District of Columbia
Green Collar Jobs Demand Analysis
Final Report

- **Green Collar Jobs Demand Estimates**
- **Best Practices**
- **Focus Groups: Findings on Green Businesses**

Submitted to:

Washington D.C. Economic Partnership
and the
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and
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Momentum Analysis

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EXECUTIVE SUMMARY

STRATEGIC FRAMEWORK

The District of Columbia recognizes that meeting the challenge of global economic competition is served in part by the implementation of strategies to foster a more livable city. Policies that protect and enhance the environment and public health can play a complementary role in an economic development strategy. They may actually have a propulsive, transformative effect. The District recognizes this and wishes to capture both employment opportunities for its residents in emerging green industry sectors and create a greener, more sustainable local economy. These policy goals pose both opportunities and challenges for the District's resources and current workforce capabilities. This study will help inform the District's decision-making process on how to best allocate work force training and economic development resources in support of these goals.

It is no longer conventional wisdom to assume that achieving higher environmental standards is antithetical to growing businesses, creating jobs and developing a city's economy. Indeed, more businesses are looking at their "triple bottom line" (profit, environmental and social impacts) and finding sources of innovation. Recent and burgeoning global interest in "green collar jobs" is further testament to this shift in perspective. There is a realization that improving environmental and energy standards can actually drive demand for technological and process innovation and, commensurately, create employment opportunities. The District's goals of creating a green economy and capturing "green collar jobs" is a strategic response to emerging trends in the market and to current and anticipated needs of its labor force. Figure 1.0 presents a graphic illustration of how these elements overlap.

Figure 1.0
Strategic Framework
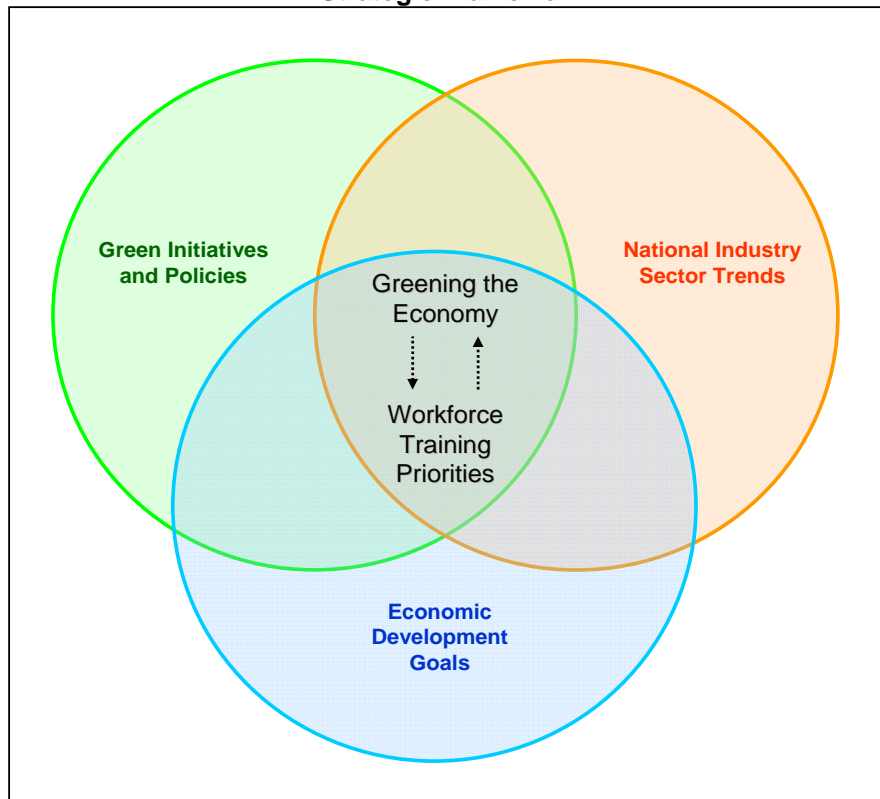
The combination of the District's *Green Initiatives and Policies* and broadly defined *Economic Development Goals*, and the exogenous force of emerging *National Industry Sector Trends* are portrayed in the figure as labor demand (skills) drivers. Green initiatives and policies will result in higher environmental performance standards and the introduction of new systems and technologies. Meeting these standards, operating new systems and using new technologies will require new skills. District economic development goals include creating and retaining job opportunities for residents, particularly the District's hard to employ (or chronically unemployed) population, across a broad occupational spectrum. Emerging national trends in green sectors (i.e. cleantech, alternative energy, environmental services) represent industry attraction opportunities for the District.

