REGIONAL INDUSTRY CLUSTERS OF OPPORTUNITY

ACTION PLANS EXECUTIVE SUMMARY

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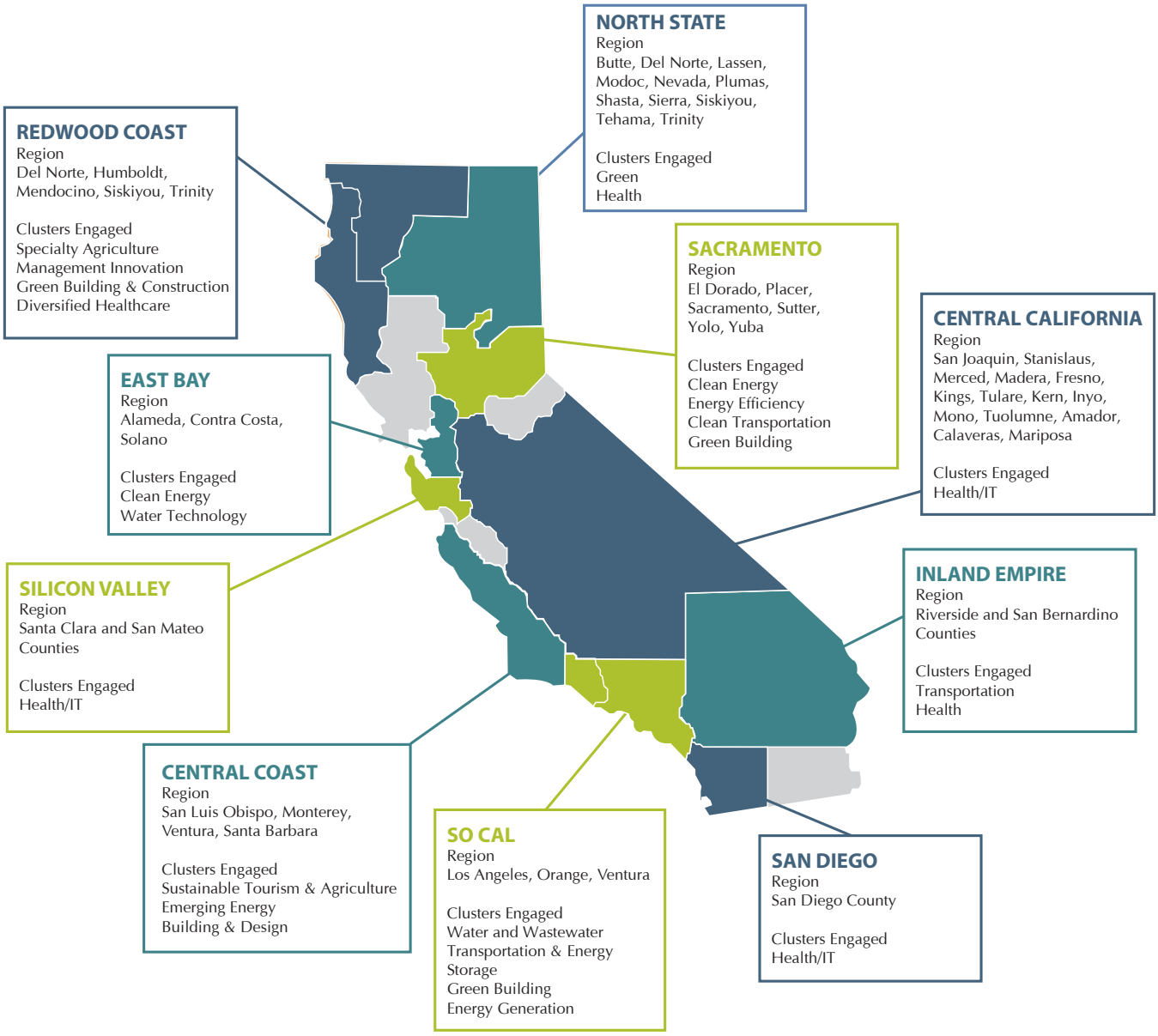
THE MOBILIZATION

10 Regions Organize Around Industry Clusters of Opportunity

In 2010, teams in 10 regions spanning much of California began a journey that culminated a year later in more than 20 cluster action plans, with specific commitments for implementation focused on key workforce and economic priorities. The Regional Industry Clusters of Opportunity effort is the largest simultaneous mobilization of regional clusters in any state. It demonstrates that California's regions can develop concrete, innovative, and actionable strategies to promote the growth of their key industries, expanding economic opportunity for people and economic vitality of communities, while improving the economic competitiveness of firms.



