

Green Is Gold: A Strategy for Developing the Richmond Green Economy – Executive Summary



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Why a Green Economic Development Strategy for Richmond?

With the US and global economy struggling to emerge from the worst recession since the Great Depression, green industries are some of the brightest stars in a very dark night. Renewable energy, energy efficiency and many other green sectors have continued to grow as the general economy has stagnated. With the increasing cost of extracting fossil fuels, the implementation of new environmental policies including a possible price on carbon at the State and Federal levels, and a growing cohort of environmentally conscious consumers, these sectors are projected to continue to add jobs at a high rate. Under these circumstances, as with most economic development strategies, a green economic development strategy is a chance to grab a piece of a growing pie. However, beyond the growing pie, there are several reasons why Richmond in particular should be interested in such a strategy.

As this report will show, Richmond has strengths that make it a good place for green industries to thrive. The city encompasses a wide variety of competitively priced space that meets the needs of green businesses. Richmond's location between the East and North Bay attracts green businesses that want access to both regions. The city's port, rail and highway infrastructure provides valuable benefits for goods movement and commuting. Existing industries and businesses support each other and new green industries. Lastly, Richmond's internationally renowned green workforce development programs provide a local skilled workforce for green businesses.

Green economic development should also serve many of Richmond's particular needs. Green industries appear to offer quality jobs that are accessible to the neediest Richmond residents who often have barriers to employment. Green industries will help Richmond diversify its tax and employment base away from its current dependence on carbon intensive industries. As green industries replace dirty industries, Richmond will be able to remedy some of its history of local pollution and poor environmental health. Aggressively promoting a green economy in Richmond can also help generate positive publicity for the city and give balance to and start to improve what currently are one-dimensional, negative perceptions based on high crime rates.

Richmond is also pursuing this strategy because Richmond residents, City staff and community leaders care deeply about preventing catastrophic climate change. The City of Richmond is already implementing local environmental policies that will reduce local pollution and the city's carbon footprint. These policies will also generate new work and require old work to be done in new ways. By incorporating these policies into a larger green economic development strategy, Richmond can capture much of the job generation and revenue created by these policies for its own residents. Richmond can help encourage other communities to do their part on climate change by becoming a successful model for minimizing local costs and maximizing local economic benefits of carbon reduction and other environmental improvements.

This report charts a course of implementation to create a new, green economy in Richmond that will achieve these goals. Chapter 1 conducts location quotient and shift share analysis for both specific green industries and the broader local economy. It also lays out the functional definition of green businesses for the purposes of this report. Chapter 2 takes information from business and other interviews, the literature review and data analysis to present a strengths, weaknesses, opportunities and threats (or SWOT) analysis. Chapter 3 looks at particular trends with certain green sectors and certain neighborhoods within Richmond. Chapter 4 presents the 13 case studies developed by the City.

Chapter 5 uses the information from the previous chapters and an understanding of current City projects to present a green economic development strategy and recommend steps for implementation.

Richmond Industries and Trends

Richmond jobs have weathered the recession better than the California average, with local employment remaining essentially the same, while statewide employment fell by 8 percent. The fastest growth in employment was in the construction sector (29 percent), led by solar installation-related job growth mostly from the arrival of solar company SunPower. Despite this green job growth, by far the highest concentration of employment in Richmond, relative to the State, remained in the Oil and Gas industry.

In 2010, Richmond had 1,837 green jobs including:

- **683 jobs in renewable energy (581 in solar)**
- **418 in transportation services**
- **251 in recycling**
- **236 in environmental services and remediation**
- **220 in green building materials, construction and landscaping**

Combined, these sectors encompass this report’s definition of green business. While these categories are by no means meant to be exhaustive or definitive, they were chosen because they provide a useful framework for identifying green economic development opportunities given the existing local economy. Because this definition is based on particular sectors, not all of the businesses included as “green” have the most environmentally responsible operations. Furthermore, some of these green businesses, in addition to their green products and/or services, also produce very polluting products and services. Conversely, some Richmond businesses that work hard to green their operations are not considered green by this report because they do not produce green products and services.