At the intersection of these demand drivers, *Greening the Economy* can be viewed as a responsive strategy and workforce training as an adaptive tool – to best prepare the District's residents, particularly its hard to employ population, to capture "green collar job" opportunities – and as a facilitative tool to enhance the District's ability to attract green industry sectors and foster greener outcomes with current DC businesses. Harmonizing workforce training and economic development programs to accelerate green development outcomes is a high priority for the District. Local businesses will play an important role in advancing the District towards a green economy. When more local businesses are able to employ more District residents, it strengthens the economic and social vitality of the city. As the only municipal government in the United States prohibited from taxing non-resident income, a strong residential employment base is critical to the District's ability to generate sufficient revenues to support the many services demanded. Identifying where the priorities should be placed for workforce training is one of the key goals of this study.

Recently implemented green initiatives and policies such as the *Green Building Act of 2006 ("Green Building Act")* and the *Clean and Affordable Energy Act of 2008 ("Energy Act")* will play a significant role in greening the District's economy. In concert with many other DC green initiatives, the Green Building and Energy Acts are expected to trigger demand for new job skills, as new building and energy standards will have to be met. In some instances, the green initiatives may trigger demand for entirely new jobs or new occupational categories.

The District defines "green collar jobs" *as career-track employment opportunities in emerging environmental industries as well as conventional businesses and trades, created by a shift to more sustainable practices, materials, and performance. The definition includes both lower and higher skilled employment opportunities that minimize the carbon footprint of all necessary inputs and directly result in the restoration of the environment, the generation of clean energy and improved energy efficiency, the creation of high performing buildings, and the conservation of natural resources.* This definition is born out of, and directly responds to, the District's unique socio-economic environment. Many jurisdictions have identified "green collar jobs" as blue collar, or manual labor, or low skilled or manufacturing jobs being performed with a new green or environmental focus. The District's economic and workforce composition, however, led it to take a broader, more inclusive approach to green collar jobs. The District, therefore, uses the terms "green collar jobs" and "green jobs" interchangeably.

OVERALL FINDINGS AND RECOMMENDATIONS

Greening the DC Economy

The District should implement a combination of internally and externally focused strategies to promote greener outcomes in its economy. The internal strategies should focus on creating stronger incentives for greener business practices and green business retention. Green business and clean tech industry attraction should serve as the focus of the external strategy. Key findings and specific recommendations include:

➢ *Stimulate demand for environmentally preferable goods and services*. Institute an Environmentally Preferable Purchasing program similar to the DOD green procurement strategy at the District Office of Contracting and Procurement. Vendors supplying the District with products and services could be required to practice green supply chain and green IT standards. Such a program would require personnel training and the establishment of targeted green procurement parameters. A pilot program could be housed in the Department of Employment Services Procurement division.

➢ *Strengthen green business retention and attraction and measure performance.* Establish a green business program similar to other exemplary and recognized programs (e.g., the Bay Area Green Business program). Such a third party credentialing body with accepted standards and metrics for green business practices could serve several purposes:

- Create greater incentives for businesses to adopt greener practices.
- Provide businesses tangible, measurable standards to adopt and abide by.
- Provide technical services to both existing and target industries on environmental compliance issues or on process innovation, which can support industry retention in and help attract businesses needing such services.
- Support marketing and industry attraction efforts encouraging green businesses (or businesses interested in such practices and/or the "triple bottom line" approaches).
- Support the District's ability to accurately track progress towards greening its economy by way of establishing recognizable standards/metrics for the environmental performance of businesses and by providing a reliable basis for classification and tracking.

