

# sarta CleanStart Progress Report 2010



## Sacramento Region – A California Clean Tech Leader

Recent data supports the success of CleanStart's vision of the region becoming a Clean Tech powerhouse. An independent organization, Next 10, systematically tracked the most recent data available on green jobs and concluded that our region was the statewide leader in green job growth, at 87% between 1995 and 2008. This tops the Bay Area and the San Diego regions as the percentage growth leader. Statewide green jobs increased 36% or 42,000 positions in the same period, while the overall increase of total jobs was 13%. The report showed a total of 13,000 Clean Tech jobs in Sacramento. The challenge now is to keep the recent successes coming.

*The full report, 'Many Shades of Green', can be downloaded at [www.next10.org](http://www.next10.org).*

### Advances Continue: Many Other Positive Signs

We are pleased to report some great progress in 2009.

- Over \$130 million in Clean Tech grant funds were awarded in the region
- Twenty new Clean Tech businesses emerged
- Ten start-ups were mentored by SARTA
- The Region was recognized as the 7th most "environmentally smart" city in the US by the Natural Resources Defense Council
- Two successful networking and showcase events increased attention and activity around Clean Tech in the region

All of this has occurred against a backdrop of both good and bad news for the Clean Tech industry globally and statewide.

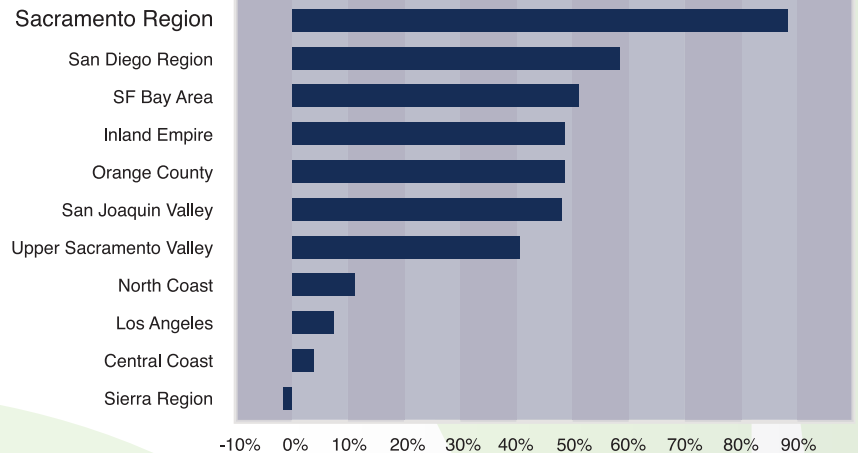
### Global Clean Tech Investment Momentum Slowed but not Lost

Clean Tech continues to be a popular segment for investment. However, the down-turn in the global economy that began in 2008 did take its toll. Clean Tech investing is outpacing investment in both biotech and IT. For 2009, the estimated global venture investment in Clean Tech declined from 2008 totals, and did not quite equal 2007. The investment in the last half of 2009 far outpaced the first half, giving evidence that the momentum is coming back. The availability of stimulus

money for Clean Tech (over \$50 billion), along with the extension of renewable tax credits and higher regulatory requirements for Utilities to purchase clean energy, have all attracted substantial private capital. New Clean Tech venture funds were launched in 2009 adding over \$2.5 billion in new capital for this sector.

Another part of the Clean Tech trend is an increased interest from Utilities to buy renewables and their willingness to finance projects through direct investment and power purchase agreements. The total amount of capital invested through public shares and project finance worldwide exceeded \$75 billion in 2009. IPO activity returned in the last half of 2009, with A123 Systems (lithium-ion batteries) raising the largest amount at \$380 million.

California Green Job Growth  
1995-2008



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Clean Tech is adding employees faster than most other sectors at 9% growth per year. In the US, there are now 770,000 jobs in this field; almost as many as in telecom. In California, there are an estimated 160,000 jobs in Clean Tech. While there may have been some contraction in this sector in the past year, the activity level remains high, keeping the sector at the head of the pack for both job and new business growth.

