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Green Heroes

Our inaugural list of the 50 most eco-friendly companies in Middle Tennessee [From the September/October issue of Nashville Post magazine]

By Drew Ruble

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Growing consumer desire for environmentally friendly business has led many companies to “green” their practices, making them more sustainable. In addition, many entrepreneurs have opened businesses with a green slant in recent years. The result? Green business has evolved into a profitable aspect of the business world for mom-and-pop shops and multinational companies alike.

What makes a business green? For this first-time ranking, we define a green business first as one that provides goods or services intended to improve the sustainability of others. For nearly every category of conventional consumer goods and services, there is a green alternative – from automobiles to marketing services.

Second, we define a green business as one that employs sustainable principles in their facilities and practices. As such, many of the businesses here are focused on keeping their environmental footprint small, reducing waste, reusing materials, using innovative building techniques and materials to promote energy efficiency, and even encouraging employees to think about the environment in their day-to-day business life. In many instances, the companies listed here fall into a third category of green business – those that fit both of the above descriptions.

A quick scan of this list will no doubt generate conversation – and even debate – due to the



fact that a significant portion of the companies profiled here are larger companies, many of which a green purist might contend have at best a mixed environmental record. Without question, there are scant few large companies in Nashville, or anywhere for that matter, that have as a core business principle to decrease or even negate their environmental footprint.

But in acknowledging that the greatest potential for “greening” American business lies not so much in startup entrepreneurial ventures as in convincing larger, already established American companies to adopt greener policies, we’ve weighed the work of some of Middle Tennessee’s largest companies that are working to green their businesses accordingly – all the while noting that they could do more.

Rest assured, there’s still plenty of room here for profiles of smaller companies on the leading edge of the green movement. After all, the heartbeat of true environmental commitment is found predominantly in the large collective of small green businesses. And there are so many of them in Nashville that they do represent a power.

The companies on this list might be headquartered in Nashville or out of state with operations in Nashville. Some are for-profit and some not-for-profit. Represented here are both private enterprises and government agencies – even some institutions of higher education. Companies big and small have made the list, as have both originators and imitators of sustainable business goods and/or practices. Together, they comprise the best of the best of green Nashville businesses.

Many of these companies applied for the designation, while others have been editorially selected. Either way, we hope these profiles will help convince local businesses that going green is not only economically feasible but can in fact be a boon to the bottom line.

A.O. Smith Water Products Co.

hotwater.com

Water heaters typically use more energy than most other household appliances – on average, more than a fridge, dishwasher, clothes washer and dryer combined. This Ashland City-based maker of high-efficiency residential and commercial water heaters and hydronic boilers is making a significant impact internationally on energy consumption through its innovative and high-efficiency designs. From hybrid water heaters to solar panel systems, no one has done more to usher in a new era of energy-efficient water heaters than A.O. Smith. For instance, the company developed the first affordable solar water heating system specifically designed for popular high-rise apartment buildings in China, where rooftop mountings are limited.

Balfour Beatty Energy Solutions

balfourbeattyenergy.com

Construction conglomerate Balfour Beatty located this, its latest endeavor, in Nashville late last year. BBES provides programs that identify and execute cost-saving renewable energy

and energy efficiency projects nationwide. The company focuses on technology, behavior change and regulation when designing energy solutions to help clients conserve natural and financial resources. Tabitha Crawford and Richard Lucy lead BBES. Crawford contributed to the Presidential Climate Action Plan and the Institute for Sustainable Practice at Lipscomb University. She also spent four years as senior VP of sustainability and innovation at Nashville-based Actus Lend Lease. Balfour Beatty, on the Dow Jones Sustainability Index, reports monthly water, electric, gas, oil, fuel and air travel usage, plus mileage, waste and recycling.

Bridgestone Americas

bridgestone-firestone.com

Given the public's perception of tires (i.e. environmental waste floating in a river or burning in a pile), tire maker Bridgestone's presence on this list may at first surprise readers. And though there is more that a company like Bridgestone could do to reduce its carbon footprint, people often don't realize that 99 percent of scrap tires taken in by Bridgestone Americas network of 2,200 U.S. retail stores find another beneficial purpose (surpassing the national average of 85 percent). The general public may also be unaware of how clean and efficient Bridgestone's plants are – all of which operate at the international standard for environmental excellence. Two of the company's manufacturing plants (including one in Warren County that sits on a 680-acre official wildlife habitat) are LEED (Leadership in Energy and Environmental Design) certified, making Bridgestone the first tire maker globally to achieve that status. From a product perspective, Bridgestone's green achievements include producing tires that are more fuel efficient and longer lasting. The company's Ecopia tires, known for fuel efficiency, are often the original equipment found on hybrid vehicles.

Centric Architecture

centricarchitecture.com

The former Fowlkes and Associates Architects has more than five decades of experience leading design and restoration projects in Nashville and throughout the Southeast. It changed its name a few years ago to reflect its transformation into a green architecture firm focused on cultivating a more eco-centric business. One significant recent project was designing Tennessee's first LEED silver-certified elementary school, Julia Green Elementary. The \$6.1 million expansion and renovation project was part of a Metro initiative to make all government buildings more green. In addition to conducting environmentally friendly renovations (increased natural light, white roof, insulated windows, dual flush toilets, etc.) to 55,000 square feet of existing space at the school, the company also added 11,500 square feet of green construction, including a new Frist Performance Hall and enhanced library. The school is projected to improve its energy efficiency by 21 percent and reduce water usage by 30 percent.

