

State Economic Blueprint

February 2025



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To My Fellow Californians:

As we stand at the threshold of a new year, I am filled with immense pride and optimism for the future of our great state. California has always been a beacon of innovation, resilience, and progress. Time and again, we have demonstrated our ability to rise above adversity and set new standards for the nation. Today, I am writing to share our statewide economic vision and to reaffirm our commitment to building a California that works for everyone.

Over the past few years, we have made strides in addressing some of the most pressing issues facing our state, making significant investments into our housing supply, infrastructure, and healthcare and educational systems that have laid a strong foundation for sustainable growth and prosperity. This work has set the stage for our first-of-its-kind investment into bottom-up, regional economic planning.

Through California Jobs First, we have brought together more than 10,000 Californians in regions across the state to define what the future can and should look like in each of their communities. This Economic Blueprint, informed by these local efforts and voices, defines an economic agenda for California that charts a path towards a prosperous and sustainable future for all Californians.

To all those Californians that participated in this effort: I am grateful for your commitment to our shared success. This Blueprint, and each of our regional plans, represents the hope that you have for our collective economic prosperity.

To our business leaders and executives: your role in achieving this vision is crucial. Your commitment to ethical leadership, sustainable practices, and community engagement will be instrumental in creating a vibrant economy that not only generates wealth but also uplifts our communities and protects our environment. I urge you to continue innovating, investing, and collaborating as we work to build a brighter future for all Californians.

We have work to do if we want California to remain the place for dreaming up new ideas and turning them into reality, but I know we are capable of it. Together, let's make sure the future continues to happen here, first.



Gavin Newsom
GOVERNOR

To Our Fellow Californians:

California has created more opportunities, more jobs, and more businesses than any other state, but we need to ensure that we're all moving forward together—and that every region across our state continues to play a critical role in the sustainable growth of the world's fifth largest economy. That's what California Jobs First is all about.

Over the last three years, our teams have worked in partnership with local leaders across the state to develop community-led and regionally-specific economic strategies through the Regional Investment Initiative, the flagship program of California Jobs First. This initiative forged new coalitions in each of our 13 economic regions that brought together voices from business, labor, community, education, local government, and more to collectively design the economic future they envision for their respective communities. Governor Newsom launched the California Jobs First Council to develop a statewide Economic Blueprint driven by these 13 regional strategies that leverage the unique assets, advantages, and opportunities across our state. This Blueprint is groundbreaking—it's the first statewide, bottom-up economic development strategy in the nation and the first economic strategy California has had in over two decades.

This Blueprint provides clear and actionable recommendations to support our regions, employers, and workers through strategic investments, policy actions, and greater overall alignment to ensure that the industries of today and tomorrow provide the good-paying jobs Californians deserve.

This work is critically important, challenging, and successful implementation will take time. We look forward to our continued partnership and collaboration as we work to build a healthy, prosperous future for all Californians.

In partnership,



Dee Dee Myers
DIRECTOR, GO-BIZ



Stewart Knox
SECRETARY, LWDA

Responding to the LA Wildfires

Beginning on January 7th, 2025, hurricane-force wind-driven fires resulted in massive urban conflagrations across separate areas of Los Angeles County.

16,251 structures were destroyed and 29 lives were lost.¹ The four most destructive wildfires in California's recorded history, as well as the nine largest in state history, have all happened within the past decade. These extreme events illustrate that we need to plan for the future amid growing climate volatility in order to build a more climate-forward economy.

SPEEDING RECOVERY AND PROTECTING SURVIVORS

Governor Newsom issued a number of executive orders in response to the Los Angeles firestorms to help aid in rebuilding and recovery, create more temporary housing, and protect survivors from exploitation and price gouging²:

- Providing tax relief to those impacted by the fires.** California postponed the [individual tax filing deadline](#) to October 15 for Los Angeles County taxpayers. Additionally, the state extended the January 31, 2025, sales and use tax filing deadline for Los Angeles County taxpayers until April 30 – providing [critical tax relief for businesses](#). Governor Newsom suspended penalties and interest on late property tax payments for a year, [effectively extending the state property tax deadline](#).
- Rebuilding Los Angeles faster and stronger.** Governor Newsom issued an executive order to [streamline the rebuilding of homes and businesses](#) destroyed – suspending permitting and review requirements under the California Environmental Quality Act (CEQA) and the California Coastal Act.
- Fast-tracking temporary housing and protecting tenants and homeowners.** To help [provide necessary shelter](#) for those immediately impacted by the firestorms, the Governor issued an executive order to make it easier to streamline construction of accessory dwelling units, allow for more temporary trailers and other housing, and suspend fees for mobile home parks. Governor Newsom also [issued an executive order](#) that prohibits landlords in Los Angeles County from evicting tenants for sharing their rental with survivors displaced by the Los Angeles-area firestorms. For homeowners, California has worked with five major lenders, as well as [270 financial institutions](#), to provide [mortgage relief](#) to their customers.
- Mobilizing debris removal and cleanup.** With an eye toward recovery, the Governor [directed fast action](#) on debris removal work and mitigating the potential for mudslides and flooding in areas burned. He also [signed an executive order](#) to allow expert federal hazmat crews to start cleaning up properties as a key step in getting people back to their properties safely. The Governor also [issued an executive order](#) to help mitigate risk of mudslides and flooding and protect communities by hastening efforts to remove debris, bolster flood defenses, and stabilize hillsides in affected areas.
- Safeguarding survivors from price gouging.** Governor Newsom expanded restrictions to protect survivors from illegal price hikes on [rent, hotel and motel costs](#), and [building materials or construction](#). Report violations to the Office of the Attorney General [here](#).
- Directing immediate state relief.** The Governor signed legislation [providing over \\$2.5 billion](#) to immediately support ongoing emergency response efforts and to jumpstart recovery efforts for Los Angeles. California quickly launched [CA.gov/LAfires](#) as a single hub of information and resources to support those impacted and [bolsters in-person Disaster Recovery Centers](#).
- Getting kids back in the classroom.** Governor Newsom signed an executive order to [quickly assist displaced students](#) in the Los Angeles area and bolster schools affected by the firestorms.
- Protecting victims from real estate speculators.** The Governor issued an executive order to [protect firestorm victims](#) from predatory land speculators making aggressive and unsolicited cash offers to purchase their property.

PREPARING FOR TOMORROW

The State embarked on the path to recovery by doubling down on partnerships spanning from local entities within LA County to federal agencies, thereby laying the groundwork for a climate-oriented economic future. This includes engaging the LA County Jobs First Collaborative to embed recovery into their existing regional plan with an additional \$3 million investment into the Collaborative. With the issuance of this California Jobs First Economic Blueprint, the Newsom Administration is working to help LA County and its other Jobs First regions with building more sustainable and inclusive economies.

THANK YOU

California is grateful for the tremendous heroism and sacrifice that more than 16,000 first responders demonstrated in the fight to contain the LA wildfires. Thank you for putting your lives on the line to protect Southern California communities and for embodying the spirit of this state. **A**

HOW TO HELP

California Rises, a collaboration between Governor Newsom and California Fire Foundation, has been re-launched to support firefighters and those impacted by the fires. If you would like to donate or volunteer, please visit CARises.com.



Executive Summary

California has always been a beacon of the future. Our dynamic economy, world class educational institutions, and diverse and skilled workforce have consistently put us at the forefront of innovation and growth.

As a state guided by core values of equity, sustainability, and innovation, we are building a model for continued economic growth and prosperity that benefits all Californians and helps us navigate emerging trends.

This is where California Jobs First comes in. Recognizing the need for an inclusive economic strategy, Governor Newsom launched the state’s California Jobs First Regional Investment Initiative (RII) in 2021.¹ RII empowered regions around the state to bring together a diverse set of community members—more than 10,000 Californians—to craft their own economic visions.² The result is 13 community-led regional economic plans that reflect the unique strengths and needs of each area.

In March 2024, we launched the California Jobs First Council, bringing together nine state agencies to develop a comprehensive approach to advancing California’s economy.³ Working across our departments, we have now developed a 10-year economic development strategy for California that builds on regional priorities and harnesses our state’s greatest strengths. We identified a set of strategic sectors, each represented in at least one regional plan, that capture the breadth and diversity of California’s economy, assessing where there are opportunities for near-term job creation and where California has distinct, competitive assets. Over the next two years, we will pilot replicable models for advancing these strategic sectors, supporting job creators not only during their early stages but through the full product lifecycle, with a specific emphasis on manufacturing.



NORTH STAR

Help create, attract, and increase access to good-paying jobs.

