

# The Greening Economy

By Jackie Tsou

In municipalities across the country, an unusual phenomenon is gaining momentum. It is the merger of two ideas traditionally believed to be opposites of each other—economic development and environmental protection—to create strategies for “green economic development,” or “sustainable development.” The creation of a “sustainable economy” is an attempt to find effective solutions to our country’s dependency on fossil fuels, while simultaneously boosting local economies through job creation. Now investors and policy-makers everywhere are pleasantly surprised to discover that green economic development promotes both, environmental protection and production performance.

## Green Economic Development

There is no universally agreed upon definition of green economic development, but the concept usually encompasses the three tenets of sustainability—environment, economy, and equity—viewed within a continuum, whereby meeting the needs of the present does not compromise the ability of future generations to meet their own needs.<sup>1</sup> In other words, green economic development integrates economic development—tax base expansion, wealth creation, and job creation—with the values of sustainability.

The City of Toronto, Canada, states that, “green economic activity promotes healthy environments, vital economies, and social equity.”<sup>2</sup> A healthy environment is brought about by lowering greenhouse gas emissions through a reduction in resource input and waste output; a vital economy increases a city’s global competitive advantage; and social equity provides a healthy working environment, preserves and creates gainful jobs, and plans for a community’s future quality of life.

Implicit here is the idea that financial profitability and social and ecological responsibility are mutually reinforcing goals.<sup>3</sup> An idea whose credibility is borne out by research that shows greater cost efficiencies and better performance in green economies.

Green economic development, as practiced across the U.S., may include: green building (the use of energy efficient technologies and recycled materials in construction); green procurement (purchasing supplies and equipment made from recycled or renewable resources); and waste reduction (devising means to recycle output streams). The Green Guide to Healthcare, for example, purports to be a toolkit for “integrating enhanced environmental and health principles and practices into the planning, design, construction, operations and maintenance of [medical] facilities.”<sup>4</sup>

Policy-makers have also been looking at clean technology to develop a greener, “high performance” economy. In a 2004 report by Clean Edge produced in partnership with San Francisco’s Department of the Environment, clean technology is described as “an emerging sector that comprises a diverse range of products, services, and processes that harnesses renewable materials and energy sources, dramatically reduces the use of natural resources, and cuts or eliminates pollution and toxic wastes.”<sup>5</sup> It includes, but is not limited to, solar photo voltaics (PV), wind power, hybrid electric vehicles, fuel cells, bio-based materials, and advanced water filtration. The report outlines a 10-step plan for attracting new jobs and

businesses into San Francisco while concurrently reducing its resource dependency.

### The Economic and Policy Outlook

In recent years, investment in clean technology industries has increased dramatically at the national and global levels, proving that environmental reasons apart, “going green” is also a sound economic strategy.

Last year, State Treasurer Phil Angelides, announced his commitment to California’s environmental future with his Green Waves Initiative, a robust pension-backed investment program, which would channel approximately \$500 million dollars into the green technology sector. A 2004 study co-authored by the Natural Resources Defense Council (NRDC) and Environmental Entrepreneurs (E2), shows 29 percent (\$339 million) of the North American venture capital investment in new “clean” technologies occurring in California, and projects the creation of up to 114,000 jobs in “cleantech” start-ups in the next five years.

Recent research by the Renewable Energy Policy Project also forecasts that the state is especially poised to benefit from the expected growth in renewable energy industries. In the PV industry alone, California could gain approximately 6,800 jobs in manufacturing and 3,500 jobs in construction and installation of PV components.<sup>6</sup> Similarly in the wind turbine industry, California could add nearly 13,000 new manufacturing jobs, totaling over \$4.2 billion in investments.<sup>7</sup> Furthermore, even firms that do not currently work within these industries could incorporate PV and wind turbine development in future production, thus benefiting from these

renewable, clean tech industries.

Last January, the California Public Utilities Commission, passed a \$2.9 billion California Solar Initiative to create incentives for commercial and residential customers to install 3,000 megawatts of solar energy before 2017. As state and local policies like these begin to prioritize clean technologies, the demand for them will go farther and deeper and encourage greater participation in green economic development.

### Evaluating the Current Definition

As green economic development gains legitimacy and momentum in the public and private sectors, it is important to assess its criteria for success and identify the true beneficiaries of green policies and practices, before the current mode of operation becomes the norm. Specifically, to what extent are low-income, and communities of color benefiting from green economic development? Do the policies explicitly include marginalized populations?

