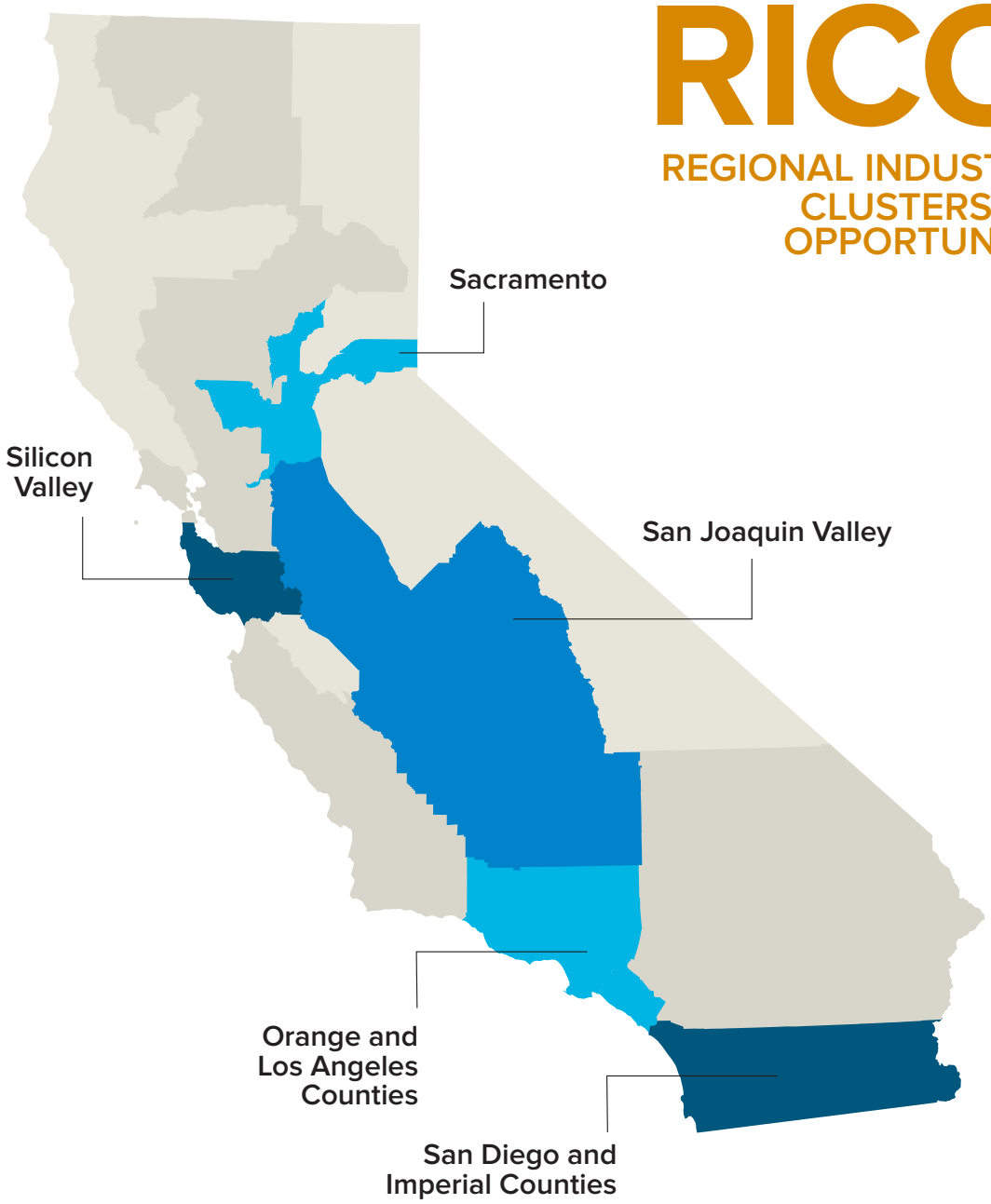
RICO

REGIONAL INDUSTRY CLUSTERS OF OPPORTUNITY



How California regions are expanding the advanced transportation industry

December 2014

PREPARED BY

Collaborative Economics, Inc. | www.coecon.com
Collaborative Economics (COECON) is a strategic advisory and consulting firm that works with clients to create breakthrough solutions for regions and communities. COECON works with businesses, foundations, government, education, and community sectors to do leading edge clean economy, innovation, and sector analysis for states and regions across the country.

