2010

Connecting with Clean Tech CEO's: Roundtable Discussion Findings

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December 6, 2010

GREEN CAPITAL ALLIANCE
Growing California's Clean Tech Center

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Introduction

The Green Capital Alliance is a partnership of education and research institutions, workforce and economic development organizations, utilities, local government leaders and private businesses striving to make the Sacramento region a hub for the clean energy technology industry cluster. In order to guide the work plans of these partner organizations, the Green Capital Alliance has made a practice of convening local clean technology company leaders to assess opportunities and better support their industries, stay in tune with the working realities on the ground, and make sure local education and workforce training programs continue to meet their needs.

Regional leaders want to support growth in the number of companies and jobs across all areas of the green economy, paying close attention to the segments of the industry cluster that represent existing strengths for the region and take advantage of our unique assets. The Green Capital Alliance has been supporting establishments with primary business activities that provide products or related services (e.g. research and development, management/compliance, installation/maintenance, advocacy/awareness, etc.) focused on producing clean energy, conserving the use of energy, or creating more efficient vehicles and buildings.

In 2010 the engagement of local company leaders was particularly important because regional partners have been implementing millions of dollars in stimulus funding from the American Recovery and Reinvestment Act (ARRA) of 2009, and two key planning efforts focused on boosting the green economy were underway.[1] Company leader input was used to guide the

[1] An overview of the ARRA stimulus funding focused on clean technology in the Sacramento Region is provided in the Green Capital Alliance's five-year progress report, *Advancing the Clean Energy Economy in California's Capital Region*: http://www.valleyvision.org/PDFs/GCAReport2010_Nov.%2029%202010.pdf

development of the region's Clean Energy Sector Strategy, funded by the California Workforce Investment Board as part of a statewide, multi-agency focus on supporting clean technology industry clusters at the regional scale. Additionally, our learnings from the CEO roundtables helped shape the high level strategies emerging from Mayor Johnson's Greenwise Initiative.

The Green Capital Alliance convened CEO roundtables twice before—in 2007 and 2009—meeting with a total of 72 company leaders[2]. This time around the sessions were organized slightly differently. Rather than hosting luncheons with companies from a variety of green industries, we designed each gathering to elicit input from individual segments of the larger green industry cluster. GCA hosted six roundtables covering the following sectors:

- Green Building
- Solar (2 sessions)
- Smart Grid
- Alternative Fuels and Vehicles
- Biomass

Green Capital Alliance staff also completed five one-on-one interviews with CEOs to gain insights on the local companies in the energy efficiency industry.

Significant changes have been underway in the clean energy technology "ecosystem" at the local, state and federal scale since the 2009 roundtable sessions. There have been great news stories like SMUD's success at securing $126 Million in ARRA funds for Smart Grid infrastructure, paired with nearly $20 Million to jumpstart a major home retrofit program. Likewise, Mayor Johnson's Greenwise Initiative shined a spotlight on the region's clean technology companies and further elevated their importance in economic development planning. At the same time there have been big disappointments, like the federal shutdown of Property Assessed Clean Energy (PACE) financing districts that would have enabled more building owners to make energy-saving investments. The loss of PACE coupled with a sustained downturn in the housing sector has stressed many companies in the green building industry. Considering these and many other realities, the Green Capital Alliance staff and partners were interested to hear local companies' perspectives on the opportunities and challenges facing the region's businesses.

Sponsors and Staffing

The Green Capital Alliance would like to thank Sacramento Employment and Training Agency, Los Rios Community College District and Bank of America for supporting the 2010 CEO roundtables. Their financial support made it possible to expand the Green Capital Alliance staffing level and broaden the scope of input gathered from company leaders. We are also grateful for our hosts who donated meeting space, including: University of Phoenix, City of

[2] Copies of the 2007 and 2009 CEO Roundtables reports are available on the Green Capital Alliance website: http://www.greencapitalalliance.org/news.htm

Roseville Utility Exploration Center, Sacramento Municipal Utility District, the Sacramento Area Commerce and Trade Organization, and the Sacramento Employment and Training Agency. Valley Vision staff members Julia Burrows, Emily Dransfield, Suzanne Linville and Kristine Mazzei planned and facilitated the CEO roundtables and interviews.