City Square Hendersonville

citysquaretn.com

The City Square shopping center in Hendersonville is home to one of the largest solar projects in Tennessee. A 288-solar-panel system (covering roughly 40 percent of the roof) offsets the property's energy costs by at least \$22,850 annually, based on recent utility rates. City Square was granted three TN Clean Energy Technology grants and a Federal Energy Investment Tax Credit, which combined, covered 70 percent of the total cost of installation. City Square sells the power it produces back to the Tennessee Valley Authority (TVA) as part of the "Generation Partners" program. The 135,000-square-foot City Square Commercial Center is owned and operated by developer Greg Smith, a leading advocate for clean energy across Tennessee, whose shopping center property was among the first U.S. users of low-pressure sodium security lighting – a feat he accomplished back in 1980.

Clarcor

clarcor.com

This publicly traded filtration and packaging business that moved its headquarters from Rockford, Ill., to Franklin six years ago is part of a joint venture with BioProcess-Algae LLC and Green Plains Renewable Energy to build an algae-to-fuel pilot project in Shenandoah, Iowa. The joint venture's goal is to build photobioreactors that will grow algae from which oil can be extracted and used commercially. Algae work as tiny factories using photosynthesis to transform carbon dioxide and sunlight into lipids, or oils. Scientists say some strains can double in size in a few hours and, if force-fed carbon dioxide, may be able to grow even faster. This would prove doubly useful, since carbon dioxide is a plentiful byproduct of power plants. Growing algae in photobioreactors and producing oil on a scale large enough to feed the ethanol production process has yet to be done successfully, but the effort to turn pond scum into oil is laudable.

Constellation Energy Projects & Services Group

constellation.com

Constellation Energy Projects and Services Group (CEPS), doing business here in Nashville, is a 220-employee wholly owned subsidiary of Constellation Energy, a \$15.6 billion revenue "competitive energy" company. Constellation's energy services arm, CEPS is known for large-scale solar, biomass and geothermal energy projects. It is the group that built and currently operates the District Energy System, or Energy Generation Facility, that replaced the downtown thermal transfer plant back in 2002 (at a cost of \$43.6 million), supplying heating and cooling to 40 buildings in downtown Nashville. The facility is supported by the sale of chilled water and steam to downtown buildings at no cost to taxpayers. The system saves its energy customers approximately 10 percent as compared to alternatives. Combined with additional savings from changing Metro's solid waste disposal method to land-filling, Metro expects it will have saved more than \$200 million via the new system by 2022.

Crosland Tennessee

crosland.com

Crosland Tennessee developed the \$68 million Terrazzo, the largest mixed-use/residential

high-rise in the Southeast to achieve LEED certification from the U.S. Green Building Council. It's also the first LEED-certified high-rise in downtown Nashville and the first LEED mixed-use high-rise in Tennessee. Terrazzo's green features include reduced energy and water consumption, floor-to-ceiling windows, recycling stations on every floor, green housekeeping in common areas, preferred parking for fuel-efficient cars and vegetated rooftop terraces (among many other programs). Crosland also focuses on recycling construction waste on project sites, the use of local materials to reduce transportation impact and the use of recycled materials over virgin resources. Crosland has made a commitment to seek LEED certification for all of its development projects in Tennessee. Its focus on urban sites benefits the environment by reducing commutes to work, re-using existing buildings and incorporating higher density developments. The company provides green guides for its residents.

EarthSavers

earthsavers.org

This locally owned residential and commercial recycling service provider aids businesses, government entities, institutions and individuals in recycling as much of their waste as possible in the most convenient way. In business since 2002, the company now serves individuals in six Middle Tennessee counties. Having grown to nine employees, the company serves over 1,850 homes and businesses recycling over four million pounds of paper, cardboard, plastics, Styrofoam, metal, glass, electronics, computers and batteries each year. In an age of LEED reporting and EPA guidelines, EarthSavers offers clients quarterly reports that provide volume and waste estimates based on the amount of recycled materials, helping a company quantify efforts to reduce its carbon footprint. The company is currently active in the dialogue of how to start composting in Nashville. Current clients include Metro Nashville, the state of Tennessee, Vanderbilt University, LP Corp., CMT and Starbucks, among others.

Energy Ace

energyace.com

This sustainability consultancy firm based out of Atlanta just opened its Nashville office in April but has guided LEED administration for several projects in the state. The office is also led by Ken A. Scalf, who has an extensive background and deep roots in Tennessee, including LEED administration for the state's first LEED Gold retail center – Two North Shore. A founding member of the Middle Tennessee U.S. Green Building Council, as well as current chairman of the City of Franklin Sustainability Commission, Scalf previously served as the assistant state architect for the state of Tennessee, where he championed high-performance, sustainable buildings. He was instrumental in the implementation of the state's first LEED-certified building at the Oak Ridge National Lab. The 2009 co-chair of the American Institute of Architects National Committee on the Environment and current chair of the review committee for the draft International Green Construction Code for the AIA response, Scalf also serves as president-elect for the Middle Tennessee AIA and is slated for the

president's position in 2012.

Energy Source Partners

energysourcepartners.com

Energy Source Partners provides design, financing, installation, management and support for all aspects of installing a solar energy system. The company has installed solar systems at businesses, including on the roof of the MetroCenter headquarters of Film House, the largest film production company in Tennessee, and of KraftCPAs, one of the largest independent certified public accounting firms in Tennessee. This summer the company installed a solar array on a commercial building in Cheatham County for Kingston Construction – a 21.12 kilowatt hour (kWh) rooftop photovoltaic (PV) system. The combination of new state and federal incentives, coupled with Energy Source Partners' business model (it owns and installs all the equipment and manages the system), makes it possible for building owners to install solar panels with no upfront expense. The company then shares in the revenue generated, and customers save on energy costs (while lowering their carbon footprint).