## Bright Signs in California for Clean Tech Sales

While the state has more than its share of economic woes, the drive behind the expansion of clean tech remains strong and reinforces CleanStart's goal to create thousands of new jobs.

California approved a \$3.1 billion Energy Efficiency Program for ratepayer-based spending by Utilities, the largest commitment ever made. Within this new program is \$175 million in funds for innovative programs that deliver zero-net energy homes and commercial buildings. This supports to 64 cities, counties, and regional agencies with over \$260 million for local efforts targeting public sector building retrofits and leading edge energy efficiency opportunities. This is in addition to the \$500 million in federal stimulus funds allocated to the California Energy Commission and to local agencies for clean energy; a significant opportunity for our Region!

In addition, California is emerging as a center for new automotive technology with the likes of Fisker Automotive and Tesla Motors. Fisker Automotive, in Irvine, landed a \$528 million loan from the DOE to develop two lines of plug-in hybrids that will reportedly save hundreds of millions of gallons of gasoline and offset millions of tons of greenhouse gas emissions by 2016. Tesla Motors in San Carlos has been delivering its sports car and is well along in developing its 4-door sedan version, both based on an all-electric technology. This activity will create new local vendors to supply these manufacturers.

Driving greater attention to auto efficiency and biofuels, the California Air Resource Board released its rules on low carbon fuels and implemented AB 32. These rules are the first in the nation intended to lower the carbon intensity of auto fuels by 10% by 2020. In response, a significant investment in low-carbon fuel businesses can be expected.

In the realm of Clean Tech/Clean Energy the Governor signed two important orders. In September, the Governor signed an Executive Order increasing to 33% the amount of electricity the Utilities will need to buy from renewable sources; the highest percentage in the nation. This was followed by the signing in October of a law expanding a self-generation incentive program to support wind, fuel cells and co-generation.

## Company-Building Successes

The objective of our efforts is to build a robust regional Clean Tech economy. In order to succeed we need to see not only more Clean Tech companies but more successful ones. In the past year 20 new "fresh faces" have been added to the list of Clean Tech companies in the region, balancing out the number we lost, and keeping the region at 98 Clean Tech companies.

Several companies have demonstrated success in public markets and gained significant investment. There are now three public companies in the region: Solar Power, Inc. (SOPW.OB), Octus Energy (OCTI.OB) and Pacific Ethanol (PEIX).

- Solar Power, Inc., in Roseville, is making a splash with its 3.6 MW solar installation at Aerojet, soon to be upgraded to 6 MW. This installation will be the largest single industrial solar site in the country. The company has recently crossed over to positive earnings and is gathering momentum with a \$50 million market cap.
- Pacific Ethanol (PEIX) has suffered a reduction in sales but still sold \$390 million in product in the past year, and now has 150 employees.
- Octus Energy is currently putting together an energy efficiency business and has acquired its first company in this sector.

## Major New Clean Tech Grants for the Region

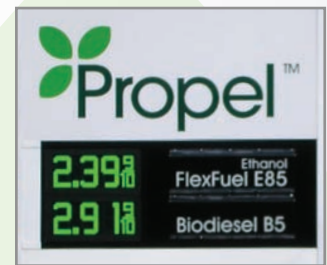
The region had three major wins advancing clean tech in 2009:

1st, SMUD, Sacramento State, Los Rios and the Department of General Services received a \$127 million Smart Grid grant from the DOE. Smart grids provide more efficient energy use and integration of renewables. This grant enables SMUD to install 600,000 smart meters and 50,000 demand controls, modernize 50 Sac State buildings with smart controls, and expand the engineering and computer curricula to educate students in smart grid careers. This puts the region at the cutting edge of new technology and should create businesses that will exploit it.