GOALS

- 1 Support sustainable and equitable growth across regions and populations
- 2 Invest in the workforce for the sectors of the future
- 3 Create an attractive environment for and with job creators
- 4 Strengthen California’s innovation economy and entrepreneurial culture

What follows is a result of this work. This Blueprint outlines how we will achieve the California Jobs First North Star of helping **create, attract, and increase access to good-paying jobs**, focusing on four goals to achieve this objective.

We have developed a set of strategic themes and activities that will advance each of our four goals and help us meet our North Star for a resilient and inclusive California economy.

Achieving the ambitious goals set forth in this Blueprint will require significant partnership and collaboration—across regions, communities, and stakeholders throughout the state. **By working together, we can invest in our strategic sectors to drive sustainable economic growth, innovation, and access to good-paying jobs for all Californians.**



Strategies that will Advance the Goals of California Jobs First:

NORTH STAR

Help create, attract, and increase access to good-paying jobs.

GOALS

Support sustainable and equitable growth across regions and populations

Invest in the workforce for the sectors of the future

Create an attractive environment for and with job creators

Strengthen California’s innovation economy and entrepreneurial culture

STRATEGIC THEMES

- Continue to empower regions to advance their strategic priorities through the Regional Investment Initiative
- Mobilize broader state resources to support community-vetted regional strategies

- Design skills-based pathways into in-demand occupations for strategic sectors
- Lower barriers to accessing job opportunities in partnership with the Master Plan for Career Education
- Streamline workforce programs across the state

- Improve, align, and simplify the incentive toolkit
- Streamline and expedite the process for siting industrial operations while maintaining our strong environmental protections

- Partner with our educational systems to foster and expand innovation
- Develop support systems to drive access to federal innovation programs
- Support advancements of strategic sectors in California’s innovation ecosystem

Introduction

“Each region of California has its own strengths—we’re helping build out each local economy with a bottom-up approach that’ll connect more good-paying jobs with California families.”

- Governor Gavin Newsom

The Future Happens Here First

CALIFORNIA JOBS FIRST OVERVIEW

California is an economic powerhouse on the national and global stage, with the world's 5th largest economy as of 2023.¹

The sheer size of California's economy is underpinned by its diversity and dynamism, driven by our leadership across a broad set of sectors: California is home to the global epicenter of technological innovation in Silicon Valley, the entertainment industry capital in Hollywood, and some of the world's most fertile and productive agricultural land in the Central Valley.

Yet despite our deep, historic strengths, we are facing forces that we must carefully navigate to secure California's economic future, including climate change,^{2,3} uneven distribution of economic opportunity and benefits,⁴ and new disruptive technologies that have the potential to reshape society.⁵

In the face of change, we cannot rest on our laurels or take California's economic status for granted. Instead, we must approach these emerging trends head on with the same resiliency and optimism that has long defined California—looking out and embracing new ideas and solutions while maintaining our distinctly Californian values of equity, sustainability, and innovation.

And that is exactly what we are doing. With California Jobs First, we are taking an even more active and aggressive role in shaping California's economic trajectory in a way that is community-led and climate-forward, showing the world that **the future happens here first.**



Taking Action Today

Early in this Administration, Governor Newsom recognized that a state as large and diverse as California needed community informed, regionally nuanced strategies to achieve sustainable, people-centered economic growth.



In partnership with the Legislature, he turned that recognition into action in 2021 with the creation of the California Jobs First Regional Investment Initiative (RII), a first-of-its-kind, large-scale, and participatory economic development initiative, bringing together a diverse set of community members to build the economic vision for their region.

Through RII, we made strategic investments into regional planning capacity that culminated in the creation of 13 inclusive regional economic plans.⁶

California has Invested \$268M to Empower Regions to Advance Their Economies Through the California Jobs First Regional Investment Initiative

Where we are today

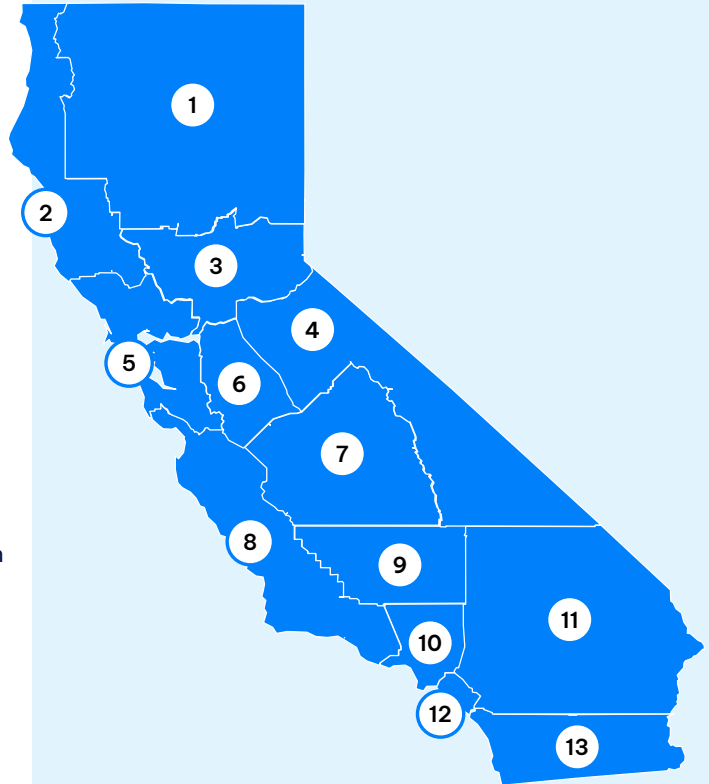


Developing the 13 Jobs First Regions

The creation of California’s thirteen economic regions marks a strategic, data-driven approach to advancing resilient economic growth across the state.

These regions were identified to maximize the potential for collaboration, economic diversity, and job creation. Guided by California’s Labor Market Information Division at the California Labor and Workforce Development Agency (LWDA), each region was defined based on unique local factors—like commute patterns, labor market characteristics, and industry strengths—alongside critical elements such as population size, geographic scale, and economic linkages.⁷

By grouping counties with shared economic ties and local connections, California has created an ecosystem of regions that can drive both local and cross-regional initiatives. This approach breaks down geographic and economic silos, encouraging regions to work together on transformational projects that transcend boundaries, from developing good-paying jobs to building sustainable industries. The California Jobs First initiative has empowered these regions with tools and funding to build the local partnerships needed to collectively create regionally-tailored solutions, ensuring that economic resilience is woven into the fabric of communities statewide.



- ① North State
- ② Redwood
- ③ Capital
- ④ Sierra
- ⑤ Bay Area
- ⑥ North San Joaquin
- ⑦ Central San Joaquin
- ⑧ Central Coast
- ⑨ Kern County
- ⑩ Los Angeles County
- ⑪ Inland SoCal
- ⑫ Orange County
- ⑬ Southern Border



WHAT IS THE REGIONAL INVESTMENT INITIATIVE?

A foundational element of California Jobs First is our investment into the Regional Investment Initiative.

The RII has created and empowered 13 regional governance bodies, called ‘Jobs First Collaboratives,’ to bring together diverse partners and organizations to collectively define an economic vision for the future of their region.

Over the last two years, thousands of Californians have come together to develop regionally relevant plans to create good-paying jobs and thriving communities. Each region convened representatives from local governments, employers, labor groups, community-based organizations, tribal entities, and more, and instituted shared decision making processes that ensure historically underserved groups and worker voices are represented.⁸

With state support, these ‘Jobs First Collaboratives’ have already seeded innovative projects, including a new accelerator program for biomanufacturing in the North San Joaquin Valley⁹ and a hub for food entrepreneurship in the Capital Region.¹⁰

These governance structures were charged with defining strategies for their regional plans that aligned with the following objectives:

- **Job quality and access:** Prioritize stable jobs with safe working conditions that provide good-paying wages, health benefits, worker advancement, and opportunities to increase access.
- **Equity:** Incorporate the needs of diverse communities and populations historically excluded from planning and economic development processes and engage them in decision making.
- **Sustainability:** Aim to build carbon-neutral, climate-resilient economies by addressing the needs of each region’s communities.
- **Economic competitiveness and resilience:** Focus on strategies that help regions leverage emerging opportunities, diversify to navigate economic shocks, compete in the global economy, and bring prosperity to their communities.¹¹



Each of the 13 regional plans can be found on the Jobs First website: jobsfirst.ca.gov

For the first time in California’s history, every part of the state has research-backed and community-led strategies for how to grow their economy in a way that benefits all residents.¹²

California Jobs First has continued to build from this intensive planning process. In March 2024, Governor Newsom launched the California Jobs First Council, bringing together nine different state agencies in a shared mission to streamline our economic, business, and workforce development programs to create more jobs, faster.¹² The Council will help direct a coordinate and comprehensive approach to economic development by channeling the efforts of our agencies, regional and local partners, and communities towards a shared vision for the future—the California Jobs First State Economic Blueprint.