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RICO Overview

Background

In 2013, teams in five California regions began an effort to mobilize advanced transportation industry clusters. These teams worked with industry to identify priority areas for action and develop cluster action plans, with specific commitments for implementation focused on economic and workforce development. The Regional Industry Clusters of Opportunity (RICO) grant program is a focused effort by the state to grow the advanced transportation industry, simultaneously addressing talent pipeline and business development issues. It demonstrates that California's regions can play an integral role in helping meet state goals while expanding economic opportunities in their communities.

Given the impact of the transportation sector on California's economy and environment, California policymakers have implemented a number of laws and programs for more efficient, renewable, and innovative transportation fuels and vehicles. The California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (Assembly Bill (AB) 118) is an important part of California's transportation strategy. AB 118 created the Alternative and Renewable Fuel and Vehicle Technology Program in the California Energy Commission (Energy Commission) to fund projects to develop and deploy innovative technologies that transform the state's fuel and vehicle types to help attain the California's climate goals.

The California Workforce Investment Board and Energy Commission, working in coordination with the California Labor and Workforce Development Agency, funded this AB 118 RICO grant program to develop and implement strategies to advance regional economies and workforce in targeted clusters. The goal of the grant was to develop and implement alternative fuel and vehicle regional clusters of opportunity strategies, and mobilize employers and regional partners to advance the competitive position of targeted clusters. This RICO initiative is a structured process that supports regional economic and workforce development networks. These networks are working directly with businesses in industry sector partnerships to develop and implement strategies to advance their targeted clusters.

RICO Grant Process

The RICO grant funded regions to mobilize and grow targeted advanced transportation industry clusters. These clusters included employers as partners in economic development and workforce development. The regions worked together through the four stages of the RICO grant process and met at the end of each stage at an action clinic in Sacramento (described in more detail later in the report):

- **Stage 1** – Clusters of opportunity diagnosis
- **Stage 2** – Mobilizing clusters through collaborative priority-setting
- **Stage 3** – Developing an investment strategy based on priorities
- **Stage 4** – Sustainable implementation of investment strategies
- **Periodic action clinics** – Meetings of all of the regions to share progress and challenges, receive technical assistance, and learn from peers.

RICO Regions

Five regions were chosen for the RICO grant, and each region focused on targeted advanced transportation sectors:

- **Orange and Los Angeles Counties** – Hydrogen Vehicle Infrastructure, Waste-to-Energy, Energy Storage
- **Sacramento** – Electric Vehicles, Waste-to-Energy
- **San Diego and Imperial Counties** – Biorenewables
- **San Joaquin Valley** – Electric Vehicles, Natural Gas
- **Silicon Valley** – Electric Vehicles

Early Results

The RICO regions are in the early stages of implementing their strategies to grow the targeted clusters, but are already starting to see results. For example, regions are:

- **Creating or expanding a focal point for cluster action** – RICO teams are building and leveraging partnerships in their regions to mobilize for action. In some regions, employers are coming together for the first time to work on shared priorities. In other regions, existing partnerships are being leveraged to expand the industry and reinvigorate employers for action.
- **Growing the local economy** – RICO teams are already seeing direct impacts on the local economy. Regions are using the cluster investment strategies to leverage private investment and are starting to attract, expand, and retain businesses in the cluster.
- **Preparing the local workforce for industry careers** – RICO teams are starting to map out the talent pipeline for clusters, align training curriculum within and among regions, and identify and train for in-demand occupations.

RICO Lessons Learned

Throughout the grant period, the regions, technical assistance team, and state agencies identified a number of lessons learned about the RICO process and results, outlined below.

- **Aligning job creation with job training efforts is effective.** RICO partnerships integrate economic and workforce development to engage and grow the regional targeted industry.
- **Peer-to-peer learning works.** RICO grantee regions met regularly to share ideas, progress, and work through shared challenges.
- **Industry leadership is critical.** Regional clusters with strong employer leadership are critical for launching and sustaining partnerships.
- **Leveraging existing relationships promotes long-term sustainability.** RICO teams leveraged existing relationships, partnerships, and organizations in their regions to engage and grow their targeted clusters.
- **The RICO transformation of the traditional grant model shows results.** The RICO grant is different from traditional grant models in that it allows time and money to both identify priorities and implement strategies around those priorities.
- **States and regions have shared goals and complementary roles.** State policy makers participated in RICO action clinics, including a policy roundtable event around zero emission vehicles. These discussions identified numerous shared goals among states and the regional teams, and ways each can help advance those goals.
- **Industry cluster partnerships can link to spillover industries.** Advanced transportation industry clusters have related industries with shared skills and services, and the RICO teams are facilitating these connections for workers and companies.

The five RICO regions developed sustainability plans to identify how they will continue to implement their investment strategies. In addition, some regions received implementation grants to match funding for implementation. More results will be documented as the RICO regions continue to implement their strategies.