Envolve Strategies

envolveus.com

Billed as the first green marketing and public relations agency in the Southeast, Envolve Strategies focuses solely on marketing and sustainability consulting for underserved green businesses both established and emerging nationally. Envolve specializes in certified green events, workplace strategies, green media, grassroots marketing, socially responsive messaging and online marketing programs. Clients must meet a certain number of internal criteria used to determine if a company's sustainability initiatives are marketable in order to be selected for representation. Those that qualify benefit from Envolve's expertise in marketing companies as sustainable brands that people want in their lives. Envolve also serves a crucial role at the intersection of consultants and marketers to bring about verifiable messaging and stamp out "green washing" – or false or insupportable claims about sustainability. Founding partner and president Mark Thien is co-founder of the Nashville Clean Water Project, the largest water cleanup project in Nashville history. With business partner Jim Deming, the company has combined the scientific and social elements of the sustainable business movement.

Earl Swensson Associates

esarch.com

ESa incorporated the principles of sustainable building and green design well in advance of industry trends. For proof, consider examples like the Caterpillar Financial Center and The Hutton Hotel, a poster child for eco-friendly hotel design. At ESa, sustainability and the basic principles of good design are synonymous – spaces should be created that are environmentally responsible, high-performance, profitable and healthy. The company – consistently ranked among the top health care designers in the United States – currently has more than 20 projects totaling over 6.5 million square feet that focus on sustainable issues

and/or are seeking LEED certification. A member of the National U.S. Green Building Council, ESa is also a charter member (and one of only five design firms nationally) of the Planetree Visionary Design Network, which encourages sustainable design in healthcare and senior living facilities. ESa also has an in-house sustainability committee and has implemented numerous energy and waste reduction strategies within the office.

Forevergreen Solar

fegsolar.com

Predominantly a player in smaller solar installations (40 percent of the company's work is in residential installation), Forevergreen projects have included an installation on the Old Natchez Country Club golf course comfort station, which doesn't have access to traditional electricity. The panel directly powers a 10-watt fan that runs from sunup to sundown, moving 180 cubic feet of air per minute. A current project is the Richland Animal Hospital, which will be getting grid-tied solar power. Prior to starting Forevergreen Solar, Mike VanDenBerg, who holds an MBA from the Owen Graduate School of Management at Vanderbilt University, spent nine years in business consulting with a focus on technology and strategy. His passion for solar was ignited after getting to know co-founder Brian Jansen and after realizing that 99 percent of the U.S. market for solar remains untapped. Jansen, a licensed architect, had extensive experience as a project manager for a nationwide real estate developer and as a president of an architecture and contracting company.

Freeman Webb

freemanwebb.com

Freeman Webb's new Green Hills headquarters building was the first in Tennessee to receive LEED Gold certification. The building includes a green roof with more than 1,100 plants (a setup that reduces the building's cooling costs), retractable glass walls to provide open-air access, occupant detection sensors to automatically turn lights on or off, high-efficiency elevators, and an interior and exterior constructed from recycled content. As a result, energy use is 25 percent less and water use is 30 percent less in The Freeman Webb Building compared to similarly sized buildings. Freeman Webb was the only U.S. company to be honored at the "Green Apple Awards" given out by The Green Organization, a United Kingdom-based nonprofit environmental group dedicated to promoting environmental best practices around the world. (The company will attend a ceremony in November at the House of Commons, the lower house of Parliament in the U.K., to receive acknowledgement.) The largest private owner/manager of apartments in Nashville also received the "Industrial Conservationist of the Year" award from the Tennessee Wildlife Federation.

Gardens of Babylon

gardensofbabylon.com

Gardens of Babylon is the sustainability authority in Nashville for outdoor care. The company is routinely cited among the "Best of Nashville" by readers of sister publication the Nashville Scene, whether in the category of best landscaper, best garden center, best place to

shop green or best environmentally friendly business. With 55 employees, the company specializes in naturally grown plants, eco-conscious garden products and landscape installs (including edible landscapes), as well as rain gardens, rain barrels and other water pooling devices (among other offerings). The company is currently developing Nashville's first environmentally sound lawn maintenance company, using alternative fuels to power trucks and equipment.

Gaylord Entertainment

gaylordentertainment.com

The historic flood that devastated Nashville in May hit Gaylord Entertainment harder than any other Music City corporate entity. In the aftermath of the floods, Gaylord is executing over \$200 million worth of new construction on its various Nashville properties – properties that are integral to the tourism trade in Middle Tennessee. A silver lining? The rebuild has allowed Gaylord the opportunity to green up its local operations, especially at the massive Gaylord Opryland complex. In addition, the company is to be lauded for its recent hiring (just days before the flood) of its first headquarters-based VP of sustainability. Clearly, Gaylord sees greening its footprint nationally as making good business sense. (See our related **cover story**.)

Green Home

hellogreenhome.com

General contractor Ryan Nichols and his partner John Price only accept projects that are truly low-impact, environmentally speaking. And they have all the work they can handle. The company specializes in finding one-off, unique green projects desired by homeowners and businesses looking to use creative green designs and systems. Green Home is the contractor of record on the region's first LEED for Homes New Home (Joelton) and the region's first LEED for Homes Renovation (across from Elmington Park). Both projects were pending certification at press time but are expected to be regional firsts. Nichols learned green building while working in the construction industry out West, where he assisted in building several energy efficient homes in places like Sun Valley, Idaho, and Bend, Ore. Now the 1997 Page High School graduate and world traveler has brought that experience back to Middle Tennessee.