Discussion Format

The 2010 roundtables were focused on individual segments of the clean energy technology industry cluster to formulate a more nuanced understanding of how economic, political and social realities are impacting certain types of companies. The Green Capital Alliance hosted six roundtables: Green Building, Solar (2 sessions), Smart Grid, Alternative Fuels and Vehicles, and Biomass. For Energy Efficiency Technologies, staff conducted individual interviews with leaders from five local companies.

Meetings were convened for two hours over breakfast at each of the host locations, and they typically involved approximately 15 people (a combination of company leaders and Green Capital Alliance staff and partners). The agendas emphasized the desire to hear from company leaders, so the majority of the time was spent on posing the roundtable questions and facilitating the resulting discussions.

In addition to addressing the questions listed below, a small portion of each meeting was allotted for Green Capital Alliance partners to share information about their programs and services related to economic and workforce development, and to provide an update about delays to implementing a regional PACE program.

CEO Roundtable Discussion Questions

The following questions served as a general outline for the roundtable discussions and interviews, but oftentimes there was not enough time in the meetings to cover each one of them. In that case, Green Capital Alliance staff focused on gathering feedback at a higher level—identifying economic development opportunities and challenges, and then gathering specific input on workforce development needs.

Questions:

1. Recognizing the economic and political climate has changed recently, what are the biggest opportunities and challenges facing clean energy businesses right now?

2. As you look forward to the next 5 years what do you expect your workforce needs will be?
    - Do you train your employees in-house, or do you hire employees that are already trained?
    - Are you having difficulty finding qualified workers? Do you have certain training needs that are not being met by local/regional organizations?
    - Have you hired recent graduates of green building courses and are they meeting your needs? If no, why not?
    - Would you be interested in meeting with education and training providers to give input on curriculum for green building programs?
    - Are you familiar with wage subsidy programs that can reduce your salary costs?

3. What can local government do to better support your growth and development (i.e. developing supportive policies, serving as the trial grounds for new products, easing permitting and regulatory barriers, etc.)?

4. How do you think we could support the expansion of the regional market for clean tech products and services?

5. Do you have any advocacy recommendations for legislation at the state and federal level that the Metro Chamber and other partners could help you to support?

6. What do you think the Sacramento region should do to become the hub for clean technology businesses?

Conversation Outcomes

The Green Capital Alliance staff would like to thank the company leaders who participated in the 2010 roundtables for being open and honest with their observations, and staying fully engaged in the process. One of the most important outcomes from this effort can't be measured—the relationships that are initiated and grow between companies and our regional partners. These contacts sustain the value of the roundtable sessions throughout the year, and add another personal layer to business retention and expansion efforts in the region.

Of course, the input from the meetings also has tremendous value to Green Capital Alliance partners. The following summary provides an overview of key discussion outcomes, grouped into bulleted lists for each sector and focus area. This information will be shared with leaders from the region's economic and workforce development organizations and other Green Capital Alliance partners to help determine our work plans for 2011. Not surprisingly, concerns about the economy, difficulty accessing capital and the resulting impacts on all levels of business activity were topics raised at each of the roundtables. Fortunately this input is tempered with thoughts on opportunities, and guidance for how we can best advance these ideas.

General Feedback

- Access to capital continues to be a challenge across all sectors. Several company leaders reported initiating staff reductions during the past year and only a small percentage of businesses are experiencing growth. Business owners also reported difficulties accessing traditional methods of financing to hire new employees or purchase equipment.

- Slow moving federal stimulus programs were also a challenge for companies since customers are not initiating projects due to anticipation of future financing options. Difficulty answering customers' questions about the programs and a lack of coordination between program marketing and public education was also noted.

- Although there has been lot of activity around growing the region's clean technology industry cluster, this is not a well know feature of the Sacramento region to those who live outside the area. Additional efforts to gather data, articulate our accomplishments and market our strengths are needed.

General Workforce Related Feedback

- A small number of companies experienced growth and hired new employees during the past year. Most of these positions were in sales and marketing, procurement and administration. Participants in the Green Building session also identified potential for an increased demand for HERS raters as a result of SMUD's Home Performance program and a need to train people to fill these positions.

- Although many company leaders expressed a desire to hire and train new employees to meet potential demand, they are currently focused on retaining existing employees and need resources to retrain incumbent workers. Federal stimulus funding for the region's workforce development programs has been largely focused on training unemployed workers.

- Company leaders across all sectors reported that they have successfully recruited employees from the Bay Area to fill local positions. This practice allows local companies to hire skilled workers who need little training, and the lower cost of living makes Sacramento an attractive place to live.

