Tools to Engage and Educate** internal staff, leadership and public facing staff, communication and media re: goals, targets, and important roll in operations and behavior
4. **Educate facilities and operations staff** – much of ZNE happens downstream

# **OVERCOMING THE COST BARRIER**

*“The prevailing industry perception is that zero energy is cost prohibitive and suitable only for showcase projects with atypical, large budgets; however, **there is mounting evidence that zero energy can, in many cases, be achieved within typical construction budgets.**”*



# Fundraising & Financing Strategies



1. **Utility Program Support - Savings By Design**
2. **Pilot Research Program**
3. **Technology Demonstrations**
4. **Use an Upgradable Design Strategy**  
(e.g. Redding School for the Arts)
5. **External Grant Funding**
6. **District Approach to Energy (FortZED)**
7. **Solar Financing District (e.g PACE)**
8. **Prop 39 funding for schools**

# Fundraising & Financing Strategies



9. **Prototypical Design for replication of standard buildings** (Campbell School District's 8 new schools)
10. **Reduction of operation costs = increased capital project budgets**
11. **Power purchase agreements (PPAs)**
12. **Energy Service Companies (ESCO)**
13. **Emerging Tech programs** through utilities
14. **Urban development tools** (if they are in local government redevelopment area)
15. **FEMA or hazard mitigation financing** for resiliency planning and critical building upgrades

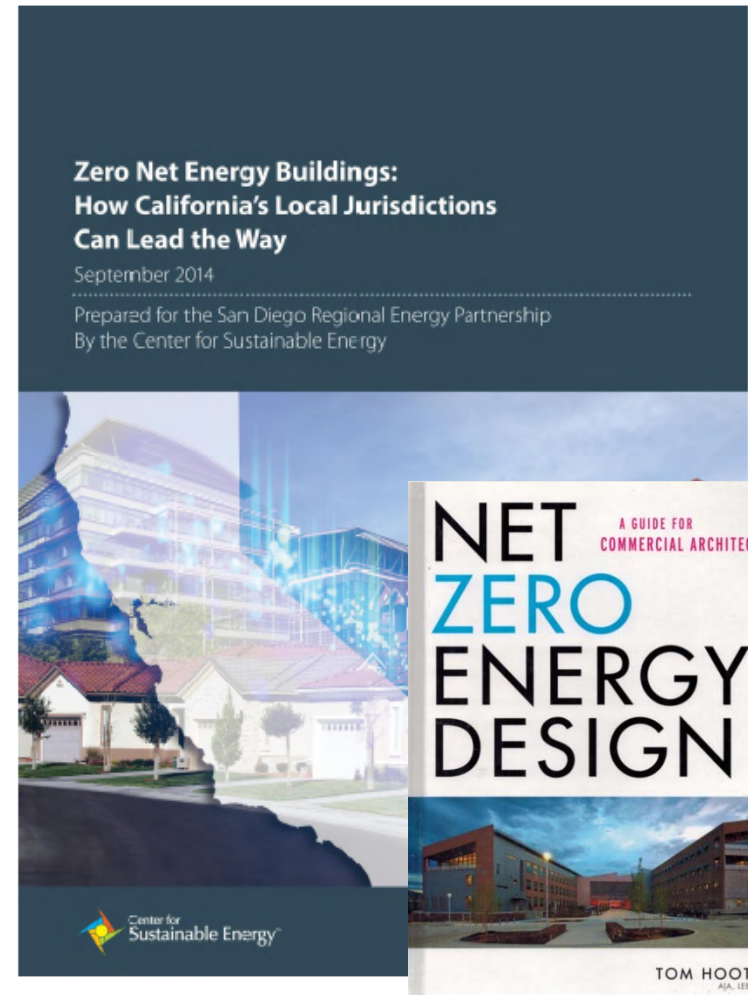
# Resources to Support Local Governments

## Policy Templates

- [Santa Barbara Resolution for Zero Energy Buildings](#) in County Owned Facilities
- ZNE Incentive Track embedded in Green Building Programs  
[SmartBuildSB2 website](#)

## Resources

- ZNE Report by Center for Sustainable Energy & Online Tool  
<https://energycenter.org/zne>
- NBI Top 10 Policies for Getting to Zero Energy Buildings  
<http://newbuildings.org/ten-selected-policies-support-progress-toward-net-zero-building-sector>



# 5 GREAT NEW TOOLS FOR ZNE BUILDINGS

**1 ZNE Message Platform**  
Key messages for target audiences on the what and why of ZNE.

**2 "Intro to ZNE" Presentation**  
Customizable powerpoint presentation provides an overview of California's goals and policies for ZNE, key strategies, and case study examples.

**3 ZNE Companion Guide/Fact Sheets**  
Collection of FAQs, resources, design strategies, and key messages for designers, commercial building owners, policymakers, and decisionmakers of schools and public buildings.

**4 Case Studies: ZNE & Ultra-Low Energy Buildings**  
Read about ZNE and ultra-low energy building examples, including design strategies, costs, and lessons learned.

**5 ZNE Action Bulletin**  
Sign up for our quarterly e-newsletter for updates on ZNE news, events, trainings, case studies, planning, policy, and research. To sign up, or to get more info about the toolkit, email [heather@newbuilding.org](mailto:heather@newbuilding.org).



# ZNE Communications Toolkit

**Zero Net Energy in CA Introduction**

**ZNE Schools & Public Buildings**

**ZNE Facts for Commercial Building Operators & Owners**

**Energy Efficient Strategies & Features**

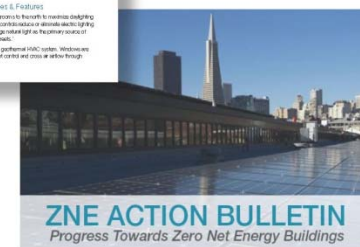
## ZNE Companion Guide to Zero Net Energy in CA

TOOLS & RESOURCES FOR DECISIONMAKERS, DESIGNERS, OWNERS, POLICYMAKERS, & CHAMPIONS

JUNE 2013 DRAFT



Frequently Asked Questions, Design Fundamentals, Project Profiles, & Resources for More Information



**ZNE ACTION BULLETIN**  
Progress Towards Zero Net Energy Buildings

[www.newbuildings.org/zne-communications-toolkit](http://www.newbuildings.org/zne-communications-toolkit)

# ZNE Early Adopters Leadership Network

Support for Schools, Local Governments, Higher Ed & State Agencies