Gresham Smith & Partners

gspnet.com

Nationally recognized architecture, engineering, environmental and planning firm GS&P is involved in several green projects. Locally, they designed the 460,000-square-foot Nissan NA headquarters with its many sustainable elements, including six-foot-deep aluminum sunshade outriggers, which extend around the perimeter of each floor to reduce solar heat gain and improve energy efficiency. Other building features include a green roof system, digital lighting controls, a chilled water plant and an under-floor air distribution system that provides a controllable environment for employees. Building materials, finishes and

furnishings contain high quantities of recycled content. GS&P contracted with the Airport Cooperative Research Program last year to develop a guidebook for improving environmental performance at small airports, aimed at helping small airport managers identify environmental compliance requirements, best management practices that enhance environmental stewardship and resources to promote the green efforts. The firm is also a member of the American Institute of Architects 2030 Commitment program with its goal of carbon-neutral buildings by the year 2030.

Hemlock Semiconductor

hscpoly.com

Hemlock will soon open a \$1 billion Clarksville plant where it will manufacture polycrystalline silicon (polysilicon), a key raw material used in the production of solar cells and semiconductor devices. Everything from cell phones to flat panel televisions to the electronics in automobiles and personal computers relies on polysilicon. Granted, it's an energy-intensive process to make polycrystalline silicon; however, once the product is used to make a solar panel, the panel produces anywhere from eight to 15 times the amount of energy used to manufacture it – a positive net gain over the lifetime of the panel. HSC manufactures one-third of the world's polysilicon supply for solar cells, which provide clean renewable energy, reduce greenhouse gas emissions and reduce the need for fossil fuels. As such, HSC products are helping to enable sustainable energy options throughout the world.

Holladay Properties

holladayproperties.com

The Nashville office of this Indiana-based building solutions company has completed some of the most significant green redevelopments in Music City. The company recently worked to transform a century-old, blighted industrial property, known as the "Sawtooth Building," into Class-A office space by bringing back several of the original architectural features of the building, particularly the use of natural "daylighting." An example of a building's life coming full circle, the building was originally designed to provide an environment sensitive to the needs for lighting and comfort for General Wax Industries employees. Vacated by General Wax in the 1950s, and used for a variety of purposes since then, the building's features had long been hidden until Holladay reintroduced them for a new generation of Nashville workers. Nashville-based Griffin Technologies, one of the world's foremost creators of accessories for home, mobile and personal technology, has already signed on to be the anchor tenant. Also, Holladay recently completed AmeriPlex at Elm Hill – Middle Tennessee's only LEED-designed industrial facility, which attracted tenant Lennox Hearth Products, a California company that recently relocated to Music City. The industrial reuse expert also converted the former Collins & Aikman auto parts plant on Massman Drive into an office warehouse facility currently occupied by Standard Candy.

Hutton Hotel

huttonhotel.com

The Hutton Hotel is hands-down the most green and sustainably suited hotel in the city. Hotel Interactive, the hotel industry's leading online information resource, called the Hutton Hotel "one of the most sustainable focused properties we've ever seen." Adapted from a former office building, the hotel boasts such sustainable features as bronze exterior glass that is the highest rated for thermal insulation, water-free urinals in public restrooms, guest room lighting that shuts off when a guest leaves the room, reclaimed wood furnishings in its 1808 Grille restaurant – even dispensed soap, shampoo and conditioner in guest rooms to reduce plastic waste. Industry-leading initiatives in sustainability range from energy-conscious lighting throughout the hotel to low-energy EcoDisc elevators, a hybrid courtesy vehicle, biodegradable cleaning products and bamboo flooring and furnishings. The Hutton Hotel is a development of Pennsylvania-based Amerimar Enterprises, which has renovated and repositioned office, hotel, retail, multi-family and mixed-use properties throughout the country.

iHospitality

ihospitalitytn.info

This specialty provider of eco-friendly compostable tableware and food containers made from sugar cane pulp, corn starch and other materials that, unlike Styrofoam or plastic, quickly degrade into nontoxic components, was founded by entrepreneur Ashley Currie. Currie formerly worked as a sales associate with the Scarritt Bennett conference and retreat center, and while employed there, noticed how often people who booked events requested eco-friendly tableware and cutlery. Currie took mental note of the limited options in that regard. Today, her recently launched company's clients include The Harpeth Hall School, Tayst restaurant and FreshPoint produce distributors, among others. Many people assume a green product like the disposable plates, bowls, cups, to-go-containers, cutlery, napkins, lunch trays, bake ware and bio-bags that iHospitality provides must automatically be more expensive than traditional offerings, but prices are comparable to what is already in use.

J Gowdy Sustainability Consulting

jgowdyconsulting.com

J Gowdy focuses on helping businesses lessen their environmental impact but also drive profit by lowering costs via sustainable solutions. The firm's primary client is Bridgestone. There is still an overriding assumption in the business world that environmental improvements are at odds with financial improvements; J Gowdy focuses on breaking through misconceptions on this issue. Without question, the biggest challenge for small consultancy shops like J Gowdy is communicating to large firms the financial and environmental and social potential – i.e., a win-win scenario – that is available to every company. Founder Jeff Gowdy is a board member of the Middle Tennessee Clean Air partnership, founding member of the Nashville Net Impact professional chapter and a guest faculty member at Vanderbilt University.