With the creation of the Blueprint, we are taking our efforts to the next level and setting a comprehensive yet flexible economic agenda for the next ten years that can be updated to reflect evolving regional needs and context. The Blueprint aims to align state and regional efforts to accelerate job creation and innovation across California, bringing a whole-of-government approach to advance sectors that will shape California’s economic future and build skills-based pathways for Californians to access economic opportunities.

Ultimately, we believe this vision will be best realized locally. Each region has already received strategic investments to help turn these ideas into tangible projects. We will continue to empower regions with tools to execute on the strategies defined in their plans, from working to align the state’s economic development-related funding toward California Jobs First goals and objectives, to identifying which programs might be most relevant to building funding stacks for projects that advance regional strategic sectors.

CALIFORNIA JOBS FIRST COUNCIL



Co-Chair: Governor’s Office of Business and Economic Development (GO-Biz)



Co-Chair: Labor and Workforce Development Agency (LWDA)



California Department of Food and Agriculture (CDFA)



California Department of Veterans Affairs (CalVet)



California Environmental Protection Agency (CalEPA)



California Health and Human Services Agency (CalHHS)



California Natural Resources Agency (CNRA)



California Public Utilities Commission (CPUC)



Governor’s Office of Land Use and Innovation (LCI)

Purpose of the State Economic Blueprint

Inclusive planning efforts not only identified the unique strengths and opportunities of each region, but also elevated the interconnectivity between regions and established the need for greater coordination across the state.

We are now building from the strategies developed by each region over the last two years to establish a cohesive, state-level economic roadmap for the next 10 years.

The Blueprint intends to set a direction for the state, align resources towards a subset of sectors and projects that will chart the economic future for California, and help mobilize capital in support of our economic vision. Through the strategies outlined in the Blueprint, we will also continue to support each of the 13 regions in implementing their economic strategies and attracting additional capital to get transformative projects off the ground.

Developing the State Economic Blueprint and defining its goals is only the first step. Achieving these goals by 2035 requires significant partnership—with regions, investors, employers, labor, academia and more—to implement the changes needed to unlock the full potential of each of our strategic sectors.

California Jobs First North Star & Goals

NORTH STAR

Help create, attract, and increase access to good-paying jobs.

GOALS

- 1 Support sustainable and equitable growth across regions and populations:** Advance community-led, regional strategies designed with equity and sustainability at their center
- 2 Invest in the workforce for the sectors of the future:** Ensure residents have the skills they need to access opportunities in strategic sectors.
- 3 Create an attractive environment for and with job creators:** Make California the preferred destination for businesses to generate ideas and bring them to life.
- 4 Strengthen California's innovation economy and entrepreneurial culture:** Foster a dynamic environment of public-private sector collaboration where industry, academia, investors, and entrepreneurs drive new advancements and take risks.

Understanding Today's Reality

“Across California, we are showing how growing our economy and caring for our environment go hand-in-hand. Healthy, productive landscapes—from our farms to forests—drive economic activity and create jobs. Likewise, our growing economy relies on abundant natural resources, like clean air and clean water. California Jobs First is helping leaders across our state shape a vibrant, healthy future for their regions and we’re proud to partner in these efforts.”A

- **Secretary Wade Crowfoot**
California Natural Resources
Agency (CNRA)



Understanding Today's Reality

California stands at a pivotal moment, where our unparalleled economic and innovation strengths must confront the pressing challenges of today to build a future that is both prosperous and inclusive. In this section, we delve into the current state of California's economy, highlighting both the opportunities and obstacles that shape our path forward.



5th

California's ranking amongst the world's largest economies based on GDP¹

1st

California's ranking based on venture capital dollars received by its entrepreneurs compared to those in other states²

~2.9 million

Number of students attending one of the State of California's post-secondary educational institutions³

Nation-Leading Economic Scale, Productivity, & Dynamism

California leads the nation in economic scale, diversity, and dynamism.

Our Gross Domestic Product (GDP) is \$3.9 trillion—more than 1.5x that of Texas, the next largest U.S. state—and our five-year growth rate of 6% suggests that we aren't slowing down any time soon.⁴ The state's economic prowess can be attributed to several key factors.

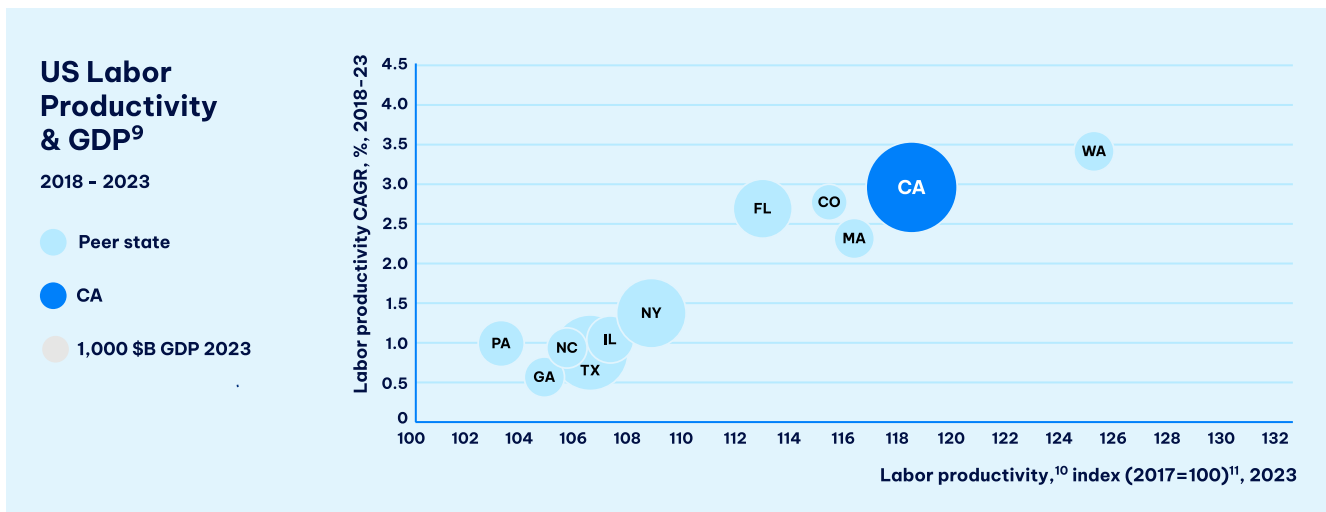
Scale and Diversity

California continues to be a hub for economic activity. The state is home to the headquarters of 57 Fortune 500 companies, the most of any state—surpassing both Texas (52) and New York (52).

But size alone isn't what makes us stand out; it is our strength across sectors that is unique, with Fortune 500 companies spanning from financial services (Visa), to entertainment (Walt Disney), to life sciences (Amgen), to technology (Apple).⁵ California is truly an economy driven not by a single sector but by several nation-leading ones.

Productivity

Our people and industries are increasingly productive. California ranks third in overall labor productivity,⁶ a measure of how much work a person can do in a certain amount of time, and second amongst peer states identified based on similarities in economic size and industry composition.⁷ The state has also experienced nearly 3% year-over-year productivity growth from 2019–2023, more than double the national average of 1.3%.⁸



International Interconnectedness

California is competitive on the global stage, with our businesses providing products and services not just to domestic consumers but also the international market. In 2023, we exported nearly \$180 billion of goods around the world, including \$155 billion in manufactured goods.¹² We are also the leading U.S. importer, with our ports handling more than 40% of national imports.¹³

It's not just our large companies that are internationally relevant; in 2022, small and medium-sized firms with fewer than 500 employees generated 43% of California's exports.¹² California is also a place where companies from around the world want to do business: foreign direct investment supports more than 800,000 jobs—surpassing all other states¹⁴—and over \$84.3 billion in wages for Californians.¹⁵



TAKING ACTION

Amid these economic strengths, there are policies and processes that increase the real and perceived difficulty of doing business in California. Backlogs in grid connectivity have created risks to timely project delivery,¹⁶ an experience shared with many states facing increased demand for power.¹⁷ And while the California Environmental Quality Act (CEQA) plays an important role in protecting the natural resources of the state, at times it has been used as a wedge to slow down development projects.¹⁸

The Newsom Administration has Taken Action to Address These Barriers:

- The passage of Senate Bill 149 expanded coverage of the judicial streamlining certification process for CEQA to include green infrastructure and advanced manufacturing processes, helping reduce lawsuit-related delays from 3-5 years to ~270 days.¹⁹
- In September 2024, the California Public Utilities Commission introduced new energization timelines for our three large investor-owned utilities to expedite the approval process for new residential and commercial buildings as well as electric vehicle (EV) charging stations.²⁰
- Through Executive Order N-8-23, the Governor created an Infrastructure Strike Team to streamline and expedite the process for projects offering significant opportunities for infrastructure and job creation.²¹

One-of-a-Kind Innovation, Research, & Educational Ecosystem

A can-do, entrepreneurial spirit has defined California since our early days, helping build our reputation for innovation and research.

