



GUIDE series

Green Building and Renovation Guide

Residential Products and Resources

Using this Guide

This guide has been compiled to assist Calgary's residents to find building materials that are free of toxins; contain recycled contents; have a lower environmental impact than conventional building products; and that are generally less harmful to both the environment and human health. The guide also has other useful green building and design resources, energy saving tips and information on obtaining green power in and around Calgary.

The guide is divided into sections for ease of use. Many of the product links go straight to the supplier, giving people the utmost flexibility when trying to choosing the best product for their home. Many of the product websites allow the user to select 'Dealer' or 'Find a retailer' in a specific area. Some of the products are available at local retails (in some cases this will require special ordering), while others are only available through mail order.

We know that wise decisions are not easy to make without the right information. We hope this guide will help Calgarians obtain the necessary information so that they can make informed decisions. This document is a work in progress and we would appreciate any feedback so that we can continually improve it.

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GENERAL HOME AND BUILDING SUPPLIES

EcoLogo Certified Products (www.environmentalchoice.com) – an ecolabelling program for a wide range of sustainable products.

Green Alberta (www.greenalberta.ca) – an Alberta-wide online database of green building products and materials for builders, designers and home owners. The database covers ethical, health-conscious, environmentally low-impact and cost-effective alternatives to conventional interior and exterior building design.

Green Space Building Products (www.ez2bgreen.ca) – an Okotoks, Alberta home-based business specializing in environmental/toxin free interior building products. Roxanne Calver is former owner of the Healthiest Home Calgary. Call 403-938-0800 or 403-999-2830 for more information and to learn more about the products they carry.

Greener Choices (www.GreenerChoices.org) - A *Consumer Reports* web-based initiative to “inform, engage, and empower consumers about environmentally-friendly products and practices.”

Healthiest Home and Building Supplies (www.thehealthiesthome.com) - Canada’s first green building store. It also has a green building consultant, a construction/renovation expert, marketing professionals and design consultants to supplement their green products.

Home Depot’s Eco Options - offers a wide range of eco products for homeowners.

Buyer Beware: A Closer Look at Eco Options

Kristi Wiedemann, Science and Policy Analyst for GreenerChoices.org, *Consumer Reports*’ eco-website, went shopping at Home Depot to see if the program lived up to its hype. Click [here](#) to read what she found out.

GENERAL GREEN BUILDING AND DESIGN RESOURCES

Environmental Building and Product Rebates

To learn more about incentives and rebates in Alberta visit www.incentivesandrebates.ca. The rebates cover everything from eco-renovations to installing solar panels to buying Energy Star rated appliances.

Built Green (www.builtgreencanada.ca) - an industry-driven voluntary program that promotes “green” building practices.

Designing Green (www.designinggreen.com) - a great Canadian resource for green building suppliers.

EnerGuide for New Houses (EGNH) – provides advice on building an energy efficient home.

EnviroHome (<http://envirohome.chba.ca/index.html>) - Each year this designation is given to a select number of new home projects across Canada. To qualify, each home must be certified to the R-2000 Standard and it must include additional air quality and environmental features beyond what the R-2000 Program requires.

GreenHomeGuide (www.greenhomeguide.com) - a U.S. website that is still helpful for general green building information.

Green Building Blocks (www.greenbuildingblocks.com) – a U.S. website that lists green building products and techniques.

Lighthouse Sustainable Building Centre (www.sustainablebuildingcentre.com) – an educational centre dedicated to advancing and catalyzing sustainability in built environments.

Net Zero Energy Healthy House (www.netzeroenergyhome.ca) – a coalition working to advance the benefits of zero or very low impact resources, including cleaner air and healthier homes, climate protection, and economic development opportunities.

MATERIALS

Cabinets

Although MDF (medium-density fiberboard) and particleboard are made from by-products of the wood-cutting process, they are bound together with urea formaldehyde glue. Formaldehyde is a probable carcinogen and urea formaldehyde glue is a major concern for indoor air quality. Similarly, the lamination process, whereby wood grains or veneers are bound to the MDF or particle board, is done with solvent-based adhesives that may off-gas toluene, benzene or other volatile organic compounds (VOCs).