The Center for Community Innovation puts Richmond in a regional context with green employment data for the East Bay. Richmond figures differ due to older data and different sector definitions.

Green Jobs in East Bay Cities, 2008

| | Energy Research | Env Srvcs | Green Building | Green Mfg | Green Transport | Recycling & Remediation | Emp Total | Business Total |
|--------------------|----------------------------|----------------------|---------------------------|----------------------|----------------------------|--|----------------------|---------------------------|
| Alameda | 33 | 85 | 12 | 28 | 22 | 11 | 191 | 65 |
| Albany | | 17 | 34 | 2 | 13 | 33 | 99 | 31 |
| Berkeley | 5,052 | 437 | 367 | 142 | 24 | 59 | 6,081 | 206 |
| El Cerrito | | 20 | 1 | | 5 | 18 | 44 | 33 |
| Emeryville | 1 | 365 | 15 | | 1 | 15 | 397 | 36 |
| Oakland | 100 | 608 | 2,254 | 31 | 1,608 | 865 | 5,466 | 309 |
| Richmond | 17 | 124 | | 81 | 520 | 589 | 1,356 | 69 |
| San Leandro | | 48 | 27 | 91 | 247 | 580 | 993 | 89 |
| Total | 5,203 | 1,704 | 2,710 | 375 | 2,440 | 2,170 | 14,627 | 838 |
| Richmond % | 0% | 7% | 0% | 22% | 21% | 27% | 9% | 8% |

Source: Dun & Bradstreet, National Establishments Timeseries Dataset, 2008.

Unfortunately, a better than average performance by Richmond businesses does not necessarily translate into better employment levels for Richmond residents. As of 2008, only about 14 percent of Richmond jobs were held by Richmond residents.

Generally low educational attainment also prevents Richmond residents from taking advantage of Richmond's improving business climate. Richmond residents with no high school diploma and Richmond residents with less than a 9th grade education make up a considerably larger percentage of the city population than the Bay Area or national average.

Education Attainment, 2008

| | <u>Richmond</u> | <u>Bay Area</u> | <u>United States</u> |
|--|-----------------|-----------------|----------------------|
| Less than 9th grade | 12% | 8% | 6% |
| 9th to 12th grade, no diploma | 8% | 6% | 9% |
| High school graduate | 22% | 18% | 30% |
| Some college, no degree | 24% | 20% | 20% |
| Associate's degree | 7% | 7% | 7% |
| Bachelor's degree | 17% | 25% | 17% |
| Graduate or professional degree | 10% | 17% | 10% |

Source: American Community Survey, US Census, 2008.

Note: Bay Area includes San Jose-San Francisco-Oakland CSA

Margin of error not included

These disparities indicate that workforce development, training residents for local jobs, must be an integral part of any successful economic development strategy in Richmond.

Location Analysis

Comments from Richmond green businesses made very clear that to talk about the green economy in Richmond is often to talk about several different economies. The Richmond green economy looks very different in different parts of the city. Employment is highly concentrated in the neighborhoods south of I-580, with 1,218 jobs out of an estimated 1,837 total Richmond green jobs. For specific neighborhoods:

- **743 jobs are located in Marina Bay**
- **452 jobs fall along the Richmond Parkway**
- **259 jobs lie near the Port of Richmond**
- **183 jobs are in Point Richmond**
- **The 200 remaining jobs are scattered throughout the city**