The cluster action plans focus on a diverse set of industries, including established sectors like health services and specialty agriculture; growing green sectors like renewable energy, alternative transportation, and water efficiency; and emerging areas of convergence like health and information technology. They are all demand driven—based on the priorities and ongoing engagement of more than 500 employers. They all involve multiple partners—from labor to workforce agencies to economic development organizations to community colleges to community-based organizations. And, most importantly, they all include tangible financial and in-kind commitments to putting plans into action—to sustain implementation beyond the grant period.

Each of the regional teams followed a similar four-phase action plan process, beginning with a diagnosis of their regional industry strengths using public and proprietary data sources. Based on this diagnosis, candidate clusters of opportunity were identified as the possible focus for action plans. Clusters of opportunity often include a mix of linked export-driven sectors and population-driven industries that have a track record of job, establishment, and/or wage growth. Most regional teams chose at least two clusters for action plan development.

The second phase of the action plan process focused on collaborative priority-setting. To identify shared priorities required deep engagement of cluster employers. Teams worked through this stage in several ways—including holding cluster meetings, interviewing individual employers, and surveying companies. Most employed more than one strategy. This phase produced a set of workforce and economic priorities for action. However, the deeper purpose of the engagement process was to go beyond providing information or insights into industry trends and priorities, to build a level of shared responsibility among employers for the development and implementation of their cluster action plan.

The third phase focused on the development of the action plan itself. The teams spent substantial time working on specific strategies and outcomes focused on cluster workforce and economic priorities. It involved refining ideas and tactics to achieve shared results. And, it included bringing additional businesses and community partners to the table to help flesh out the action plans.

In the fourth phase, the regional teams identified the specific commitments that would be required for sustainable implementation, including both financial and in-kind investments by multiple partners. These size and variety of these investments vary widely, as do the action plans in their focus and scope. Nonetheless, every cluster action plan includes specific commitments to turn written plans into actual results in the field.

At the beginning of each phase, all the regional teams were brought together in “action clinics” to share their experiences, offer peer-to-peer support, and receive technical assistance. Teams also had access to technical assistance as they moved through the four-stage process.

THE RESULT

More than 20 Cluster Action Plans Moving Into Implementation

The more than 20 cluster action plans engage industries across California. What this means is that industry clusters of opportunity are important not only for high-tech or urban or rural or any specific kind of region, but for all regions. The vast diversity of California's regions—and the fact that these different regions effectively engaged employers, developed shared priorities, identified specific strategies, and secured tangible implementation commitments shows that the action plan process can succeed across the State.

No two plans are alike, as no two California regions are the same. Even similar clusters in different regions produced different workforce and economic priorities for action. These differences are a testimony to the distinct needs of employers across the State, and the unique set of workforce and economic assets in each region. What this means is that state policy should be sensitive to and supportive of regional distinctiveness, rather than assume that a "one size fits all" approach will work.

The substance of the plans is the most important outcome of the process—the tangible actions that will be taken in the months ahead to help clusters grow across California. At the same time, the journey of each regional team—how they targeted their clusters of opportunity, engaged employers to develop cluster action plans, leveraged implementation resources and commitments, and are sustaining action—is important to understand. Each team was asked to document not only their action plans, but the process of how they developed them, so that other regions can learn from the experience.

The teams were not required to produce plans that looked and sounded the same. They were encouraged to design plans that were customized to meet their regional needs. As a result, some are more highly-produced public documents than others. What they were required to do was be specific about their strategies and implementation commitments—to be clear about how their plan would be actionable, not a report that would sit on a shelf.