It should be noted that several manufacturers have switched to formaldehyde-free resins, with some incorporating low-VOC adhesives for binding wood grains and veneers.

FSC Certified Wood – works to promote environmentally responsible, socially beneficial and economically viable management of the world's forests. To find FSC certified wood products in your area visit: www.fsccanada.org/findwoodproducts.htm.

Reclaimed Agriculture Fibre – a strong, lightweight, durable, environmentally sensitive alternative to wood. May be used in furniture, cabinetry, casework and interior design elements. Visit www.kireiusa.com/ for more information.

Strawboard and Wheatboard - bio-based particle board/MDF made without formaldehyde and often finished with an FSC certified veneer. This can be found at

[The Healthiest Home](#).



Counters and Backsplashes

Bamboo

Plyboo (www.plyboo.com) – offers a wide assortment of bamboo products.

Totally Bamboo (www.totallybamboo.com) – offers a large selection of countertops, backsplashes and trims made from 100% bamboo.

Certified Wood

Windfall Lumber (www.windfalllumber.com) – offers wood countertops from sustainably harvested wood.

Composite Surfaces

Paperstone (www.paperstoneproducts.com) – paper reinvented as a sustainable composite surface.

Richlite (www.richlite.com) – manufacture of paper-based fiber composites used for a variety of architectural, food service, recreational and industrial applications.

Squak Mountain (www.tmi-online.com) – A fibrous-cement material comprised of recycled paper, recycled glass, coal fly-ash and Portland cement.

Reclaimed Agriculture Fibre – a strong, lightweight, durable, environmentally sensitive alternative to wood. May be used in furniture, cabinetry, casework and interior design elements.

Kirei USA (www.kireiusa.com) – visit their website for a list of products.

Recycled Aluminum

Eleek (www.eleekinc.com) – recycled aluminum countertops and tiles.

Recycled Glass and Concrete

Icestone (www.icestone.biz) – durable surfaces made from recycled glass and concrete.

Sandhill Industries (www.sandhillind.com) – glass tiles for backsplash and bathrooms made from 100% post-consumer recycled glass.

Carpets

The Carpet and Rug Institute has introduced a [green label plus](#) rating that helps to identify carpets with very low VOC emissions.

Recycled Content Carpet

Interface (www.interfaceinc.com), Mohawk (www.mohawk-flooring.com/carpeting/) and Shaw (www.shawfloors.com/carpet). Milliken's Earth Squares (www.sustainablecarpet.com) are 100% refurbished post-consumer nylon. Milliken has also removed PVC from all of its products.

Recycled Pop Bottle Carpet

Mohawk (www.mohawk-flooring.com/carpeting/) produces PET lines made from 100% recycled pop bottles.

Wool Carpet

Eco Choices (www.ecochoices.com) and Earth Weave (www.earthweave.com) sell undyed or vegetable-dyed organic wool area rugs and carpeting.

Nature's carpet (www.naturescarpet.com) is available in Calgary at Colin Campbell – 103 – 1207 11th Ave S.W. (403-245-9222). Wools of New Zealand (www.wonz.com) is a great resource for wool carpets and rugs available in Canada.

Rugmark (www.rugmark.org) label ensures that the carpets were made without the use of child labour.

Decking

Recycled Composite

Taiga Building Products (www.taigaforest.com/Products/composite/main.asp) carries Trek composite decking made from recycled plastic.

Alternative Plastic Product Manufacturing Incorporated (<http://www.altplastic.com/Default.asp>) manufactures plastic lumber made from 100% recycled materials. Manufactured in Lethbridge, Alberta.

Flooring

Bamboo – quickly regenerates.

Bamboohardwoods (www.bamboohardwoods.com) – large range of bamboo flooring.

Ecotimber (www.ecotimber.com)

Silkroad (www.silkroadflooring.com) – carries EcoLogo certified bamboo flooring, plywood and veneers.

Plyboo (www.plyboo.com)

Cork – may be harvested without damaging the tree.

Vida (www.environmentalhomecenter.com/vida.shtml)

Marmoleum – natural linoleum made from pine resins, flax and linseed oil. There are no toxic by-products from the manufacturing process.