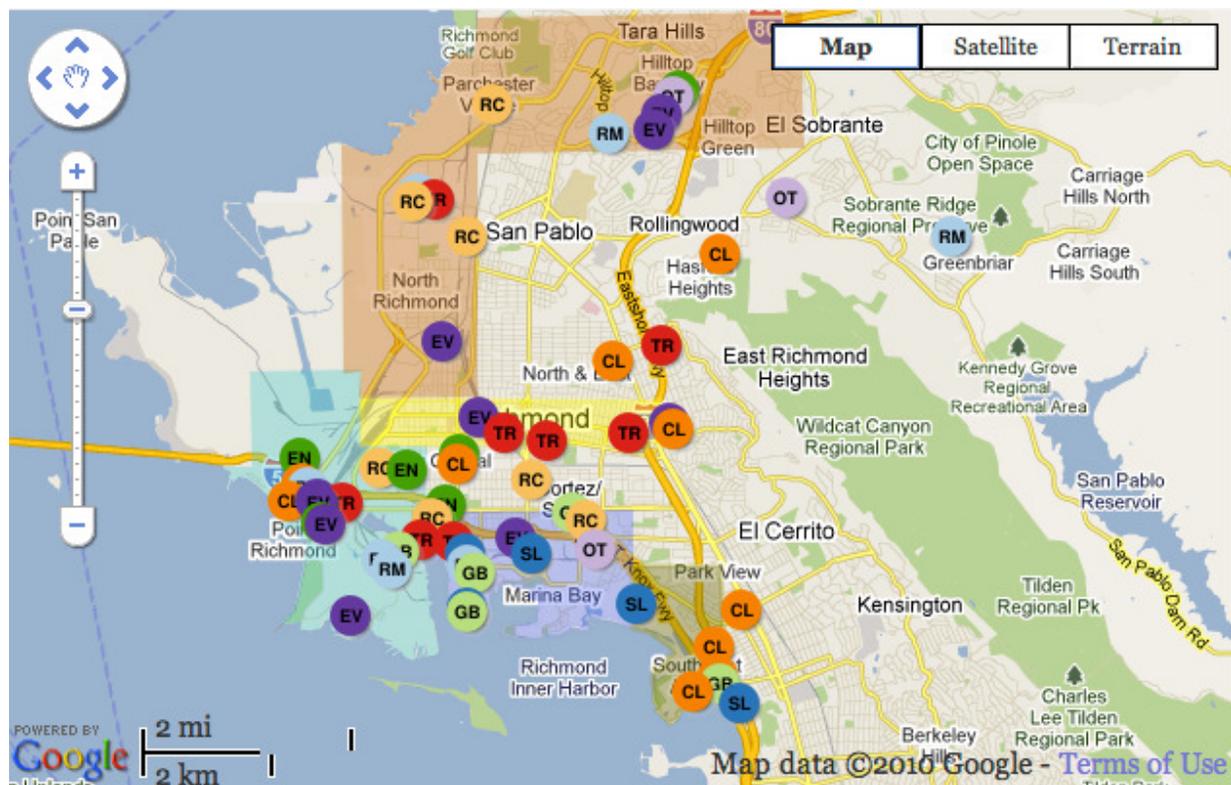
Particular types of green businesses and jobs are concentrated in particular neighborhoods as well:

- **652 of the 683 renewable energy jobs, over 95 percent, are located in Marina Bay and Point Richmond. Those neighborhoods combined also have about half of the green building and environmental services jobs.**
- **The Port contains 169 of Richmond's estimated 356 green manufacturing jobs.**
- **Along the Richmond Parkway, two government employers, BART and the West County Waste Water District, make up 278 of that area's 452 green jobs.**

Marina Bay and Point Richmond particularly stand out. In addition to dominating the renewable energy sector, they make up 5 of the 7 Richmond green businesses that plan to expand. These two neighborhoods also are home to all six of the green firms that moved from Berkeley to Richmond. Lastly, the differentiation of Marina Bay and Point Richmond from the rest of the city is reflected in the way Richmond green businesses talk about local quality of life in those neighborhoods. When businesses talk about natural beauty and amenities in Richmond they almost exclusively talk about Marina Bay and Point Richmond. Richmond businesses also perceive these neighborhoods as having less crime than other parts of Richmond.

The map below shows the distribution of green businesses in Richmond.

Richmond Green Business Map



Key: CL = Construction and Landscaping
 EV = Environmental Services
 GB = Green building materials
 RC = Recycling
 OT = Other
 TR = Transportation Services
 SL = Solar Energy
 EN = Other Renewable Energy
 RM = Remediation

Source: richmondgreenbusiness.com

Strengths, Weaknesses, Opportunities and Threats Analysis

Interviews with Richmond businesses, backed by economic and demographic data and a literature review, indicate Richmond's strengths, weaknesses, opportunities and threats for green economic development.

