Los Angeles and California: Leading in Clean Technology

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Los Angeles & California as Leaders in Cleantech Business

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LAEDC LOS ANGELES COUNTY ECONOMIC DEVELOPMENT CORPORATION

WHY CALIFORNIA?

•California is the #1 state for attracting foreign direct investment. (International Trade Association)

•We have 931,000 people employed in high tech jobs. (Tech America Annual Report)

•There are 300,000 Californians employed in high paying green jobs. (California EDD)

•There are over 1,500 clean technology companies headquartered in California, including big names such as BioJet Corporation, Bloom Energy and Tesla. (CleanTech Group)

•California is the #1 state for venture capital—CA received 51.03% of the dollars invested in US venture capitals. (Moneytree)

Source: http://www.business.ca.gov/Portals/0/AdditionalResources/Reports/%5BFact%20Sheet%5D%20June%202012.pdf

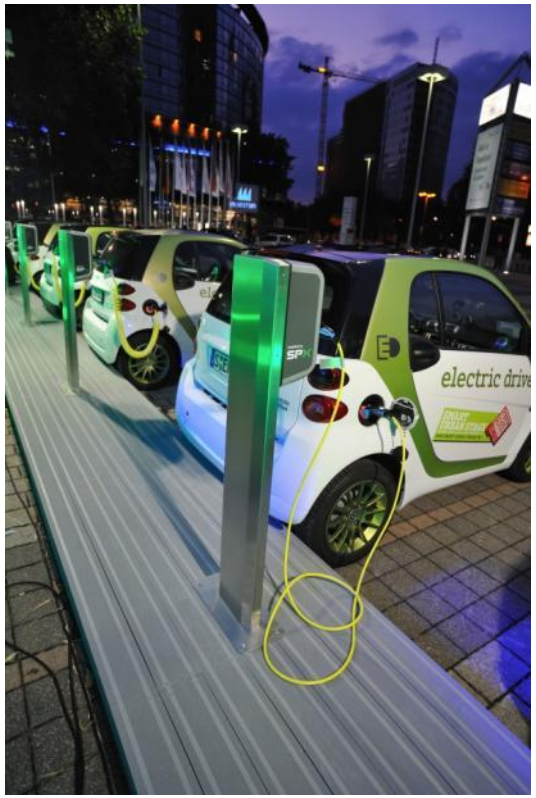
CALIFORNIA – LEADER IN CLEAN TECH VC INVESTMENTS

• In 2011, California received $14.5 billion in total venture capital investments – up 20% from 2010.

•In 2011, California received $3.5 billion in total venture capital investments in clean tech – up 24% from 2010.

•In 2011, California received 62% of the total global venture capital investment in solar, representing $1.2 billion.

•In 2011, the top three clean tech segments for venture investments in California were: energy generation, energy efficiency and clean transportation.



(Source: NEXT 10 California Green Innovation Index)

CALIFORNIA – LEADER IN CLEAN TECH PATENTS

•California leads the nation in clean tech patent registrations and accounts for 25% of total patents in clean technology registered with the U.S. Patent and Trademark Office.

•California-based solar and battery patents represent 41% (182 patents) and 21% (258 patents), respectively, of all clean tech patents filed nationwide.

•California leads the nation in patents registered in the following clean tech segments: battery technology, water, solar and energy infrastructure.

(Source: NEXT 10 California Green Innovation Index)

CALIFORNIA – LEADER IN RENEWABLE ENERGY

• From 2009 to 2010, energy generation from renewable sources in California increased 11.2% to represent 13.7% of ALL energy generated in the state (versus an average of 4.1% for the rest of the U.S.).

•For every dollar of GDP generated in 2009, California emitted 28 percent less carbon than in 1990.

•In 2011, California passed 1,000 MW of installed solar capacity, an amount high enough to make it a leader among nations.

•From 2009 to 2010, California's wind generation capacity jumped by 44%.

(Source: NEXT 10 California Green Innovation Index)

CALIFORNIA – MAJOR RECENT ENVIRONMENTAL POLICY DEVELOPMENTS

- In November 2012, California will conduct its inaugural auction of emission allowances under its **Cap-and-Trade** program.

- In April 2011, California's landmark **Renewables Portfolio Standard** Program was extended and expanded to increase the percentage of power generation from renewable sources to 33% from 20%.

- In 2011, California raised its **net metering** caps from 2.5% to 5%, and expands the program to all eligible forms of renewable energy.

