

REPORT ON ESTABLISHMENT OF  
A GREEN JOBS PROGRAM  
IN SAN ANTONIO

Presented to the Honorable Phil Hardberger, Mayor  
And  
The City of San Antonio

Sustainable Systems, Inc.  
Council for Adult and Experiential Learning (CAEL)

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## Overview

In October 2008, the City of San Antonio contracted with Sustainable Systems to conduct an assessment and make recommendations in relationship to the establishment a Green Jobs Program in San Antonio. The Green Jobs Program can be seen as a way to address the need for job development that will be generated by a successful large-scale Green Retrofit Program and by the green/clean tech businesses that receive investment from a Multi-Tech Venture Fund. Both the Green Retrofit Program and the Multi-Tech Venture Fund are important components in San Antonio's Sustainability Plan.

To accomplish this assignment, Sustainable Systems partnered with a national organization, the Council for Adult and Experiential Learning (CAEL). CAEL is a leading national workforce intermediary with substantial experience designing and implementing workforce programs for cities, regions, states, corporations, and industry sectors.

Sustainable Systems and CAEL made a trip to San Antonio and had interviews with a number of relevant groups to identify what would be needed to undertake a large scale green jobs effort in the San Antonio Area. Meetings were held with Alamo Workforce Solutions, Alamo Community College System, University of Texas at San Antonio, CPS Energy, SAWS, and a variety of City staff and for-profit and not-for-profit employers.

This report looks briefly at the concept of green jobs and green jobs in other areas before addressing the components of a Green Jobs Program. CAEL has a template for sector-based workforce development, which it uses to develop a proposal and a proposed budget for the creation of a Green Jobs Program in San Antonio.

## Green Jobs

According to the New York Times, a green collar economy is “an economy with millions of workers installing solar panels, weatherizing homes, brewing biofuels, building hybrid cars and erecting giant wind turbines. Labor unions view these new jobs as replacements for positions lost to overseas manufacturing and outsourcing. Urban groups view training in green jobs as a route out of poverty, while environmentalists say they are crucial to combating climate change.”

The creation of green jobs addresses many of the key problems currently facing the U.S., i.e. unemployment, the recession, the environmental crisis and climate change, and dependence on foreign oil. Recognizing this, the Obama Administration has made a strong commitment to green jobs creation and named a green jobs champion – U.S. Representative Hilda Solis – as Secretary of Labor.

## Green Jobs Programs in Other Areas

As one of the first green jobs programs in the country, the City of Oakland allocated \$250,000 to an experienced job training organization, the Cypress Mandela Training Center and Laney Community College to fund the Oakland Green Jobs Corps through January 2010. The Oakland program will provide low- and moderate-income residents with training

for jobs such as solar panel installation, energy-efficiency construction and retrofits, and work related to biofuels, such as car and truck maintenance, production and fuel stations.

The Los Angeles Green Careers Training Initiative, the other model already in existence, was developed by The Los Angeles Apollo Alliance in conjunction with the City of Los Angeles Green Retrofits Program. The Green Careers Training Initiative is seeking to create green career ladders in construction, the public sector, public and private power companies and emerging energy industries by (1) connecting low-income inner-city residents to union apprenticeship and community college training programs that prepare them for living wage jobs and (2) providing upgrade training to existing workers within those industries.

### Components of a Green Jobs Program

As an aspect of its Sustainability Plan, it is highly appropriate for San Antonio to establish its own unique Green Jobs Program. Implementation of the San Antonio Sustainability Plan will create a number of opportunities for building the skills of the local workforce, both unemployed and underemployed workers, and will benefit many area employers. In its visit to San Antonio, CAEL considered to what degree the workforce development infrastructure and stakeholder community are prepared to support a Green Jobs Program and to recommend next steps in the implementation of such a Program.

A note about the term “Green Jobs” is in order here as we attempt to create a framework and to take the next steps toward implementation. This term, Green Jobs, is commonly used but ill-defined. In its broadest sense, “Green Jobs” are those which support any form of sustainability. In this sense, a Green Job can be indistinguishable in function, skills, certification, etc. from its non-Green version, except for the type of company where it exists. For the purposes of this overview, we will refer to “Green Skills” as the distinguishing factor, and to workers who require different skills than their non-green counterparts.