Forbo (www.forbo.com)

Phoenix Floor and Wall Products Ltd. (www.floorsbyphoenix.com) – a Canadian distributor offering a broad range of marmoleum floor coverings.

Rubber – recycled rubber flooring products.

DinoFlex (www.dinoflex.com)

Solid Wood New – certified wood products.

Ecotimber (www.ecotimber.com)

Woodland (www.woodlandflooring.com)

Solid Wood Reclaimed – wood taken from lake bottoms, riverbeds and old barns. Note: Don't be fooled by "vintage wood" that may actually be new wood that has been weathered to look like old wood.

Canadian Heritage (www.canadianheritagetimber.com)

Ecotimber (www.ecotimber.com)

Woodland (www.woodlandflooring.com)

Solid Wood Rescued – made from trees that have suffered storm damage, disease, or have become a safety concern. Some of the wood is salvaged from construction sites.

Urban Tree Salvage (www.urbantreesalvage.com)

Bamboo is a grass which grows to a harvestable height of 20 metres in three to five years. Its extensive root system is naturally replenishing, making replanting unnecessary.

Heating and Cooling

Air Conditioners – look for Energy Star rated units. These will use *at least* 10% less energy than similar new models. Energy Star central air systems will use about 20% less power. Visit <http://oee.nrcan.gc.ca/publications/equipment/roomaircond> to find the right air conditioner for your home.

Energy Star Rated Windows – poor windows can result in a heat loss of 25% from your home. Look for Energy Star qualified windows. The type of window that is best suited to the home will depend on the climate.

All Weather Windows (www.allweatherwindows.com)

CWD Windows & Doors (www.cwdwindows.com)

Fans – in general, fans use approximately 90% less energy than air conditioners. Fans come in all shapes and sizes, ranging from the basic floor models to reversible window fans. There are even whole-house fan systems. Visit www.housecooler.com, www.airvent.com or www.quietcoolfan.com for more information.

Furnace – look for Energy Star rated furnaces. These will save you 20-30% on your heating bills.

Geothermal - a geothermal heat pump will regulate your home's temperature by tapping into stable temperatures found below the frost line. For a directory of geothermal contractors visit Earth Energy Society of Canada at www.earthenergy.ca.

Programmable Thermostat – Energy Star (<http://oee.nrcan.gc.ca/energystar/>) qualified thermostats have temperature and time settings, helping to save homeowners *at least* 10% on their heating and cooling bills.

R-Values and Insulation Types

This is the rating that measures the insulation's ability to resist heat flow. The higher the R-value, the more effective the insulator.

For a description of the various types of green insulation click [here](#).

Insulation

Cellulose – Can-Cell Industries (www.can-cell.com) carries cellulose insulation that displays Environment Canada's EcoLogo.

Formaldehyde-free Insulation – Air Krete (www.airkretcanada.com) carries formaldehyde-free cement-type insulation, while Johns Manville (www.jm.com/insulation/building_insulation/4465.htm) carries formaldehyde-free insulations in various forms. Many of the products have 20% recycled content.

Natural Fibres (including recycled denim) – Bonded Logic (www.bondedlogic.com) manufactures natural fibre insulations.

Expanded Polystyrene (EPS)– BioBase 501 (www.biobased.net) manufactures a product similar to polyurethane foam but made in part with soybean oil. Polarfoam Insulation (PF-7300) (www.whyfoamisbetter.com) is a soy-based urethane spray foam made with recycled plastic bottles. Plasti-Fab Ltd. (www.plastifab.com) manufactures a variety of EPS insulations.

Forestry Certification Standards in Canada

With 134 million hectares of forest land dedicated to forestry operations in Canada, 127.75 million hectares are certified under three sustainable forestry management (SFM) standards: Canadian Standards Association (CSA: 59%), Sustainable Forestry Initiative Program (SFI: 26%) and Forest Stewardship Council (FSC: 15%).

I. CSA

Canada's National Sustainable Forest Management Standard (CAN/CSA-Z809-02);



2. FSC

The Forest Stewardship Councils Principles & Criteria and/or Standard



3. SFI

The Sustainable Forestry Board's Sustainable Forestry Initiative program (SFI 2005-2009)



Lumber

Columbia Forest Products (www.columbiaforestproducts.com) – offers a line of environmentally certified decorative panels and veneered particleboard that carry the Forest Stewardship Council (FSC) ecolabel. They also offer a line of formaldehyde-free hardwood plywood. Carried by P.J. White Hardwoods Ltd. (www.pjwhitehardwoods.com) and Hardwoods Inc. (www.hardwoods-inc.com), both of which are in Calgary.

