

## GREEN BUILDING RESOURCES FOR HOMEBUILDERS

### Why Build Green?

Building construction, use and demolition, and building material manufacturing, impact the local, regional, and global environment in multiple ways. According to U.S. Government data, buildings account for 60% of the raw materials used in the U.S. and 40% of non-industrial solid waste, 65% of electricity consumption, 48% of greenhouse gas emissions and 12% of potable water consumption. Energy generation and consumption; the use of chemically treated materials, toxic adhesives, solvents and other substances; and the extraction, processing and transportation required to bring materials into the marketplace all result in extensive environmental impacts.



The building industry will always need materials, so the question becomes: what are the best materials and products to use? One has to consider the overall life cycle of the materials and the facility and building site as a whole. Green building takes all of these life cycle impacts into account with the goal of maximizing efficiency and minimizing waste in every phase of construction and throughout the life of the building. Green building results in buildings that are healthier for people and the environment.

Contrary to popular belief, building an energy-efficient, durable, high-performance home doesn't have to be expensive. Because green building seeks to minimize waste while maximizing efficiency, builders that use a "whole-house" green building approach often find that the added cost of some high-performance systems can be offset by downsizing in other areas. In general, building a "green" home costs close to or less than 8% more than the cost of a home built with traditional construction approaches. This investment will pay for itself many times over in lower operating costs for the life of the building.

Homeowners and homebuilders alike stand to benefit from increasing the environmental performance of a home. Homeowners will enjoy lower utility bills, better indoor air quality, and an overall healthier and more comfortable living environment, while homebuilders will see improved market differentiation, enhanced regulatory approvals and home sale premiums.

One of the most effective strategies for minimizing the environmental impacts of building construction is to reuse existing buildings. Reusing buildings and building materials has benefits that extend throughout the lifecycle of the material. Reuse minimizes habitat disturbance and reduces the need for infrastructure such as utilities and roads into wild areas to extract raw materials. Rehabilitation of building materials also reduces the volume of solid waste in landfills and the environmental impacts associated with the production and delivery of new building products. Reused materials can also be less toxic because in most cases they have already had time to "off-gas" any hazardous chemicals.

The Center for ReSource Conservation has compiled the following resources to give building professionals access to information that can help them better understand the impacts and implications of building approaches, technologies and materials choices. Links do not imply an affiliation with or an endorsement by The Center for ReSource Conservation.

## GREEN BUILDING IN COLORADO

[Built Green Colorado](#) is the largest green building program in the nation with over 100 builder members across the state. The Built Green Colorado web site provides an extensive [list of green building topics for builders](#).

City of Boulder's [Green Points Building Program](#) encourages the use of cost-effective and sustainable remodeling and building methods that conserve fossil fuels, water and other natural resources.

[The Boulder Green Building Guild](#) is an association of building professionals dedicated to promoting healthier, resource-efficient homes and work places.

The [Colorado New Home Choices](#) website, developed by the City of Fort Collins and E-Star Colorado, offers resources for new home buyers on a range of energy efficiency, healthy home and sustainability features.

[E-star Colorado](#) provides technical expertise for builders and homeowners with tools and resources helpful in creating energy efficient [high performance homes](#).

## GENERAL RESOURCES ON BUILDING GREEN

The Center for ReSource Conservation's The Skinny fact sheet series: [The Skinny on Green Building](#)

The Center for ReSource Conservation's green building web site, [greenerbuilding.org](#), provides useful information about green building products, local dealers and green building programs, and allows users to share their experiences with products.

The California Integrated Waste Management Board provides an outline of [green building basics](#).

The Green Building Pages web site provides a [sustainable design checklist](#) adapted from an article in Environmental Building News.

The U.S. Green Building Council (USGBC) answers the question "[why build green?](#)"

Energy Design Resources provides the [eVALUator](#), an easy-to-use tool that calculates the lifecycle benefits of investments that improve building design.