- Company leaders who attended the Smart Grid and Alternative Fuels and Vehicles sessions noted that this region has an opportunity to create a highly skilled clean tech workforce. A strong base of skilled employees who are familiar with new and emerging technologies could be used as a marketing and business attraction tool for the region.

Alternative Fuels and Vehicles

- The Sacramento region has a solid foundation to develop the necessary infrastructure and incorporate new technologies related to alternative fuels and vehicles. There is an abundance of available space available to build charging and filling stations compared to more densely populated areas like Los Angeles and San Francisco. Sacramento is also considered an early market community, which opens the door for receiving funding to pilot new technologies and develop the local infrastructure.

- Finding the funding needed to develop hydrogen fueling stations is a challenge. Although alternative fuel vehicles have been extensively developed, more fueling stations are needed to bring a significant number of vehicles to market. Station owners need to see the business case for selling hydrogen, and consumers need to see that this type of vehicle has a practical range.

- Additional work is needed on the tax rebates and incentives available for purchasing alternative fuel vehicles. Developing incentives and rebates for local government fleet upgrades would be beneficial, and offering federal government incentives beyond the first 200,000 vehicles sold could also help increase market penetration.

- Changes to vehicle emission standards have created a need to bring industry workers up to speed with the new technology. Los Rios Community College District has trained over 80 people through its programs, including staff at PG&E, CalTrans and Regional Transit. Although hiring was slow for the first two years, several companies recently approached Los Rios faculty to interview program graduates for open positions.

- Infrastructure upgrades and building public charging stations will require skilled construction workers, electricians and utility line workers. There is an immediate need for contractors to install home charging stations in conjunction with electric and hybrid vehicle rollouts. Los Rios instructors also noted that electric drive expertise is a key skill to incorporate into alternative fuel and vehicle training programs.

Biomass

- There is great potential for biomass investment and job creation in the Sacramento region. Source material, whether forest biomass, organic waste or agricultural waste is plentiful. Federal grants have funded an initial investment in Placer County forestry biomass and funding is also possible through Department of Energy and Department of Defense in the future. Currently, high focus on solar and wind, but biomass has great potential for Sacramento region.

- The technology already exists to convert waste to biomass for energy and other products. Sacramento is home to several entrepreneurs who have found the best technology for anaerobic digestion and high temperature gasification and are looking to commercialize the technology here. This will have economic and environmental benefits as we create new jobs in this industry and reduce the amount of waste going to the landfills.

- Regulatory requirements and a difficult permitting process in California for dry waste, thermal chemical and gasification processes drive companies to other states. Support for developing these technologies and providing financial assistance for a third party process verification would help grow the industry locally.

- Legislation, specifically AB 222, would have significantly helped in clear definitions for gasification not being defined as incineration. Reintroduction of this legislation, written by a technical person, would have greatly assisted the biomass industry. Assistance from Valley Vision and the Green Capital Alliance to advocate for this legislation would be appreciated.

- Legislation for tax credits for biomass would also be a jumpstart for the biomass industry. Need same attention as wind and solar and need to add this to the federal advocacy agenda.

- Infrastructure for waste hauling is an issue. Currently, haulers do collect separated green waste and a small amount of restaurant food waste for processing versus burying in landfill. Need to continue discussions on infrastructure to support biomass industry from hauling to locations for biomass processing facilities in region.

- There could be increased demand for truck drivers and waste haulers if a waste to energy conversion facility is built in the region. As demand for biomass and waste to energy conversion increases, there will also be a need for highly skilled workers to manage the technical processes.

Energy Efficiency Technologies

- The new California Green Building Code could help stimulate the market and increase business opportunities for companies that sell or install energy efficiency products.

- Including local purchasing agreements for energy efficiency products in City and County contracts would help stimulate the market and keep money in the regional economy.

- The region needs to attract more venture capital and start up financing to support the development of new technologies and bringing those products to market.

- Company leaders reported that the region has a stable workforce and it is not difficult to locate and hire skilled workers to fill open positions. Employers are looking for general transferrable skills and a solid work ethic.

Green Building

- Prevailing wage and reporting requirements continue to be a challenge with many ARRA funded projects, especially those focused on home weatherization for low income families. Many contractors opted out of bidding for the work due to the time involved with tracking hours and categorizing the jobs performed on each work site. Additionally, agencies that received ARRA funding struggled to complete program reports on time due to conflicting deadlines between state and federal oversight agencies.