MoCo Sustainable Connections (www.mocosustain.com) serves as a sales representative for a group of FSC-certified operations offering a number of products from Cedar siding and Douglas-fir flooring to Sheathing and Forming plywood.

Triton Logging Inc. (www.tritonlogging.com) specializes in timber that has been retrieved from the bottom of hydro dam reservoirs flooded over the past century.

The Rainforest Alliance's SmartWood program evaluates forest product operations that are reclaiming or using reclaimed, recycled and/or salvaged wood materials. Those that meet the standards are awarded certification for Rediscovered Wood. www.rainforest-alliance.org/programs/forestry/smartwood/



Paint

Clays and Plasters

American Clay (www.americanclay.com) – supplies natural earth plasters that add an appealing and healthful beauty to interior walls and ceilings.

Milk Paint – the least toxic paint of all and it can be used on plaster, drywall or stucco.

Old Fashioned Milk Paint Company (www.milkpaint.com) specializes in this product.

Natural Paints

Eco-House (www.eco-house.com) sells natural paint products for use on concrete, stucco and new drywall. It is naturally antibacterial and solvent free. Mineral paints are also available.

Farrow & Ball (www.farrow-ball.com) is a U.K. based company that offers clay-bases paints, free of VOCs, biocides, fungicides and ammonia.

Paint

AFM Safecoat (www.afmsafecoat.com) – leading provider of environmentally responsible, sustainable and non-polluting paints, stains, wood finishes.

Benjamin Moore (www.benjaminmoore.ca)

CBR Products (www.cbrproducts.com) – supplier of environmentally responsible paints and sealers.

Color Your World (www.coloryourworld.com)

General Paint (www.generalpaint.com)

Yolo Colorhouse (www.yolocolorhouse.com/) – supplier of environmentally responsible paint.

Recycled Paint

EcoCoat Paint (www.recyclepaint.com/ecocoat.htm) is recovered from Calgary's fire halls and is re-blended and resold. This great product saves the paint from being incinerated in Alberta's hazardous waste treatment facility.

Stains and Finishes

AFM Saftecoat (www.afmsafecoat.com) – leading provider of environmentally responsible, sustainable and non-polluting paints, stains, and wood finishes.

CBR Products (www.cbrproducts.com) – supplier of environmentally responsible paints and sealers.

Eco-House Inc (www.eco-house.com/) – sells mineral paint and natural wood finishes.

Raincoast Alternatives (www.raincoastalternatives.com) – supplier of environmentally responsible stains and finishes.

Roofing

Asphalt

IKO (www.iko.com/index.asp) sells asphalt shingles made with organic (non-fiberglass) felt.

Metal roofs

Classic Metal Roofing Systems (www.classicmetalroofingsystems.com) offers roofing products made with 98% recycled metal.

Recycled Roofing

Authentic Roof (www.authentic-roof.com/index.htm) sells roofing products made from recycled materials. Available in Calgary at Enercon Roofing Products Ltd. (403-720-0600) and Taiga Forest Products (403-203-5338).

Recycled Rubber

GEM EuroSlate/EuroShake (www.euroslate.ca/), a Calgary based company, sells roofing tiles made from recycled tires.

Sealants/Adhesives/Chaulking

AFM Safecoat (www.afmsafecoat.com) – sealants, adhesives and caulking with low-volatile organic compounds (VOC). Products free of formaldehyde, ammonia, acetone and phthalates are also available through AFM Safecoat.

Tiles

Interstyle (www.interstyle.ca) – manufacturer of ceramic and glass tile for kitchens, bathrooms and swimming pools.

Oceanside (www.glasstile.com) – handcrafted glass tiles.

Sandhill Industries (www.sandhillind.com) – glass tiles for backsplashes and bathrooms made from 100% post-consumer recycled glass.