REDWOOD COAST

The region expanded their efforts on specialty food/flowers/beverages, diversified health care, building and systems construction and maintenance, management and innovation services, and niche manufacturing, and are pursuing major areas of cross-cluster action: building the physical and information infrastructure to connect to outside markets, leveraging local talent for regional competitive advantage, improving regional capacity to attract and retain a quality workforce, addressing regulatory complexity and cost without sacrificing environmental standards, generate and conserve energy in ways that leverage regional advantages, incubate new businesses, recover and reuse materials, and prepare land for high-value uses.

EAST BAY

The region set the vision of becoming a globally recognized innovation and manufacturing center focused on clean energy and water technology that drives regional economic growth and job creation through innovation, incubation, and investment. The clean energy and water technology cluster action plans focus on talent and workforce development, as well as economic strategies such research and innovation, entrepreneurship and investment, manufacturing and infrastructure, and market transformation and expansion.

SILICON VALLEY

The region focused on the convergence opportunities with health and information technology, creating an action plan that would strengthen IT curriculum in health care occupational training, establish ongoing industry panels to foster collaborative among workforce partners and responsiveness to fast-changing workforce needs, help inventors and entrepreneurs move to the marketplace with new products, including patent law, marketing, business collaboration to pursue new consumer applications.

CENTRAL COAST

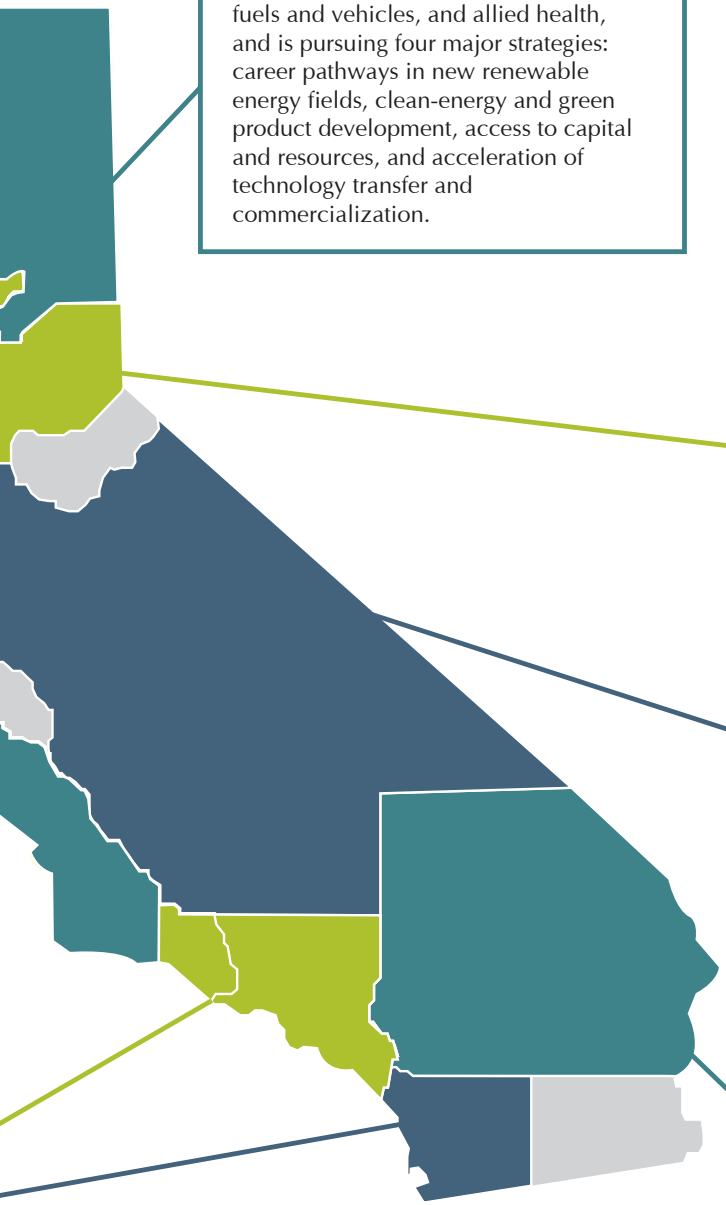
The region chose to focus on three clusters of opportunity: sustainable tourism and agriculture, emerging energy, and building and design. Monterey and San Luis Obispo County's workforce investment boards and economic development entities have agreed to work together to link existing cluster-based initiatives that relate to one or more of these priorities.