[Oikos](#) provides an extensive green building library with articles and case studies.

The Energy and Environmental Building Association (EEBA) provides [building professional resources](#) on a variety of topics dealing with new home construction or retrofitting an existing home.

[The National Association of Home Builders'](#) (NAHB) highlights ways for residential builders to incorporate holistic environmental solutions in new homes.

[Greener Buildings](#) from Greenbiz.com is a comprehensive resource for environmentally responsible building development. This website has loads of resources for builders, including [Backgrounders](#) (basic information on a range of green building topics) and a searchable database of [case studies](#).

Toolbase Services provides [extensive summaries and case studies](#) on a range of residential green building practices and products, including heating and cooling systems, building envelope, appliances and efficient constructions practices.

The U.S. Department of Energy's Building Technologies Program produces [technology fact sheets](#) that focus on efficient materials and green building practices, including construction and design practices, heating and cooling equipment, building envelope, energy efficiency, indoor air quality and more.

The [Whole Building Design Guide](#) has information on integrated 'whole building' design techniques and technologies. This website includes a construction and waste management database of local businesses; a building envelope design guide and other resources.

The [Sourcebook for Green and Sustainable Building](#) is a technical and logistical guide covering

practical green building choices created by the Austin Energy Green Building Program.

[The Sustainable Design Resource Guide](#) for Colorado and the Rocky Mountain West, co-produced by the American Institute for Architects and Architects, Designers, and Planners for Social Responsibility, is a well-researched introduction to some of the key issues in sustainable building design. Special emphasis is placed on building materials and finishes. The guide also includes a checklist of product questions, a full glossary, and plenty of additional resources.

BuildingGreen.com's [green building discussions](#) are a forum for anyone interested in green building issues to discuss and promote green building principles and practices on all types of projects.

The [LEED for Homes program](#) is being developed by the US Green Building Council with input from local and national stakeholder groups. The voluntary initiative promotes the transformation of mainstream home building towards more sustainable practices. LEED for Homes is expected to launch in the summer of 2007.

The [Built Green Checklist](#) guides builders through a comprehensive green building approach. Use the list as a guideline or use an interactive tool to see if your project meets Built Green criteria.

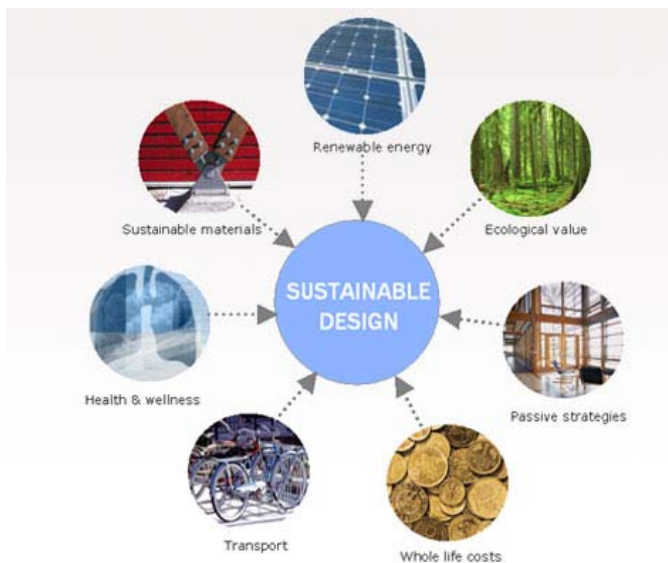
[Environmental Design + Construction](#) magazine offers a searchable database of current and past editions with articles and information on a wide variety of green building topics. Registration required.

The [Smart Communities Network](#) offers an array of information and additional resources on green buildings, green development, land use planning, community energy and more.

The California Integrated Waste Management Board's [Sustainable Building Guidelines](#) are a compilation of national green building guidelines and includes performance instructions for designers and builders to use in construction projects.