Wallpaper

While most wallpaper is made from the dioxin-creating polyvinyl chloride (PVC), many options exist including wallpapers made from actual paper, bamboo, cloth, sisal, dried grasses and even cork. Check with your local dealers. See www.innovationsusa.com/ for a selection of **non-vinyl** wallcoverings.

Windows

It takes eight times more energy to manufacture a PVC (vinyl) window than an equivalent timber frame.

Source: Window of opportunity: The environmental and economic benefits of specifying timber window frames.

Energy Star Rated Windows – poor windows can result in a heat loss of 25% from your home. Look for Energy Star certified windows. The type of window that is best suited to the home will depend on the climate.

All Weather Windows (www.allweatherwindows.com)

CWD Windows & Doors (www.cwdwindows.com)

Wooden Windows – CWD Windows sells wooden windows made from “well-managed forests” certified by the Forest Stewardship council. Visit www.cwdwindows.com/windows-wood/index.html for more information.

GREEN ENERGY

Bullfrog Power – Green Calgary is partnering with Bullfrog Power — a Canadian power provider offering 100% green, carbon-free electricity — to offer green power for homes and businesses. Residents and businesses can buy Renewable Energy Certificates (REC) to offset all or a portion of their energy needs with wind projects. www.bullfrogpower.com.



By purchasing Bullfrog Power through Green Calgary, you support our work. That's because Bullfrog Power donates a portion of the revenue to Green Calgary on your behalf. Use the code “**CCA09**” when you purchase 100% green, renewable power through the Bullfrog Power website.



Canadian Hydro Developers Inc. – residents can buy Renewable Energy Certificates (REC) to offset all or a portion of their energy needs with wind, hydro and biomass projects. www.canhydro.com.

Greenmax – wind power energy sold at a flat fee. Visit <https://www.enmax.com/Energy/Res/Go+Green/Greenmax.htm> for more information.

Renewable Energy Certificates (RECs) – these represent the property rights to the environmental benefits from generating electricity from renewable energy sources. Although the energy entering a person's home isn't necessarily renewable, RECs ensure that the issued renewable energy is fed into the grid somewhere along the line. In this respect, the environmental attributes are separated from the actual energy but by supporting renewable energy through RECs, the market is able to expand and contribute more renewable energy to the grid.

Thermal Creek – geo thermal heating company. Visit <http://www.thermalcreek.com> for more information.

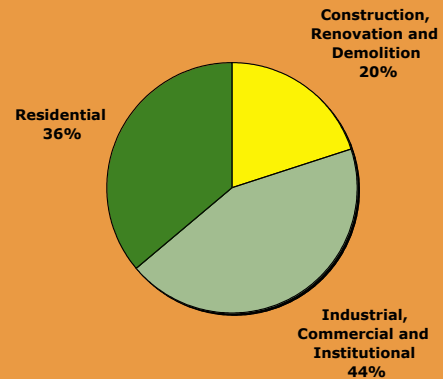
RECYCLING AND WASTE REMOVAL

FOR YOUR INFORMATION

Construction recycling doesn't just happen in Calgary; it has to be requested. Some waste haulers provide recycling, while others do not.

To prevent disappointment, it is important to discuss your expectations with the hauler before hiring them.

Components of Calgary's Landfilled Waste Stream (2004)



Commercial Environmental Services (formerly Calgary Materials Exchange) - a program of Green Calgary (www.greencalgary.org). Assisting companies to reduce their environmental impact associated with waste. They offer customized, one-on-one service and the information, education, resources and tools necessary to divert waste from landfill and help reach your waste-diversion goals.

Services include:

- Waste Reduction Solutions / Consultation
- Online Recycling Directory
- Waste Measurement Toolkit Assessments
- Calgary Materials Exchange (www.cmex.ca) - The program is well connected with all of Calgary's recyclers, while the website serves as a valuable tool for posting and browsing reuse items. The program deals with all waste that is non-residential.

Please call Sarah at (403) 230 1443 ext. 226 or email sarah@greencalgary.org.

Enervison (www.whywasteit.ca/) – a construction and demolition (C&D) waste diversion and recycling directory.

RENEWABLE ENERGY SYSTEMS

Clean Energy Developments (www.cleanenergydevelopments.com) – a Calgary-based firm specializing in a combination of technologies including solar, geothermal and other clean energy technologies for heating, cooling and hot water solutions. (403) 244-6866.