2nd, the Sacramento Employment and Training Agency awarded SARTA \$250,000 for a Venture Lab for clean tech and med tech startups. This grant is a result of stimulus funds SETA received. SARTA's Venture Lab, is a unique university-private industry technology development center that serves as a catalyst to accelerate the growth of companies based on innovative technologies. Located at 3801 Power Inn Road, Sacramento, CA 95826, the lab brings together business incubation services and links resources of Sacramento State University and University of California, Davis. Sacramento Venture Lab can be reached at 916-231-0770.

3rd, the Los Rios Community College District received \$2 million from the U.S. Dept. of Commerce to expand and enhance its green technology curriculum, to ensure that faculty and students are prepared to support existing and expanding company needs.

Just to highlight a few of the private companies in the region, Pacific Renewable Fuels has received \$25 million in federal funding for its first waste-to-liquid fuel refinery and Propel Fuels has opened several new biofuel pumps at local filling stations. Optimal Technologies received major funding from Goldman Sachs to pursue their proprietary AEMPFAS software services platform which gives utilities the ability to better manage customer loads. SynapSense, based in Folsom, now has major customers for its wireless devices that help data centers cut their energy use.



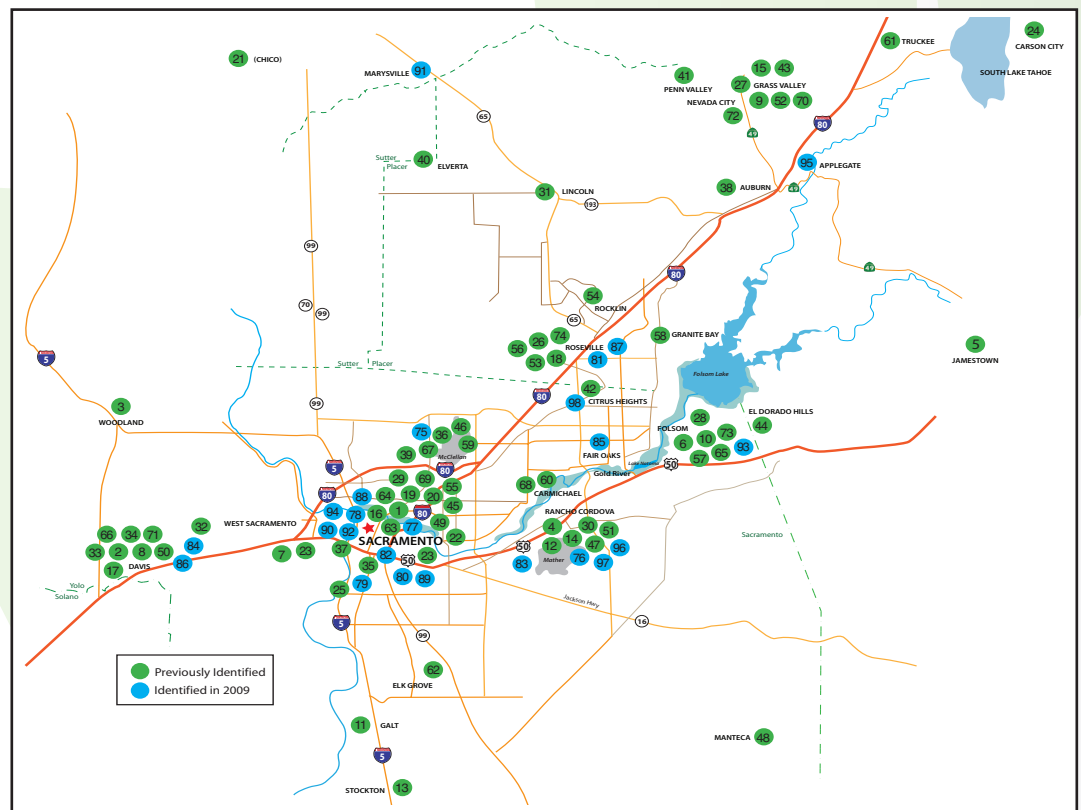
In addition, the Sacramento Commerce and Trade Organization (SACTO) has been successful in getting Clean Tech companies to move here — 70% of the new companies coming to the Sacramento region are Clean Tech!