➢ *Direct development assistance at front end for green business and clean tech.* Tax incentives do not exist for large energy producers on the state level for the renewable energy production mandates that states such as Nevada and California have implemented. The success of Pennsylvania efforts indicate that direct economic development incentive assistance, on the front end of business development and business attraction efforts, has more value than general tax credit based incentives. The District does not currently offer any tax benefits specifically targeted to green businesses to create green collar jobs.

➢ *Green and clean tech industry attraction*. The District's (and the region's) economy does not have a large manufacturing base to expand on, and therefore must focus its efforts in sectors that have a business base which can be expanded in the near term. The District does have a substantial (but declining) printing and printing supply industry. The industrial expertise in the district could be redeployed to focus on utilization of this industrial base to serve green demand, as is being done with the use of "printing technology" for the manufacture of thin film "nano" solar cells in California.

➤ *Most states and localities have not instituted separate efforts to attract and grow green businesses*, but include green businesses in their standard economic development business attraction and growth assistance efforts. Various states such as California and Nevada have instituted requirements for the utilization of renewably generated electricity but have not instituted tax incentives to encourage such utilization.

➤ *Green standards strengthen market value in real estate sector*. A 2008 CoStar Group, Inc. study found that LEED-certified and Energy Star-rated buildings in both the U.S. and in the DC markets were "adding value" to buildings, as exhibited in higher occupancy levels, rents and sales prices as compared to traditional commercial properties.

Workforce Training and Green Collar Jobs

The District's workforce training strategy and programs should consider a continued focus on basic work readiness to assist residents seeking entry to many of the positions in the construction sector, as many offer relatively low barriers to entry. There will be new demand driven by the District's green initiatives for occupations with new green skills and knowledge.

➤ *In most cases green collar jobs are existing jobs with new skills requirements*. The findings from the demand analysis and the green businesses focus group sessions indicate that most "green collar jobs" will be slightly modified versions of existing occupations. Many, however, will present opportunities for new training and skills in green practices and technologies.

➤ *Pursue Federal Green Jobs funds*. The District should develop a comprehensive green jobs workforce support and workforce development program that can be funded when federal Green Jobs funds become available. This comprehensive effort should include soft skills, pre-apprenticeship training, and wraparound services that will be needed to serve the ex-offender, youth and other hard to serve populations. Soft skills include training for attitude, appearance and basic life skills.

➤ *Emulate the New York City and Oakland programs* as a model for the development of programs for youth and other hard to serve workforce development populations. Specifically, the District should partner with nonprofits that operate successful programs and encourage them to adopt green collar jobs as an area of focus.

➤ *Workforce training programs should consider* focusing on and reflecting District leadership, policy and involvement in Green Jobs as a resource for program development and implementation. District government should structure programs such that they can be scaled to meet growing future demands.

➤ Most participants in the focus groups said the responsibility for providing a job ready workforce (with the required life and soft skills) was that of the District government.

➤ *Promote small business development* that can create entry level or low barriers to entry green job opportunities for youth and ex-offenders.

REPORT SECTION SUMMARIES

The remainder of the Executive Summary provides brief summaries and highlights from the major sections of the report. They appear in the same order as in the report. Much greater detail is provided in the body of the report. Additional detail on findings and methods can be found in the Appendix.

Demand Analysis

Estimate of Current Green Collar Jobs

The estimate of current green collar jobs in the District is based on an original analysis performed for this study. The industry-by-industry assessment found that there are currently about 22,000 "green" jobs in the District. Based on an analysis of existing labor market data supplied by the District Department of Employment Services for 82 industries in DC, a total of *22,283 jobs were classified as "green"* and another *3,167 jobs as "possibly green".* The rationale underlying the classification differs from industry to industry. This is slightly more than three percent of all jobs in the District.