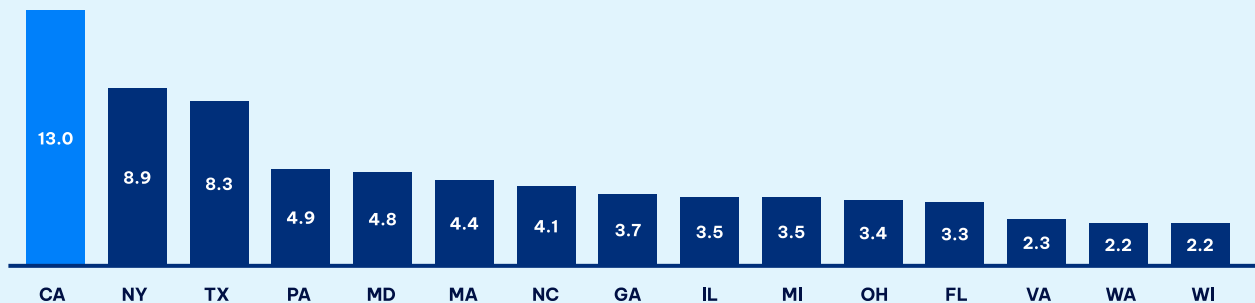
California has been the birthplace of countless new technologies—from the cable car²² to the first functioning laser²³ to the iPhone.²⁴ As these innovations have rolled out, Californians have been afforded a front row seat as the future unfolds. Our pioneering nature is grounded in an ongoing, symbiotic partnership between our academic and research institutions and the public and private sectors that spark new ideas and innovation.

Research Assets

California is home to 11 universities in the U.S. designated as having the highest research activity (“R1 universities”),²⁵ and our universities are home to more Nobel laureates than any other state in the country.²⁶ Notably, eight of our R1 universities are University of California (UC) institutions,²⁵ a crown jewel of American public higher education institutions with international recognition. Aided by federal and state funding, these universities invest heavily into their research capabilities: in 2023, California ranked 1st in the nation for annual higher education research and development (R&D) spend with nearly \$13 billion invested.²⁷ The state has also long been home to cutting-edge federal research labs, including 4 of the 20 Department of Energy (DOE) national laboratory locations,²⁸ which are hotbeds for new discoveries.

Top 15 States by Total Higher Education Research & Development²⁷

\$B, FY 2023



Public Investment for Emerging Technologies

We are also a direct catalyst for innovation through our investments to help develop and scale new emerging technologies. The California Energy Commission's Electric Program Investment Charge (EPIC) program has invested \$1.2 billion into clean energy research, development, and commercialization, unlocking \$10.1 billion in private follow-on funding to transform the electricity sector.²⁹

This program is one of many examples of the state playing a critical role providing early funding that helps attract private investment;³⁰ right now, our Carbon Removal Innovation Support Program (CRISP) is doing just that with financial incentives intended to catalyze the development of direct air capture technologies for atmospheric carbon removal.³¹

Private Capital and Investment

Our research strengths and our state-led funding have drawn private investment to California, creating a virtuous cycle for entrepreneurial activity.

Sand Hill Road has become synonymous with the venture capital industry, helping businesses located in California secure more venture capital investment than any other state in the country.³² Our businesses also invest significantly into R&D alongside their public partners, contributing nearly 40% of national corporate R&D spend.³³

Innovation

Taken together, the rich partnership between California's institutions and entrepreneurs has unlocked a distinctive recipe for innovation and technology commercialization. We produce more patents per capita than any other state in the U.S.,³⁴ and four of our higher education institutions rank in the top 20 for technology transfer based on startup formation,³⁵ helping position California in the top five states by startup density.³⁶

These pieces come together into a comprehensive innovation ecosystem, reflected in our #1 ranking on the Kauffman Early-Stage Entrepreneurship (KESE) Index that measures entrepreneurial activity in the United States.³⁷

TAKING ACTION

The very technologies that California invents are leading to disruptions that have the power to reshape society. Quantum computing not only has the potential to solve some large-scale problems faster,³⁸ but also to bypass encryption and cybersecurity measures, putting highly sensitive data at risk.³⁹

And while advancements in automation and artificial intelligence (AI) offer the promise to accelerate knowledge creation and productivity gains, they also have the potential to displace jobs and further exacerbate economic inequality unless thoughtfully managed.⁴⁰

The Newsom Administration has Taken Action to Shape How Emerging Technologies Roll Out:

- The California Department of Technology (CDT) released Cal-Secure in 2021, a five-year information security maturity roadmap to address gaps in the state's information and cybersecurity programs.⁴¹
- In 2023, Governor Newsom signed an executive order to study the development, use, and risks of AI technology throughout the state, and to develop a deliberate and responsible process for deploying AI within state government.⁴²
- In September 2024, the Governor signed 17 bills covering the deployment and regulation of GenAI technology, the most comprehensive legislative package in the nation on this emerging industry, including regulation of deepfakes and combating AI-generated misinformation.⁴³

A Diverse & Skilled Workforce that Draws on Talent from Around the World

California's economy is powered by our people. Not only is California a conveyor belt for talent, but we are also a magnet for human capital from around the world.

Our inclusive policies and investments into educational and workforce programs create an environment where individuals from various backgrounds can bring their unique perspectives and skills to bear.

Educational Assets

Our educational institutions are recognized on the international stage and provide learning opportunities to millions of students. Two of our universities make U.S. News & World Report's top 10 rankings for best universities.⁴⁴ But the state's ongoing commitment to our public educational system is what helps us stand out. Five of the University of California's (UC) campuses make the top 10 list for public universities,⁴⁵ and in 2024, the system awarded more than 10,000 degrees in engineering or computer science.⁴⁶ California State University, the nation's largest public university system, set a record in 2024 for first-year enrollment with more than 68,500 first-time, first-year students enrolled across the university's 23 campuses.⁴⁷ And through the California College Promise Grant, the California Community Colleges Chancellor's Office (CCCCO) is able to waive its fees for nearly half of the 1.4 million students in its system.⁴⁸

CALIFORNIA'S EDUCATIONAL ASSETS LEAD THE NATION

US NEWS & WORLD REPORT BEST

Public University Ranking⁴⁵

- #1 UCLA
- #2 UC Berkeley
- #6 UC San Diego
- #9 UC Irvine & UC Davis (Tied)

US NEWS & WORLD REPORT BEST

University Ranking⁴⁴

- #4 Stanford University
- #6 California Institute of Technology

WALL STREET JOURNAL

Social Mobility Ranking⁴⁹

- | | |
|---------------------------|---------------------------|
| #1 UC Merced | #5 Cal State LA (CSU) |
| #2 Stanislaus State (CSU) | #7 CSU Long Beach |
| #3 CSU San Bernardino | #9 CSU Northridge |
| #4 Fresno State (CSU) | #10 Cal Poly Pomona (CSU) |

STUDENTS ENROLLED AT CALIFORNIA EDUCATIONAL INSTITUTIONS

2.1M

California Community Colleges

461k

California State Universities

295k

University of California

These public educational institutions play an important role in ensuring that higher education is used as a force for economic mobility: the UC system enrolls a higher percentage of Pell Grant recipients than public or private peer institutions,⁵⁰ seven of California’s selective public colleges are ranked in the top 20 based on the share of students who moved from the bottom fifth of family incomes to the top fifth as adults,⁵¹ and eight are among the top 10 highest ranked universities for social mobility according to the Wall Street Journal.⁵²

Diversity

California’s diversity is one of our most defining and valuable characteristics, fostering a rich tapestry of cultures, languages, and ideas. As of 2022, no single racial or ethnic group comprised a majority of our population.⁵³ Immigration in particular has been key to our strength and successes. 27% of Californians are foreign born, nearly two times the U.S. average (14%).⁵³ We attract more international students than any other state, welcoming more than 140,000 students in the 2023-24 school year.⁵⁴ And California companies employ more H-1B visa holders (70,000+ approved in fiscal year 2024) than any other state,⁵⁵ helping these employers access critical specialized skills.⁵⁶

This rich diversity is not only the result of happenstance; we have launched initiatives such as the Local Immigrant Integration and Inclusion Grant (LIIIG), which includes efforts to support immigrant entrepreneurs, as part of our approach to helping talent from around the world contribute to our economic success.⁵⁷

We see the impact of this diversity—nearly two-thirds of U.S. unicorns (billion-dollar companies) were founded or co-founded by immigrants or the children of immigrants.⁵⁸

Workforce Alignment

We are increasingly aligning our educational and workforce efforts to the needs of the labor market to intentionally build high-potential career pathways for Californians. Since the first budget during the Newsom Administration in fiscal year 2019-20, we have allocated over \$4 billion in workforce development funding to upskill workers in all 13 Jobs First regions,⁵⁹ enabling our workforce system partners to build more opportunity for all Californians.