Target opened its first LEED store in California in the city of Davis on October 9, 2009. The LEED registration for this project means state-of-the-art energy efficiency, water savings and indoor air quality.

The Green Capital Alliance, a partnership of 25 organizations including SARTA, has been working together to make the Sacramento Region a hub for clean energy technology and a leader in sustainability. This partnership has helped local governments create funding for energy efficiency retrofit and solar projects; funding that will translate into new market demand.

## Sacramento's CleanTech Cluster 2010

- 1 Atlantis Energy Systems
- 2 Advanced Energy Products
- 3 Advanced Luminescence, Inc.
- 4 AgriPower, Inc.
- 5 AIM Solar
- 6 Altery Systems
- 7 Bloo Solar
- 8 Blue Oak Energy
- 9 California Solar Electric Co.
- 10 Carbon Sequestration, LLC
- 11 Cardinal Glass Industries
- 12 Clean Energy Systems, Inc.
- 13 ConSol
- 14 D3 LED, LLC
- 15 David Wright Associates, AIA
- 16 Davis Electric Cars, Inc.
- 17 Davis Energy Group
- 18 Energy Saving Specialists
- 19 Environmental Resources Mgmt.
- 20 Exergy
- 21 FAFCO Inc.
- 22 Go Green Consultants LLC
- 23 Green Irene Eco Consulting
- 24 GreenSwitch
- 25 Henwood Associates, Inc.
- 26 IDS, inc.
- 27 Impulse Devices, Inc.
- 28 Jadoo Power
- 29 Jerico Energy
- 30 JMJ Natural Lighting
- 31 Mobius Technologies, Inc.
- 32 Novozymes, Inc.
- 33 NuGrid Wind Energy
- 34 Onsite Power Systems, Inc.
- 35 OpticLanes
- 36 Optisolar - An EPOD Company
- 37 Pacific Ethanol, Inc.
- 38 Pacific Power Management, LLC
- 39 Pacic Renewable Fuels
- 40 PeeVee, Inc.
- 41 Plan It Solar
- 42 PLEXOS Solutions, LLC
- 43 Power Planting
- 44 Premier Power Renewable Energy, Inc.
- 45 PureAire Technologies
- 46 Renewable Energy Institute
- 47 Residential Control Systems, Inc.
- 48 Sandpiper Technologies
- 49 Siemens Transportation Systems, Inc.
- 50 Sierra Energy



- 51 Sierra Pacific Home and Comfort
- 52 Sierra Solar Systems
- 53 Sims Recycling Solutions
- 54 SMA America, Inc.
- 55 Solar Depot, Inc.
- 56 Solar Power, Inc.
- 57 Solaraire
- 58 Solar Development
- 59 Solarecity Electric
- 60 SolarRoofs.com
- 61 Solar Wind Works
- 62 Spectrum Energy Development Inc.
- 63 SunOptics
- 64 SVV Technology Innovations, Inc.
- 65 SynapSense Corp.
- 66 Talbott Solar & Radiant Homes
- 67 Technikon
- 68 TNT Lighting & Solar

- 69 Vanir Energy, LLC
  - 70 Vector Engineering, Inc.
  - 71 Wilcox Ocean Power
  - 72 Wood Heat Stoves & Solar
  - 73 Worley Parsons
  - 74 Yes! Solar Solutions
- NEW FOR 2010**
- 75 Ternion Bio
  - 76 Sierra Pacific Solar
  - 77 Mount Professional Services
  - 78 Alfa Tech Cambridge Group
  - 79 California Sunlight
  - 80 Clean World Partners
  - 81 Corporate Design Group
  - 82 CulinAire Systems
  - 83 Conversion Processes
  - 84 Dynamic Design Engineering