- Construction;
- Architecture and Engineering; and
- Federal Government jobs.

One of the key challenges the District (and other government agencies) faces in its quest to grow green collar jobs and green its economy is one of classification. Determining whether an industry, or an occupation within an industry, is green, or potentially green, is a relatively new and undefined process. The District's ability to properly count and track progress in growing green collar jobs and greening its economy speaks to one of the key findings and recommendations of this report. This study establishes a baseline (and tools) for classifying and tracking green jobs; however, the introduction of a third party credentialing body (e.g., a green business certification program) would serve the dual purpose of establishing clearer standards for counting green businesses (and jobs) and for creating new incentives to both attract green businesses and assist existing businesses in becoming green.

Green Initiatives Aggregate Labor Composition and Demand Estimate

The *Green Buildings Act of 2006* and the *Clean and Affordable Energy Act of 2008* constitute the bulk of the labor demand estimated for the years 2009 through 2018. The District's aggressive construction and development scenario will see a flurry of activity beginning in 2009 gradually taper off through year 2016. This could change, however, as the analysis is based on known (as of Summer 2008) major development "projects on the books" (i.e. proposed, planned or under construction). **The estimate does not factor in potential increases in build out capacity, for example if the District enacts rezoning legislation to intensify development, nor do the numbers reflect any precise assumptions about future market conditions.**

The estimate of total aggregate employment demand per year attributable to District green initiatives and proposals begins at about 23,931 annual job opportunities in 2009, gradually decreases to a low in the 10 year study period of 3,600 in year 2016, and then begins to increase again. These trends could change depending on future market conditions and on the rate at which

the District rolls out or approves projects. Current economic uncertainty, particularly in mortgage related industries, reinforces this point.

The composition of expected labor demand is of greater importance to this study and is arrived at through a more robust modeling process. The top line findings are:

- Over a third of the labor demanded by the green initiatives will be for occupations in Job Zones 1 and 2. Job Zone 1 represents occupations requiring the lowest educational and experience levels for laborers on a scale of 1-5. Zone 1 requires "little or no preparation;" Zone 2 requires "some preparation" and Zone 3 requires a "Medium Preparation" level.[1]
- About 42 percent of the demand is for occupations in Job Zone 3, which is less accessible than Zones 1 and 2.
- The 10 occupations in highest demand are:
  - carpenters
  - construction laborers
  - first-line supervisors/managers of construction trades and extraction workers
  - construction managers
  - operating engineers and other construction equipment operators
  - plumbers, pipefitters and steamfitters
  - roofers
  - electricians
  - cement masons and concrete finishers
  - painters, construction and maintenance

There are many green skills and knowledge areas for workers to learn for the "green collar" versions of the occupations in highest demand listed above. The second highest occupational category, which also has low barriers to entry, is construction laborers. Key green skills and knowledge components for **construction laborers** are listed below:

- *Helpers-Carpenters:* Know and understand green building materials, site considerations and passive building design, construction operations to reduce environmental impact, window benefits and technologies, sustainable construction technologies that enhance resistance to disaster.

- *Brick masons and block masons (and Helpers):* Understand the use of porous pavements to reduce stormwater runoff, know how to: reduce a building non-roof heat island effect, harvest site energy (using passive solar designs) and decrease the size of the building HVAC system, optimize energy performance.

- *Landscaping and groundskeepers:* Paving technologies-permeable, porous paving, heat island effect – LEED® points, high albedo and reflectance, shade planting, irrigation system and low impact planting strategies, surface water management, site lighting, natural pest control techniques.

Some of the occupations within the top 10 highest demand grouping require more experience and training than others for construction laborers. Several of these occupational categories are listed below along with some the key elements of skill and knowledge needed to change them into a green collar version of the occupation.