The State of Colorado's Governor's Energy Office offers the [Building Professionals Energy Resource](#), with links to a variety of green building resources.

## ARCHITECTURE, PLANNING AND DESIGN



The U.S. Department of Energy's [Building Toolbox](#) provides guidelines, tools, success stories, and links to guide you through the process of designing, constructing, or renovating efficient, affordable, high-performance buildings.

[Advanced Buildings Technologies & Practices](#) is a web based guide to more than 90 environmentally appropriate technologies and practices for builders.

The Green building pages [Checklist for Sustainable Design](#) was adapted from an article in Environmental Building News and is broken down into sections on design, site issues, materials, equipment and jobsite practices.

The [Whole Building Design Guide](#) has information on integrated 'whole building' design techniques and technologies. This

website includes a construction and waste management database of local businesses; a building envelope design guide and other resources.

## CONSTRUCTION AND DEMOLITION WASTE

[ReSource](#) is an innovative program of the Center for ReSource Conservation that makes it possible to reuse building materials. ReSource salvages used building materials and resells them to the public. Resource can transform demolition projects into deconstruction, reducing waste and turning the materials into a tax-deductible commodity.

The Center for ReSource Conservation's The Skinny fact sheet series: [The Skinny on Deconstruction](#) (coming soon).

The Environmental Protection Agency's [WasteWise Building Challenge program](#) offers links to websites, publications, articles and trade associations related to reducing building construction and demolition waste.



[Design and Detailing for Deconstruction](#) arms builders and designers with practical methods for ensuring that the bulk of materials used in new buildings can be reused and recycled later.

The [Construction Waste Management Database](#) is a free online network of companies that haul, collect and process recyclable debris from construction projects. It was created in 2002 by GSA's Environmental Strategies and Safety Division to promote responsible waste disposal.

The [Building for the Future](#) (pdf) report from the U.S. Environmental Protection Agency's WasteWise program focuses on the material aspects of green buildings, including reduction, reuse and recycling of construction and demolition debris and the use of recycled, reused, and otherwise "resource-efficient" building products.

The [Deconstruction Institute](#) provides educational materials, tools and techniques, networking, case studies, articles, facts about the environmental impacts of deconstructing.

The [Building Materials Reuse Association](#) facilitates building deconstruction and the reuse/recycling of recovered building materials. The website offers a searchable directory of places to donate or buy reusable building materials, plus news and events.

The [Construction Materials Recycling Association](#) promotes the safe and economically feasible recycling of recoverable construction and demolition materials.

## FRAMING AND EXTERIOR FINISHES

This Department of Energy's technology fact sheet on [advanced framing techniques](#). (pdf)

[Optimum Value Engineering \(OVE\)](#) describes a framing method that minimizes material usage while meeting model building code structural performance requirements. Using OVE results in lower material and labor costs and improved energy performance for the building.

Built Green's article on [advanced framing techniques](#).

Energy Star fact sheet on [value engineered framing](#) (pdf).

## BUILDING ENVELOPE, INSULATION & WINDOWS

The Center for ReSource Conservation's [The Skinny fact sheet series](#) includes fact sheets on insulation, windows, air sealing, and duct sealing.

[The Energy and Environmental Building Association](#) offers resources and links on air sealing, insulation, windows and doors, and more.

The U.S. Department of Energy offers [technology fact sheets](#) on air sealing, insulation, and windows.

The Public-Private Partnership for Advanced Housing Technology (PATH) Tech Set 2, [Durable Building Envelope Details](#) shows builders how to improve the durability of a building envelope.

PATH's Tech Set 5, [Storm-Resistant Roofing](#) shows how to protect against both structural failure and water infiltration while adding minimal additional costs.

The Green Home guide report, "[Choosing the Right Insulation Delivers Energy Savings](#)" discusses one of the most important steps you can take to improve the energy performance of your home and thus lessen its environmental impact.