SAN DIEGO

The region also focused on the convergence opportunities with health and information technology, creating an action plan that included development of workforce programs at UC San Diego Extension and other institutions, a marketing campaign to promote San Diego as a health IT hub, focused efforts to leverage and connect existing company and institutional strengths in analytics, biotechnology, and bioinformatics as they relate to Health IT.

SO CAL

The region chose to focus first on two clusters: water efficiency and alternative transportation, and is pursuing major strategies in workforce development, market development/customer awareness building, policy and procurement, and plug-in rebates and infrastructure.



NORTH STATE

The 11 county region focused on the green sector (renewable energy, energy efficiency, and related firms), alternative fuels and vehicles, and allied health, and is pursuing four major strategies: career pathways in new renewable energy fields, clean-energy and green product development, access to capital and resources, and acceleration of technology transfer and commercialization.

SACRAMENTO

The region focused on clean energy, energy efficiency, clean transportation, and green building and is pursuing six areas of action: grow the residential and commercial customer base for clean energy technology cluster products and services, enhance the internal and external image of the Sacramento Region as a hub for clean energy technology cluster activities, enhance the understanding and adoption of green business practices among establishments in the Sacramento Region, Build mechanisms and internal capacity to actively fund innovative Clean Energy Technology companies. Build capacity within regional institutions that support start-up and emerging growth businesses and technology development in the Clean Energy Technology cluster. Align education and training programs with the specific needs of the Clean Energy Technology cluster and related employment opportunities

CENTRAL CALIFORNIA

The 14 county region focused on the health care cluster, the largest employer in the San Joaquin Valley after agriculture, and is implementing a sustained, annual consolidation of employer workforce surveys across the segments of the health care cluster to identify and target critical workforce shortages in health occupations, focusing first on implementing a skilled nursing internship program and applying for funding to meet specific needs such as psychiatric and radiation technicians, as well as working together on key regulatory issues (e.g., long-term care).

INLAND EMPIRE

The region selected health care and green transportation as their clusters of opportunity, with action plans focusing on developing a health career "pipeline" encouraging students early in school to choose health careers and continue to degree or certificate completion, promoting the application of IT across health care, and recruiting and retaining physicians. For green transportation, they are focusing on training mechanics to convert vehicles, promoting lease of electric vehicles for goods movement, and educating firms about incentives for retrofits.

THE ACTIONS
Specific Strategies from the Plans

The more than 20 cluster action plans contain both workforce and economic strategies, reflecting the range of actions required to drive economic opportunity, vitality, and competitiveness.

CLUSTER WORKFORCE STRATEGIES

The workforce development strategies being proposed and pursued through the cluster action plans are diverse. Some are broad-based (focusing on patterns of talent needs across the cluster) and others are very specifically focused on certain occupations and industry segments. They reflect the voice and commitments of cluster employers to articulate their needs and work with their community partners to help with curriculum, internships, and placements. A range of examples includes:

Develop and integrate curriculum, technology and certification for green jobs in community colleges and apprenticeships; identify core skills that apply across multiple industry segments and make training programs "stackable" and applicable to multiple fields; create green jobs career ladders, publicize green job opportunities through career fairs, student mentorships, internships, job shadowing, recruitments and screening events.

SACRAMENTO

Develop new career pathways in clean energy development, working with community colleges, the Builder's Exchange, and Energy Efficiency Training Academy; create a new solar thermal technology training program, partnering with private business, and a new sustainability manager certificate program for companies that need to procure, use, and maintain green products, services, and practices; provide specialized training in key areas such as boiler technicians, smart meter/smart grid, and energy efficiency; become the West Coast National Alternative Fuels Training Center (NAFTC) for Propane and Propane Hybrids.

NORTH STATE

Grow local community college programs to prepare incumbent workers for emerging jobs and occupations in solar, wind, biofuels, storage, smart grid, waste-to-energy, fuel cell; establish a clean energy/renewable energy systems degree and certificate programs at California State University East Bay, similar to clean energy certificate programs at Cal Poly Pomona, Humboldt State University, and Oregon Institute of Technology; provide internships and other work experiences for students attending local degree and certificate programs in renewable energy related fields; expand the Bay Area Consortium of Water and Wastewater Education sponsored water/wastewater technology program at Solano Community College.