- *Carpenters* - Know and understand green building materials, site considerations and passive building design, construction operations to reduce environmental impact, window benefits and technologies, sustainable construction technologies that enhance resistance to disaster.

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[1] Note: Descriptions of Job Zones are provided in report section 1.2 on aggregate labor demand. A more detailed explanation of Job Zones is in the Appendix.

- *Construction supervisors* - Effective management for green construction, waste management.

- *Cement masons and concrete finishers* - Building reuse, construction waste management , recycled content, regional materials, landscape and exterior design to reduce heat islands , stormwater management: rate and quantity , reduced site disturbance, minimum energy performance.

- *Plumbers* -Understand and utilize environmental impacts of plumbing design, construction and occupant uses, waste removal – waterless urinals, dual flush toilet, composting toilets, water collection – condensate, rain water cisterns, gray water, water efficiency.

- *Electricians* - Day lighting and artificial lighting, impact of electricity use on the environment and on size of mechanical system design, compact fluorescents and other efficient light sources, LEED® rating system, sizing of system- peak loads.

Green Skills Gap Assessment for Hard to Employ Population

Based on District Department of Employment Services (DOES) data, 22,200 persons, or 6.4 percent of the District's labor force, were unemployed in June 2008. The statistical profile of the District's unemployed developed for this report is based on a statistical analysis of the 2005 American Community Survey (ACS) Public Use Microdata Sample (PUMS) data, which was the most recent data available.

About one in five District residents identified as workers within the occupational categories of installation, maintenance and repair are unemployed. Notably, this group's skill sets and experience makes it a candidate for many of the green job opportunities that will be created by the District's green initiatives, particularly from the *Green Building Act of 2006*. The occupational categories of production, transportation, material moving and construction, while they do not account for a large share of the unemployed in DC, exhibit high unemployment rates. Unemployed persons in these occupational categories likely possess skills that are useful for the green jobs that will be created by the District's initiatives.

Individual Green Initiatives and Proposals

District of Columbia's Green Building Act of 2006. The District of Columbia's *Green Building Act of 2006* was created to establish high-performance building standards for the planning, design, construction, operation and maintenance of building projects. In addition, it established incentives for green building, such as a program to expedite the review of construction documents for qualifying green buildings. The *Green Building Act* also created a Green Building Fund and the Green Building Advisory Council. This initiative is estimated to generate a labor demand for 121,200 workers over 10 years. These occupations are mainly in the construction industry. In addition, demand for 9,200 workers to operate and maintain the newly constructed and retrofitted facilities is expected. Demand for building operations and maintenance jobs requiring some green skills will gradually increase due to the combination of development build out, potential intensification of development with re-zonings and more buildings being subject to the green building requirements.

Clean and Affordable Energy Act of 2008. On August 4, 2008, Mayor Fenty signed the District Energy Bill, which will be enacted as the *Clean and Affordable Energy Act of 2008* (CAEA) later this year. The CAEA includes several components that will positively contribute to making the District's economy greener. The CAEA authorizes the creation of a Sustainable Energy Utility (SEU), which will conduct sustainable energy programs. To fund the SEU and other new and

existing energy efficiency and renewable energy programs, the CAEA creates a non-lapsing Sustainable Energy Trust Fund.. In addition to authorizing public spending, the CAEA is expected to spur increased private spending in the economy by establishing benchmarking requirements for public and private buildings, increasing the solar energy requirement for electrical providers and allowing energy submetering for commercial tenants. In total, CAEA is estimated to generate a labor demand for 11,800 workers over 10 years. Additional findings on or related to this initiative include:

- A 2008 CoStar Group, Inc. study found that LEED-certified and Energy Star-rated buildings in both the U.S. and in the DC markets were "adding value" to buildings, as exhibited in higher occupancy levels, rents and sales prices than traditional commercial properties.