LightWave Solar Electric

lightwavesolar.com

Fast-growing LightWave Solar Electric (which has grown from 10 to 16 employees in the past year) designs and installs turn-key solar electric systems throughout Tennessee. In business since July 2006, LightWave boasts an unlimited state electrical license and the most North American Board of Certified Energy Practitioners (NABCEP) certifications in the state. The company has installed 78 solar photovoltaic systems – that’s 750 kW of installed PV power. President and founder Steve Johnson has worked closely with TVA on the development of the Generation Partners program and has been responsible for the design and installation of over half of TVA’s grid-tied installations in Tennessee, including installations at Oak Ridge National Laboratory. Other projects/clients have included the City Square shopping center, the Metropolitan Development and Housing Agency’s (MDHA) Parthenon and Madison Towers, as well as residential projects for former VP Al Gore and rock star Sheryl Crow.

Lipscomb University

lipscomb.edu

The Princeton Review, a nationally known education services company, selected Lipscomb as the only university in Middle Tennessee to be included in a unique new resource for college applicants – a guide to the 286 most environmentally responsible or green colleges. Developed in partnership with the U.S. Green Building Council, the guide focuses on higher ed institutions that have demonstrated an above-average commitment to sustainability in terms of campus infrastructure, activities and initiatives. The university recently opened the Gold-level LEED-certified A.M. Burton Health Sciences Building. A new arts and engineering building set to open this fall is being built using green methods and materials, and will include a renewable energy lab designed to teach students about various sustainable energy sources. Lipscomb is also arguably the leading voice for sustainability practices in the Nashville area from a practitioner level. The university established the Institute for Sustainable Practices in 2008, offering the state’s first bachelor’s and master’s degree concentration in sustainability, as well as a green MBA. It established the state’s first business summit on sustainability best practices, and it established a monthly sustainability lecture series. Through its outreach and example, the private liberal arts college has made going green practical. University president L. Randolph Lowry III recently told sister publication The City Paper that “Stewardship is a paradigm basic to our faith. Therefore, we take very seriously the practice of sustainability as an act of stewardship.”

Living Well Events

livingwellevents.com

This event production company produces the Living Well Sustainable Marketplace, a two-day environmentally friendly event showcasing companies, agencies and organizations in the Southeast region that provide products, services, resources and information for attendees to make ecologically sustainable lifestyle choices. The Nashville Sustainable Marketplace will take place during the Earth Day celebration, April 22 and 23, 2011. An Orlando, Fla., event will take place in June 2011. These events target not just the early adopters of clean living but also the mainstream consumer and buyer, meaning that the

events encourage all people, no matter where they stand on the spectrum of sustainable living, to take another step toward an environmentally healthier lifestyle. The company is owned by two female entrepreneurs, Tracy Martin and Shonda Alexander, who moved back home from Portland, Ore., one of America's greenest cities, and whose mission is to create a similar awareness of environmentally friendly living in Tennessee and throughout the Southeast.

Louisiana-Pacific Corp.

lpcorp.com

Nashville-based LP is the world's leading maker of engineered wood building materials. As such, LP products contain fewer raw materials than comparable traditional lumber products made from solid wood. LP uses forest management and timber procurement systems that are certified, which helps ensure its wood comes from well-managed forests. The green attributes built into LP products are recognized in green building certification programs across North America. LP's radiant barrier sheathing blocks up to 97 percent of the radiant heat in a roof panel from radiating into an attic, reducing attic temperatures by as much as 30 degrees. LP's trim and siding products help reduce waste on job sites, as the absence of knots and voids in woods helps reduce wood scrap piles. LP's laminated strand lumber (made from chips of wood, resin and heat) is longer, straighter and stronger than traditional wood, reducing the total number of pieces needed to complete a project. Longer-lasting building products by definition help the built environment last longer. On the manufacturing side, LP uses the whole log. Around 75 percent of the energy LP uses comes from biomass energy produced on site. As a company that was formerly based in Oregon, LP was doing this type of eco-conscious work long before the Green Movement reached the Volunteer State.

MarketStreet Enterprises

nashvillegulch.com

MarketStreet is the master developer (in collaboration with MDHA) of the 60-acre Gulch, the first LEED-certified neighborhood in the Southeast, which is booming with new residents and new businesses (and serves as the physical address for SouthComm Inc., publishers of *Nashville Post* magazine). There are only about a dozen LEED-certified neighborhoods nationally, and only about two dozen in the world, including the Olympic Village in Beijing, China. Criteria used by the U.S. Green Building Council in labeling the neighborhoods include smart location and linkage, neighborhood pattern and design, green construction, technology and innovation in design. The Gulch also received the designation for developing high density, mixed-use buildings that will support a network of public transit and proximity to employment. In addition, the district was lauded for its tree-lined streets, on-street parking and sidewalks, preservation of historic buildings and adaptive reuse of existing buildings. MarketStreet's role in revitalizing this blighted and forgotten area of downtown Nashville has been crucial to enhancing Nashville's downtown fabric and injecting economic vitality there.

Mars PetCare US

mars.com

In September 2009, Mars Petcare opened the world's first sustainable pet food manufacturing facility in the United States. The facility – Arkansas' first sustainable manufacturing facility – received LEED Gold certification for its industry-leading efforts to recycle water, reduce energy use and protect against erosion and light pollution. Other steps the company has taken to reduce its environmental impact include expanding pet care plant recycling systems, changing packaging from paper to woven polypropylene (older bags were harder to recycle) and dramatically reducing solid waste. The company has even improved its recipes in an effort to reduce the amount of methane gas being released into the atmosphere by pets. In an industry first, the company recently announced (against a backdrop of dwindling global fish stocks) its commitment to use only sustainably sourced fish by 2020. As the world's largest pet care business, the company sets a precedent for other manufacturers and positions itself to effect real change.

