

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

General ZNE Resources

ZNE Action Bulletin |

newbuildings.org/zne-action-bulletin-0

Electronic newsletter produced by New Buildings Institute, in partnership with the California Public Utilities Commission. It provides information on new research, trainings, innovative buildings, and developments with key strategic efforts in policy and planning.

ZNE Communications Toolkit |

newbuildings.org/zne-communications-toolkit

Tools and resources for ZNE champions, policymakers and local government staff, designers, commercial owner-operators, and decisionmakers for schools and public buildings. The toolkit includes frequently asked questions, fact sheets strategies for an integrated design process, key communication messages, ZNE case studies, a presentation template, and more.

ZNE Education & Trainings |

pge.com/en/mybusiness/services/training/pec/index.page

(click on classes and search on ZNE) PG&E offers ZNE workshops on design for residential and non-residential buildings through its training centers in Stockton and San Francisco.

Architecture at Zero | architectureatzero.com

A zero net energy design competition open to students and professionals worldwide, engaging architecture, engineering, planning students and professionals in the pursuit of energy efficient design.

Zero Energy Building Certification — Living Building Challenge | living-future.org

Managed by the International Living Future Institute, the Living Building Challenge is intended to inspire design and construction of zero impact, restorative buildings.

Policy & Program Resources

California Long Term Energy Efficiency Strategic Plan |

cpuc.ca.gov/PUC/energy/Energy+Efficiency/eesp

A comprehensive Plan for 2009 to 2020 and an integrated framework of goals and strategies for saving energy.

CPUC ZNE Commercial Action Plan |

cpuc.ca.gov/PUC/energy/Energy+Efficiency/eesp

ZNE Commercial Action Plan developed by the California Public Utilities Commission to help achieve the strategic plan goals and engage industry leaders, relevant agencies, stakeholders, utilities and other influencers, including sustainable homes and businesses.

California's Savings by Design program |

savingsbydesign.com

A program providing support for buildings that achieve at least 40% energy savings above Title 24 code. This includes support for design teams, help with additional modeling, assistance with technical resources, and commercial and residential ZNE seminars.

PG&E ZNE Pilot Program | pge.com/myhome/saveenergy/money/energysavingprograms/znepilotprogram

Zero Net Energy Pilot Program promoting California's long term energy goals through a portfolio of research, development, and demonstration projects around ZNE buildings together with complementary education, outreach and information activities.

California ZNE Homes 2020 Planning and Information Website | californiaznehomes.com

The Energy Division of the California Public Utility Commission (CPUC) is currently creating a ZNE Residential 2020 Vision Framework to help meet the state's ZNE residential building goals. This website is designed to facilitate stakeholder involvement in that effort and provide resources to key audiences.

Governor's Executive Order for ZNE State Buildings | gov.ca.gov/news.php?id=17508

ICLEI-Local Governments for Sustainability | icleiusa.org

California green building programs and benchmarking ordinances — Exceeding the 2008 Building Energy Efficiency Standards | energy.ca.gov/title24/2008standards/ordinances/index.html

School Resources

Coalition for High Performance Schools | chps.net

NEEP Roadmap for Zero Net Energy Buildings Northeast Energy Efficiency Partnership | neep.org/public-policy/energy-efficient-buildings/high-performance-public-buildings/roadmap-for-zero-net-energy-buildings

Sustainability Tools for Assessing & Rating (STAR) Communities | starcommunities.org

Design Resources

Energy Design Resources | energydesignresources.com

Advanced Building | advancedbuildings.net

Savings by Design | savingsbydesign.com

Integrated Design – The best path to highly efficient buildings | designsynthesis.betterbricks.com

Whole Building Design Guide – Engage the Integrated Design Process | wbdg.org/design/engage_process.php

AIA Integrated Project Delivery: A Guide | betterbricks.com/

Plug Load Best Practices Guide | newbuildings.org/plug-load-best-practices-guide
Plug loads can be managed through low- and no-cost measures that are relatively straightforward to implement. This Guide shows how simple changes can cut costs and save energy in offices.

Vancouver Integrated Design | metrovanancouver.org/services/wastewater/engagement/LionsGate/ResourceDocs/2012-09-10-Workshop1-Summary.pdf

Books

Net Zero Energy Design: A Guide for Commercial Architecture | Tom Hootman, 2012.