- *Proposed Energy Audit Program Initiative.* The District's proposed Energy Audit Program, modeled after the Berkeley, California Residential Energy Conservation Ordinance, places an emphasis on the seller of residences to provide an energy audit to prospective buyers. An energy audit is an inspection, survey and analysis of energy flows in a building, process or system with the objective of understanding the energy dynamics of the system under study. The program will have provide a buyer with an estimate of energy used by a residence, stimulating the seller to invest in their home to reduce energy consumption, making the home a more attractive purchase based upon future energy cost savings. This initiative is estimated to generate a labor demand for 300 energy inspectors over the 10 year study period.

Department of Transportation (DOT) Transit Infrastructure Projects. The District's Department of Transportation (DDOT), in coordination with other District departments, is implementing numerous environmentally focused projects that will result in green collar jobs in the occupational categories of design, construction and maintenance. The projects that are either planned or currently in construction include: a Low Impact Development (LID) program which, focuses on installation of storm water infrastructure improvements, including installation of storm water Best Management Practices throughout the District; numerous streetscape improvements; the Anacostia Demonstration Streetcar Project; and the retrofitting of school buses. This initiative is estimated to generate a labor demand for 10,300 workers over 10 years, primarily in the construction industry.

Waste Water and Water Treatment Infrastructure Improvements. The DC Water and Sewer Authority (WASA) is investing in several new projects as part of its overall Capital Improvement Plan (CIP). Key projects that will have both environmental benefits and improve the environmental performance of the system include the Combined Sewer Overflow Control Plan (CSOCP) and new digester facilities for wastewater treatment. These facilities are the single largest plant project ever undertaken by WASA. The new digester will reduce energy usage and help manage biosolids. The facility's construction budget has increased due to the escalating costs of construction materials and the schedule has been extended due to design and procurement-related delays. This initiative is estimated to generate a labor demand for 1,500 workers, mainly in the construction industry, over 10 years.

Proposed Photovoltaic Solar Trees Parking Lots Initiative. The proposed Solar Tree Initiative would install solar panels on parking lots throughout the District, serving the dual purpose of creating small scale clean energy farms and providing shade for parked cars. Beyond providing

clean, quiet energy and shade for vehicles, it would create a highly visible display of DC's commitment to creating a greener economy. This initiative is estimated to generate a labor demand for 440 workers, mainly in the construction industry over two years and supply 1,380 homes with solar energy indefinitely.

Proposed Green Roof Program Initiative*.* The proposed Green Roof Initiative is part of an ongoing commitment by the District to increase the number of Green Roofs within DC. The assumptions for generating the labor demand estimates were based in part on the study *RE-GREENING WASHINGTON, DC: A Green Roof Vision Based on Quantifying Storm Water and Air Quality Benefits* produced by the Casey Trees Endowment Fund and Limno-Tech Inc. in August 2005. This proposed initiative is estimated to generate a labor demand for 11,800 workers, mainly in the roofing contracting industry, over 10 years.

Best Practices Documentation and Recommendations Summary

Best practices were documented for approaches to workforce development for green collar jobs, job preparedness training for hard to employ populations, and for strategies to promote and attract green business and clean tech industries. The cases reflect a mix of non-profit organizations, local, regional and state government programs. It is notable that the District is ahead of the curve in terms of green strategies and workforce training for green collar jobs programs.

National green jobs support efforts focusing on youth and ex-offenders in connection with green jobs workforce development*.* Programs studied included Green for All, the Ella Baker Center in Oakland, California, and the Center for Employment Opportunities (CEO) in New York City. The groundbreaking efforts of the Green for All, and local efforts such as those being undertaken by the Ella Baker Center in Oakland, California and the Center for Employment Opportunities in New York City and the New York region are all still in their nascent stages, so only anecdotal evidence of program success and outcomes related to green collar jobs is available. The Center for Employment Opportunities (CEO) in New York City offers an exemplary model for helping the hard to employ population transition into, and stay in, the workforce. The District should consider emulating the New York City and Oakland programs as models for the development of programs for youth and other hard to serve workforce development populations. The District could be served well by partnering with both nationally and locally based nonprofit organizations operating successful programs and encourage them to adopt green collar jobs as an area of focus if they are not already.