Strengths

Richmond has many green economic development strengths that lay the foundation for the current and future local green economy.

1. Local green businesses like Richmond's **diverse set of relatively affordable manufacturing, warehouse/distribution and office space** that include a variety of product ages, designs and buffers from conflicting uses.
2. Richmond's **key location between the East Bay, Marin, and the rest of the North Bay** offers access to centers of green research and innovation, a well trained regional workforce and green consumers that demand locally produced green products.
3. **Local green workforce development programs**, such as RichmondBUILD, offer well-trained "green collar" workers for green building, energy efficiency and solar installation jobs.
4. State incentive zones like the Enterprise Zone, Targeted Employment Area, and Recycling Market Development Zone combine with City permitting expertise to make **doing business in Richmond easy and affordable**, especially for green businesses.
5. The Port of Richmond, extensive rail freight connections, and highways access offer **goods movement infrastructure** that keeps Richmond connected to the region and the world.
6. Local green businesses have developed **supply chain relationships and synergies** between each other and regional industry concentrations that offer mutual benefits.

Weaknesses

Richmond has significant weaknesses that need to be addressed for the local green economy to reach its full potential.

1. Richmond's biggest weakness for the green economy is the **reputation and reality of crime** in the city. After falling in 2008, the murder rate jumped back up in 2009. Media coverage of Richmond primarily focuses on violent crime.
2. Richmond also suffers from the perception by some that it is **not business friendly**. This perception is stronger among traditional businesses than among green businesses.
3. Some green businesses and workers feel that Richmond suffers from **high pollution rates and limited alternative transportation infrastructure**.
4. Some green businesses suggested that, compared to other parts of the Bay Area, Richmond has **fewer of the retail, social/cultural and aesthetic amenities** they want for their employees.

Opportunities

Business interviews and other research present many areas of opportunity for Richmond.

1. Richmond can expect **employment growth** from existing and new green businesses. Seven out of the 21 Richmond green businesses interviewed plan to expand employment in the near future including 100 new employees at SunPower. Only two current businesses worry that they will have fewer employees. Other growth will come as new green businesses move to Richmond from Berkeley and elsewhere.

2. **Environmental policies** could make Richmond more attractive to green businesses. Policies that create demand for green products and improve quality of life attract green businesses. Richmond is already an environmental policy leader.
3. The **glowing reputation developed by Richmond's green workforce development program, RichmondBUILD** puts Richmond in a good position to expand existing programs, develop new ones, and leverage resources for coordinated business development.
4. The **recent settlement with Chevron** over the utility users tax could start a new, improved relationship with the City's largest employer.
5. By **marketing its strengths**, Richmond can reach out to new green businesses and investors that might currently be unaware of the benefits of doing business in Richmond.

Threats

This research also identified several threats that must be addressed before they damage future opportunities.

1. The potential for **employment losses** lurks behind opportunities for growth. Five green businesses have recently left or decreased employment. Four businesses have said they might leave if they cannot find the right space and conditions for expanding in Richmond.
2. The City suffers from several **barriers that will prevent green policy innovation** in the future including the current long-term recycling contract, a county government that is less focused on the green economy and suburban land use patterns that limit alternative commuting.
3. The **deteriorating capacity of the Fire Marshall's office** to process hazardous materials permitting could also discourage many new green businesses.
4. All of these threats come under conditions of **fierce competition** for these growing green industries and **limited resources** in this time of recession and low tax revenue.

Case Studies

In addition to the strengths, weaknesses, opportunities and threats analysis, this report also looks at case studies that offer lessons for green economic development in Richmond. These case studies cover a variety of sectors including solar, energy efficiency, recycling and waste management, biofuels, and other topics not connected to a particular sector. The case study regions span the US and vary by size, wealth and economic assets. The table below summarizes key features of the 13 case studies investigated in the report.