With Executive Order N-11-23, we launched a new Master Plan for Career Education, which visions the systems change needed to create skills-based pathways, expand work-based learning, and strengthen the talent pipeline California needs to maintain our competitive edge.⁶⁰ This effort builds from the Governor’s earlier commitments to work-based learning, including setting an ambitious target to expand the State’s earn-and-learn apprenticeship system to serve 500,000 Californians by 2029.⁶¹

Since then, we have served nearly 200,000 earn-and-learn apprentices⁶² and in fiscal year 2023-24 we were the national leader in active registered apprenticeships with more than double that of Texas, the runner up.⁶³ We continue to invest in this effort, with the 2023-2024 budget dedicating \$221 million to earn-and-learn apprenticeships and workforce initiatives.⁶⁴

\$4 Billion

In Workforce Development Funding⁵⁹

500,000

Apprenticeship Goal⁶¹



TAKING ACTION

In recent decades, our attractiveness as a place to live and work has been impacted by growing cost of living.^A

Despite population increases in 2024, significant numbers of Californians are still migrating out to other states,⁶⁵ with many citing housing-related costs as a primary driver.⁶⁶ Housing has become more expensive and out of reach to many, with over half of California renters spending more than 30% of their income on rent⁶⁷ and home values increasing by over 300% in the past two decades.⁶⁸ Although we rank 10th nationally in median household income,⁶⁹ we rank second to last after adjusting for cost of living⁷⁰ with the costs of necessities—including housing, groceries,⁷¹ and infant care⁷² outpacing peers.

The Newsom Administration has Taken Action to Address Challenges with Affordability:

- Since taking office, the Governor has signed 42 housing and homelessness-related CEQA reforms to clear the way for local governments to fulfill their legal obligation to site and zone 2.5 million new units,⁷³ and in 2019, Governor Newsom issued Executive Order N-06-19 calling on the Department of Housing and Community Development (HCD) and the Department of General Services (DGS)

to identify underutilized state-owned sites for the development of affordable housing, which is on track to deliver ~5,550 new rental units.⁷⁴ The Administration has also dedicated more than \$37 billion toward housing strategies in the last three budgets alone.⁷⁵

- The California Public Utilities Commission (CPUC) approved a proposal in May 2024 to reduce the price of residential electricity through a new billing structure authorized by the state.⁷⁶
- In 2021, the California Comeback Plan initiated a path to expand eligibility for transitional kindergarten (TK) to all four-year-olds by 2025-26.⁷⁷ The Administration has dedicated significant additional funding in subsequent budgets to ensure effective implementation.⁷⁸
- CalFresh, our food benefits program, was expanded to cover Supplemental Security Income and State Supplementary Payment recipients in 2019.⁷⁹ As a result, almost 5 million Californians now receive support to access healthy and nutritious food each month.⁸⁰
- The Governor signed legislation in 2022 to increase Paid Family Leave and State Disability Insurance benefits for California workers⁸¹ and in 2023 to expand their paid sick leave.⁸²

Distinct Regional Economies Informed by Unique Natural Resources & Community Assets

California spans over 160,000 square miles, making it comparable in size to countries like Japan and Sweden.⁸³ Along with this vast scale comes a wide range of topographies and economies defined by these different natural features.^A

Natural Resources

California has more than 840 miles of coastline, the highest and lowest points in the continental U.S., more than 25,000 square miles of desert, and the tallest trees on the planet.⁸⁴ Our geographic variation is one of the reasons we are home to nine of the country's 61 national parks, the most of any state.⁸⁵ These parks drive significant tourism to California (nearly 11.4 million visitors in 2023),⁸⁶ contributing to the more than \$150 billion travel spend that took place in California in 2023, an all-time high.⁸⁷

Our natural resources also underpin our leadership in other industries, from agriculture to renewable energy. Over one-third of the nation's vegetables and three-quarters of its fruits and nuts are grown in California alone.⁸⁸ We also boast an estimated 340,000 acres of land with potential for solar energy development,⁸⁹ as well as unparalleled deposits of critical minerals necessary for numerous clean technologies that comprise 15% of global rare-earth element supply.⁹⁰



Place-Based Assets

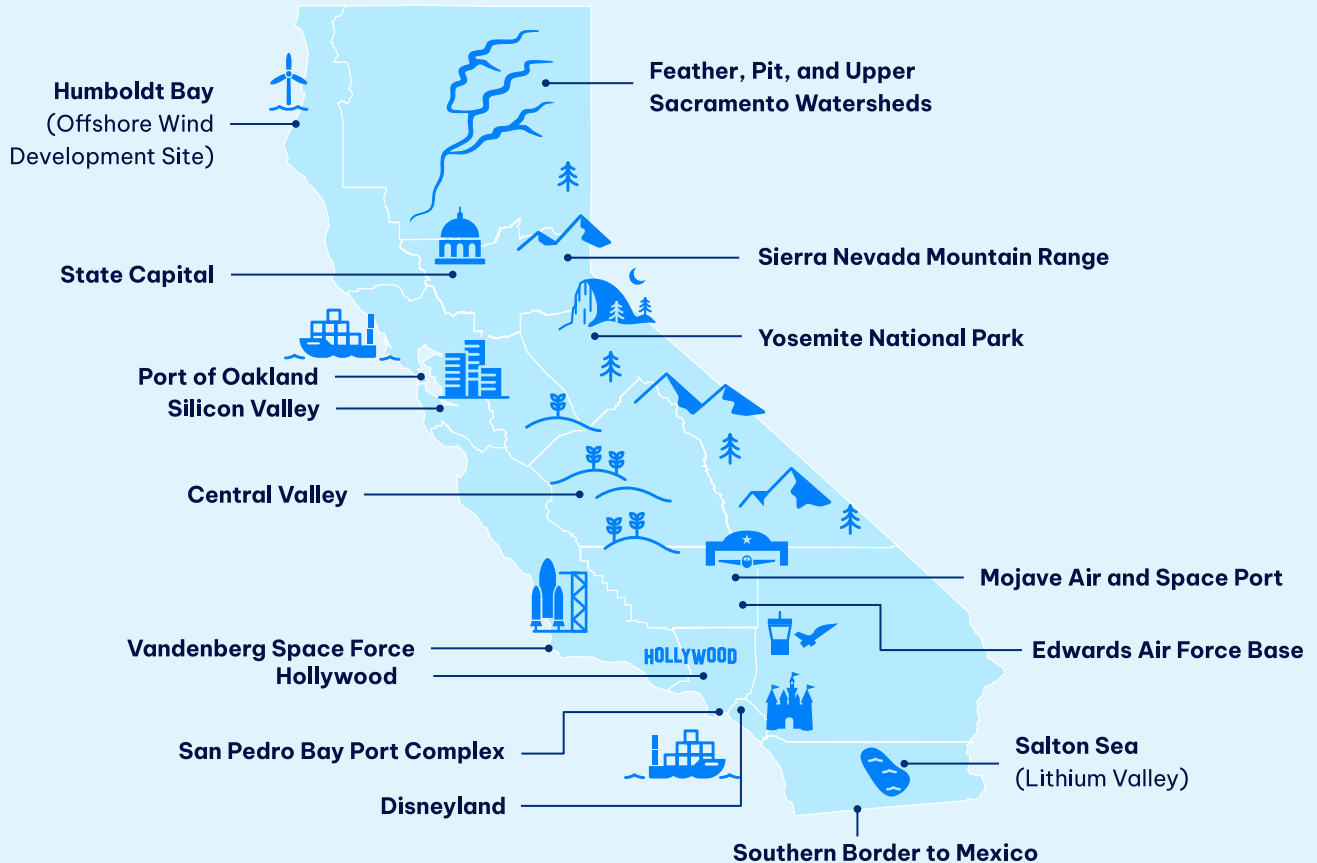
Our natural resources are impressive, but there are also man-made attributes that make us unique.

We have invested heavily in our transportation infrastructure to help transmit goods to and from the rest of the world, taking advantage of our position as the Western gateway to the United States. These investments have paid off: California consistently ranks first in the continental U.S. for both inbound and outbound air freight flights, and our ports handle 40% of all containerized cargo entering the U.S. and nearly 30% of the nation's exports.⁹¹ The San Pedro Bay Port Complex leads the way as the 9th busiest port in the world by container volume.⁹²

Our geographic location and weather conditions have also contributed to longstanding federal investments into our aerospace and defense launch and test assets, from the Vandenberg Space Force Base, the world's second busiest spaceport,⁹³ to Mojave Air and Space Port, the nation's first facility to be licensed for horizontal launch of reusable spacecraft.⁹⁴

Each California Jobs First region identified a range of assets in their Regional Plans.