As currently defined, green development aims for the three goals of traditional economic development—generate revenue, create wealth, create jobs—with the additional goals of social equity and a healthy environment. However, even the City of Toronto’s definition of social equity falls short of talking about it in individual, human terms.

### Some Recommendations With a Clean Edge

The 2004 Clean Edge report for San Francisco prioritizes the creation of a vision for a clean tech future, communicated and implemented by a clean-tech manager. It emphasizes the importance of marketing San Francisco as a “ready and willing” place for clean tech industries and of creating partnerships with and providing financial incentives to business. All steps

### Minneapolis: 20 “clean” megawatts, 220 possible jobs

In Minneapolis, Minnesota, the Green Institute, a non-profit organization, is leading the city towards developing community-based clean energy, thus addressing both, the supply and demand sides of the energy equation. Specifically, the Community Energy Program generates solar and biomass heat and power (supply) while concurrently promoting conservation and energy-efficiency (demand).

The Green Institute’s Phillips Biomass Community Energy Project is employing biomass technology to achieve sustainable energy production for Minneapolis residents. The Project will use urban tree trimmings and agricultural residues to generate 20 megawatts of energy and heat—approximately one percent of the energy demand in Minneapolis. (One megawatt would supply enough energy for 1,000 homes.) The electricity will be sold to the electric grid, and the heat will be used for a Phillips-area community heating system.

Most importantly, it is estimated that the Phillips Biomass Project will create 20 long-term, full-time jobs, half of which are likely to be filled by personnel trained at an existing apprenticeship program with a partnering community college. Additionally, nearly 200 construction jobs and other indirect jobs for wood waste generators, farmers, and those in the transport sector are forecasted. As evidence to its commitment to local economic development, the Green Institute also pledges to hire locally and pay its employees a living wage—a minimum of over \$15/hour).

Critical to the Green Institute’s success has been its ongoing partnership with city and county governments. Recognizing early the ways in which the Green Institute’s work supports their goals of reducing waste and diverting storm water into productive uses, Hennepin County provided financial support to the organization, while the city of Minneapolis granted a variance to an existing building code.



Photo: Green Roof at the Phillips Eco-Enterprise Center Minneapolis, MN.

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### Richmond Turns Green with Economic Possibilities

In the early 1940s, Richmond, California, was one of the most productive ship building centers of the nation. More recently, a lack of employment opportunities, diminishing affordable housing stock, and a high crime rate experienced by segments of the city's population have seriously impacted the entire city. Realizing that innovative approaches are needed to address these problems, the city looked to green economic development for a way to concurrently revitalize its economy and clean up its environment.

In November 2003, a collaborative made up of Urban Habitat, Contra Costa Faith Works, and the Richmond Improvement Association, among others, began to look at economic development issues as one component of a larger equitable development initiative. Two years later, the city was presented with a unique opportunity to take advantage of the Green Waves Initiative, an investment program offered by the California State Treasurer's Office, for industries in the emerging green technology sector.

Today, as Richmond approaches a new wave of development, it is faced with a truly unique opportunity to employ equitable green policies that can address the deep-rooted social ills that have impeded the city's economic growth. And some recent government-led actions seem to signal that Richmond is on its way to becoming a greener city.

In October 2005, Mayor Irma Anderson joined 187 mayors, representing nearly 40 million Americans, to sign the U.S. Mayors Climate Protection Agreement, which seeks to meet or surpass the Kyoto Protocol in local municipalities through various strategies. More recently, city council members have initiated efforts to adopt a green building ordinance that the Richmond Planning Department is charged with spearheading.

In February 2006, Richmond crafted a resolution (No.11-06) in collaboration with Urban Habitat, formally establishing the position that "economic opportunity, environmental integrity and societal equity are the foundation upon which sustainable



tech industries and of creating partnerships with and providing financial incentives to business. All steps clearly useful in establishing a warm climate for launching a greener economy but obviously biased towards business rather than the community. The plan provides no assurance that job creation for residents with varied backgrounds is a key aspect of green economic development.

In recent years, attracting biotechnology firms has been a popular economic development strategy. Small and large cities alike have developed incentives for biotechnology firms to locate in their jurisdictions. Biotech jobs, however, tend to be in research and development, requiring levels of education that are bound to exclude the lower income segments of the population. Such mismatches between job opportunities and the skills of the local workforce will force residents to either travel out of the city for appropri-

ate jobs or stay and work at low-paying jobs with no career prospects.