From CAEL’s experience in other skills and jobs initiatives, we know that there are a number of steps in building any region’s capacity to develop a workforce characterized by its level of Green Skills, and its ability to support a Green economy. Those are the steps that we were considering during our visit to San Antonio in November, and they include:

- **Defining Industry Sectors in Need of Green Skills.** Currently in San Antonio, the green retrofit, construction and public utilities-related initiatives appear to be the best foundation on which a Green Jobs/Green Skills initiative can be built. Tackling the broader retrofit category of skills—HVAC Installation and Maintenance, Construction, Solar Panel Installation and Maintenance, Landscaping and Utilities (water and power) – will enable the Green Jobs Program to achieve some early successes and will require developing new perspectives on traditional occupations. The Multi-Tech Venture Fund may expand the types of venues, jobs, and skills that would fall under a Green Skills initiative, but at the moment the primary industries in which we recommend a focus on Green Skills are construction, retrofit and utilities.
- **Defining Skills/Careers/Career Pathways.** While the broad categories of relevant jobs are generally agreed upon, the specific positions and roles within those categories of

jobs have only anecdotally been divided between those which require particular Green Skills and those which do not. Prior to initiating skills training programs and skills standards, it will be necessary to identify jobs which require Green Skills, just what those skills are, and how they can best be learned and evaluated. It will also be important to examine the nature of various firms' staffing and the different applications of Green and non-Green Skills; the ways in which individuals can advance from traditionally-skilled workers to Green-skilled workers, including postsecondary degrees and other credentials; and the difference between the opportunities and earning potential of each type of job.

- **Inventorizing the Capacity of the Education and Training Delivery Infrastructure.** Currently, San Antonio's primary workforce training entities with whom we met— Alamo Community College District, Bridges to Work, UT San Antonio — present no offerings aimed directly at Green Skills. While they have offerings in the broader construction and power/utilities fields, the offerings do not yet include components designed to develop or validate Green Skills. Further definition of Green Skills and the employers who require them will allow the education and training providers to incorporate Green Skills into their existing programs, or develop programs specifically designed to teach Green Skills.
- **Creating Skills Standards for Green Jobs.** Skills standards and validation of those standards for retrofit-related green jobs are not widely accepted or recognized — in San Antonio or elsewhere. Green Certification is typically conferred upon the home or the appliance, not the worker who builds, installs or maintains. This void in the national Green Jobs/Green Skills discussion offers San Antonio the opportunity to be a leader in defining Green Skills in a way that directly addresses skills and instructional conditions in San Antonio.
- **Engaging Leading Employers.** Employer representatives who deal with the worker supply and talent/skills issues will be critical informants. To date, there is only casual engagement of those who will benefit from a Green-skilled workforce. Engaging a sample of 5-10 employers representing each sub-sector (plumbing/irrigation, solar, HVAC, power, etc.) and formalizing the skills analysis will enable the creation of baseline skills profiles, skills standards and career pathways.
- **Creating a Leadership Group.** CAEL met with leaders within the academic and public workforce systems in San Antonio. While all were generally supportive of the San Antonio's Sustainability initiative and associated Green Skills possibilities, we did not discover a local "thought leader" group on this topic. CAEL recommends that a Green Skills Steering Committee be convened under the auspices of the Mayor's Office and that it include, at a minimum, one or two prominent business leaders, one or two elected officials, and executive leadership from the two and four-year institutions.
- **Identifying Investors.** There are a number of local and national foundations (AT&T Foundation, Living Cities), as well as federal programs, which can be approached for investment in Green Skills initiatives in San Antonio. Workforce Investment Act funds, US Department of Labor discretionary funds, and funding through the Texas Workforce

Commission may be leveraged for Green Skills training. However, program architecture and delivery partnerships will need to be developed prior to soliciting funds.

## Template for Sector-Based Workforce Development

CAEL has created a template for the process that needs to be undertaken in any region that wishes to develop a successful sector-based workforce and talent development program. This process template has been referred to above, and includes:

1. **Convening a Leadership Team/Steering Committee.** High-level leadership will draw attention and funding to the effort. A steering committee on green jobs may be a subset of a broader leadership team, or may stand on its own.
2. **Identifying a Workforce Intermediary.** It is unlikely that any single institution or agency will be able to execute this initiative on its own. Therefore, some intermediary project management/partner management function is crucial. While it is ideal if such an intermediary is drawn from the local region, such as, for example, Alamo Community College, a neutral outside entity like CAEL could also perform this function if there is no local agency that is appropriate for taking on the relevant responsibilities.
3. **Developing Career Pathways Information for the Region.** This will include assessing emerging sector jobs and associated skills, credentials and wage levels. Occupational and skills targets will need to be identified so the recruitment, assessment and training functions can be created. Development of a career pathways inventory will involve: national research on the sector; local employer interviews/focus groups; and survey research.
4. **Inventorying Program Offerings Among Education and Training Organizations and Institutions.** It is important to identify the education and job training programs that exist within the local area, and to determine their capacity to develop the skills needed to succeed in the sector—based on the career pathway information that has been developed. This part of the process should determine which existing instructional programs can be modified to fit the standards of the sector and which need to be uniquely developed. Some assessment of delivery capabilities (evening, on-line, community-based, etc.) will also impact to what degree the programs are useful.
5. **Inventorying Funding Opportunities.** Some inventory and analysis of workforce and technical education funding being used in the region should be conducted to determine both the size of effort that is currently underway, and to develop a strategy to leverage new funding to support the effort.
6. **Assessing Existing Talent Development System Capabilities.** It is crucial to assess the degree to which existing instructional offerings, funding agencies, assessment resources, participant recruitment mechanisms, placement functions and worker support functions are able to work together.