- In 2010, California passes SB 71, a **sales and use tax exclusion** for eligible projects on property utilized for the design, manufacture, production or assembly of advanced transportation technologies or alternative source – including energy efficiency – products, components or systems.

CALIFORNIA – MAJOR RECENT ENVIRONMENTAL POLICY DEVELOPMENTS (CONTINUED)

- In 2009, California establishes its **net metering** program, requiring that California utilities reimburse customers for excess power generated from solar and wind power systems.

- In 2008, California adopts **green building** codes (first in the U.S.).

- In 2007, California passes **AB 118**, an incentive program to fund clean vehicle and equipment projects, research on biofuels production and workforce training.

- In 2006, California Global Warming Solutions Act (**AB 32**) is passed, requiring that GHG emissions levels be reduced to 1990 levels by 2020.

Los Angeles County

AT-A-GLANCE

Nearly 10 million people

$557.50 billion economy

3,803,800 employees (nonfarm payroll)

$53,335 average annual wage

1,063,100 employees in traded clusters (2010)

1.2 trade employment location quotient (2010)

Compared to the nation as a whole, Los Angeles County has a larger share of its employment in traded industry clusters, suggesting the increased potential for wealth creation through exports.

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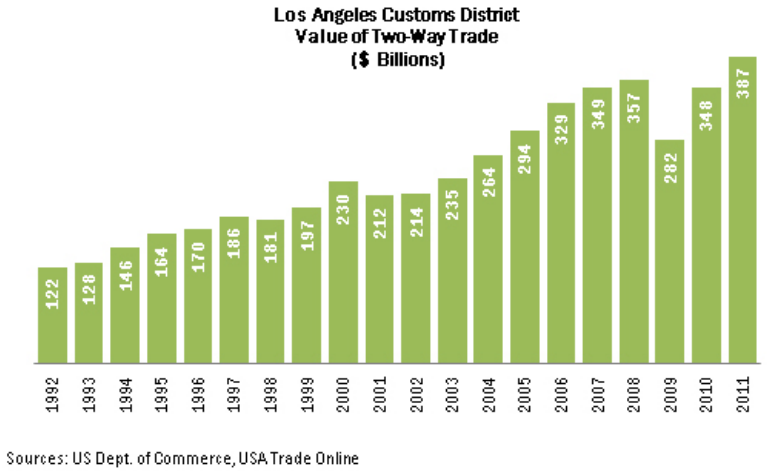
LOS ANGELES: LEADING INTERNATIONAL TRADE SECTOR

- Los Angeles is the #1 International Trade Center in the U.S.

- Los Angeles Customs District handled $386.7 billion in two-way trade (2011).

- L.A. is home to the nation's busiest origin and destination airport – the Los Angeles International Airport (LAX).

- The Ports of Los Angeles & Long Beach are the nation's busiest ports, handling 14 million TEUs in 2011.



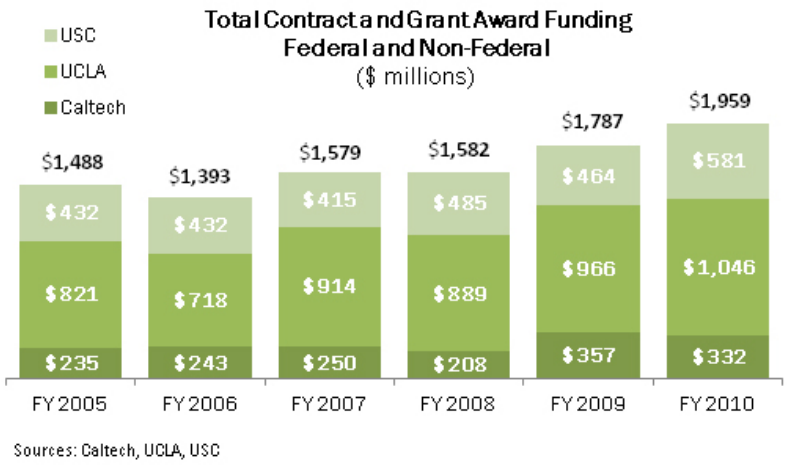
Sources: US Dept. of Commerce, USA Trade Online

LOS ANGELES: LEADING THE WORLD IN SKILLED WORKERS

•World-class research universities: California Institute of Technology (Caltech), University of California- Los Angeles, and University of Southern California, which together received nearly $2 billion in contract and grant award funding.