What sets green industries apart from biotechnology and software industries, is that they present an unique opportunity to develop a range of well-paying skilled jobs locally. In addition to manufacturing wind turbines, for example, there are installation, maintenance, and operation jobs to be had. However, cities have to proactively encourage the development of jobs across all skill sets, in order to achieve equitable outcomes for residents.

Embedded within the concept of equitable outcomes in green economic development, is the process by which such outcomes are achieved and decisions made. Full and fair participation by affected communities should be incorporated into the crafting of workforce development programs that meet the needs of all stakeholders. This is especially important

cities can build a better quality of life for its residents.” The resolution detailed the elements of a sustainable community as:

**Ecological Integrity:** including satisfying basic human needs, such as clean air and water; protecting ecosystems and biodiversity; pollution prevention strategies.

**Economic Security:** including local reinvestment; meaningful employment opportunities; local business ownership; job training and education.

**Empowerment and Responsibility:** including respect and tolerance for diverse views and values; a viable non-government sector; equal opportunity to participate in decision-making; access to government.

**Social Well-Being:** including a reliable local food supply; quality health housing, and educational services; creative expression through the arts; safety from crime and aggression; respect for public spaces and historic resources

Currently, Richmond is home to a number of businesses and services, which promote green practices. MBA Polymers, Inc., a plastics recycling company, won the World Economic Forum’s 2006 Technology Pioneers Award for its innovative recycling process, which can produce plastics with 95% less energy than required when using petrochemicals. CytoCulture International, Inc., an environmental biotechnology firm, specializes in bioremediation services, as well as bio fuels manufacturing. The West Contra Costa Landfill is also employing a methane conversion process to reduce greenhouse gas emissions. Clearly, these businesses have realized the benefits of locating in Richmond—abundant industrial land, a strong Bay Area market, and access to transportation infrastructure. A coordinated effort to market Richmond as a green business-friendly city would undoubtedly encourage many other businesses.



as green economic development matures, otherwise the success of the strategy will be compromised.

In summary, any definition of green economic development should include a commitment to social equity and make explicit its beneficiaries. To achieve the goals of equitable green economic development, policies should create incentives that not only attract new business but also create new jobs that are accessible to and evenly distributed among city residents with different skill sets. In short, green economic development should ensure that “individuals and families in all communities can participate in and benefit from economic growth and activity”<sup>8</sup> and have access to quality jobs.”

## Endnotes

- 1 World Commission on Environment and Development (WCED). Our common future.
- 2 City of Toronto, Canada. *The Green Economy Plan*.
- 3 Lippe, Pamela and Nixon, James. “Building the Sustainable Economy!” quoted in: <http://www.ci.austin.tx.us/sustainable/workplan.pdf>
- 4 *Green Guide for Health Care*. <http://www.gghc.org/about.cfm>
- 5 Pernick, Ron, Joel Makower, and Arthur de Cordova. “*Harnessing San Francisco’s Clean-tech Future, A Plan for Attracting Businesses and Creating Jobs.*”
- 6 These figures are based on the PV Industry Roadmap, which balances likely trends with industry objectives. California is projected to have installed 9,600 MW of PV energy by 2015 from its current capacity of 340 MW.
- 7 Job and investment figures assumes development of 50,000 MW of wind energy.
- 8 Policy Link. *Equitable Development*. <http://policylink.org/equitableddevelopment/>

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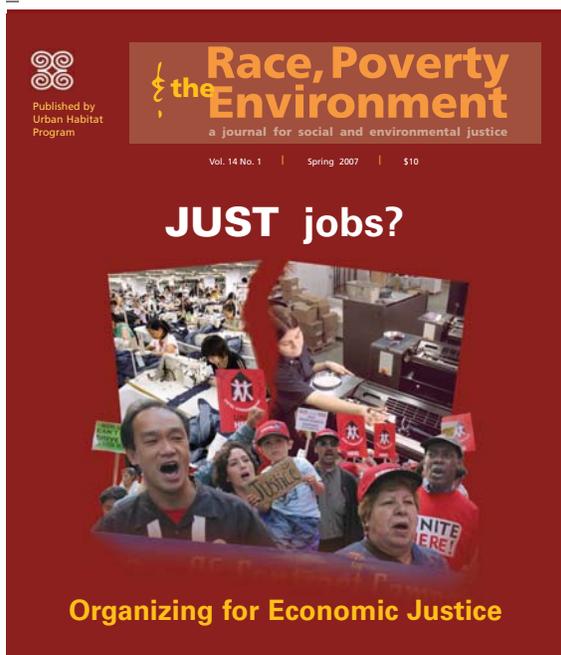
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