7. **Project Management.** The workforce and talent development delivery community is often misaligned and difficult to efficiently mobilize. It will be necessary to develop project plans that align well-defined target opportunities, appropriate instruction and counseling, applicable assessments/standards, target populations, effective delivery mechanisms and partners.
8. **Evaluation/Quality Control.** It is unlikely that all elements described here will operate without some challenges. Regular reflection on the broad program model as well as the individual aspects of it will allow for continual improvement of the model.

CAEL has developed a proposal for services that will provide San Antonio with the basic information needed to create a Green Skills focused Green Jobs Program. CAEL's proposal addresses items 3, 4, 5 and 6 of the above. While CAEL is engaging in this work, we can also be assisting San Antonio to review the Leadership, Intermediary, Project Management and Evaluation functions – specifically whether there are entities in the region that are well-positioned to perform and support those functions.

## Proposal

CAEL appreciates the opportunity to collaborate in designing and implementing a Green Jobs Program in San Antonio. We believe that the development of San Antonio's Sustainability Plan, the Multi-Tech Venture Fund and Green Retrofit Program position the city well to experience an expansion of Green Jobs opportunities.

In order to prepare the City for implementation/launch of a successful Green Jobs Program, CAEL recommends that the City of San Antonio and its partners in the Sustainability Plan first define the career pathways and the education and skill requirements for various categories of green jobs—and that this be done with employer partners who can validate skills and competencies needed for various jobs and pathways; benchmark this proposed initiative against other national models for green workforce development; inventory the education and training resources in San Antonio that can meet these skills needs or have the ability to build capacity; and identify both regional and national funding sources that might support the initiative.

CAEL proposes the following steps to prepare San Antonio to link the Sustainability Plan to job and career opportunities:

### **Prioritize 2-3 Sub-Sectors or Clusters in Which to Launch the Green Jobs Program.**

CAEL will work with sustainability partners to identify job categories, skills needed and career pathways in several Green Jobs sub-sectors or clusters. Some possibilities include:

- Home Rehabilitation, retrofitting (existing homes).
- Solar power (solar manufacturing, installation and maintenance).
- Wind power (manufacturing, installation and maintenance).
- HVAC Installation and Maintenance.
- Construction (new residential or commercial).
- Landscape/irrigation.

- Waste management.

### **Identify the Positions Within each Cluster Impacting the Business’ “Green”**

**Character.** Many of the skill sets required of workers in the target clusters will remain the same regardless of the degree to which the firm pursues and performs Green work. Some positions and their respective skill sets, however, will need to change in order to enable the workforce to meet Green objectives. For example, the Green aspect of home building will not likely impact how carpenters perform their jobs, but a focus on using sustainable building materials will require purchasing agents to adjust their work and skills.

CAEL will interview a sample of employers (7-10) within each target cluster to identify the functions and positions which impact whether the firms can pursue Green projects and conduct their business with an emphasis on sustainability. Some skill areas to consider include:

- Systems Design (solar, HVAC, irrigation, etc).
- Installation, repair and maintenance of new sustainable systems.
- Solar.
- Plumbing.
- HVAC.
- Construction Project Management.
- Integration of disciplines to enhance sustainability (such as integrating landscape design with irrigation design and installation).
- Purchasing.
- Consumer education, public education.
- Achieving green certification.
- Auditing/Evaluating homes’ efficiency.
- Green-driven Sales/marketing (remodeling for energy efficiency, efficient appliances, etc).
- Interfacing with utility concerns (CPS Energy, SAWS).

**Define Job Requirements.** Once the key positions within the target clusters are defined, CAEL will research the skills and credentials that validate competency in the particular roles. To ensure that the skills identified reflect the realities of San Antonio employers, CAEL will convene a small, representative employer committee for each cluster to do the following:

- Validate that the positions targeted impact sustainability.
- Determine the educational and experience requirements required beyond non-green versions of the position.
- Define salary ranges of the target positions, emphasizing the earning differential between traditional and green-skilled workers.
- Create employment growth projections in green disciplines (perhaps validated by larger survey).