Mobilizing Industry Clusters of Opportunity
Launching and Sustaining Industry Cluster Partnerships

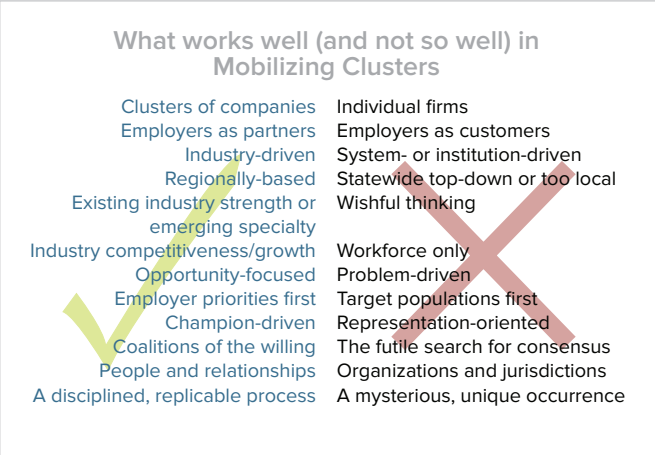
What is a Cluster of Opportunity?

A cluster of opportunity is a combination of related sectors in a given region that are growing in terms of jobs, companies, investment, and/or innovation. Typically, a cluster of opportunity is comprised of sectors that are export-oriented, population driven, and offer occupations with career potential, creating workforce opportunities for regions.

Mobilizing cluster employers as partners in economic development and workforce development has been shown to have tangible impact on business productivity, economic competitiveness, and alignment between workforce development and employer needs.

Stage 1 – Identifying Clusters

Industry clusters of opportunity are important drivers of regional prosperity. Information to help identify industry clusters with opportunities in your region includes growth in employment, companies, technology adoption, and/or innovation.



Stage 2 – Mobilizing Clusters Through Collaborative Priority-Setting

Cluster mobilization begins with launching industry-led, community-supported partnerships that allow for business to work collaboratively with economic and workforce development partners to enhance industry competitiveness and prepare workers with the skills they need. At this level, industry cluster employers provide more than information; they become actively engaged to identifying strategies to grow the industry through marketing, policy changes, talent development, and other priorities. They also start to emerge as champions to implement specific initiatives.

Stage 3 –Investment Strategy

The industry cluster partnership, including employers and regional partners, develops an investment strategy that turns the good ideas generated through collaborative priority-setting into an integrated set of measurable outcomes, key strategies, specific actions, and commitments to deliver results that grow the cluster. The investment strategy is developed by employers who remain actively engaged through implementation.

Stage 4 – Sustainable Implementation

The industry partnership develops a set of broader organizational and policy changes to sustain and expand regional industry clusters of opportunity strategies. The partnership also creates a lasting mechanism to support ongoing collaboration among business and community partners.

Support for RICO

The RICO program is funded by the California Energy Commission through an interagency agreement with the California Workforce Investment Board. The funds include grants for five regional industry partnerships, developed using a common framework for authentic and sustained business engagement. It also includes technical assistance from Collaborative Economics for the regional grantees.

RICO Process Timeline

The RICO teams were awarded their grants in July 2013 and are set to complete the grant process in December 2014. While the grant period ends in 2014, these teams have developed sustainability plans and are positioned to continue implementation of the cluster strategies. In addition, most of the teams have been awarded grants to implement their cluster strategies and continue peer-to-peer collaboration.

Regional teams met at the end of each stage at an Action Clinic in Sacramento to share their progress update, learn from their peer regions, and receive technical assistance. The process culminated in a Showcase event in October of 2014 and final regional action plans in December 2014.

FOUR STAGE RICO PROCESS

STAGE 1
Clusters of Opportunity Diagnosis
July-September 2013

STAGE 2
Collaborative Priority-Setting
October 2013-March 2014

STAGE 3
Clusters of Opportunity Investment Strategy
April-July 2014

STAGE 4
Sustainable Implementation
August-December 2014

RICO Lessons Learned

Throughout the grant period, the regions, technical assistance team, and state agencies identified a number of lessons learned about the RICO process and results, outlined below.