Mazzetti Nash Lipsey Burch

mazzetti.com

As sustainable design has moved into the forefront of responsible building technology, M+NLB's reputation as sustainable design experts has soared. This full-service consulting and design firm has been designing energy-efficient buildings for almost 50 years. The company works mostly with health care clients (80 percent of revenues), which makes it a company well positioned to bring more green design to an area – health care construction – that is historically more focused on cost and speed. The staff boasts a member of the three-member group that co-coordinated the Green Guide for Healthcare, which has signed a memorandum of understanding with the U.S. Green Building Council to become the foundation document for the LEED for health care product. The company's newest division, called BLUE Climate Change Consulting, provides clients with services including environmental impact analysis, energy and greenhouse gas management consulting and emissions inventory and reduction services. The company has also worked with a number of municipalities to develop and implement sustainability standards. The Nashville office is slated to be the pilot project for a new city certification program this year.

Metropolitan Development and Housing Agency

nashville-mdha.org

The city's development and public housing agency recently installed a rooftop solar energy display at Parthenon Towers – a first for community-owned housing in Tennessee. The 280 PV panels cover almost 5,000 square feet of the building's roof. That project alone made MDHA the largest solar energy generator for Nashville Electric Service. In addition, MDHA installed 300 panels atop its Madison high-rise property and a smaller display atop Edgefield Manor in East Nashville. Altogether, it has made MDHA among the largest generators of solar power in the state of Tennessee. The agency has also received millions of dollars in federal stimulus money to renovate and green its public housing developments. From window replacement to heating and cooling and weatherization improvements, the end

result is greater comfort for residents and lower energy costs for MDHA – a significant development given that the public agency is often made to absorb the energy costs of residents who cannot pay their bills. As such, the agency is playing a leading role in fulfilling Mayor Karl Dean's plan to make Nashville the greenest city in the Southeast.

Nashville Natives

nashvillenatives.com

Nashville Natives nursery grows native plants for environmental restoration projects, working in partnership with public agencies and private landowners in the protection and management of natural areas. The company also specializes in green roofs, which improve urban and built environments while cleaning the air, cooling the earth and capturing and filtering storm water runoff. The nursery's solar array of 36 panels on the roof of its equipment barn (an 8.28 kilowatt PV system) offsets the cost of the nursery's entire energy demand in an average year.

(n) habit

n-habit.net

Rachel and Edward Martin, 2006 graduates of the UT-Knoxville School of Architecture, opened this environmental home design and supply store last year after spending three years in Oregon studying eco-friendly trends and techniques. The store sells a wide array of home supply and decorating products, from bamboo flooring to wood stoves, no-Volatile Organic Compounds (VOC) paint, dual-flush toilets, rain barrels, countertop materials, recycled glass tiles and energy monitors (among other products). Inventory is based on five criteria: how close to Nashville was it extracted or manufactured; to what degree does it incorporate recycled materials; what is the extent of its use of VOCs; can it be recycled; and what is its ability to reduce consumption of water or energy? The couple's free workshops are can't-miss and teach customers how to "live lightly on earth." Green architectural design services (40 percent of the business) are also available to residential and small commercial customers.

Nissan North America

nissanusa.com

Automotive giant Nissan is aiming to be a global leader in zero-emission vehicles. It will soon begin producing its Leaf electric car in Smyrna following a complete modification of that manufacturing plant to produce zero-emissions vehicles and state-of-the-art lithium-ion battery packs. Nissan's green program, a comprehensive plan to reduce the energy consumption and emissions of both its vehicles and operations, has progressed nicely over the years. The company has successfully improved the efficiency and fuel economy of its gasoline-fueled engines while at the same time developed hybrid and plug-in hybrid cars, fuel cell vehicles and electric cars. In addition, the company's North American headquarters building in Franklin incorporates energy-efficient strategies like aluminum sunshades, low emissivity, high-performance glass and an under-floor air distribution system. The building is a model for green building and architecture around the world.

Nogas LLC*nogasamerica.com*

James Arledge spent three decades building James Arledge Piano Service into an internationally acclaimed high-quality long string provider. The success of Arledge's piano business garnered him invites to music industry conventions in Germany and China, where he says he was overwhelmed at the number of electric scooters on the road. "This scooter thing, from the first trip to China, just really bugged me," he told Nashville Post. "Why don't we have these in America?" Switching business gears, Arledge launched NoGas Electric Scooters. In an urban environment like Nashville, he views gas-free scooters, motorcycles and bikes as a perfect fit. According to Arledge, the green batteries in his electric vehicles can be used to fertilize soil when finished. Arledge is also Nashville's primary consultant for Toyota Prius conversions.

Outpost Solar*outpostsolar.com*

Pulaski-based but with a Nashville office, Outpost Solar designs and manufactures numerous photovoltaic solutions. Notables include an armored solar generator for military use for remote area power generation. The company, a subsidiary of Richland LLC, also commissioned the Southeast's first solar-assisted plug-in charging station for electric vehicles (just in advance of the production of numerous electric car models by major automotive brands). That pilot project, which involved the state, TVA, the U.S. Department of Agriculture and Pulaski Electric System, is a mini-version of additional charging stations the company will build in Pulaski and Knoxville, allowing drivers to cross half the state in an electric car, a key development if the use of such alternative vehicles is ever going to reach critical mass. The company's parking area solar arrays, with integrated electric vehicle charging capacity generate power and revenue from valuable parking real estate and are sure to dot Tennessee's landscape in the coming years.