Structure a workforce training program with a focus on renewable energy and energy efficiency, with a training curriculum capable of meeting the demands that will be directly generated by District and Federal policies and regulation, and program requirements, that can be funded under the new $125 million annual Federal DOL program*.* Energy Training funds are expected to fuel emerging demand for green collar jobs. The *Green Jobs Act of 2007* (Green Jobs Act) (H.R. 2847) authorizes up to $125 million in funding to establish national and state job training programs and is administered by the U.S. Department of Labor to help address job shortages that are impairing growth in green industries, such as energy efficient buildings and construction, renewable electric power, energy efficient vehicles and biofuels development. The District should develop a comprehensive green jobs workforce support and workforce development program that

can be funded when the federal Green Jobs funds become available. This comprehensive effort should include soft skills, pre-apprenticeship training, and wrap around services that will be needed to serve the ex-offender, youth and other hard to serve populations. Soft skills include training for attitude, appearance and basic life skills. Wraparound services include transportation and child care support required to enable the worker to receive workforce training and support long term employment in a green job. Pre-apprenticeship programs, typically carried out in partnership with a local community organization, provide basic skills support in math, English and other areas required to enter union and other apprenticeship programs. Training programs need to be linked with employers, so direct employment is the outcome.

State and local efforts to attract and grow new green businesses that can be adopted by the District. State economic development and business relocation/attraction efforts, with the exception of California and Pennsylvania, have not developed programs to focus on green businesses. Most states and localities have not instituted separate efforts to attract and grow green businesses but include green businesses in their standard economic development business attraction and growth assistance efforts**.** Pennsylvania and California are leaders in the effort to focus on green jobs. Localities generally have not developed green focused business relocation efforts. The District could emulate these state efforts, using its quasi-state status to undertake and fund local business growth development, business attraction and business relocation in the green economy. The District's economy is not based on manufacturing, so it must focus efforts on sectors that have a business base, which can be expanded in the near term. The District does have a substantial (but declining) printing and printing supply industry. The industrial expertise in the District could be redeployed to focus on utilization of this industrial base to serve green demand, as is being done with the use of "printing technology" for the manufacture of thin film "nano" solar cells in California.

Expand the market presence of District Certified Business EnterprisesCertified Business Enterprises (CBEs) in the federal and local government green marketplace, particularly with respect to meeting environmental remediation requirements at Walter Reed Army Hospital and the Potomac Annex, and the follow-on construction of new facilities at these sites for new federal tenants and to meet the public and commercial needs of local residents. The environmental remediation requirements at Walter Reed Army Medical Center (WRAMC) and the Potomac Annex, and the follow-on construction of new facilities at these sites for new federal tenants and to meet the public and commercial needs of local residents will create green collar job demands in the District. These environmental remediation requirements are funded by the Department of Defense (DOD), and will be contracted by DOD or the Army Corps of Engineers. The District can develop a program to assist existing District Certified Business Enterprises to become certified under the federal contracting preference program and available under the government wide (GWAC) contracting vehicles that will be utilized by DOD and the Corps to select vendors for the remediation and cleanup at WRAMC and Potomac Annex. Almost all large federal contracts will have a requirement for small business or other preferred federal contractors to be utilized for a percentage of sub-contacts. The District should focus its efforts on getting current and new CBE's certified under federal programs so that they can compete for these sub-contracts.

Develop and implement a Green Procurement Strategy and use Green Supply Chain analytics as a measurement approach and process tool to get DC vendors to participate in a Green Procurement Strategy. The District should consider instituting an Office of Contracting and Procurement Environmentally Preferable Purchasing program similar to DOD green procurement

strategy, as documented in the Department of Defense Green Procurement Strategy. The District could require vendors to institute green supply chain and green IT measures in order to qualify for the supply of products or provision of services to the District. Such an initiative could begin with a training program for procurement officers and the establishment of targeted green procurement standards. A pilot program could be instituted in the DC Department of Employment Services. Implementing green requirements for many District of Columbia vendors would jumpstart a green products and services market in the District. A green procurement program will have a multiplier effect by keeping spending within the District, in addition to making local businesses more competitive in the national and international market, since green practices are being demanded by numerous types of vendors and consumers. Fortunately, the green procurement best practices for the world's largest buyer, the DOD, are available for the District to use as a template.

