

PARTLY SUNNY

Project List

0809

BUILDINGS

Zero Energy / RuralZED

The Zero Energy Development system combines inexpensive construction methods with state of the art materials and technologies to develop low energy and low environmental impact buildings. By ending their reliance on fossil fuels, these buildings reduce operating costs for their owners, save energy and have very low carbon footprints.

www.ruralzed.com

Renovation / Cherokee Investment Partners Home Office

Cherokee Investment Partners' corporate headquarters is a 100-year-old building in downtown Raleigh, North Carolina. At Cherokee, upgrades to the heating and cooling systems coupled with recovering the roof with well-insulated, reflective material and solar cells helped reduce energy use by 25 percent. Through careful planning approximately 86 percent of construction and demolition waste was diverted from the landfill.

www.cherokeefund.com

Prefab / RISD Solar Decathlon

In 2005, Rhode Island School of Design entered a prefabricated house into the United States Solar Decathlon. The Decathlon is sponsored by the US Department of Energy to spur research in the design and fabrication of energy efficient buildings. RISD's 800-square-foot solar home reimagines two features of prefabrication—the service core and the pre constructed skin—to maximize the building's energy performance.

solar.risd.edu

Green Roofs / Smart Roofs LLC

Vegetated roofs benefit the building owner and local community alike. In New York City, Sustainable South Bronx runs a green roof design, installation, maintenance company and a policy department that helps drive demand for these services. The non-profit uses green roofs to alleviate the impact of intensive power plant and diesel emissions in the neighborhood.

www.ssbx.org

Systems Integration / Bank of America

Slated for completion in 2009, The Bank of America Tower at One Bryant Park in New York City will be one of the greenest office buildings ever built. The 55-story tower is designed to produce 70 percent of its energy needs, reduce its water use by 50 percent compared to a conventional building and cool itself with ice produced at night when electricity is less expensive. These efficiencies are the result of the careful integration of the technical systems throughout the building.

www.durst.org

Super Insulation / Rocky Mountain Institute

The Rocky Mountain Institute (RMI) in Aspen, Colorado keeps its inhabitants comfortable, even at extreme temperatures, with 16-inch walls. These walls allow the building to heat itself largely through passive solar gain from a central greenhouse that serves as the main “furnace.” Two wood stoves are used for backup heating in especially cold or cloudy weather.

www.rmi.org

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ENERGY

Carbon Markets / San Francisco

Through the newly established Carbon Fund, the city of San Francisco is managing carbon offset purchases within the city itself. Rather than funding remote projects, offset payments will be invested directly in local renewable energy projects, such as solar installations and a biodiesel conversion program.

www.sfgov.org/site/mayor_index.asp?id=72509

Cogeneration / TGE Cogen Facility

In 2002, Michael Singer was approached by Trans Gas Energy to work on an early stage design for a new cogeneration facility. Singer's team explored how the new power plant could support the local community. It is designed to direct excess heat from the natural gas-fired generators and use it to warm public greenhouses, community spaces and administrative services in the building.

www.michaelsinger.com

Cooperative Utilities / Benny Farm

Green Energy Benny Farm was created as a non-profit, community-run utility company that will oversee the water, energy and waste systems. Investment in green infrastructure will ultimately decrease the heating and cooling expenses for the residents at Benny Farm.

www.bennyfarm.org

Kinetic Energy / Sustainable Dance Club

The Sustainable Dance Club in Rotterdam converts dancing into kilowatts. Activated by a grid of piezoelectric crystals, the nightclub's dance floor serves as a giant generator. On a more serious note, the National Japanese Railway Ministry is exploring similar technologies for use on commuter train platforms.

www.sustainabledanceclub.com

Offshore Wind Power / Galveston Array

Offshore wind turbines are typically installed with deep footings driven into the ocean floor. Power is collected from the windfarm and brought back to shore via undersea power lines that connect to the regional power grid. Up and down the eastern seaboard sites for offshore wind farms are under consideration. One of the more unconventional projects is being built near Galveston. Beginning in 2010, The Galveston Offshore project will make use of decommissioned oil platforms in the Gulf of Mexico by retrofitting them with windturbines and run powerlines through existing undersea pipelines.