EAST BAY

Support vocational trades in high school and CR (welding, mechanics, truck drivers, electronic technicians, etc.) and applied academic learning.

REDWOOD COAST

Better integrate IT into current health care training models, including greater participation of health IT companies in current advisory or teaching roles, increased in-field/applied work experiences including internships and apprenticeships, and use of shared trainers and training spaces.

SILICON VALLEY

Develop programs at UC San Diego Extension and other local institutions related to Health IT, leveraging and connecting industry and institutional strengths in analytics, biotechnology, and bioinformatics.

SAN DIEGO

Work with regional training providers to secure and commit funding to address critical health occupation shortages, including radiation techs, psychiatric techs, skilled nurses, clinical lab scientists, promotoras/community outreach, and MD extenders.

CENTRAL CA

Train mechanics in how to convert medical transport vehicles to CNG.

INLAND EMPIRE

CLUSTER ECONOMIC STRATEGIES

The clusters of opportunity in each region have a wide range of needs. Some are workforce related, with workforce and education partners taking the lead in developing and adapting their offerings to concrete ways. Other cluster needs require one or more economic strategies. These kinds of strategies fall into two major categories: market development and business development.

MARKET DEVELOPMENT

One of the most urgent, especially for the green-oriented clusters, is market development—the actions that help to grow the market for their products and services. Market development can include public policy and procurement; customer education and financing, encouraging potential residential, commercial, industrial, or agricultural customers to use local products and services; and enabling infrastructure that provides platforms for markets to operate effectively. Some examples from the cluster action plans include:

Public Policies and Procurement

Develop a Regional Governmental Clean Tech Master Plan (RGCTMP) to adopt incentives that demonstrate local government commitment to supporting a clean tech cluster. These could include: buy-local procurement policies; RFP notification processes; local hiring agreements; business license fee waivers for clean tech companies; creation of clean tech enterprise zones; incentives for "greening" private buildings; and/or linking redevelopment activities to clean tech business support opportunities.
SACRAMENTO

Work with local public agencies, including counties, cities, public school districts, community college districts, universities, water and wastewater agencies, and transit districts—to develop an aggregated purchasing program, which would help stimulate the local market for clean energy products and services.
EAST BAY

Initiate a pilot Clean Cities Coalition that could be expanded to the region to deploy new alternative transportation fuels, focusing on municipal fleets.
NORTH STATE

Develop a local preference policy for general and sub-contractors of construction and professional services.
REDWOOD COAST

Encourage public sector to adopt "buy local" policies, which are designed to ensure competitive pricing, boost local economies, foster sustainable development, reduce greenhouse gas emissions, create local jobs, and provide opportunities for small businesses consistent with state policy.
EAST BAY

Encourage local governments to adopt alternative energy policies, amend their general plans and building codes to encourage use of alternative energy in development projects, and adopt water elements to their general plans.
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EAST BAY

Encourage standardized solar permitting across jurisdictions.
NORTH STATE

Develop a uniform, efficient, low-cost permitting process for clean energy projects and installations .
EAST BAY

Customer Education and Financing

Launch a Green Water Jobs Campaign, developing a brand and argument for green jobs in the water efficiency cluster focusing simultaneous financial savings, job creation, and environmental benefits, educating cities, purveyors, and landscapers on water efficiency, landscape, and low-impact development ordinances and compliance, recognizing and showcasing best practices.

SO CAL

Educate the public about water conservation, commercial real estate owners and managers about adopting decentralized water infrastructure technologies, and water agencies and jurisdictions about how to meet the requirements of SB x7-7, which aims to reduce per capita water use by 20% by 2020 .

EAST BAY

Encourage regional water and wastewater agencies to serve as a platform for the testing and demonstration of innovative water technologies and to support "buy local" programs.

EAST BAY

Establish a region-wide "dashboard" to measure progress in targeted areas and infuse into the media; create pilot projects that focus on "greening" specific types of industries in the region that represent a large portion of the employment base, like health care; develop an annual event to recognize corporate sustainability; develop a Green Pages 2.0 directory of local green products and services.