- Consumers are wary about borrowing or spending money in the current economic climate and businesses have experienced difficulty selling their products. Even with available financing options, consumers are currently more inclined to save money than to pay for home energy efficiency retrofits or solar installations.

- SMUD's Home Performance Program is expected to stimulate demand for energy efficiency retrofits, and company leaders emphasized the importance of providing training and education opportunities for the contractors who will market the program to homeowners.

- Company leaders identified the need for a region-wide clearinghouse of reliable, verified training resources (by topic, by type of certification, by location). Employers want a simple, coordinated roadmap outlining the training process and assurance that training programs from different sources are synchronous.

Smart Grid

- Smart Grid deployment will provide an opportunity for innovators to develop and test products, work through challenges with new technologies and bring their products to market. This unique characteristic of the region could be leveraged to attract and retain intellectual capital, and it will be important to develop a solid marketing strategy.

- Developing and integrating the technologies that will interact with the Smart Grid provides and unprecedented opportunity for collaboration among local companies.

- Smart Grid deployment will create a need for skilled employees, especially customer service representatives. General skills that are adaptable and critical thinking skills will be essential at all levels as the demand for workers increases in this emerging employment area.

- The California Smart Grid Center at Sacramento State University is serving as the lead agency for a statewide workforce development consortium, which will develop a training pipeline from the certificate level through the doctorate level. There is an identified need to train for current Smart Grid related jobs and to create an educational pathway for future workforce needs.

- Electrical engineering is a foundational degree for Smart Grid engineers, and existing engineers can be retrained in seven to nine months. There is an estimated 15-year knowledge gap in the field and a need to develop additional instructors who can teach the new generation of employees entering the workforce.

Solar

- Failure to launch a regional PACE program negatively impacted the solar companies that hired employees to meet the program's anticipated demand and subsequently had to lay people off. Other companies found the program's approval process cumbersome and lost potential customers during the 30-day waiting period for financing approval.

- With different costs and processes among jurisdictions throughout the region, permitting for solar installations continues to be a challenge. Several business owners indicated that creating consistency with permitting and training counter staff to understand solar would improve the customer and contractor experience.

- Incentives were identified as a key ingredient in building the solar industry, and homeowners need more education to understand the benefits of solar and the existing incentive programs. Marketing efforts associated with SMUD's Home Performance Program are expected to help local companies.

- In general, solar business owners are able to find skilled workers to fill open positions. One company reported difficulty with finding candidates with a clean driving record. A handful of solar companies reported significant growth and hiring new employees.

Regional Policy Support

- Create consistency permitting fees and processes consistent throughout the region and make the overall process less onerous for the contractor and the property owner.

State and Federal Policy Support

- Continued grants, federal planning and policy support is needed for clean energy technologies. Company leaders are concerned about what will happen when the federal stimulus dollars are expended.

- Several company leaders indicated that a federal Clean Energy policy would help them to continue developing technologies and expand their businesses.

- Address the challenges associated with implementing and managing ARRA funded energy efficiency retrofit programs that are created by Davis-Bacon and prevailing wage requirements.

- Additional effort from State government to support the local economy is needed.

Education and Awareness Needs

- There is a general need to educate and prepare the community to use new technologies, and specific needs in the following areas:
    - Smart Grid security and privacy concerns
    - Range and expanse concerns for alternative fuel vehicles
    - Making the business case for solar
    - Economic and comfort benefits of energy efficiency retrofits
    - Benefits of biomass and waste conversion

- Contractors expressed a desire to be involved in developing incentive and rebate programs, helping to identify processes improvements and finding ways to simplifying the customer's experience.

Next Steps

The input gathered through the CEO roundtables continues to be a key source of information that informs the work plans of both the GCA and its partners. These conversations will shape the strategic planning efforts implementation of initiatives like the Clean Energy Sector Strategy and Greenwise that will focus on growing the clean technology industry cluster. Going forward, the Green Capital Alliance will continue tracking and sharing updates about our progress through our e-news, the website and ongoing public events.

Attendees

The following table provides an overview of the roundtable meeting attendees.