Ener-West Geo-Energy Services Inc. (www.ener-west.com) – An active geo-thermal heating and cooling company based in Calgary, involved in residential and commercial projects in Western Canada. Also installs and promotes Solar Thermal systems. Member in good standing of the Canadian GeoExchange Coalition. (403) 279-2384

Goose Creek Renewable Energy Inc (www.goosecreek.ca) – a renewable energy business based in Blackie, Alberta. (403) 333-0748

Sedmek Inc (www.sedmek.com) – a Calgary based business specializing in distribution and wholesale of solar products

Solar Services (www.solarthermal.com) – home and commercial solar products. Based in Airdrie, Alberta. 403-948-6847.

Trimline Design Centre (www.trimlinedesigncentre.com) – supplies products and offers workshops on solar thermal, solar photovoltaic (PV), wind power, hybrid systems, biodiesel and straw bale building. Based in Edmonton, Alberta. 780-466-9034

Sky Fire Energy (www.skyfireenergy.com) - a Calgary-based business specializing in renewable energy systems including solar electric, solar thermal, wind and high efficiency heating. 403-251-0668

YEAR-ROUND ACTIVITIES OF GREEN CALGARY

Empowering Calgarians to create healthy homes and communities by providing environmental education, products and services.

Green Calgary offers a variety of programs to help achieve mandates of waste reduction and water protection including:

Environmental Education

Green Calgary is pleased to offer a wide variety of presentations to businesses and employees to help answer tough questions about the environment, explain how to practically become green and share Calgary-specific knowledge. These can be done as part of a staff meeting, as a ‘Lunch and Learn’ or any other time.

Waste at Work: Reducing your company’s environmental footprint

Green Procurement: Using buying power to influence change

Waste at Home: How individuals can make a difference in daily life

Getting There Green: Environmentally friendly driving and alternative transportation

Green Cleaning: How to improve indoor air quality and choose green products

Composting: Learn how to recycle your organic waste and make great fertilizer

Vermicomposting: Don’t have a yard? Learn to compost indoors with red wiggler worms!

Please contact the Education team at [403] 230 1443 ext 225 or education@greencalgary.org for more information or to book. Member discounts apply.

Healthy Homes Calgary

The Healthy Homes Calgary program is our newest residential service, providing free home visits to Calgarians interested in creating a healthy living environment, while reducing the home’s “eco-footprint”. We will provide the tools and information needed to improve indoor air quality, energy and water efficiency, waste reduction, and more.

Please call Ashley at [403] 230 1443 ext. 223 or email ashley@greencalgary.org.

Commercial Environmental Services

Assisting companies to reduce their environmental impact associated with waste. We offer customized, one-on-one service and the information, education, resources and tools necessary to divert waste from landfill and help reach your waste-diversion goals.

Services include:

- Waste Reduction Solutions / Consultation
- Online Recycling Directory
- Waste Measurement Toolkit Assessments
- Calgary Materials Exchange - www.cmex.ca

Please call Sarah at [403] 230 1443 ext. 226 or email sarah@greencalgary.org.

EcoStore - selling environmental products that reduce our environmental footprint

The Green Calgary EcoStore sells products that are environmentally sustainable and help to reduce waste and conserve water. Products include compost bins, recycling bins, rain barrels, water saving kits and much, much more. Visit the website for details: www.greencalgary.org

We are wheelchair accessible and located in downtown Calgary on the southwest corner of 4th Avenue and 7th Street SW.

809 Fourth Avenue SW

[403] 230 1443 ext. 222

Open Tuesday and Wednesday 10-5:30

Thursday 10-7

Friday and Saturday 10-4

Closed Sunday and Monday

Information Services & E-newsletter

We respond to thousands of public requests for environmental information. Calgarians want to know how to recycle their household waste and otherwise reduce their environmental footprint.

Please contact Green Calgary if you would like more information about our programs or if you are interested in volunteering.

809 Fourth Ave SW, Calgary, AB T2P 0K5

Phone: [403] 230 1443

Fax: [403] 398 0605

info@greencalgary.org

www.greencalgary.org