Oak Ridge National Laboratory's [fact sheet on insulation](#) covers everything from why you should insulate to R-values.

Smart Energy Living's [insulation page](#) offers information on the benefits of insulation, equipment & services, hiring contractors and how-to's for do it yourselfers

[The Cellulose Insulation Manufacturer's Association](#) offers information for builders and contractors on the benefits, uses, and applications of cellulose insulation. Several fact sheets and reports can be downloaded on topics such as cellulose installation codes and cellulose and fire hazards.

[Oikos](#) provides an extensive green building library with articles and case studies on energy efficient windows and glazing.

[The Efficient Windows Collaborative](#) provides information on the benefits of energy-efficient windows, descriptions of how they work, and recommendations for their selection and use.

The Lawrence Berkeley National Laboratory's Building Technologies Department includes extensive research and information on [windows & day lighting](#).

The Southface Institute fact sheet on [window selection](#).

## ENERGY CONSERVATION

### *General Energy Efficiency*

[Home Performance with ENERGY STAR](#) is an initiative to facilitate whole-house energy improvements. This program emphasizes "house-as-a-system" thinking to saving energy and address a variety of customer needs, from comfort to durability to health and safety.

[ENERGY STAR](#) is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy and provides consumer standards and information on energy efficient products and practices. Its website offers many resources, including:

- A list of [ENERGY STAR qualified products](#) in more than 40 categories with a search tool to find local dealers and service providers.
- The [ENERGY STAR Qualified New Homes](#) program promotes a variety of energy efficient features for better performing new homes.
- [Guidelines for Home Improvement](#) for improving your home's energy efficiency.

Toolbase Services provides extensive [energy efficiency guidance](#) on heating and cooling systems, building envelope, appliances and efficient constructions practices.

The U.S. Department of Energy's [Whole-House Energy Checklist: 50 Steps to Energy Efficiency in the Home](#) (pdf) covers all areas of residential energy consumption.



[Flex Your Power](#) is a comprehensive clearinghouse of energy efficiency information for every building type.

The U.S. Department of Energy's [Building America Building Technologies Program](#) provides a variety of resources to help builders improve the quality and performance of new and existing homes.

[Home Power Magazine](#) online provides information on renewable energy options, home energy efficiency, solar hot water, space heating and cooling, green building materials and home design, and efficient transportation. Home Power also provides extensive product information, homeowner testimonials, buyer advice, and "how-to's."

#### *Energy Modeling*

[The Building Energy Software Tools Directory](#), from the U.S. Department of Energy, lists building software tools for evaluating energy efficiency, renewable energy, and sustainability in buildings

[Home Energy Efficiency Design](#) (HEED) allows users to create a 3D model of a home to help evaluate its current energy performance and simulate energy efficiency improvements.

#### *Zero Energy Homes*

"[The Near-Zero-Energy House](#)", an article from Solar Today magazine, discusses how builders combine solar energy technologies with energy saving features and construction techniques to build houses that generate nearly as much electricity as they consume on an annual basis.

Toolbase Services' [Seven Steps to a Zero Energy Home](#) highlights the opportunities for reducing energy use that exist in all areas of the home. This link includes many additional resources for zero energy home construction.

The U.S. Department of Energy's fact sheet on [Zero Energy Homes](#) (pdf).

## **RESIDENTIAL RENEWABLE ENERGY**

[Build it Right: Cleaner Energy for Better Buildings](#) (pdf), an effort of the Renewable Energy Policy Project with the American Council for an Energy-Efficient Economy, discusses why buildings waste energy and how they can be more energy efficient, barriers to green building and how to increase implementation of renewable energy generation, with action steps and further resources.

[Home Power Magazine](#) online provides comprehensive information on renewable energy options, home energy efficiency, solar hot water, space heating and cooling, green building materials and home design, and efficient transportation. Home Power also provides extensive product information, homeowner testimonials, buyer advice, and "how-to's."