- **Aligning job creation with job training efforts is effective.** RICO partnerships integrate economic and workforce development to engage and grow targeted regional industries. These partnerships engage businesses to identify industry priorities that increase cluster competitiveness overall, including but not solely focused on workforce needs. This approach results in a set of business-driven strategies that promote sector growth and job creation while aligning training with the needs of the industry. By simultaneously addressing both economic and workforce development priorities, RICO partnerships ensure that workers are prepared with the right skills, at the right time.
- **Peer-to-peer learning works.** Regions met at the end of each stage in action clinics that focused on sharing ideas, progress, and working through challenges. By working together, regions identified model programs that can be replicated, such as charging permitting procedures and EV technician and safety training curriculum. The three RICO regions that focused on EV have committed to working together to share ideas and solve common problems in growing the EV industry.
- **Industry leadership is critical.** Strong employer leadership is critical for launching and sustaining partnerships. These strong business leaders understand that the successes of their business is connected to the success of the industry overall. Additionally, they understand the unique assets and opportunities in their own regions and are willing to champion strategies that strengthen the sector and the region. Industry leaders play critical roles in helping to recruit other businesses to the cluster partnership and provide time and resources to support implementation of cluster growth strategies.
- **Leveraging existing relationships promotes long-term sustainability.** RICO teams leveraged existing relationships, partnerships, and organizations in their regions to connect with business leaders and respond effectively to their economic development and workforce needs. By tapping into existing networks, teams create a long-term support system for the industry and avoid duplicating other efforts.
- **The RICO transformation of the traditional grant model shows results.** The RICO grant is different from traditional grant models in that it allows time and resources to both identify priorities and implement strategies around those priorities. Traditional grant models tend to fund planning, capacity building, or implementation; RICO does all of the above. The grant time period is long enough and flexible to allow for priority setting early and then transition into implementation. This RICO grant also specified that teams spend 50 percent of funding on implementation activities, and sets up teams for further implementation grant dollars.
- **States and regions have shared goals and complementary roles.** State policy makers participated in RICO action clinics, including a policy roundtable event around zero emission vehicles. These discussions identified numerous shared goals among states and the regional teams, and ways each can help advance those goals.
- **Industry cluster partnerships can link to spillover industries.** Advanced transportation industry clusters have related industries with shared skills and services. The RICO teams are identifying those connection points and starting to work with those workers and companies

Partnering for Action
Regional Action Strategies to Mobilize Advanced Transportation Clusters

Each regional grant team developed a cluster action plan that includes both a description of the process and the specific strategies and implementation commitments. Each plan answers the following questions:

- **How did we identify our regional industry clusters of opportunity?**
- **How did we engage employers to develop cluster investment strategies?**
- **What are the investment strategies and partner commitments to grow the cluster?**
- **How do we plan to achieve sustainable, systemic change?**

Each plan lays out specific strategies, actions, and financial and in-kind implementation commitments. Regional investment strategies included both economic development and talent pipeline actions to ensure job creation and job training efforts are aligned.

The regional summaries below show a summary of the action plans, including the partners engaged and the actions identified. Regional teams are currently in the early stages of implementing their strategies, but have already achieved early results as outlined below. Regional industry clusters are continuing to meet and have plans to sustain implementation and grow the cluster.

Orange and Los Angeles Counties

Regional Grant Team

Orange County Workforce Investment Board (lead), Pacific Gateway Workforce Investment Network, Orange County Business Council, Los Angeles County Economic Development Corporation

Industry Clusters Of Opportunity Focus

Orange and Los Angeles Counties has the largest consumer base in the state, as well as a high concentration of business consumers of transportation technologies such as the ports and public transit agencies. The region is leveraging this local demand to develop and deploy advanced transportation technologies and to serve broader state and global markets. The region is the automotive design capital of the world, has two of the busiest ports in the country, and is the largest manufacturing center in the U.S., which gives the region a competitive advantage in the advanced transportation market. Business leaders and local economic, workforce, and community partners worked together to identify priorities and economic and workforce strategies to grow the following industries in the region:

- Hydrogen Vehicle Infrastructure
- Waste-to-Energy
- Energy Storage

Hydrogen Industry	
Business and Community Partners include	CH2M Hill, Chevron, Anaheim Public Utilities, Automobile Club of Southern California, Orange County Sanitation District, University of California Irvine, Parsons Corporation, Cleantech OC, Southern California Gas Company
Investment Strategy includes	**Promote accelerated deployment of hydrogen infrastructure,** including stimulating demand, increasing affordability, removing barriers to implementation, and setting standards **Support accelerated adoption of hydrogen vehicles,** including stimulating demand, increasing affordability, and removing barriers **Develop and implement workforce training and education programs** at regional institutions to train new alternative fuel workforce talent

Waste-to-Energy Industry	
Business and Community Partners include	LA County Sanitation District, Cleantech LA, AECOM, Resource Bioenergy, Sempra Utilities, Southern California Gas Company, Waste Management
Investment Strategy includes	**Develop the market for waste-to-energy**, remove barriers to product development, and identify and remove barriers to advance the market **Develop a career pipeline for waste-to-energy** **Develop a supportive ecosystem** for the local cluster and improve access to capital for projects