Green Economic Development Case Studies

| | <u>Sector</u> | <u>Cost</u> | <u>Scale</u> | <u>Job Creation</u> | <u>Job Access</u> | <u>Focus</u> |
|-------------------------|----------------|-------------|---------------------|---------------------|-------------------|--------------------------|
| Toledo, OH | Solar | High | Richmond & Corridor | Dynamic | Medium Barrier | Business Development |
| New York, NY | Green Building | Low | Richmond & Corridor | Dynamic | Low Barrier | Business Development |
| San Jose, CA | Green Building | Medium | Richmond | Dynamic | Low Barrier | Workforce Development |
| Chicago, IL | Recycling | Low | Corridor | Dynamic | Medium Barrier | Environmental Policy |
| Los Angeles, CA | Recycling | Profitable | Richmond & Bay Area | Low - Fixed | Low Barrier | Environmental Policy |
| Seattle, WA I | Biofuels | Medium | Richmond & Corridor | Medium - Fixed | Low Barrier | Environmental Policy |
| Seattle, WA II | Biofuels | Medium | Richmond | Medium - Fixed | Low Barrier | Business Development |
| Pittsburgh, PA | Biofuels | Low | Richmond | Low - Fixed | Low Barrier | Environmental Policy |
| Cleveland, OH | Wind | High | Richmond & Corridor | Dynamic | Medium Barrier | Business Development |
| San Diego, CA | Wind | Profitable | Richmond | Low - Fixed | Low Barrier | Infrastructure/Amenities |
| Fort Collins, CO | Cleantech | High | Corridor | Dynamic | High Barrier | Business Development |
| Twin Cities, MN | Green Mfg | Medium | Corridor | Dynamic | Low Barrier | Business Development |
| San Leandro, CA | N/A | Low | Richmond | Dynamic | N/A | Infrastructure/Amenities |

The case studies demonstrate the many angles from which to develop green economic development opportunities.

- The **Toledo, OH** case presents the strategy that has made Toledo the center of the solar industry in the United States.
- In **New York City** the Spec It Green program case shows one way to better connect local green building materials manufacturers with potential local users of those products.
- The **San Jose, CA** case outlines opportunities to connect green business development programs with workforce development and product demonstration.
- The **Chicago** case highlights the most prominent national example of the By-Product Synergy Network program developed by the US Business Council for Sustainable Development, which helps businesses overcome confidentiality constraints to find material and logistic synergies that lower business costs, increase efficiency, and reduce waste.
- The **Los Angeles** case discusses that city's investigation into new waste to energy conversion technologies.
- **Seattle, WA** offers two examples of public-private partnerships to promote biofuels production and use.
- The **Pittsburgh, PA** case demonstrates how one organization has linked biofuels production with urban toxics remediation and blight removal.
- The **Cleveland, OH** case illuminates opportunities for green economic development partnerships with local foundations.
- A case study of **wind turbines** at small ports indicates opportunities to take advantage of new green imports.
- **San Leandro, CA** provides a model for a BART shuttle serving local businesses.
- The **Fort Collins, CO** and **Minneapolis-St Paul, MN** cases provide comprehensive green economic development strategies that the East Bay could follow.

Next Steps and Recommendations

A green economic development strategy provides many opportunities for Richmond. The City should focus on particular green sectors that are already strong. This includes most clearly, solar energy, but also transportation services, recycling, environmental services, green building, and biofuels. The City should cater green business development to the specifics in different Richmond neighborhoods based on the Industry and Location Analysis discussion. Richmond also needs to use both a local (city) and regional (East Bay) approach to green economic development using the East Bay Green Corridor Partnership as an asset.

Richmond is already taking many steps to support green business and move towards a green economy. These steps encompass many aspects of the City's work including business development, workforce development, improvement of local amenities, and innovation in local environmental policy. Specific efforts include a new green center, a green business website, new marketing strategies, new workforce training programs, transit, bicycle and pedestrian improvements, technical assistance to help businesses green their operations, incentives to encourage the purchase of local green products and many other areas of work. Below is a list of recommended action items to continue this progress. Items are organized in order of priority.