SELECT REGIONAL ASSETS⁹⁵





TAKING ACTION

The distinct assets and characteristics of each region have also contributed, in part, to the disparities that exist between them – from access to services to economic outcomes.

Parts of the state have limited access to healthcare given shortages in primary care physicians.⁹⁶ An estimated 3.5 million Californians remain unconnected to internet service due to limited infrastructure, affordability issues, and other barriers, including a large share of low-income households (81%) and individuals who live in rural areas (86%).⁹⁷ And while the Bay Area region has experienced nearly 5% year-over-year GDP growth over the last decade, five California Jobs First regions experienced growth below the 2.3% national average.⁹⁸

These inequities exist within regions and geographies as well. Every county in California except San Francisco has populations classified as rural; these rural populations tend to have lower incomes (\$83,100 for rural households compared to \$92,400 for urban households).⁹⁹

What's more, many of the state's Hispanic, Black, and tribal populations experience poverty and unemployment rates well above their white peers.¹⁰⁰ These disparities have the potential to hinder our ability to achieve equitable growth and fully leverage the potential of all regions and Californians.

The Newsom Administration has Taken Action to Address these Disparities:

- Governor Newsom signed Executive Order N-16-22 directing state agencies and departments to take additional actions to embed equity analysis and considerations in their mission, policies, and practices.¹⁰¹
- The Department of Health Care Services (DHCS) partnered with the California Health Care Foundation to launch a Health Equity Roadmap initiative to engage Medi-Cal members of Black, Indigenous, and communities of color in DHCS' collective work to eliminate health disparities and advance health equity for Medi-Cal members.¹⁰²
- The Administration launched the Workforce for a Healthy California Initiative, a multi-year, cross-agency initiative that has awarded over \$350 million to programs that are expanding and diversifying the health and human services workforce across behavioral health, primary and specialty care, nursing, allied health, and direct care professions to ensure that California has the workforce to meet the needs of Californians, now and in the future.¹⁰³
- In 2021, Senate Bill 156 committed \$6 billion to expand broadband infrastructure and enhance internet access for unserved and underserved communities,¹⁰⁴ and we are on track to surpass 3,000 miles of middle-mile broadband construction by end of 2024.¹⁰⁵
- Governor Newsom announced the state's support for the return of over 2,800 acres of ancestral land to the Shasta Indian Nation on the 5th anniversary of the state's apology to California Native American peoples in June 2024.¹⁰⁶

Leadership that Addresses the Impact of Climate Change

California is both an economic leader and climate steward. From being the first in the country to establish limits on greenhouse gas emissions¹⁰⁷ to housing the fourth largest cap-and-trade market in the world,¹⁰⁸ we continue to push forward a comprehensive, long-term approach to addressing climate change.



Clean Energy

We have invested billions on behalf of electric ratepayers to expedite California's transition to clean energy and directed the state's investor-owned utilities to help us achieve our goal of net-zero carbon emissions by 2045.¹⁰⁹ Early efforts helped establish California as the largest solar market in the U.S..¹¹⁰ Our more recent expansion of battery storage capacity by 15x between 2019 and 2024 will play an essential role in building the necessary capacity to transition to renewable energy sources and meet our targets.¹¹¹

We continue to push forward innovation in clean energy through programs such as the Climate Catalyst Revolving Loan Fund, which is designed to mobilize public and private funding to accelerate the speed and scale of climate solutions.¹¹²

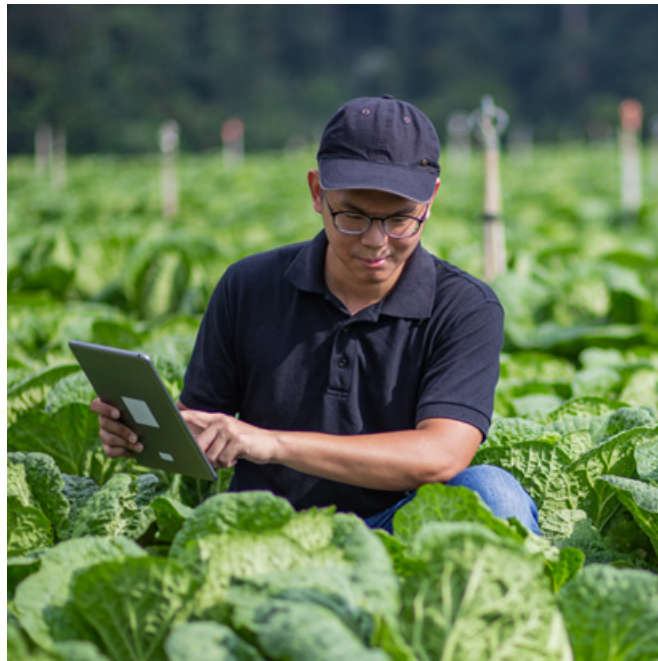
Green Transportation

California has also played an important role helping create the technology and the market for clean transportation. Research at UC Davis contributed to the development of the first plug-in hybrid vehicle, which laid the groundwork for today's zero-emission vehicles (ZEVs).¹¹³ We have also shaped the national market for ZEVs through our policies. In 2020, we adopted a mandate requiring sales of all new passenger vehicles to be zero-emission by 2035.¹¹⁴ To facilitate this transition, we have committed \$10 billion to build out the infrastructure for, and accessibility of, clean transportation, including investments into ZEV purchases for low-income consumers, charging infrastructure in low-income communities, and clean mobility projects.¹¹⁵ In part resulting from these policies, we are now the leading ZEV market in the nation, accounting for 35% of U.S. ZEV registrations¹¹⁶ and housing 60 ZEV manufacturers.¹¹⁷

Conservation and Nature-Based Solutions

As the most biodiverse state in the nation and one of the world's 36 global biodiversity hotspots,¹¹⁸ we are well positioned to lead the nation in conservation and nature-based solutions. Governor Newsom issued Executive Order N-82-20 establishing an ambitious goal of conserving 30% of California's lands and coastal waters to help restore biodiversity, expand access to nature, and build resilience to climate change.¹¹⁹

Since the signing of the executive order, we have added 1.5 million acres of conserved land, with 25% of California's lands and 16% of its coastal waters protected as of 2024.¹²⁰ The Administration has also supported the adoption of forward-looking, nature-based climate solutions,¹²¹ investing around \$9.6 billion into projects that combat climate change and store carbon since 2020¹²²—many of which provide job opportunities in rural communities around our state.



TAKING ACTION

Climate change is impacting the realities of daily life around the world, and we are not immune to the challenges that are emerging.

California has become increasingly dry over the last 130 years, with droughts like the one from 2012-2016 threatening the water supply for individual use and economic activity—most notably for agricultural production.¹²³

Progressively powerful storms, flooding, and sea level rise also threaten our state, increasing risk and costs.¹²⁴ The Federal Emergency Management Agency (FEMA) ranks California #1 nationally for expected annual loss from natural hazards, totaling more than \$16 billion.¹²⁵ Higher risks of natural disasters mean higher risks of associated property damage, contributing to growing challenges within the homeowner insurance market, where seven of the top 12 insurance groups in the state have paused or restricted their policy writing since 2022.¹²⁶

The Newsom Administration has Taken Action to Prepare For Climate Change Impacts:

- The Newsom Administration is investing \$2.5 billion to implement the Governor's Wildfire and Forest Resilience Action Plan in addition to \$200 million annually to support forest health and fire prevention programs. The Governor's fiscal year 2024-25 budget allocates a total of \$4 billion toward wildfire response and prevention.¹²⁹
- The Administration has committed \$8.7 billion to drought resilience and response,¹²⁷ with the State Water Resources Control Board distributing approximately \$880 million in fiscal year 2023-24 to improve climate resilience and boost water supplies in communities around the state.¹²⁸
- In 2021, Senate Bill 1 established the Sea Level Rise Adaptation Planning Grant Program, which aims to support coastal communities in developing sea level rise resiliency through consistent adaptation planning.¹³⁰ The Administration has also committed a total of \$492 million to flood investment projects.¹³¹

Charting Tomorrow's Future

“Regional and community input have been instrumental in defining our strategic sectors for the next decade, each of which were identified by at least one regional plan. This collaborative approach ensures that our economic strategies are deeply rooted in the respective strengths and needs of each region.”

- **Director Sam Assefa**
Governor's Office of Land
Use and Climate Innovation (LCI)

“Through California Jobs First, we will continue building a culturally competent and linguistically diverse healthcare workforce, using health careers as pathways for economic opportunity while providing quality care to our communities. California Health and Human Services Agency remains committed to these efforts to ensure improved health outcomes, overall affordability and economic mobility for all.”