www.windenergypartners.biz

Turnkey Services / SunEdison

SunEdison is the largest solar energy provider in North America, providing turnkey services for the installation and maintenance of photovoltaic panels on commercial, governmental, institutional and utility properties. SunEdison leases space from the property owner and installs and maintains solar panels there. It then sells the power their panels generate back to the property owner at below market rates in exchange for federal tax credits.

www.sunedison.com

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FOOD

Distribution Systems / Beeline

Beeline's system streamlines distribution and provides small farmers with greater access to the marketplaces that keep them in business.

aylanto.com

Production Facilities / The Farmers Diner

The Farmers Diner business model pays small farmers more than they would normally receive for their goods. By sourcing food locally it creates a real demand for more local organic farming operations while reducing the overall carbon footprint of the meals it produces.

www.farmersdiner.com

Urban Agriculture / Chicago Farm

In addition to growing fresh food, The Chicago Resource Center operates City Farm to create jobs. Ken Dunn, founder of the Center, notes, "We found that by planning and planting carefully, you can create a job for an individual on about 10,000 square feet, or about four lots." In Chicago, that could mean 20,000 jobs to revitalize and farm 80,000 vacant lots across the city.

www.resourcecenterchicago.org/70thfarm.html

Institutional Partnerships / Farm to School

Farm to School is a successful nationwide program that connects schools with nearby farmers to serve healthy meals in school cafeterias, educate students about nutrition, and support local growers.

www.farmtoschool.org

Community Gardens / Growing Gardens

Growing Gardens defines itself as a human services and youth development organization that uses sustainable gardening practices to assist immigrants, seniors, at-risk youth, people with disabilities and families.

www.growinggardens.org

LAND

Street Trees / Providence Ordinance

Providence's Landscape and Tree Preservation Ordinance requires property owners who receive a building permit to increase the amount of tree coverage on their property to 25 percent. According to the city, the ordinance will yield 40,000 new trees in Providence by 2020. "These trees provide \$2.9 million in benefits annually, a terrific investment of city resources towards community health and well-being."

forestry.providenceri.com/forestry/tree_planting.php

Reforestation / Gaviotas

The sensible and sustainable management of natural resources provides a living wage and supports local ecosystems. Las Gaviotas is now a self-sustaining program that provides 200 full-time jobs and part-time work for about 3,000 people.

www.friendsofgaviotas.org

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Shared Space / Exhibition Road

Exhibition Road, home to some of London's finest museums, is being redesigned, removing sidewalks and changing paving patterns – to create an open space that encourages pedestrian traffic between the museums. The redesign of city streets promises environmental benefits as well. Replacing tarmac with cobbles or other pavers decreases stormwater runoff and better supports street trees. The shared space approach suggests new ways to repurpose our city and suburban streets, reclaiming public space and creating new opportunities for greening cities. www.exhibitionroad.com

Adaptation / Soldier's Grove

The relocation of Soldiers Grove's town center has benefited the village immensely. It has helped local businesses grow and prosper, while the solar buildings have kept operating costs low. When the Kickapoo River flooded at record levels in 2007, the town was virtually unscathed. Soldiers Grove is an important model of how communities may be more proactive as they face the challenges of climate change. www.soldiersgrove.com

Rethinking the Lawn / Edible Estates

Edible Estates is an ongoing arts project by Fritz Haeg that replaces front lawns with productive food gardens. Edible Estate gardens can be very productive. The increased biodiversity of multi-crop planting enriches the soil and attracts beneficial insects. In addition to the ecological impacts, one California couple says their new front yard garden supplies about 40 percent of the food they eat. www.edibleestates.org

Urban Redevelopment / Stapleton Airport

Stapleton is a compact urban development. By preserving open space, the development provides a high quality of life for residents by blending the convenience, diversity and sophistication of city life with the open space, safety and community of suburban living. In addition, this form of development encourages the use of public transit and limits the need for private cars. www.stapletondenver.com

MOBILITY

Light Rail / Denver

The light rail trains in Denver have reduced urban sprawl by making areas surrounding rail stations more desirable places to live. These areas have seen greater density in development, maximizing land usage and promoting the revitalization of communities that have been in decline. www.rtd-denver.com/LightRail