Energy Storage Industry	
Business and Community Partners include	Chargepoint, AeroVironment, Nissan, US Bank, PEV Collaborative, Sempra Utilities, Greenlots, California Fuel Cell Partnership, Cal Poly Pomona, Department of Water and Power Los Angeles, Honda, Ford
Investment Strategy includes	**Attract additional energy storage companies to the region** **Improve access to capital for companies and projects** **Develop a talent pipeline for energy storage** **Help identify sites for energy storage companies to locate in the region**

Early Implementation Results

- **The RICO team produced a two-region, multi-WIB strategy to advance the competitiveness and growth of the advanced transportation cluster in the region.** This is one of the first efforts to connect Los Angeles and Orange Counties advanced transportation industry activities.
- **Regional clusters are continuing to meet monthly. LAEDC, for example, is leveraging its E4 Mobility Alliance that meets monthly (or more) and has more than 260 members.** Companies included in these meetings range from utilities such as Southern California Edison and Southern California Gas Company to developers and installers such as Aerovironment, BYD, and Honda and workforce organizations such as CalPoly Pomona and Cerritos College.
- **The Orange and Los Angeles RICO team and stakeholders are working with South Coast AQMD and Orange County Fire Authority to develop standards and guidelines for hydrogen fuel infrastructure that can inform long-term standards and regulations.** The team will also continue to support and leverage the already-developed first responder training for hydrogen by Rio Hondo College and apply for funds to roll out curriculum deployment.
- **The RICO team developed and released the first ever workforce reports on energy storage and waste-to-energy,** highlighting the job potential, common occupations, and skills and training needed in each.
- **Several energy storage companies are reaching out to LAEDC to discuss locating in the region.**
- **The LAEDC, a RICO team partner, has identified Advanced Transportation as a targeted industry cluster** and has dedicated resources over the next several years to ensure it receives similar treatment as our other targeted industry clusters from a branding, marketing, targeted business assistance, etc. effort.
- **In February 2014, the Southern California Center for Alternative Fuels and Advanced Vehicle Technology was launched,** led by LAEDC in coordination with RICO efforts. The goal with the Center is to leverage regional assets to lead development, design and production of lower-emission technologies to add the high-value jobs and wages as well as the tax revenues to the region that will result from a thriving advanced transportation cluster. The Center will serve the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara and Ventura. The Center has a three-year grant award from 2014-2017 with a promise to operate until 2019.

Sacramento

Regional Grant Team

Sacramento Employment and Training Agency, Valley Vision, American River College, Atlas Disposal, Atlas ReFuel, City of Sacramento, CleanWorld, Greenwise Joint Venture, Sacramento Area Electrical Training Center, Sacramento Clean Cities Coalition, Sacramento Metropolitan Air Quality Management District, TakeCharge (managed by the Sacramento Area Council of Governments)

Industry Clusters Of Opportunity Focus

The 6-county Sacramento Region is home to the state's capital and is at the crossroads of the state's major interstate corridors. Innovative advanced transportation partnerships are enabling the region to forge tighter connections with local companies and to plan for growth in the future. Business leaders and local economic, workforce, and community partners worked together to identify priorities and economic and workforce strategies to grow the following industries in the region:

- Electric Vehicles
- Waste-to-Energy

Electric Vehicles Industry	
Business and Community Partners include	California Fuel Cell Partnership; California Air Resources Board; City of Sacramento; El Dorado County; North State Building Industry Association, Phil Haupt Electric; SacEV; SMUD; Sacramento County; National Electrical Contractors Association/IBEQ; Greenwise Joint Venture, Sullivan Auto Group; Take Charge, convened by Sacramento Area Council of Governments (SACOG) and its 140 regional stakeholders.
Investment Strategy includes	**Increase demand for plug-in electric vehicles (PEVs)** to stimulate business and job growth • Build consumer awareness through education and increasing visibility of EVs **Facilitate PEV purchase and infrastructure installation process** to eliminate unnecessary roadblocks **Create training and certificate programs** for occupations associated with the PEV economy **Launch a PEV charging demonstration project**