SACRAMENTO

Develop new financing tools to enable more customers to purchase green building and renewable energy products and services.

SACRAMENTO

Educate the public and build consumer interest about purchasing and leasing options and financing programs through tax-exempt leases, other federal and state programs, utility owned, and other financing options.
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EAST BAY

Develop pilot project for purchase of electric off-road vehicles for goods movement, and conduct outreach to Independent trucking firms to promote use of incentives for retrofits and purchase of alternative fuel vehicles.

INLAND EMPIRE

Create an energy innovation center similar to the San Diego Gas and Electric program where customers, local business, and trades people can learn about energy efficiency, alternative fuel transportation, clean energy alternatives, energy efficient design, rebates, and incentives .

EAST BAY

Enabling Infrastructure

Create alternative fuel centers (infrastructure) along major transportation corridors in the region.
NORTH STATE

Implement an electric vehicle infrastructure deployment strategy, including new charging station infrastructure and retrofits.
SO CAL

Encourage public sector to install electric vehicle charging stations and biofuels filling stations in their corporate yards, public parking garages, and new development projects.
EAST BAY

Build redundant fiber optic line to ensure continuous communications access to global markets.
REDWOOD COAST

BUSINESS DEVELOPMENT

Another major need identified by cluster employers across the regions was business development. The most prevalent business development strategies from the cluster action plans were business support and financing, and technology commercialization.

Business Support and Financing

Create an active and fully funded "VC Road Show" to pitch the region's assets and companies to venture-focused audiences; expand training to support companies in winning seed money; develop a revolving loan fund to support growing clean tech companies; establish standards and warranties for solar panels in CA to make growing solar technology firms more "bankable."
SACRAMENTO

Hold venture forums and business plan competitions to expose equity investors and venture capital firms to local start-up and early-stage clean energy companies; work with regional banks to understand the needs of the clean energy sector, and develop loan programs for expansion and equipment purchases to meet the growth needs of local companies.
EAST BAY

Develop new pilot mentoring program to provide entrepreneurial training for small businesses in remote rural areas.
NORTH STATE

Support entrepreneurs in water and wastewater.
SO CAL

Business Support and Financing

Give local companies support with exporting their clean tech products.

SACRAMENTO

Create a marketing campaign to communicate that San Diego has all the components needed to flourish as an international health IT hub, encouraging major wireless, health care, and health IT companies to locate or expand in the region.

SAN DIEGO

Help clean energy manufacturers with expansions in the region through facility and infrastructure assistance, connection to other companies and suppliers, uses of local and state credits and incentives, and facilitation through permit approval processes.

EAST BAY

Develop a regulatory information exchange to keep up, trouble-shoot.

REDWOOD COAST

Technology Commercialization

Offer proof of concept services for testing and validating new product development such as solar thermal roof application; provide technical assistance to university faculty and students to accelerate technology transfer and commercialization; establish team to work with recycle firms and identify materials that could be developed into secondary products.

NORTH STATE

Accelerate the transfer of innovative clean energy and water technologies into the marketplace—and capture that innovation locally by supporting local technology demonstration projects, facilitating university/research laboratory/industry interaction, linking economic development and business development experts with local scientists and engineers.

EAST BAY

Build a new innovation forum focused on leveraging the region's Smart Grid investment, and building new business opportunities for regional companies, tied into existing programs and offerings; develop a talent pool of "serial CEOs" to complement initial technical talent / inventors; create connections between green technology companies, other technology companies, and existing industries to spur new innovations and facilitate technology deployment.

SACRAMENTO

Establish a referral network of specialized service providers and investors that can assist with technology commercialization, equity financing, regulatory approvals, and export assistance; work with university and federal research laboratory technology transfer offices to encourage companies using locally developed technology to locate or expand in the region .

EAST BAY

THE COMMITMENTS

Regional Teams Make It Real and Sustainable

All the cluster action plans include tangible commitments for implementation. These commitments, like the plans themselves, come in many forms. All the plans include a substantial commitment of in-kind resource commitments from the community partners—in the form of staff time, use of facilities and equipment, and the like, from workforce investment boards, labor organizations, community colleges, universities, and other community and volunteer organizations. Implementation of each of the cluster action plans will also involve the continuing engagement of cluster businesses as partners, and often the participation of industry associations, chambers of commerce, and economic development corporations.