A guide on how to design and build net zero commercial buildings, this book includes practical strategies, step-by-step technical analysis, case studies, and integrated design approaches.

Toward a Zero Energy Home: A Complete Guide to Energy Self-Sufficiency at Home | David Johnston and Scott Gibson.

A book exploring the design and construction of self-sufficient houses, cites climate and geographic challenges, describe exactly how to go about building an energy-efficient home, and features ten houses that were built for zero energy living.

Two Degrees: The Built Environment and Our Changing Climate | Alisdair McGregor, Cole Roberts, and Fiona Cousins, 2012.

A book explaining how we can set practical steps to reduce the extent of global warming and to adapt to climate changes, including zero energy and zero carbon approaches for new construction and existing buildings.

Special Studies

California Zero Net Energy Cost Study | Davis Energy Group, December 2012.

A study exploring the cost-effectiveness of ZNE buildings in the current residential and commercial marketplace through a review of literature, case studies, and interviews with ZNE experts familiar with residential, commercial, and community-scale projects.

Getting to Zero 2014 Status Update: A look at the projects, policies and programs driving zero net energy performance | New Buildings Institute, 2014. newbuildings.org/sites/default/files/2014_Getting_to_Zero_Update.pdf

Report presenting information on characteristics, incremental costs, and design features of zero energy buildings (ZEBs) and finds that zero energy buildings are achievable and feasible for some building types with current technologies and at incremental costs for increased efficiencies.



The Road to ZNE: Mapping Pathways to ZNE Buildings in California | Heschong Mahone Group, December 2012.

A policy and market inquiry on pathways forward to achieve California's 2020 and 2030 ZNE goals.

The Technical Feasibility of Zero Net Energy Buildings in California | ARUP, January 2013.

A study examining the technical feasibility of zero net energy buildings for various building types, and specific to California climates.

Zero and Net Zero Energy Buildings + Homes | Building Design + Construction, March 2011. bdcnetwork.com/article/2011-zero-and-net-zero-energy-buildings-homes.

A white paper examining definitional issues and case studies lessons, describes proven building technologies, analyzes the business case for ZNE, looks at developing performance-based codes, and provides an action plan to advance ZNE and resources for more information.

The Power of Zero Optimizing Value For Next Generation Green | issuu.com/bnim/docs/the_power_of_zero_-_final/1

Report uses statistical analyses and anecdotal assessments of actual projects, comparing costs for specific systems, as well as overall construction costs of the greenest projects, using Net Zero, LBC, COTE Top Ten, and Architecture 2030 standards to quantify performance, against industry standard projects.

Cost Control Strategies for Zero Energy Buildings: High-Performance Design and Construction on a Budget | buildingdata.energy.gov/cbrd/resource/1655

Guide assembles recommendations for replicating specific successes of early adopters who have met their energy goals while controlling costs. Contents include: discussion of recommended cost control strategies, which are grouped by project phase (acquisition and delivery, design, and construction) and accompanied by industry examples; recommendations for balancing key decision-making factors; and quick reference tables that can help teams apply strategies to specific projects.

Zero Energy Commercial Buildings Consortium | zeroenergycbc.org/resources/cbc-reports

Public/private consortium of commercial building stakeholders working with the U.S. Department of Energy (DOE), to develop and deliver technology, policies, and practices to achieve sector-wide market transformation. Several zero energy related reports are available on their website.

Case Studies

California ZNE Case Study Briefs | newbuildings.org/zero-energy

ZNE & Zero Energy Capable Buildings | advancedbuildings.net/net-zero-case-studies

Department of Energy High Performance Buildings Database | eere.buildinggreen.com

The High Performance Buildings Database is research sponsored by the U.S. Department of Energy that seeks to improve building performance measuring methods by collecting data on various factors that affect a building's performance, such as energy, materials, and land use.

New Buildings Institute's Getting to Zero Buildings Database | newbuildings.org/getting-to-zero-buildings-database

Here you will find in-depth information about high performance buildings across the United States, Canada, and beyond. The database includes information on measured and modeled energy performance, environmental characteristics, design process, finances, and other aspects of each project.