Waste-to-Energy Industry	
Business and Community Partners include	Clean World, Atlas Disposal; Atlas ReFuel, BREATHE California; CalRecycle; California Restaurant Association; City of Sacramento; County of Sacramento (landfill); County of Yolo (landfill); Recology Environmental Solutions; Green Restaurant Alliance of Sacramento; Sacramento Clean Cities, Sacramento Metropolitan Air Quality Management District; Sierra Energy; Synergex International Corporation
Investment Strategy includes	**Grow demand and long term commitments** for waste-to-energy projects and business growth. • Advocate for supportive local and state-level policies • Increase visibility and support for projects through educational materials/events/forum • Encourage regional fleet operators and other potential consumer groups to shift to using renewable natural gas (RNG) vehicles **Establish the workforce needed** to support future growth in the industry

Early Implementation Results

- **The Sacramento RICO team has created a sustainable venue for engaging cluster stakeholders around shared priorities for action.** The Green Capital Alliance, a group convened by Valley Vision and created to inform and guide actions advancing the cluster, will continue to convene employers from both the EV and waste to energy clusters.
- **The Sacramento RICO team promotes adoption of Electric Vehicles in the Sacramento Area by supporting the TakeCharge Initiative, and more specifically by helping to develop relationships between fleet managers and infrastructure providers.** 140 regional stakeholders are involved in TakeCharge, with 80 specifically involved in targeted fleet adoption actions. Companies involved include Phil Haupt Electric, Nissan, Clipper Creek, Sullivan Auto Group, and SMUD, among others.
- **The RICO team has developed a series of web-based resources aimed at facilitating increased EV adoption.** This website includes a crowdsourcing application to identify desired locations for new EV chargers. A user drops a pin in the map to indicate where a charger should be and, if there is support from a critical mass of users, SACOG will authorize installation of a charger at that location. This application enables a demand-driven approach to infrastructure systems, which meets user demand for EV infrastructure without over-saturating the market.
- **Through RICO, Sacramento is also working to reduce barriers for waste-to-fuel and energy technologies.** These efforts are led by key industry players in the region such as CleanWorld, Sierra Energy, Atlas Disposal, Synergex International Corporation and Recology.
- **The RICO team developed add-on curriculum and certifications for RNG tank certification and facility maintenance** which will put the systems in place to train workforce for both EV and RNG fueling and maintenance jobs.
- **RICO team members developed a dealer training module that can be scaled to the rest of the region.** This training will facilitate EV adoption.
- **The team plans to support career pathways for the EV sector by installing EV charging stations and supportive curriculum at selected high schools and American River College** to provide hands-on experience for students in the green jobs and engineering career pathway programs.

San Diego and Imperial Counties

Regional Grant Team

Cleantech San Diego, Imperial Valley Economic Development Corporation, San Diego Regional Economic Development Corporation

Biorenewables Industry

San Diego and Imperial Counties are home to a robust biorenewables industry that leverages San Diego's world-class research and development community, and Imperial County's abundance of industrial land, reliable energy and water, and large labor pool. While the number of biofuel projects has increased in recent years, there remain challenges to commercializing and siting facilities in the region, though research conducted through the RICO project suggests that the perception of permitting difficulty among businesses exaggerates true permitting difficulty in the region. The grant team brought together business leaders and local economic, workforce, and community partners to work together to identify priorities and economic and workforce strategies to grow the biorenewables industry and improve commercialization in the region.

Biorenewables includes alternative and renewable fuels and products from sources such as algae, biomass and waste.

Biorenewables Industry	
Business and Community Partners include	: Bethel Energy, BP Biofuels, Buster Biofuels, California Ethanol and Power, Canergy, Cellana, General Atomics, Genomatica, Life Technologies, Oberon Fuels, Sapphire Energy, Inc., SG Biofuels,Synthetic Genomics, UC San Diego, San Diego State University, Cal State San Marcos, Imperial Valley College, MiraCosta Community College, Scripps Institution of Oceanography, and the California Center for Algae Biotechnology
Investment Strategy includes	**Understand current permitting and siting processes in Imperial Valley** **Create a guide for biorenewables companies, to help debunk misperceptions about permitting and educate them on existing processes** **Develop policy recommendations to streamline permitting/siting process in Imperial Valley** **Continue and expand EDGE curriculum to grow biorenewables workforce** **Promote the region for investment and workforce talent attraction**