Action Items

- I. **Business Development: Recruitment/Retention/Expansion/Creation**
 - A. Green Center
 1. *Flesh out vision for the Center*
 2. *Identify and pursue funding sources*
 3. *Secure local green products for display*
 4. *Develop educational materials and wall size green business map*
 5. *Offer classroom space to community green education efforts*
 6. *Create tool lending library based on Berkeley example*
 7. *Work with Small Business Development Center of Contra Costa County to create small business/contractor entrepreneurship and business management trainings*
 8. *Incorporate contractors into Build It Green and other green building and energy efficiency trainings*
 9. *Add equipment to match LA Trade Tech state-of-the-art weatherization center*
 10. *Host networking events*
 11. *Provide a hub for green tourism and marketing efforts*
 12. *Explore the San Jose model that connects green business development programs with workforce development programs*
 - B. Website: Green is Gold
 1. *Delegate coordination of in-house management/maintenance capability and identify sources for content updates for both City and EBGCP websites*
 2. *Combine with www.richmonca4business.com*
 3. *Develop automated system to update real estate data from brokers*

4. *Link to EBGCP website*
- C. Marketing Plan
 1. *Create PowerPoint presentation to market Richmond to green businesses*
 2. *Plan major green business event with EBGCP and/or other partner(s)*
 3. *Work with East Bay Green Tours to grow Richmond green tourism with focus on Green Center*
 4. *Promote EZ/TEA, RMDZ and Richmond's green business-friendly profile*
 5. *Develop long-term marketing plan along the lines of Minneapolis-St. Paul's Thinc.Green*
- D. Richmond Field Station
 1. *Promote as site for 2nd LBL campus, including follow up with Sam Chapman*
 2. *Investigate opportunities to increase UC Berkeley uses*
- E. Permitting
 1. *Work with City of San Francisco and SunWater Solar to implement solar thermal over-the-counter permit system*
 2. *Develop plan to prevent loss of HAZMAT permitting capacity*
 3. *Survey businesses to find out why perception of difficulty in permitting exists*
- F. Networking
 1. *Delegate staff coordinator for Green Drinks/EcoTuesdays*
 2. *Pursue outside co-coordinators for Green Drinks/EcoTuesdays*
 3. *Assemble mailing list for Green Drinks/EcoTuesdays*
 4. *Initiate small scale Spec It Green type gatherings at Green Center*
 5. *Invite Silicon Valley businesses to event or tour here*
- G. Green Business List
 1. *Develop system to maintain Richmond green business list that includes the business permitting system, business development staff knowledge and potentially outside sources such as www.econovue.com*
- H. Business Outreach/Assistance
 1. *Commit more resources to business recruitment and retention efforts*
 2. *Follow leads on businesses showing an interest in Richmond*
 3. *Recruit existing business suppliers and customers*
 4. *Prioritize green businesses in surveys, forums, face-to-face meetings, and rapid response to business opportunities and threats*
 5. *Target business assistance programs, such as revolving loan funds, to support green businesses*
 6. *Build relationships with UC Berkeley and LBL technology transfer and commercialization staff*
 7. *Institutionalize Berkeley-Richmond business pipeline*
 8. *Leverage contacts with State and Federal elected officials to secure introductions to businesses*
- I. Alternative Angel and Venture Capital Investment
 1. *Work with Morgan Simon to develop proposal to Stephen DeBerry that targets foundations and socially responsible venture capitalists to invest in Richmond green businesses*
- J. Focus on Certain Sectors

1. *Solar - including creating demand for installation and prioritizing permitting capacity for solar research and manufacturing facilities*
 2. *Transportation Services - including exploration into providing alternative transportation and building relationships with major employers*
 3. *Recycling – including creating demand for recycled-content products and marketing benefits of RMDZ*
 4. *Environmental Services – including promoting cleanup of contaminated land and encouraging Richmond industries and developers to hire local firms through relationship building/networking*
 5. *Green Building – including increasing demand for energy efficiency retrofits in businesses and residences and helping local contractors gain skills and certification in green business*
 6. *Biofuels – including attracting businesses that use 2nd and 3rd generation technologies and improving permitting capacity for research and production facilities*
- K. Focus on Certain Neighborhoods
1. *Marina Bay – including increasing amenities*
 2. *Point Richmond – including improving sewer and storm water infrastructure*
 3. *Downtown – including attracting more pedestrian oriented retail and improving safety*
 4. *Port – including the greening of facility operations*
 5. *Richmond Parkway*
 6. *Southern Gateway*
 7. *Hilltop*