- 85 eZE System, Inc.
- 86 Octus Energy, Inc.
- 87 Paramount Energy Solutions
- 88 Propel Fuels
- 89 Solera Power Corp.
- 90 Infinity
- 91 Green Traks
- 92 Johnson Controls
- 93 WinDensity
- 94 Optimal Technologies (USA), Inc.
- 95 Worldwater & Solar Tech Corporation
- 96 Green Light Solid State
- 97 Multimedia LED
- 98 LED Effects (Lighting Science Group)

## Event Successes Grow!



Prof. Dan Sperling  
keynoting the Showcase

In order to facilitate the start of a Clean Tech cluster in the region, CleanStart developed two events this year – “PowerSurge” and the “CleanTech Showcase”. They also participated in the VentureStart Entrepreneurs Breakfast on June 11th, 2009 at Sacramento State’s Alumni Center.

PowerSurge was an informal networking event held on April 27, 2009 at West Sacramento’s City Hall. The theme was “Getting Plugged In”, and discussed how to take advantage of the new stimulus funding. The 200 attendees heard about Federal, State, and Local opportunities from Congresswoman Doris Matsui, Pat Perez of the California Energy Commission and SETA’s Robin Purdy.

On October 16th, 2009 SARTA hosted it’s Third Annual CleanTech Showcase themed “Stimulating the Sacramento Region’s Clean Tech Economy”, at Sacramento State. The CleanTech Showcase brought out the best companies and supporters of Clean Tech in the area. This showcase was one of a series of events designed to interconnect and grow the Clean Tech cluster in the region; by far the most successful to date.



Exhibit Floor at the Showcase

Keynote speaker Dan Sperling, author of *Two Billion Cars: Driving Toward Sustainability*, shared his perspective on the future of Clean Technology, conservation and transportation. Seven roundtable topic discussions covered energy efficiency advances, where to find green jobs, an update on incentives and funding,

efficient buildings and the “fresh faces” — the new companies in the area. Many of those fresh faces were among the 85 exhibitors in the expo hall.

Reaction to the CleanTech Showcase was overwhelmingly positive from attendees and exhibitors. Our follow-up survey indicated that 88% of the attendees were ‘satisfied’ or ‘very satisfied’ with the event and would likely attend the event next year. Several exhibitors commented that this event allowed them to connect with investors, service providers



Sacramento State Dean Emir Macari  
admiring a Tesla Roadster

and potential customers better than the bigger more famous Clean Tech conferences. This can be attributed to the number of attendees with genuine interest in products and services exhibited.

“I am happy to be one of the freshest faces in Sacramento and the 2009 CleanTech Showcase after relocating my business to the area less than one month ago,” explains Eduardo Saucedo, CEO of Solera Power Corp. “Sacramento provides a growing market for Clean Technology companies and has the resources, support and politics in place to support start-up companies. In my eyes, this region combines the best conditions for solar electricity generation, which is essential as our company strives to produce renewable solar energy at the lowest possible price.”

Total attendance at the event was over 700 which was an increase of 40% in attendance from 2008, and triple the attendance for the inaugural showcase in 2007. Further, the showcase generated excellent coverage on the local television news media (TV coverage included Channels 13, 3 and 10).

## Upcoming 2010 Events

### PowerSurge

April 13 - McClellan Park, 5:30-8:00 PM at Garden Pavilion

### Sacramento CleanTech Showcase

October 26 - Sacramento State

See [www.cleanstart.org](http://www.cleanstart.org) for more information



Sandy Kirschenmann, Los Rios  
Community College & Phillip Garcia,  
Sacramento State



Lowrie Lowry, Maurice Chaney and Colleagues from Sacramento City Economic Development Department



Bruce Bacceti of SMUD

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