Early Implementation Results

- **The RICO team continues to host quarterly roundtables and stakeholder meetings with biorenewables companies and consultants, Imperial County agencies, Imperial Irrigation District and regional workforce stakeholders to discuss solutions to siting/permitting challenges.**
- **The team created the "Developer's Guide to Imperial County" (release date in mid-December 2014) in collaboration public agencies, the Imperial Irrigation District, and biorenewables businesses that have successfully navigated the permitting process in the region.** The Guide describes the permitting steps across authorities, collected through a series of interviews by the team, and recommends resources at Imperial Valley EDC and within the region for interested companies. The handbook will be maintained on the EDC, Imperial County agencies and Imperial Irrigation District websites as a living document.
- **Imperial Valley EDC has established itself as the regional point for biorenewables businesses interested in locating in the region.** IVEDC's supportive services include helping the interested biorenewables business prepare for the pre-application meetings with main permitting authorities, which helps to reduce time and cost for both the business and permitting authorities later in the permitting process, as well as assisting the company with site selection and labor relations to help mitigate known permitting challenges, in addition to other services in supplier network development, financing and workforce.
- **With individualized support from the IVEDC, California Ethanol & Power successfully completed permitting in late 2013, and expects to generate more than 220 FTE jobs in its first year of production,** as well as the Canergy Ethanol facility that will employ approximately 100 FTE's due to start construction in 2015.
- **Four new biofuel and algae-based biorenewables companies are currently investigating siting opportunities within Imperial County.**
- **The team is working with CalCAB, MiraCosta College, San Diego State University – Brawley Campus, Imperial Valley College, and UC San Diego to continue and expand the EDGE curriculum to grow the biorenewables workforce.**

San Joaquin Valley

Regional Grant Team

California State University, Fresno, San Joaquin Valley Clean Cities Coalition (SJVCCC), San Joaquin Valley Air Pollution Control District, Kern Community College District, San Joaquin Valley Clean Energy Organization

Industry Clusters Of Opportunity Focus

The San Joaquin Valley team is working to capitalize on the region's strength as a goods movement corridor and largely untapped consumer electric vehicle market to help promote adoption of advanced transportation technologies in the region, as well as retain economic benefits for local businesses. Business leaders and local economic, workforce, and community partners worked together to identify priorities and economic and workforce strategies to grow the following industries in the region:

- Electric Vehicles
- Natural Gas – liquid/compressed natural gas (L/CNG)

Electric Vehicles Industry	
Business and Community Partners include	Nissan North America, NRG eVgo, Telefonix, Plug-In America, PG&E, GreenTech Automotive, FedEx Ground, SunPower Corporation, UPS - West Region, Aerovironment, ChargePoint, Big Valley Ford, Clements School Transportation Consulting, Schneider Electric, Motiv Power Systems, Clipper Creek, Phil Haupt Electric, Eckhaus Fleet, Electric Vehicle International
Investment Strategy includes	**Develop an inventory of best practices** that have led to public-private partnerships or co-op approach to EV charging infrastructure **Increase exposure to electric vehicles to encourage adoption,** through ride-and-drive events and an EV marketing campaign tailored to San Joaquin Valley residents **Promote deployment of charging infrastructure/Electric Vehicle Supply Equipment (EVSE),** particularly at workplace, commercial and multifamily residential facilities **Train existing electrical contractors to install EVSE;** provide industry recognized EVSE certification; provide additional training for vehicle dealerships' salesforce on EVs; provide First-Responder EV Training for municipalities, non-profits, and employers; add EV modules to existing Project Lead the Way Schools in the San Joaquin Valley

Natural Gas Industry	
Business and Community Partners include	Southern CA Gas Company, Grimmway Farms, Back2EarthTechnologies, Atlas Copco Compressors, Harvest Power, A-1 Alternative Fuel Systems, Border Valley Trading, L/CNG Elite Inspection Services,Golden Empire Transit District, City of Visalia-Transit Division, City of Bakersfield, Fleet Services
Investment Strategy includes	**Facilitate and support public-private partnerships for development of 5 L/CNG stations along I-5 and SR-99** **Demonstrate value of public access L/CNG fueling stations to private station operators** **Offer companies, municipalities, non-profits L/CNG technician training for their own employees;** provide technical assistance for public and private fleet managers to determine the best vehicle technology for their business circumstances

Early Implementation Results

- **The San Joaquin Valley Electric Vehicle Partnership (SJVEVP) launched in Spring 2014 as a direct result of RICO, and is chaired by Jeannie Lam, Nissan North America's EV Business Development Manager for the West Region, and Terry O'Day, Vice President of NRG eVgo, California.** This first-ever EV partnership in the region has involved 46 business stakeholders to date, in addition to 38 stakeholders from the public and non-profit sectors, and has formed task groups around the partnerships' top priorities: infrastructure, market development and talent.
- **The SJVEVP co-chair Nissan has also issued $15,000 to SJVEVP member Plug-In America and $1,000 to SJVCCC to support EV market development activities (including a San Joaquin Valley-specific marketing campaign) in the region.** These funds will leverage California Energy Commission's additional investment to sustain SJVEVP and SJV Natural Gas Partnership efforts.
- **Various SJVEVP members have hosted ride-and-drive events within the region since the launch of the partnership,** and leveraged the SJVEVP as a platform to secure participation of member electrical contractors, infrastructure companies, dealerships and community partners.
- **Schneider Electric, another SJVEVP member, plans to dedicate four staff to supporting EV market development efforts in the San Joaquin Valley.** Including SJVCCC's 2 additional staff, the SJV RICO project will have created 6 additional jobs that support alternative fuel and vehicle deployment and adoption.
- **Leveraging extension grant funds, throughout 2015 SJVEVP will work with Project Lead the Way in San Joaquin Valley high schools to integrate Electric Vehicle training modules into the curriculum,** serving both to develop the local workforce and increase families' exposure to EVs.