Perfection Uniforms*perfectionuniforms.com*

This manufacturer of police, fire and EMS uniforms (recently acquired by senior management) is known for its innovative product development, evidenced by its designation as one of Apparel magazine's "Top 50 Most Innovative Companies." The company recently started making eco-friendly uniforms – fabric utilizing recycled polyester diverted from landfills. According to the company, approximately four to five 16 ounce plastic bottles can be made into one Perfection shirt or trouser. And an eco-responsible uniform does not require virgin polyester, so the manufacturing process expends less energy. Every pound of recycled polyester conserves the equivalent of a half-gallon of gasoline.

Puffy Stuff*puffystufftn.com*

This maker of 100 percent recyclable packaging peanuts (often called loose fill) hopes to attract an ever-larger piece of the multi-billion-dollar packaging materials market worldwide. The company's product, made predominantly of grain sorghum, is completely biodegradable – upon direct contact with water, the loose fill degrades to inert proteins that are quickly consumed by soil bacteria. Processing has removed all food value from the grain, so it won't attract pests, and it can be reused. Not only is Puffy Stuff more environmentally friendly than traditional petrochemical products, but it is also cheaper than the competitor, which is impacted by oil prices. Started in East Nashville in 2008, the company was acquired last year by Tim Edwards of Edwards Feeds Inc. and relocated to Lebanon.

S3 Surplus Management

s3sales.com

Founded by Debbie Gordon, the founder and CEO of Snappy Auctions, a marketplace for people who didn't want to or didn't know how to sell their goods on eBay, S3's surplus management services provides businesses with solutions to minimize the environmental impact of surplus/retired assets and eWaste caused by the improper or inefficient disposal of such assets. The service allows clients, which include Vanderbilt University, to reduce their environmental impact while also creating a profit center through the reuse of surplus assets. In addition, S3 provides consulting services to large organizations including hospitals and universities (which increasingly lack the resources to employ trained professionals to properly manage surplus assets) to evaluate their current systems and processes related to the disposal of surplus assets, eWaste and other equipment.

SC&A

sca-nr.com/pub

Steve Clark & Associates was founded in 1974 with a commitment to quality sustainable design. From industrial land projects to commercial developments, the land planning company works nationwide to achieve a balance between the use and management of resources. Nationally recognized projects in the field of natural site design include St. Charles Street in New Orleans, the Statue of Liberty gateway grounds and the relocation of a cypress-domed wetland in Florida. SC&A also managed the assembly of all site development guidelines for corporate sustainability leader Wal-Mart's new construction and remodels nationwide. As part of its commitment to the environment, and in celebration of its 35th anniversary, SC&A recently gave away 100,000 trees to be planted across the state of Tennessee – from shopping malls, neighborhood associations and corporate campuses to municipalities, public schools, and even state parks – to replenish the landscape. Chris Clark, president of SC&A, made the donation to honor his father, saying his father believed that the simple act of planting a tree helps foster eco-sensitivity and is something that translates into greater appreciation of our planet.

Skanska USA

skanska.com

A leading health care construction company, Skanska USA's 80-employee Nashville office is seen as an expert nationally on LEED health care construction. One member of the Nashville Skanska team recently returned from Europe after a year of studying green design. Skanska has been building green for nearly two decades and has constructed some of the landmark LEED projects in the United States. The Nashville office recently oversaw construction of the first two LEED-certified hospitals in Tennessee – Le Bonheur Children's Hospital in Memphis and Franklin Woods Community Hospital in Johnson City. (The company built the first LEED Gold hospital in the United States – Providence Newberg Hospital in Oregon.) South Central Construction magazine named the Nashville Skanska office the nation's second-largest green contractor in 2010.

SSRCx

ssrcx.com

Smith Seckman Reid, an engineering design and facility consulting firm with more than 40 years of experience with health care, institutional, sports, entertainment and municipal projects, created this independent subsidiary in 2007 exclusively to provide LEED-facilitation services. A team of LEED-accredited professionals experienced in the design, construction and operation of high-performance green buildings, SSRCx's Sustainable Solutions Group offers LEED facilitation, sustainable design, retro-commissioning, energy advocacy, facility analysis reporting, power monitoring, asset management services and facility commissioning. (SSRCx is one of the few firms nationally licensed to offer continuous commissioning, a process developed by Texas A&M that typically reduces energy costs of existing buildings by 20 percent or more.) Such services help make buildings ecologically sustainable and improve the bottom line for clients using LEED procedures. SSRCx has commissioned more than 500 buildings. Local projects include Vanderbilt University's The Commons, Belmont University Law School, the Caterpillar Financial Center and the Schermerhorn Symphony Center.

Tayst

taystrestaurant.com

Chef and owner Jeremy Barlow is putting Nashville on the map in terms of green eating. Barlow procures 70 percent to 95 percent of his ingredients from local and organic sources (more in summer, less in winter). He has retrofitted his operation to be much more sustainable (on-site composting of all food waste, replacing petroleum candles with beeswax, energy efficient lighting, low-flow faucet aerators, Energy Star dishwashing machine, occupancy sensors in areas that don't require constant light, among other examples). His actions garnered him the honor of being Nashville's first and only certified green restaurant by the Boston-based Green Restaurant Association. In 2009, he received the highest level of certification for restaurants, Three Stars. (There are just 16 restaurants nationally that have achieved this designation.)

