

Models for Green Job and Renewable Energy Reuse of Brownfield Sites

[Redevelopment Economics](#) is teaming with [CWS Group](#) and [Sustainable Strategies 2050](#) to provide a “green jobs cluster analysis” for the [Allegheny River Towns Enterprise Zone](#). As background the group put together a summary of strategies and projects that demonstrate green job and renewable energy reuse of brownfields.

Strategies

Arizona Strategy to Create Renewable Energy on Brownfields. The Arizona Bureau of Land Management’s (BLM) [Restoration Design Energy Project](#) was cited in a [Wilderness Society white paper](#) as a model for accommodating renewable energy on brownfields. BLM plans to analyze 42 sites totaling 26,000 acres, including landfills, abandoned mine lands, gravel pits, hazardous material sites, former airfields, trash dumps, and other isolated BLM lands in urban areas.

Los Angeles – Brownfields Site Targeted for “Clean Tech Corridor” - The City of Los Angeles has adopted an economic development strategy around attracting Clean Tech businesses.¹ The geographic cornerstone of the strategy is a brownfield, the 20-acre Centre Site near downtown. The area is targeted toward businesses that are engaged in “the assembly, manufacture or development of products in clean energy generation, sustainable building materials and furnishings, clean water technology, reduced emissions vehicle technology, and manufactured products using recycled or organic materials.”

Los Angeles also established two green job incentive funds: a \$15 million port-related Technology Advancement Program (TAP); a \$46 million set aside of the Los Angeles City Employees’ Retirement System. The TAP was instrumental in landing the manufacturing operation of the nation’s first heavy-duty, all-electric truck manufacturer, Balqon.

Kansas City Concentrates Resources on Green Zone – Kansas City is concentrating job training, human resource services, and business incentives in an effort to attract green businesses to a 150-acre underserved area of the city, dubbed the Kansas City Green Zone.²

¹ See: <http://mayor.lacity.org/Issues/CleanTech/index.htm> and <http://www.socialgreenrealestateblog.com/?p=642>

² See: <http://www.greenimpactzone.org/About/index.aspx>

Individual Sites

Keystone Industrial Port Complex in Fairless Hills, Pa – This former steel mill is being successfully redeveloped with a green jobs theme. The former U.S. Steel Fairless Works has attracted start-up solar material manufacturer AE Polysilicon Corporation, Spanish wind energy corporation Gamesa Wind US LLC, and Bard Biofuel, a 60 Mgy soybean-based biodiesel plant.³ The 2,400-acre industrial park also features landfills being converted to energy assets - Waste Management Corp. is capturing gases from landfills on the site to generate electricity, and Exelon is capped landfills for solar panel fields that also create electricity for the industrial park and beyond. A \$10 million state-local financing package of tax breaks, grants, and loans helped secure the Gamesca plant.

Detroit – Green Jobs Center Planned as Re-use of Ford Plant - A \$725 million proposed redevelopment of a closed Ford plant could create the country's largest renewable energy park, with at least 2,800 workers building storage batteries, solar panels and wind turbines. The redevelopment, proposed by Xtreme Power (Kyle, Texas) and Clairvoyant Energy (Santa Barbara), is dependent on winning a series of loans and tax incentives.⁴ Xtreme could hire 2,500 workers between late 2011 and 2014, with the potential to create another 10,000 supplier-related jobs -- 1,500 at or near the plant. Clairvoyant could hire 300 employees. The Michigan legislature approved \$100 million in tax breaks to lure the investment.⁵

Large-scale Composting – Reuse of Former Steel Mill. According to the Delta Institute website, “Chicago Composts LLC is a new venture formed by a Chicago restaurant group and Delaware-based The Peninsula Compost Group, LLC to do large-scale commercial composting from food and landscape waste. The venture is in negotiations to lease approximately 40 acres of vacant former steel mill property on Chicago’s far Southeast Side to accomplish future growth. The project would utilize patented GORE™ Cover System technology and will require approximately \$25 million in capital investment. When fully operational, the facility is expected to create 15 to 20 full time permanent jobs and process 200,000 tons of compost annually.”⁶

Philadelphia, Naval Shipyards solar - A 1.5 MW solar energy facility is being constructed on a 7-acre former landfill. Privately financed through a manufacturer-utility partnership, facility contributes to Pennsylvania’s renewable portfolio standard requirement that solar power make up 0.5% of the state’s energy consumption by 2020. The largest urban solar facility in the U.S., facility will generate energy to power 1,800 homes, create approximately 50 construction and 10 permanent jobs.⁷

³ See: <http://www.paramuspost.com/article.php/20081119151706643> and http://www.epa.gov/renewableenergyland/docs/success_keystone_pa.pdf

⁴ http://www.nytimes.com/aponline/2009/08/26/business/AP-US-Energy-Park-Michigan.html?_r=1&emc=eta1

⁵ http://www.mlive.com/business/detroit/index.ssf/2009/09/house_approves_100_million_in.html

⁶ See: <http://www.delta-institute.org/greeneconomy/>

⁷ See: http://www.epa.gov/renewableenergyland/docs/success_navyyard_pa.pdf

Jasper County, Iowa, X-Maytag plant reuse for Wind Turbine Tower Manufacturing – A 300,000 square foot X-Maytag manufacturing facility is being re-used by Trinity Structural Towers to produce steel and concrete wind turbine towers. The facility opened in February 2009, and is employing 140 persons.⁸ A City and state tax incentives package of \$6 million to encourage development of the TPI facility, in return for the creation of 500 manufacturing jobs by 2010. Trinity Towers received a \$580,000 grant from the state of Iowa to assist in retrofitting the Maytag plant, in addition to local and state tax incentives.

Milwaukee – Movable Solar Training Facility as an Interim Brownfields Reuse - Milwaukee Area Technical College and Johnson Controls Inc. will build the Wisconsin's largest solar power project, a \$6.9 million “solar education farm” that will help train technicians in the renewable energy field. The innovative project will initially locate on a landfill site, but will also be designed to be move to urban brownfield sites in the city and provide a productive interim use of properties that will later be redeveloped.⁹

Clean Coal Plant Proposed in Louisville. White Energy Technology Riverport LLC is planning a \$48.5 million alternative-fuel facility in Louisville, Kentucky. White Energy holds the patent for white coal technology, a patented process that “dehydrates lower grade coals to produce coal that burns more efficiently and with lower carbon and pollutant emissions than traditional forms of coal.” IDB tax exempt financing has been authorized by the Kentucky Economic Development Finance Authority.¹⁰

Small-Scale Moveable Wind Farm. Delta Institute in Chicago is working with Windy City Power LLC which has developed “a new technology that will provide a temporary sustainable productive use on undeveloped brownfields while simultaneously providing community based renewable energy.” Windy City has developed a wind turbine that can be “placed on land in such a way that the turbine installation is “portable” and does not require any significant excavation or disturbance to the land.”¹¹

⁸ See: http://www.epa.gov/renewableenergyland/docs/success_maytag_ia.pdf

⁹ See: <http://www.jsonline.com/business/63009642.html>

¹⁰ See: http://louisville.bizjournals.com/louisville/stories/2009/12/14/story15.html?b=1260766800^2580431&ana=e_vert

¹¹ See: http://www.delta-institute.org/greeneconomy/files/Case_Study_Sustainable_Reuse_of_Brownfield_Site_for_Small-Scale_Moveable_Wind_Farm.pdf