**Undertake Education/Training Research.** Once positions, skills and requirements are defined, CAEL will review the current offerings at Alamo Community College District, the

University of Texas at San Antonio and other area education and training institutions. By reviewing current offerings, CAEL will:

- Inventory existing workforce programs at area schools.
- Determine which existing programs address green topics.
- Begin the conversation with educators around incorporation of sustainability within existing programs.
- Determine the level of employer interface among area education and training providers on green disciplines, topics.

**Design a Green Jobs Program:** Based on the research that has been completed, CAEL will design a pilot Green Jobs Program. CAEL will use the information about employment needs in the target clusters and education and training resources to propose the elements of the Green Jobs Program, including:

- Recommended adjustment of existing educational and/or addition of new skill development opportunities (courses or modules) to enable San Antonio residents to meet the skill needs of employers providing Green Jobs.
- Development of strategies for information and outreach, career counseling, and other non-instructional features that will enable the recruitment and success of participants.
- Designation of a Project Management entity to ensure alignment of Jobs Initiative partners and other elements of the Sustainability Plan.
- Development of a Process Flow diagram showing how individuals, education and training institutions, community organizations, the City of San Antonio and other stakeholders will interact to leverage the Green Jobs opportunities and maximize the benefit to individuals and employers.

**Benchmark this Proposed San Antonio Green Jobs Program Against Other Green Workforce Development Initiatives.** CAEL will identify other areas of the country where Green Jobs Programs are underway. By looking at 3-5 other regions, CAEL will help San Antonio to advance towards skill development and employer growth more quickly. CAEL will ask the following questions in order to draw lessons from other regions:

- What training and certification is available to validate green skills.
- How other areas have assessed job opportunity, job growth.
- How other areas have prioritized particular sectors, employers, jobs or job categories.
- How other areas have engaged employers.
- “Green” and traditional employers with green initiatives.
- How other areas have engaged education and training providers.
- “Green” certificates, credentials.
- How other areas have funded their initiatives and which national funders have emerged as supporters of Green Jobs development.
- Where within the other areas’ stakeholder groups the talent development initiative is housed (Workforce System, Community College, K-12, Chamber of Commerce, etc) and what lessons from those arrangements can be used to enhance San Antonio’s efforts.

**Complete Funding Research.** CAEL will review potential funding opportunities that can help to further develop and implement the San Antonio Green Jobs Program. CAEL's research will involve:

- Identification of local, state and national philanthropic and corporate foundations who have invested in other Green Jobs Programs.
- Identification of local, state and national philanthropic and corporate foundations who invest generally in workforce development (with an emphasis on those who invest in Texas and in San Antonio).
- Review of ACCD, UTSA and other area education and training programs' investors and research on those funders' historical, stated or potential interest in Green Jobs Programs.
- Development of a template funding proposal that can be customized for requests to philanthropic, corporate or government funders.

### Fees and Expenses

Total costs for this project will be \$88,600. Fees and expenses will be paid to CAEL as an independent contractor.

Fees and expenses will be paid to CAEL as follows: \$30,000 at the signing of an agreement; up to \$3,600 in expenses as they occur; \$25,000 at the completion of the design of a Green Jobs Program for San Antonio; and the balance owed at the completion of the agreement.

## Appendix A: The Council for Adult and Experiential Learning (CAEL)

CAEL is a national leader in the fields of adult learning and workforce development. Since its founding in 1974, CAEL has been an active partner with government, business, labor and higher education, as well as community-based organizations, in addressing employee and learner skill development to promote individual growth as well as to respond to existing and emerging community workforce and economic development needs.

CAEL's experience includes:

- Assisting states and cities to develop blueprints for change in workforce development and lifelong learning—and then working with colleges and industries, businesses, unions and workforce agencies to implement those changes on a regional and local basis.
- Documenting employer demand for specific competencies and skills in emerging sectors, and integrating national career development strategies with local realities.
- Designing and managing multi-state career pathways projects such as the USDOL-sponsored Nursing Career Lattice project.
- Developing talent-development asset inventories and gap analyses to address emerging industries' talent needs.
- Organizing and managing national industry-led, on-line learning initiatives to build the skills of current workers and the emerging workforce.
- Initiating public policy projects that seek to expand federal, state, and local training programs, change state and federal policy related to higher education, workforce development and economic development, and develop new funding models for lifelong learning.
- Providing consulting to cities and states on assessment of employer workforce skill needs, assessment of workforce skill levels and the gap between worker skill levels and employer needs, and assessment of talent development and delivery systems.
- Facilitating productive partnerships among employers, education and training programs and public workforce agencies.

With a staff of 131 and a membership of over 700 colleges, universities, corporations, labor unions, associations, and individuals, CAEL is headquartered in Chicago and also maintains offices in Denver, Philadelphia, Norwalk, Connecticut; and New York City.