Silicon Valley

Regional Grant Team

NOVA Workforce Investment Board, Bay Area Climate Collaborative, work2future Workforce Investment Board, Workforce Investment Board of San Mateo County, LightMoves Consultancy, EV Charging Pros Consultancy, Prospect Silicon Valley, Recargo/PlugShare, San Jose State University, California Community Colleges

Electric Vehicles Industry

Silicon Valley's electric vehicle (EV) cluster is poised to become a major innovation center of the EV industry worldwide. The regional cluster includes original equipment manufacturers, providers and installers of charging stations, research and development operations, fleet management and repair, parts makers, software developers, utility/grid specialists, educators, consultants and public-private collaborations.

The greater Bay Area is a national leader the nation in adoption of EVs, with about 20,000 vehicles. In addition, the region is home to globally leading research and development facilities, including Nissan, BMW, Mercedes, Ford, Honda and General Motors.

The grant team launched the Silicon Valley Electric Vehicle Opportunity Initiative (EVOI) to work collaboratively with regional stakeholders to promote EV adoption, job creation, and economic growth in the region.

Electric Vehicles Industry	
Business and Community Stakeholders include	AeroVironment, BMW Tech, California Apartment Association, California Center for Sustainable Energy, California New Car Dealers Association, ChargePoint, City of San Jose, Clipper Creek, CollaboratEV LLC, General Motors R&D, IBM, InterContinental Hotels Group, Luscious Garage, Mission Motors, Nissan R&D, Plug-In Supply, Tesla Motors, Inc, Zero Motorcycles
Investment Strategy includes	**Develop regional EV academies** aimed at connecting on-going employer skill demands with the talent supply pipeline **Expand the pool of employment-ready engineering talent** in partnership with San Jose State University's proposed Center for Education and Training of Professionals in Hybrid and EV Technologies **Address barriers to charging installation and promote charging stations** within hospitality facilities, multi-unit dwellings, automakers, public works, and fleets **Expand multi-unit dwelling charging infrastructure** **Establish car share programs using EVs to serve low-income communities** **Extend and build on EV marketing campaigns to increase overall EV adoption in the region**

Early Implementation Results

- **The RICO team continues to convene the Silicon Valley EVOI in partnership with the Bay Area Climate Collaborative as a sustainable forum for connecting key stakeholders within Silicon Valley's EV cluster.** EVOI currently engages over 100 stakeholders from EV companies and organizations throughout the region.
- **NOVA Workforce Board is working with San Jose State University to create a Center for Education and Training of Professional in Hybrid and EV Technologies.** This proposed center is a collaborative effort to expand the pool of employment-ready engineering talent. Partners include EVOI, Nissan Research & Development, ChargePoint, Snap-On, Inc., Evergreen Valley College and De Anza College.
- **The team is spearheading the development of an inter-regional, multi-unit dwelling strategy to facilitate installation of charging infrastructure in multi-unit dwellings.** The team is working to provide the "voice of the customer" perspective as well as information about the plans, policies, obstacles and opportunities from apartment based multi-unit organizations and property managers. This will include developing an EV Charging Working Group in partnership with the California Apartment Association Tri-County Chapter to identify promising models for multi-unit dwelling infrastructure, and to better understand the barriers faced by multi-unit dwellings in installing EV infrastructure.
- **The team is expanding the EVOI partnership with Prospect Silicon Valley, a green energy commercialization catalyst and demonstration site in San Jose.** The organizations are currently considering an initiative designed to help EVOI and training organizations gain a better understand of the evolving skill demands of emerging green transportation companies. EVOI is leveraging its relationship with Prospect Silicon Valley to meet leaders of startup and emerging companies that will be future regional job creators. Those companies include Free Wire, developing solutions for workplace and multi-unit dwelling EV charging, and Otherlab, which is designing more efficient tanks for compressed natural gas vehicles.