The [National Renewable Energy Laboratory's](#) website includes information on renewable energy generation from basic information to what's new in research and development.

## **SOLAR**

#### *General Solar*

The Center for ReSource Conservation offers a [contractor referral network](#) including a list of solar contractors servicing Colorado's Front Range, and [The Skinny fact sheet series](#) includes a fact sheet on selecting a solar contractor.

[Findsolar.com](#) is a joint partnership between the American Solar Energy Society, Solar Electric Power Association, Energy Matters LLC and the U.S. Department of Energy. The site provides a "Solar Estimator" to calculate production and cost savings of solar electric, thermal and heating and cooling systems with information about incentives and a tool to find qualified solar professionals.

[The Colorado Solar Energy Industries Association](#) (COSEIA) represents and serves energy professionals and renewable energy users and promotes the use of solar energy and conservation. COSEIA also provides a directory of solar companies operating in Colorado.

### *Passive Solar Design*

[The Northeast Sustainable Energy Association](#) covers the basics of passive solar design and suggests additional resources.

[Oikos](#) provides information on how a building can make use of free heat from the sun.

The U.S. Department of Energy's technology fact sheet on [passive solar design](#) (pdf) discusses ways to increase the efficiency and comfort of homes using passive solar design techniques.

The Southface Institute's fact sheet on [passive solar design strategies](#) (pdf).

### *Solar Electricity*

The Center for ReSource Conservation's [The Skinny fact sheet series](#) includes a fact sheet on solar electricity and on solar rebates and incentives (including Amendment 37).



[Xcel Energy's Solar Rewards program](#) provides rebates for solar electric systems installed in the utility's territory.

The Florida Solar Energy Center's [Solar Electric Primer](#) has been designed to cover some of the basic concepts, components, and uses of solar electricity.

[PVWATTS](#) calculates electrical energy produced by a grid-connected photovoltaic (PV) system. Researchers at the National Renewable Energy Laboratory developed PVWATTS to help quickly obtain performance estimates for grid-connected PV systems within the United States and its territories.

### *Solar Thermal*

The Center for ReSource Conservation offers a [contractor referral network](#) including a list of solar contractors servicing Colorado's Front Range, and [The Skinny fact sheet series](#) includes a fact sheet on selecting a solar contractor.

The [Florida Solar Energy Center](#) offers a large body of information about solar hot water systems for homes, pools, and commercial buildings.

## **GEOEXCHANGE & GEOTHERMAL**

The Center for ReSource Conservation's [The Skinny fact sheet series](#) includes a fact sheet on Geothermal.

The [Geothermal Heat Pump Consortium](#) provides extensive information on residential ground source heat pump ("Geoexchange") systems.

The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy provides information on [geothermal heat pumps](#).

The ENERGY STAR web site provides basic information on [geothermal heat pumps](#).

Toolbase Services offers a summary of [geothermal heat pumps](#).

## **LIGHTING AND APPLIANCES**

The Center for ReSource Conservation's [The Skinny fact sheet series](#) includes fact sheets on electrical efficiency and energy efficient lighting.

The U.S. Department of Energy's Building Technology Program web page on [lighting](#) and technology fact sheet on [efficient lighting strategies](#) provides information on available lighting technologies and approaches to help you design the best lighting solutions for your building.

The U.S. Department of Energy also offers a technology fact sheet on selection and maintenance of [energy efficient appliances](#).

The Public-Private Partnership for Advanced Housing Technology (PATH) Tech Set 4, [Energy-Efficient Lighting](#) shows builders and homeowners how to improve the comfort and energy efficiency of a home through day lighting strategies and money saving artificial lighting techniques.

ENERGY STAR provides a web page on [efficient light bulbs and fixtures](#).

The Lawrence Berkeley National Laboratory's Building Technologies Department includes extensive research and information on [lighting systems](#).