II. Workforce Development

- A. Green Center
1. *Help RichmondBUILD students build relationships with contractors and other green businesses to open up future employment opportunities*
 2. *Empower RichmondBUILD students to someday start their own businesses*
 3. *Expose RichmondBUILD students to cutting edge new green technologies*
 4. *Employ RichmondBUILD students as greeters, docents, teacher's assistants for community education classes, tool lending library staff, and other jobs onsite.*
- B. New/Expanded Training Programs
1. *Continue conversations with SunPrint about future solar manufacturing training program*
 2. *Evaluate benefits of adding storm water training component to RichmondBUILD; hold meeting between RichmondBUILD staff, storm water staff and the Bay Friendly Landscape and Gardening Coalition*
 3. *Pursue opportunities to place Richmond residents in utilities and mechanics jobs at AC Transit and BART Richmond facilities; evaluate benefits of developing pre-apprenticeship program for transit mechanics*
 4. *Build relationships with PAL and RichmondSPOKES bicycle mechanic and sales training programs*
 5. *Ensure city contracts require the hiring of RichmondBuild grads where applicable*

III. Employer/Employee Infrastructure and Amenities

A. Transit Improvements

- 1. Apply for BAAQMD grant for BART to Marina Bay Shuttle*
- 2. Conduct new survey of Marina Bay employers*
- 3. Conduct Marina Bay resident survey*
- 4. Ask Marina Bay employers with existing shuttles to contribute matching funds for grant*
- 5. Negotiate matching funds from AC Transit to replace 74 bus*
- 6. Look into creating BID and nonprofit to run shuttle*
- 7. Identify opportunities for graduate student assistance with proposal*

B. Bicycle and Pedestrian Improvements

- 1. Include green business input into bicycle and pedestrian master plan*
- 2. Work with County Health Department to promote walking including applying for MTC grant opportunities*
- 3. Pursue neighborhood locker and shower facilities for bicycle commuters*

C. Work with Major Employers to Improve Connections to Their Surrounding Neighborhood and provide incentives to utilize local businesses

- 1. City of Richmond*
- 2. Kaiser*
- 3. California Health Services Department*
- 4. Social Security*
- 5. Chevron*

D. Focus on Certain Neighborhoods

- 1. Downtown – including improvements to Nevin Street from Bart to Civic Plaza*
- 2. Marina Bay*
- 3. Hilltop*
- 4. Southern Gateway*
- 5. Point Richmond*

IV. Environmental Policy

A. Special Projects

- 1. Provide technical assistance to help Richmond businesses green their operations*
- 2. Contact Pittsburg, PA nonprofit G-Tech about expanding their Project Sprout program to Richmond*
- 3. Prepare for second round of CaliforniaFIRST financing*
- 4. Put UUT onsite generation exemption on ballot*

B. All City Staff Actions

- 1. Encourage all City staff to prioritize local green products when making municipal purchasing decisions*
- 2. Recruit all City staff to identify green product demonstration opportunities in all City facilities*

C. East Bay Green Corridor Partnership

- 1. Help craft programs to increase demand for solar installation to align with City of Richmond strategy and goals*
- 2. Propose regional By-Product Synergy program*

3. *Propose regional Spec It Green Program*
4. *Promote regional standardization of energy efficiency retrofits and solar installation permitting and fees*
5. *Partner with other members to enhance networking efforts*
6. *Encourage other jurisdictions to raise their Utility Users Tax on electricity and natural gas*
7. *Propose second hire and second purchase agreements between EBGCP members cities*

D. Further Research

1. *Study pros and cons of siting Bay Area Biosolids to Energy (BAB2E) facility in Richmond*
2. *Study district energy opportunities, especially as related to the Chevron refinery*