•120 accredited institutions that confer associate, bachelor, and graduate degrees.

•World-leading automotive design program, including Pasadena's Art Center College of Design.



Sources: Caltech, UCLA, USC

•Well-trained engineering workforce from technical design and production industries, including aerospace, architectural engineering and auto design.

•Nation's leading manufacturing sector by employment (365,400).


LOS ANGELES COUNTY:
THE NEW LEADER IN
ELECTRIC VEHICLES
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LOS ANGELES: LEADING PRODUCER & CONSUMER MARKET FOR EVs

•World-and-domestic-leading EV-related companies are based here, such as AeroVironment, BYD, CODA, 350 Green, and Quallion.

•Huge demand exists for EVs in the city of Los Angeles alone, where plug-in electric vehicle sales are projected to compose 9% of total car sales by 2015 and 11.7% by 2020 (Luskin Center).

•The County of Los Angeles has a huge consumer market, with more than 5.8 million registered automobiles.

•Strong local and regional government support exists for electric vehicles .

•L.A. County is the car design capital of the world with several design and manufacturing centers of major car manufacturers, including Toyota and Honda.

LOS ANGELES: LEADING IN EV READINESS

•Millions of Department of Energy dollars earmarked in L.A. region for EV infrastructure Dollars .

•Over 230 publicly accessible EV charging stations within the county (and many more planned) .

•Aggressive policies by utilities to promote EV infrastructure, e.g., LADWP has $2,000 rebate for charger installations.

•Aggressive municipal and educational EV fleet programs to test early release of products .

•State-of-the-art workforce development and training programs for technicians and first responders.

LOS ANGELES COUNTY:
THE NEW LEADER IN
CLEAN ENERGY

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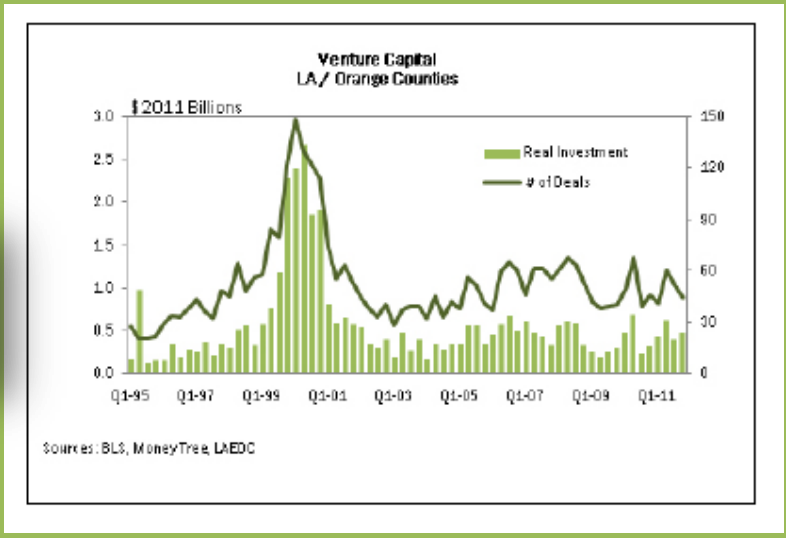
LOS ANGELES COUNTY:
A CLEAN TECH ECOSYSTEM

LACLEANTECHINCUBATOR
at La Kretz Innovation Campus

CLEAN TECH
LOS ANGELES



Approx. $330M in Clean Tech Investments in Southern California

"We chose to place the [CODA] global headquarters in Los Angeles not only because it is one of the most significant early markets for the deployment of electric vehicles, but because elected officials and business leaders have demonstrated their commitment to fostering a successful local cleantech industry."

PHIL MURTAUGH, CEO, CODA HOLDINGS

Over 100 clean tech companies are headquartered here, including big names like SolarReserve, Capstone Turbine and NanoH2O

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LOCAL REGULATIONS & INCENTIVES INFLUENCING THE GREENING OF THE CA ECONOMY

- On-Bill Financing
- Commercial PACE Programs
- Clean Air Action Plan (CAAP) at the San Pedro Bay Ports
- Additional local efforts, e.g., green building programs, electric vehicle charging station rebates, feed-in tariffs, etc.
- City of Los Angeles: Cleantech Corridor, Los Angeles Cleantech Incubator

ANY QUESTIONS?