The Pacific Energy Center produces [Light Fact Sheets](#) to help builders understand the relationship between sources of light and reflecting surfaces, how lighting systems work and how luminance affects our lives.

The Southface Institute's fact sheet on [efficient lighting strategies](#).

## HEATING, COOLING & HOT WATER

The Building America Best Practices Series: Volume 2, "[Builders and Buyers Handbook for Improving New Home Efficiency, Comfort, and Durability in the Hot-Dry and Mixed-Dry Climates](#) (pdf) addresses the challenge of maximizing energy efficiency while preserving the comfort of homes in hot-dry and mixed-dry climates.

The Public-Private Partnership for Advanced Housing Technology (PATH) Tech Set 3, [HVAC: Forced Air System](#) shows builders how to improve the energy efficiency, durability, and performance of the forced air system through proper design and installation procedures

[Oikos](#) provides an extensive green building library with articles and case studies on energy efficient heating and cooling.

The U.S. Department of Energy offers fact sheets on innovative and [energy efficient water heating technologies](#), [central heat pump and air conditioner installation](#), [how to right-size heating and cooling systems](#), and [heating and cooling equipment selection](#).

Toolbase Services offers summaries on [tankless water heaters](#) and [hot water recirculation systems](#).

The [Southface Institute's fact sheet series](#) offers information on mechanical systems, including heating and cooling equipment selection, right-sizing heating and cooling systems, central heat pump and air conditioner installation, air distribution system design and air distribution system installation and sealing.

## VENTILATION

[Oikos](#) provides an extensive green building library with articles and case studies on energy efficient ventilation.

Toolbase Services offers and summary of [energy and heat recovery ventilators](#).

The U.S. Department of Energy provides technology fact sheets on [whole house ventilation systems](#) (pdf) and [installing a whole house fan](#) (pdf) for improved control of air quality.

The [Southface Institute's fact sheet series](#) offers information on ventilation systems, including installing a whole house fan and whole house ventilation systems.

## INDOOR AIR QUALITY AND INTERIOR FINISHES

The [Healthy Building Network](#) (HBN) is a national network of green building professionals, environmental and health activists, socially responsible investment advocates and others who promote healthier building materials. The HBN website includes extensive information on PVC, pressure treated wood, plastic lumber, formaldehyde and biopolymers.

The [Greenguard Environmental Institute's guide to non-toxic, low-emissions products](#) is a searchable database of low emitting products and materials that have passed third-party testing and certification standards set by the U.S. EPA and the U.S. Green Building Council. The site is regularly updated with information, educational materials, and specification tools.

The [Coatings Guide™](#) is a pollution prevention tool for paints and coatings users. The Guide contains several tools to help users identify low volatile organic compound (VOC)/hazardous air pollutant coatings that can replace existing coatings.

The U.S. Environmental Protection Agency provides a [portal to information on indoor air quality in homes and home construction](#).

The California Air Resources Board's [Indoor Air Quality and Personal Exposure Assessment Program](#) covers of the sources of indoor pollutants and their effects on human health, insight on existing regulations and industry practices, and details on cleaner-air options for homes, schools, and commercial buildings.

Green Seal's [Choose Green Reports](#) include information on environmentally-preferred, low- or non-toxic carpet, wood finishes and stains, and floor finishes and stains.

Green Seal's [guide to certified environmentally preferable cleaning products](#) lists product that meet Industrial and Institutional Cleaners standards. Includes links to product manufacturers' homepages.

The [Carpet Research Institute's \(CRI\)](#) labeling program informs consumers when carpet has met low emissions criteria.

The U.S. Environmental Protection Agency's [Indoor Air Quality for New Homes](#) discusses many of the common pollutants found within homes. Links are provided for various pollutants which include information regarding the health effects of these pollutants and ways in which they can be addressed and reduced.

## WATER CONSERVATION

The U.S. Environmental Protection Agency's [WaterSense program](#) provides information and resources for water conservation and efficiency in buildings.