The regional teams are also investing financial resources to drive the implementation of the cluster action plans. Several of the teams are allocating a portion of their Regional Industry Cluster of Opportunity planning grant funding as seed investments to jump start implementation and leverage additional financial and in-kind investments. The workforce investment boards of many teams are making commitments to implementation from their regular funding streams—tangible evidence that the workforce system is aligning its efforts to focus on the driving industry clusters of their regions.

Some teams are tapping state and federal funding sources and programs beyond the U.S. Department of Labor, such as the California Energy Commission, U.S. Economic Development Administration, U.S. Department of Commerce, and others. For example, during the action planning process, NoRTEC secured a $500,000 grant for training and certifying employees in alternative vehicles and fuels.

Some regions are attempting to use their plans to leverage other state and federal funding in workforce and economic development. For example, the Sacramento region was included in a recent Green Jobs Innovation Fund Proposal submitted to U.S. Department of Labor by the California Labor Federation and the California Building Trades Council. The Redwood Coast is using the action plans as a foundation for the update of the Comprehensive Economic Development Strategy (CEDS), which will enable them to gain access to further EDA funding.

Across California, public-private teams are in place and making shared commitments to putting cluster action plans into effect. Every team has secured some commitments to date, and is engaged in a continuous process of seeking additional investments of financial and in-kind resources.

THE IMPLICATIONS

The State of California Can Work Through Its Regions and Clusters of Opportunity

The State of California can work through its regions and their clusters of opportunity to seed and support concrete, specific strategies for economic recovery and growth. The more than 20 cluster action plans seeded during the past year—along with independent efforts that have grown up organically across the State—make the strong case that the most effective workforce and economic strategies in California are regional, cluster-based, with strong employer engagement and supported by a diverse team of community partners.

What can the State of California do to support regional clusters of opportunity?

The State can dedicate specific seed funding to support the cluster action plan process. A relatively modest amount of investment can help regions mobilize clusters and develop plans of action. The current set of plans resulted from a solicitation developed jointly by the California State Workforce Investment Board, the California Energy Commission, the Employment Development Department and the California Economic Strategy Panel. Approximately $2.2 million dollars in funding for the 10 grants came from the American Recovery and Reinvestment Act (ARRA), the Workforce Investment Act Governor's Discretionary 15 percent portion of the federal Workforce Investment Act and Assembly Bill 118, Alternative and Renewable Fuel and Vehicle Technology Program (AB 118).

The State can also align policy to regional cluster needs and growth opportunities. State agencies with grant and other investment programs that could be more explicitly focused on regional industry clusters, as the California Workforce Investment Board and California Energy Commission have done. Regulatory bodies could view their policies through the lens of regional clusters—and determine how their actions impact the competitiveness and growth of those leading industries. And, policymakers could consult regional teams as a sounding board for legislative and executive actions that would most encourage cluster growth.

THE PLANS

What They Include and How They Will Be Implemented

The Cluster Action Plans include both a description of the process and a delineation of 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 action plans?
- How did we leverage implementation resources and commitments?
- How did we achieve sustainable, systemic change?

Each plan also describes specific priorities, strategies, and actions—along with financial and in-kind implementation commitments. These are described at various levels of detail, with various timelines, depending on the unique situation with each region and cluster. Some regions and clusters moved further and faster than others—often a function of prior experience mobilizing industry clusters of opportunity. Regardless, every plan represents a major step forward in their region—a set of commitments that would not likely have been made without the urgency and focus of the industry clusters of opportunity process.

The plans will continue to be works in progress. As the plans move into the implementation stage, there will be important refinements and course corrections that will reflect changing realities and emerging opportunities for cluster growth and competitiveness. Whatever changes are made, they will be tied to measurable outcomes and driven by specific implementation commitments. The bottom line is that the cluster action plans are the shared responsibility of the regional teams—the employers and the community partners that put them together over the past year and will continue to champion them in the future.

California
WORKFORCE
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