- **Secretary Kim Johnson**
California Health and
Human Services Agency (CalHHS)



Sector Framework

Over the last two years, each of the 13 Jobs First Collaboratives have built strategic plans identifying the sectors that will shape their future economies based on independent qualitative and quantitative research, including extensive community input.¹

Our team then reviewed these regional plans, identified common themes, and created state-level definitions.

The strategic sectors that emerged from this process are broad, reflecting the priorities of distinct regions in a state with an economy larger than most countries,² while still identifying where we are best positioned to compete on the national and international stage.

We understand that there are meaningful differences across these strategic sectors and subsectors based on their maturity, growth trajectory, and quality of career opportunities. To help characterize some of these differences, we analyzed state-level data on sector groupings and developed four categories. Using a data-driven approach, we then aligned each subsector—all of which were identified by at least one Jobs First Collaborative—to one of these categories.

Sectors in each of these categories will likely require different types of state support.

For example, many of the sectors in the “**Strengthen**” category are our historic assets, and we have built out infrastructure to support them—from the Film & TV tax credit administered by the California Film Commission³ to the public-private partnership between the Office of Tourism and Visit California.⁴

For sectors in the “**Accelerate**” category, near-term investments, both funding and otherwise, may be needed to help our state and regions capture potential growth expected in these industries.

Some of the emerging sectors in the “**Bet**” category may benefit from an entirely different toolkit that helps our entrepreneurs and researchers access the capital and support they need to bring their ideas to life.

We continue to make significant investments into the “**Anchor**” category, from investing over \$40 billion to boost affordable housing since 2019⁵ to allocating more than \$6 billion in the 2024-25 budget for childcare programs.⁶

Customizing our support to the specific needs of each category—and even each sector—will ensure we are allocating our resources most effectively to help us maintain our competitive edge.

SECTOR CATEGORIES

Strengthen

Sectors where California has an established competitive position and / or significant employment, but where there is leveling growth or wages⁷

Accelerate

Sectors with moderate to high projected growth that are ready for expansion, where additional investments (e.g., capital, infrastructure) could “bend the curve” to generate growth⁸

Bet

Emerging sectors with significant investment or high strategic importance to the innovation ecosystem⁹

Anchor

Regional anchors that are critical for attracting and supporting industry activities while often providing quality, good-paying jobs within local communities¹⁰

California's Strategic Sectors

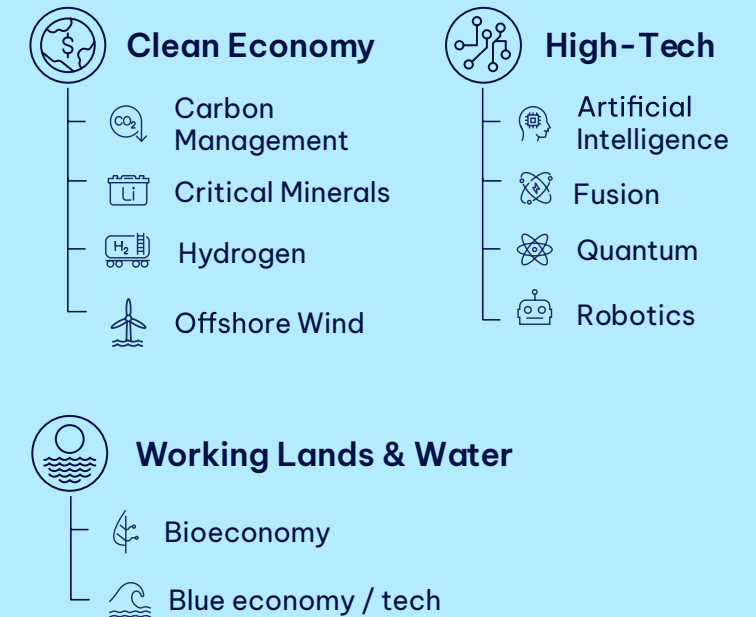
Strengthen



Accelerate



Bet



Anchor



1.High-value advanced and precision manufacturing play a major role in many of the sectors and subsectors within the 'Accelerate' category
Source: Lightcast, Moody's Analytics, MIT Living Wage, Pitchbook, US Cluster Mapping Project, California Jobs First Regional Plans Part 2, meetings with California Jobs First Regional Collaboratives conveners

Sector Pilots

With an economy as diverse and dynamic as ours, trying to solve for the specific needs of the strategic sectors and more than thirty subsectors, all at once, has the potential to limit our impact.

With that in mind, we have identified four pilot sectors and subsectors from the **“Accelerate”** category as a starting point to develop a new, replicable model for accelerating industry attraction and expansion and increasing access to good-paying jobs.

Across these pilot sectors, we want to be the place where ideas are generated and where products are made. We will draw from our research and development strengths to encourage employers to invest in other parts of the value chain in California, with a specific emphasis on manufacturing.

As the state with the largest number of manufacturing jobs—more than 1.3 million—we have a strong base to grow from, and we are particularly well-positioned for the high value-add precision and advanced manufacturing activities required for each of the pilot sectors.¹¹ We want to remain the state where companies choose to build things and have the talent and opportunities to do so.

Various Jobs First Collaboratives have identified these pilot sectors and subsectors as priorities for their regions. While our support for the four pilots will span statewide, we will build from this strong foundation of regional commitments to advance these sectors and drive access to good-paying jobs in communities around California.

Over the next two years, we will test out targeted strategies to grow the presence of these pilot sectors in California. In parallel, we will help regions implement their comprehensive plans by aligning state agency funding to their identified needs and working to build their capacity to execute. We will extend the pilot model to additional sectors as the Blueprint is implemented over the next 10 years.



Agtech & Farm Equipment



Life Sciences



Semiconductors & Microelectronics



Space, Defense, & Satellites

Advanced & Precision Manufacturing

Introducing the State's Strategic Sectors

California's State Economic Blueprint identifies key strategic sectors that are vital for driving our state's future growth and innovation.

These sectors, ranging from high-tech to tourism and outdoor recreation, represent the diverse strengths of both our urban and rural economies and are essential for creating, good-paying jobs for all Californians.

What follows is an overview of each of the state's strategic sectors, including where regions plan to advance supporting efforts. Regional strategies are expected to continue to evolve; we recommend revisiting regional alignment to the state's strategic sectors every two years.

KEY TERMS

Pathway Roles

Pathway roles are accessible occupations that can foster economic mobility and advance our goal of supporting equitable economic growth. Pathway roles are defined as occupations that pay more than a third of the region's median wage and where individuals aged 25 or above and without a college degree have historically been able to enter from lower-paid occupations and leave for higher-paid ones.¹²

Forecast Employment Change Above CA Average

Indicates where forecasted employment change from 2024 to 2029 within occupations in the relevant sector surpasses the forecasted employment change for the same timeframe across all occupations in California (0.9%).¹³





OVERVIEW

Aerospace & Defense

California has a long history designing and building aerospace & defense products and continues to be a leader in the sector today.

By leveraging its experienced workforce, existing infrastructure, and public-private funding, **California is poised to launch into the future** of aircraft, space, and satellite development and manufacturing.

California Can Capitalize on Global Opportunities in Aerospace & Defense Subsectors

Sector Category: ● Accelerate Representative California Aerospace & Defense Employers



Aircraft

Propelled by continual development in aircraft technologies, the global aircraft market was valued at ~\$420 billion in 2024, with an expected 3.5% CAGR for the next decade¹



Space, Defense, and Satellites

The global space sector (including defense and satellites) reached ~\$440 billion in 2023 and is expected to grow at a ~7.5% CAGR for the next decade, driven by satellite technologies and space exploration²





California is Leveraging its Assets to Accelerate Aerospace & Defense

California has a **robust aerospace & defense economy**, accounting for an estimated \$35 billion of annual gross domestic product output³ and comprising 10% of total U.S. defense spending as of 2022 (ranking #1 in defense grant spending)⁴

- In 2023, **aircraft parts were among California's top exports** (\$6.8 billion)⁵
- California ranks **3rd of U.S. states in its share of national security contracts**, with more than \$35 billion across three departments⁶
- California **receives 25% of NASA's procurement spend** (\$5.8 billion), more than any other state in the country⁷

California is home to an ecosystem of companies

- **All five aerospace "traditional primes"**⁸ can trace their origins or growth to California and maintain facilities around the state, including satellite and aircraft manufacturing and assembly plants, research and development labs, and aerospace radar and sensing technology programs⁹
- The state also hosts a **support network of small-to-midsize companies**, such as Aero Products, RBH Aerospace, Pacific Aerospace Corp, and others, that supply advanced components, materials, and technologies to the sector¹⁰
- **A third of all American space tech companies and 10% of space tech companies globally** are in California¹¹