Toolbase Services offers summaries on [hot water recirculation systems](#) and [low-flow plumbing fixtures](#) including toilets, faucet aerators and showerheads.

The [Irrigation Association](#) promotes water conservation through efficient irrigation.

[Xeriscape Colorado](#) is a program of the Colorado WaterWise Council. Xeriscape promotes creative approaches to water conserving landscapes.

Check out the Green Home Guide reports on: [5 Tips for Choosing a Low-Flow Toilet](#), [Making Your Bathroom Healthy, Efficient and Comfortable](#), [9 Best Practices for Choosing and Installing a Tankless Water Heater](#), and [Creating a High-End, Low-Impact Bathroom](#)

The Public-Private Partnership for Advanced Housing Technology (PATH) Tech Set 1, [Resource Efficient Plumbing](#) shows how to decrease the cost of construction and maintenance by promoting effective systems integration of the water distribution and used water (greywater) recycling network.



## MATERIALS

### *General*

The Center for ReSource Conservation's green building web site, [greenerbuilding.org](http://greenerbuilding.org), provides useful information about green building products, local dealers and green building programs, and allows users to share experiences with products.

The [Green Home Guide](#) provides information on a variety of green materials.

A guide to [Environmentally Responsible Carpet Choices](#) covers considerations on carpet materials, indoor air quality, carpet installation and maintenance, alternatives to carpet, recycling and recycled-content products, leasing and reuse programs. It also provides an extensive list of manufacturers and distributors of recyclable and recycled-content carpet, backing, and padding; natural-fiber carpets; and environmentally preferable adhesives.

The [Building for Environmental and Economic Sustainability software](#) helps builders select cost-effective, environmentally-preferable building products. Developed by the National Institute of Standards and Technology with support from the U.S. Environmental Protection Agency, the tool is based on consensus standards.

Architectural Record's [Green Product Guide](#) was created to help builders and designers choose green materials.

Oikos provides [Resources for Environmental Design \(REDI\)](#), a searchable database with information on a wide range of green building products, technologies, and materials.

The [Green Sage](#) directory lists sustainable building materials, appliances, flooring, finish materials and furnishings, with links to manufacturers' websites.

[Green Building Pages](#) is a sustainable building materials database and design tool for the environmentally and socially responsible designer, builder and client.

[GreenSpec](#) is BuildingGreen.com's product information service. It contains listings for environmentally preferable building products with descriptions, manufacturer information, and links to additional resources.

[ENERGY STAR](#) is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy and provides consumer standards and information on green building practices.

The [Green Home Guide](#) includes an online directory of green building products with reviews from building professionals and homeowners.

### *Wood*

The [Wood for Building Green Guide](#) (pdf) features purchasing and specification information for salvaged wood, recycled content, and certified wood products.



The Forest Stewardship Council's (FSC) [Designing and Building with FSC-Certified Wood Products](#) certifies sustainably-harvested, and LEED-qualifying wood products.

### *Plastic*

The Healthy Building Network's [Guide to Plastic Lumber](#) rates plastic lumber on environmental and public health priorities.

[The PVC Alternatives Database](#), created by Greenpeace, features more than 200 products and suppliers from companies in 17 countries to help builders find non-toxic PVC alternatives.

## GREEN INTERIOR DESIGN

The American Society of Interior Designers created [Turning Green: A Guide to Becoming a Green Design Firm](#) (pdf) in partnership with Associates III to assist interior designers who want to integrate sustainable design principles into their business practices.

The American Society of Interior Designers provides a [Sustainable Design Information Center](#) with access to information on sustainability and green interior design.

## FINANCIAL INCENTIVES

The Center for ReSource Conservation's [The Skinny fact sheet series](#) includes fact sheets on Federal energy efficiency tax incentives, Federal renewable energy tax incentives, local energy incentives, Amendment 37 rebates, and energy efficient mortgages.