Adopt a green business certification program modeled after the Bay Area Green Business Program. The Bay Area Green Business Program certifies businesses and government agencies – taking these entities beyond compliance with state and federal environmental regulations – in green business operations and practices across multiple sectors. This model offers a programmatic approach to bolstering the District's overall drive to create a greener economy and can play a supporting role in reinforcing the effects of green procurement strategies (for services) and green economic development strategies. The Bay Area Green Business Program (the program) is a cooperative program offering technical assistance to businesses and public agencies to not only meet compliance standards for all environmental regulations, but to adopt pollution prevention measures, conserve resources and operate in a more environmentally responsible manner overall. The potential benefits of establishing a **green business program** in the District include:

- Support development and effectiveness of District environmental priorities in procurement policies. If the District pursues environmentally preferable purchasing policies (EPPs), a third party certification system for businesses (services) would enable it to adopt more aggressive requirements for environmentally preferable services.
- Program standards and checklists could be aligned with a federal agency, particularly the DOD, to align environmental procurement policies to enhance service contracting opportunities for District businesses.
- A programmatic tool to support industry attraction and retention (technical assistance on environmental compliance and performance as an incentive). Businesses attracted by such a program are also more likely to observe standards consistent with the District's green economy goals.
- Linkages between green business program knowledge and standards and educational tools for District workforce programs focused on training green collar jobs skills.

Focus Groups: Integrated Research Findings on Green Businesses

Four focus groups were conducted at a focus group facility over the course of summer 2008 in the District of Columbia. Each focus group had approximately eight participants and lasted an hour and a half. A follow-up online survey was sent to the focus group recruitment population. The main findings include:

- *Finding 1: There is little resistance to the green trend.* There was no clear resistance to the green trend in any of the four focus groups, however the importance of District government leadership and incentives was clearly identified.

- *Finding 2: There is variation in comfort with "green" as a term, and as a trend.* Despite the lack of resistance to the green trend described above, many of the participants had different perspectives on the trend.

- *Finding 3: The underemployed need multi-faceted training*. There was debate about workforce development issues in the focus groups, specifically in the focus group with training providers (focus group three). Nearly every employer who participated in the focus groups that employs low- and under-skilled workers expressed concern about finding the right employees they need to be successful.

- *Finding 4: The green trend will create few new jobs, but these jobs will require new skills.* The phrase "green collar job" struck many participants as a vague buzzword. In the online survey (conducted after the focus groups), only 38 percent of respondents said they were "very familiar" with the term, and 10 percent volunteered that the term "doesn't mean anything."

Recommendations from focus groups:

- Include other industries in the dialogue such as high-tech, creative, political and legal, and hospitality
- Use District resources to foster increased dialogue between employers and training providers on a breadth of issues not just green trends
- Develop an education program around sustainability for public schools, training providers, and others less familiar with the green trend
- Integrate green motivation as part of life-skills training programs
- Create strong incentives for people to purchase solar panels and smaller green renovations (like tankless water heaters), since there is little market activity in these areas
- Help publicize the smaller green companies and programs (such as green hauling)
- Create green economic zones where green companies can work collaboratively in a lower-rent, emerging neighborhood
- Avoid the phrase "green collar"—alternatives include "green job," "new green job" or "green retraining"
- Avoid an overpromising of new jobs as a result of the green trend; instead focus on new and different opportunities and retraining the current workforce
- Focus on the positives of the DC area—despite the national economic climate, the District is still a good place to do business, and being green is encouraged here