Partner Organizations	Companies
Raquel Arata, Los Rios Community College District	◈ Jim Alves, SMUD
Meg Arnold, SARTA	◈ Kevin Anderson, Gridsense
Panama Bartholomy, California Energy Commission	❍ Mike Bachand, CalCERTS
Bernard Bendinger, Bank of America	▲ Tobias Barr, UC Davis PH+EV Research Center
Merwin Brown, California Institute for Energy & the Environment	✱ Larry Bawden, Bloo Solar
Bob Burris, SACTO	❍ Jim Bayless, GreenBuilt Construction
Julia Burrows, Valley Vision	❍ Kevin Beck, Build It Green
Terri Carpenter, SETA	❍ Mark Berman, Davis Energy Group
Dave Defanti, Sacramento County	◆ John Bissell, Micromidas
Doug Dransfield, Bank o f America	✢ Larry Buckle, Organic Energy Corporation
Emily Dransfield, Valley Vision	✱ Greg Brehm, OPDE
Bruce Dravis, Downey Brand	◈ John Broughton, Frontier
Chris Flores, Office of Congresswoman Doris Matsui	◆ Bob Bruns, eZE System, Inc.
Jennifer Frei, University of Phoenix	◆ Casey Call, Green Light Solid State
Phil Garcia, Sacramento State University	◈ Margarita Colmenares, Think Verde
Pedro Gomez, California Energy Commission	◈ Jim Detmers, Former C.O.O. California – ISO
Mike Goodrich, Los Rios Community College District	▲ Catherine Dunwoody, Fuel Cell Partnership
Bernadette Halbrook, Sacramento State University	◈ Eric Freund, SureWest
Brandon Ida, Office of U.S. Senator Barbara Boxer	❍ Jack Frost, Design It Homes
Robert Johnson, Cosumnes River College	◈ Harold Galicer, SeaKay
Kathy Kossick, SETA	✱ Jim Gragg, Solarecity Electric
Rick Larkey, North State BIA	❍✱ Jason Hanson, Sierra Pacific Homes
Matt Mahood, Sacramento Metro Chamber of Commerce	✢ Greg Hayes, Clean World Partners
Suzanne Linville, Valley Vision	✱ Jurgen Krehnke, SMA America
Kristine Mazzei, Valley Vision	◈ Paul Lau, SMUD
Cris McCullough, Los Rios Community College District	◈ Lloyd Levine, Filament Strategies
Robert Miller, ETP	◈ Emir Macari, California Smart Grid Center
Panda Morgan, Los Rios Community College	✱ Luke Mawhinney, Sun Edison
	◈ Ruth McElhinney, SMUD
	❍ Luke Miller, Solar Hut/Alternative Electrical Systems
	❍ Jim Mills, SMUD
	◆ Craig Morrison, Autocell Electronics
	✱ Ed Murray, Aztec Solar
	✱ Mark Nava, PG&E
	❍ Jodi Newman-Cordone, SMUD
	▲ Mike Nicholas, UC Davis PH+EV Research Center

District Dennis Morin, Sacramento Area Electrical Apprenticeship Nick Mueller, Valley Vision Thou Ny, Department of Labor James Pardun, Sacramento County Glen Porter, Los Rios Community College District Robin Purdy, SETA Yvette Rincon, City of Sacramento Gary Simon, SARTA JD Stack, California Smart Grid Center Paul Tavernia, Small Business Administration Dan Throgmorton, Los Rios Community College District Tara Thronson, Cleaner Air Partnership Suresh Vadhva, Sacramento State University Christine Welsch, SETA	◈ Mickey Oros, Altergy Systems ◈ Barbara Paitich, Terranova Scientific ◈ Ron Paitich, Terranova Scientific ◈ McLean Pierce, California Lighting Technology Center ❍ Elizabeth Redman, Efficiency First ✱ Al Rich, SolarRoofs.com ◈Dave Sanders, World Bridge Partners ✱ Eduardo Saucedo, Solera Power Corporation ✢ Dave Skitich, Atlas Disposal ✢ Brett Storey, Placer County Biomass Program ◈Alan Suleiman, SMUD ✱ Holli Tamas, Granite Bay Energy ❍ Toni Turbull, CalCERTS ◆ Peter Van Deveter, Synapsense ◈ Stan Van Vleck, Van Vleck Ranch ✢ Bill Walden, Technikon ▲ Craig Weckman, American River College ◈Henrik Westergaard, Smart Grid Billing ❍ Rick Wylie, Beutler

❍ Green Building Roundtable – April 13
✱ Solar Roundtables – August 10 and September 9
◈ Smart Grid Roundtable – September 28
▲ Alternative Fuels & Vehicles Roundtable— September 29
✢ Biomass Roundtable – October 5
◆ One on One Interviews