Tennessee Technology Center at Dickson

ttcdickson.edu

TTC campuses statewide offer a wide variety of programs aimed at improving Tennessee's workforce development needs. Among the latest is a Green Sustainable Energy Training satellite campus in Dickson, located not far from the main Dickson campus, where students can now receive specialized instruction on the installation and maintenance of solar systems. The campus is installing three different solar arrays on the building this year (as well as other mock roofs on which students can train). Teaching the course is Gary Wolf, one of only a handful of photovoltaic installers in Tennessee certified by the NABCEP. The TTC-D program is operated in partnership with the nonprofit Workforce Essentials. As such, the campus is playing a smart role in preparing technicians for this field and helping Tennessee's existing and forthcoming labor force adjust to the changing economy and find a green-collar job. The American Solar Energy Society projects that there will be 1.3 million green-collar jobs available by 2030 – quite an increase over the 445,000 jobs available now.

Thomas Nelson Publishers

thomasnelson.com

Though the economic recession and difficult times in the publishing world have arguably slowed religious publisher Thomas Nelson's green push, the company is still to be commended for a number of initiatives – not the least of which is producing a greener Bible. In collaboration with Canada-based paper giant Domtar and environmental nonprofit Green Press Initiative, Thomas Nelson, the world's largest producer of Bibles, unveiled the Charles F. Stanley Life Principles Daily Bible – the first Bible to be printed on paper from forestlands certified to the standards of the Forest Stewardship Council (FSC), the global standard-setter for responsible forest management – in 2007. In 2008, the company announced plans to reduce paper consumption by at least 30 percent by 2012 (a move to lighter paper reduced consumption by 11 percent), publish all Bibles with 100 percent recyclable fibers and eliminate the use of paper containing fiber from endangered and old-growth forest acres. At the time of that announcement, CEO Michael Hyatt stated it was his company's responsibility "to protect the resources God bestowed upon us."

Tennessee Valley Authority

tva.gov

While the massive utility's commitment to energy conservation and efficiency through the years can be questioned, the power producer did recently hire nationally respected efficiency guru Bob Balzar to improve that effort. The agency's recently adopted strategic plan calls for idling old coal-burning units and increasing production of natural gas and nuclear energy in an effort to become one of the nation's leading providers of low-cost and clean energy by 2020. From a solar perspective in Tennessee, TVA is an essential cog. The agency's Generation Partners buy-back program is a key component making the solar industry in Tennessee grow. In it, TVA offers to purchase back power from home and building owners at a rate of about 21 cents per kWh. Since the agency only charges seven to nine cents per kWh, this represents an opportunity for people to get on board and have that income actually pay for their system. An unexpected recent decision to place a moratorium on the program

shocked the state's solar industry, which quickly mobilized to work with TVA on a solution. The program was reinstated but limited to projects 200 KW or less, which did eliminate large buildings but keeps the majority of projects alive. This year also represents the 10th anniversary of TVA's Green Power Switch program, wherein TVA and participating local public power companies produce electricity from renewable sources and add it to TVA's power mix.

Vanderbilt University

vanderbilt.edu

Vanderbilt built the first LEED-certified educational buildings in Tennessee – a project that included the university's new freshman housing complex, The Commons. The university also supplies much of its own energy and has numerous sustainability initiatives (under the moniker SustainVU) ranging from wide-scale recycling to a biodiesel program. More so than on the practitioner side, though, Vanderbilt has been a leader on sustainability efforts on the research side. Faculty member Michael Vandenberg, for instance, is a leading national scholar in environmental law whose research explores the relationship between formal legal regulation and informal social regulation of individual and corporate environmental behavior. His work with Vanderbilt's Climate Change Research Network focuses on the reduction of carbon emissions from the individual and household sector.

WAP Sustainability

wapsustainability.com

The concept of sustainability in business is still very much new in practice, while its idealism is much more understood. Educating CEOs, elected officials and other thought leaders on best practices is hands-down the greatest challenge to environmental progress. WAP Sustainability works with corporate, government and academic clients throughout the Southeast in creating strategic sustainability programs that are both measurable (everything WAP does gets measured) and credible, using sound science and business-savvy processes. Services include carbon management, lifecycle assessments, energy efficiency audits, employee education programs, executive education and strategic communications, among others. Co-founders William Paddock and Brad McAllister are graduates of The Institute for Sustainable Practice at Lipscomb University. Over the last 10 years, Paddock has worked with a variety of Fortune 100 companies, federal agencies, local governments and nonprofits (including The Kroger Co., Wal-Mart, M&M Mars, HCA and Merck, among others). McAllister was critical in the development and adoption of the City of Chattanooga's comprehensive Climate Action Plan while employed there.

Waste Management

wm.com

It is clear that this Texas-based trash behemoth with substantial Middle Tennessee operations is serious about meeting the sustainability needs of the communities and environments it serves. The company spends tens of millions of dollars in research and

development, and is constantly acquiring environmentally appealing technological start-ups (like Tennessee Waste, a leader in Middle Tennessee in the collection and recycling of construction debris, which WM acquired in 2008). Company innovations range from solar-powered street-side compactors to the launch of Greenopolis, an interactive Web site that enables people to learn, act and earn rewards for making a positive impact on the environment. One current local project is the creation of a multimillion dollar state-of-the-art construction and demolition recycling facility in Nashville that will be second to none in the Southeast.



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