Congestion Pricing / London

Since the congestion pricing began in 2003, traffic flow in London's City center has improved with a 21 percent reduction of vehicles entering the zone. CO₂ emissions have been reduced by more than 15 percent. Contrary to what detractors predicted, the retail and theater sectors have actually experienced above-average growth. www.tfl.gov.uk

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Car & Ride Sharing / Goloco

Ride sharing programs like GoLoco make efficient use of cars without hindering the user's ability to get around. Founder Robin Chase says that members are creating their own "personal public transportation networks." Sharing makes more efficient use of the individual vehicles, reduces the total number of cars on the road, decreases polluting emissions and cuts demand for parking in congested urban centers.

www.goloco.org

Bike Sharing / Paris Velib

The Vélib' bike sharing program in Paris was inaugurated in July 2007. The program has 20,600 bikes stationed at 1,451 locations throughout Paris. Vélib' provides revenue for the City and transportation for the public. In addition, the mayor of Paris predicts that a more physically active citizenry will lower overall health care costs. The administration of the bike program also generates 400 jobs.

www.velib.paris.fr

Bus Rapid Transit / Curitiba

Curitiba, Brazil is home to one of the most successful and best-known BRT systems in the world. Curitiba's system is defined by three important design innovations that speed travel. First, riders prepay for tickets as they would on a subway. Second, they wait on a platform that is at the same level as the bus, expediting loading and unloading. Finally, buses travel in dedicated lanes.

www.jaimelerner.com

PlugIn Hybrid Cars / RechargeIT

In partnership with the California utility company Pacific Gas & Electric, Google is also testing vehicle-to-grid (V2G) technologies that permit the utility to draw electricity from the car. Cars equipped with V2G technologies could function as battery storage to stabilize the grid during periods of peak demand or to power homes in the event of a blackout.

www.google.org/recharge

WATER

Xeriscaping / Demonstration Garden

The first Xeriscape demonstration landscape was constructed in 1983 by Denver Water. These demonstration gardens cover a quarter-acre and feature six turf types and 90 species of plants. Different plant regions are zoned and equipped with water meters. The demonstration garden at Denver Water offers an alternative to the standard American turf lawn.

www.denverwater.org/cons_xeriscape/xeriscape/xeriscape_index.html

Wastewater / Denver Water Recycling Plant

Along the South Platte River, the Denver Water Recycling Plant is projected to draw 9,100 acre-feet of water from a neighboring sewage treatment facility this year.

When working at full capacity the plant will augment Denver's water supply by cleaning 17,000 acre feet of "used" water that can be used for cooling power plants, irrigation and filling lakes. This will save millions of gallons of fresh water for drinking.

www.denverwater.org/recycle/project_overview.html

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Stormwater Management / Portland Green Streets

The Green Streets program in Portland, Oregon is a city-wide initiative to promote and implement swales and planters that manage stormwater at the source. The runoff is captured and allowed to pool where soil and plants can filter it. Portland has monitored and tested Green Street facilities and concluded that they can cut peak stormwater flows into the municipal sewer system by an average 85 %, helping to reduce the need for costly sewer upgrades and investments.

portlandgreenstreets.org

Constructed Wetlands / Herman Miller

Wetlands are natural biofilters, removing sediments and pollutants from water. Constructed wetlands are modeled after natural wetlands to process sewage, waste water, or stormwater. The Herman Miller manufacturing facility in Cherokee County, Georgia, is located on a 70-acre site surrounded by a fragile creek ecosystem. To protect the creek, Michael Van Valkenburgh Associates constructed a wetland to collect runoff and filter the water before gradually releasing clean water into the surrounding natural system.

www.mvvainc.com/index.php?/0/10/40/#/PROJECTS/10/40/

Greywater Reuse / Greywater Guerillas

The “drumless laundry” is a low-cost and low-tech system for a single-family home. A three-way valve is added to the washing machine outflow pipe allowing the owner to divert grey water for outdoor irrigation. The owner uses a laundry detergent that degrades into plant nutrients for the almond tree, kiwi vine and raspberry patch that the system feeds.

www.greywaterguerillas.com