The [Tax Incentives Assistance Project](#) (TIAP) offers detailed information on Federal income tax incentives for energy efficient products and technologies as part of the Energy Policy Act of 2005.

[Financial Opportunities for Consumers](#) provides information about energy efficiency and renewable energy financial opportunities for consumers and homeowners.

The [Database of State Incentives for Renewable Energy](#) lists incentive programs from utilities, municipalities, states, etc. across the nation.

ENERGY STAR offers a comprehensive list of [Federal energy tax credits](#).

## CASE STUDIES

### *Residential*

The Center for ReSource Conservation's [Learn More section](#) features case studies on two Boulder area green built homes

The National Association of Home Builders' [EnergyValue Housing Awards](#) features case studies of homes that incorporate energy efficiency in the design, construction and marketing.

The U.S. Environmental Protection Agency provides [case studies on high performance homes](#).

The [Public-Private Partnership for Advanced Housing Technology](#) offers a searchable database of innovative green building project case studies.

The 2006 Parade of Homes features "[The PowerHouse](#)" to demonstrate renewable energy and energy efficient features.

"[The LifeWise Home](#)" was built by the National Association of Home Builders Research Center as part of its Marketable, Affordable, Durable, and Entry-level (MADE) Homes in Bowie, Maryland.

The homes at [EcoVillage](#) in Ithaca, New York were designed and constructed to generate low energy bills but maintain high indoor air quality.

[Greenlee Park](#), completed in 1997, was the first environmentally sustainable development built by McStain Enterprises.

A case study of [Hillside Oaks Homes](#) in Dallas, Texas highlights structural insulated panels and geothermal heat pump systems.

[The Galloway Family Home](#) is an energy efficient Habitat for Humanity house in Appalachia (pdf).

[The Prairie Crossing Homes](#) in Grayslake, Illinois (pdf).

The U.S. Department of Energy Case Study, "[Zero Energy Home Soaks up the Southwest Sun](#)" (pdf).

The U.S. Department of Energy Case Study, "[Zero Energy Homes Generating Interest in Sacramento](#)" (pdf).

The U.S. Department of Energy Case Study, [The Ultimate Family Home](#) in Las Vegas, Nevada (pdf).

The U.S. Department of Energy Case Study, "[Zero Energy Community Harvests Solar Power](#)" (pdf).

Green home guide homeowner case study, "[Energy-Efficient Remodel Delivers More Space, Lower Bills](#)".

Green home guide homeowner case study, "[Easy Upgrades Boost Water, Energy Efficiency in 1950s Ranch Home](#)".

## **COMMERCIAL**

[American Institute of Architects Committee on the Environment](#) Top 10 Green Projects for 2002

[GreenerBuildings](#) from Greenbiz.com provides a searchable database of [case studies](#) on architecture and design, the use of green building materials, energy use, and other areas.

[Architecture 2030](#) presents case studies of buildings and projects reflect innovative sustainable design strategies from all parts of the world.

Toolbase Services provides [extensive summaries and case studies](#) on a range of residential green building practices and products, including heating and cooling systems, building envelope, appliances and efficient constructions practices.

The [High Performance Buildings Database](#), developed by the U.S. Department of Energy and the National Renewable Energy Laboratory, is a unique central repository of in-depth information and data on high performance green building projects across the United States and abroad.

## **GREEN BUILDING TRADE ASSOCIATIONS GENERAL INFORMATION**

[Boulder Green Building Guild](#)

[Built Green \(Denver Home Builders Association\)](#)

[Sustainable Buildings Industry Council](#)

[Healthy Building Network](#)

[Forest Certification Resource Center](#)

[Environmental Design + Construction online magazine](#)

[U.S. Green building Council \(USGBC\) Colorado chapter](#)

[Ecobroker](#)

[Association of Energy and Environmental Real Estate Professionals](#)