California has a **wide range of aerospace and defense assets**, including military bases, spaceports, and launch facilities

- **Coastal:** Vandenberg Space Force Base, the Naval Air Station North Island, and the headquarters of the U.S. Space Systems Command at the LA Air Force Base¹²
- **Inland:** Edwards Air Force Base and Naval Air Weapons Station China Lake¹²

California is a major player in **public and private aerospace and defense R&D**

- **Home to four NASA research centers** (Ames Research Center, Armstrong Flight Research Center, Jet Propulsion Laboratory, Goldstone Deep Communications Complex),¹³ the headquarters of the **Defense Innovation Unit** that accelerates Department of Defense's adoption of commercial technology,¹⁴ and **one of five Defense Advanced Research Projects Agency (DARPA) accelerators** that helps commercialize emerging technologies¹⁵
- **California accounted for 16% of aircraft patents and 23% of space, defense, and satellite patents** in the U.S. from 2015-2023¹⁶

- **California company spending** on aircraft, aircraft engine, and parts and guided missile, space vehicle, and related parts R&D **comprised ~19% and 36% respectively of nationwide corporate R&D spending in 2021**¹⁷

California's aerospace & defense sector is **underpinned by its workforce and educational institutions**

- California is **home to over 11,000 aerospace engineers**, more than any other state,¹⁸ and ranks #1 in total number of defense personnel¹⁹
- The state is also home to **two of the top three universities** for aerospace engineering (Stanford, Caltech)²⁰ as well as over 240 aerospace and defense-related Eligible Training Provider List (ETPL) programs aligned to California's top 15 aerospace & defense occupations²¹

The state's workforce, assets, and public and private research have **attracted substantial VC dollars**, with California attracting **nearly half of the nation's space tech investment capital** over the last 11 years¹¹

- From 2020-2023, California **space tech companies received ~\$2.9 billion in VC funding** annually (70% of total space tech VC funding in the U.S.)²²

How We Are Supporting the Aerospace & Defense Sector

- **Space Industry Task Force:** Aims to expand California's space industry by fostering partnerships, attracting new businesses, and advancing research and development in space technology across the state¹¹
- **California Space Flight Property Tax Exemption:** Exempts qualified space flight property—such as satellites, space vehicles, launch vehicles, and fuel exclusively for space flight—from property taxes²³
- **Central Coast Space Master Plan:** Establishes the Central Coast as a space hub by attracting companies, improving infrastructure, and promoting a regional space identity²⁴
- **CalCompetes:** Provides tax credits to aerospace & defense companies, including ~\$80 million to 5 businesses since 2022 that created over 2,400 aerospace & defense jobs²⁵
- **Research and Development Tax Credit:** Allows companies to reduce their tax liability based on qualified research expenditures with a credit for up to 15% for qualified in-house research expenses and 24% for payments to outside contractors²⁶
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to advanced manufacturers to reduce equipment purchasing costs²⁷
- **Manufacturing and R&D Partial Sales and Use Tax Exemption:** Offers a partial exemption in state sales and use tax (3.9375%) to qualified manufacturers and businesses²⁸



Aerospace & Defense



Workforce Profile: College of the Canyons & Santa Clarita Valley EDC

As part of the High Road Training Partnerships program, the College of the Canyons (COC), a community college in Santa Clarita, and the Santa Clarita Valley Economic Development Corporation (SCVEDC), a private-public partnership focused on business attraction and assistance, are working together to grow the region's advanced technologies sector, including aerospace technologies.

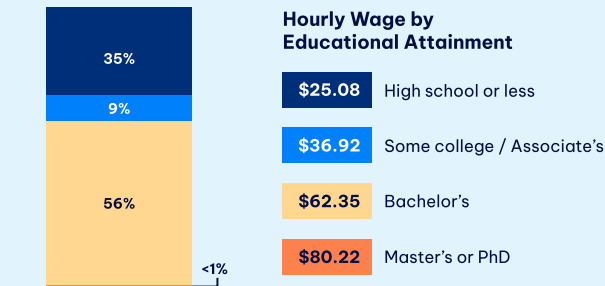
To develop the regional workforce, the COC and SCVEDC plan to establish an Advanced Technology Center (ATC) and work with employers to develop Pre-Apprenticeship and Apprenticeship programs. The project will convene key stakeholders, including ITT Aerospace and Northrop Grumman, to create apprenticeship standards and guidance for advanced technologies / manufacturing, facilitate ongoing discussions on the industry's future, and centralize information on training opportunities.²⁹

Aerospace & Defense Offers Opportunities for All Californians

The aerospace & defense sector is a **critical part of California's economic strength and future growth, creating high-paying jobs across urban and rural regions of the state:**

- Annual compensation for aerospace & defense workers is 50% higher than average U.S. private sector wage³
- Over a third of top aerospace & defense occupations typically **do not require a bachelor's degree**³
- California has **substantial place-based assets located around the state**, including testing / launch facilities and military bases¹²

Typical Educational Attainment Required Across Occupations for Aerospace & Defense in California, 2023, %³⁰



Hourly Wage by Educational Attainment

\$25.08	High school or less
\$36.92	Some college / Associate's
\$62.35	Bachelor's
\$80.22	Master's or PhD

Top Occupations Within the Aerospace & Defense Sector in California, 2023³⁰

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role? ³¹	Forecast sector employment change above CA average? ³²
Software Developers	8.4k		
Business Operations Specialists, All Other	5.8k		
Aerospace Engineers	5.3k		
Miscellaneous Assemblers & Fabricators	4.3k		
Inspectors, Testers, Sorters, and Weighers	3.8k		

~115K

Aerospace & Defense Workforce

In CA in 2023³

~3.9

Employment Multipliers

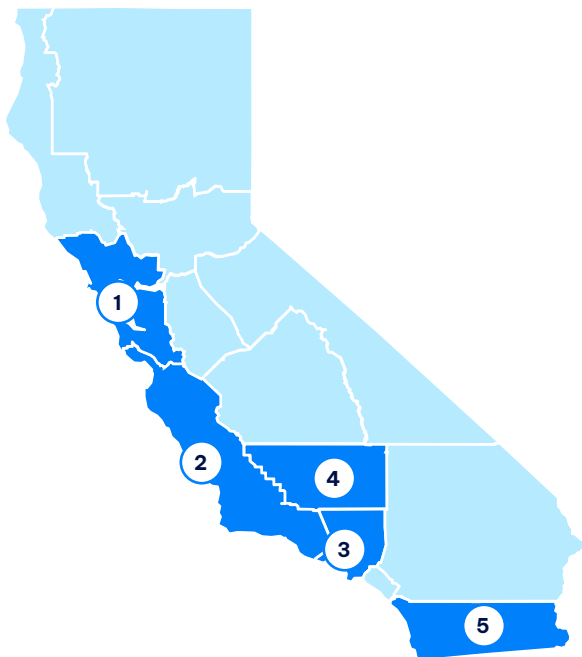
Number of indirect jobs created by aerospace & defense jobs in CA³



Aerospace & Defense

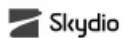
REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **five identified aerospace & defense as a regional strategic sector.** Each Collaborative also identified subsector categories within the aerospace & defense to focus their attention and resources.³⁴



Employers Expanding Their Presence in California with Calcompetes Support

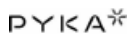
COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS³⁶



Skydio, a drone manufacturer based in San Mateo, plans to invest ~\$20 million to expand operations, creating over 440 new jobs



Rocket Lab, a commercial space launch company based in Long Beach, invested more than \$25 million to expand operations, creating nearly 150 new jobs



Pyka, an autonomous electric aircraft manufacturer based in Alameda, plans to invest more than \$9 million to expand operations, creating over 130 new jobs



Joby, an electric aircraft manufacturer, plans to invest more than \$40 million to expand operations in Santa Cruz and Marina, creating over 700 new jobs

Sector Category: ● Accelerate



Aircraft



Space, Defense, and Satellites

1 Bay Area



Dynamic hub for advanced research, technology development, and manufacturing, including several Lockheed Martin facilities and the NASA Ames Research Center at Moffett Field.³⁵ Supports thousands of high-wage jobs and contributes to national security and space exploration through projects like hypersonic flight research and satellite technologies.

2 Central Coast



Diverse aerospace manufacturing capabilities, including satellites, aircraft engine and engine parts, space vehicles, and other measuring and controlling devices, accounting for \$1.3 billion of regional exports and 2,600 jobs. Growing space operations anchored by Vandenberg Space Force Base (VSFB), the nation's second busiest spaceport.

3 Los Angeles County



Aerospace & defense accounts for ~60,000 workers in the region. Home to "Space Beach," a space technology hub anchored by companies like SpaceX and Northrop Grumman alongside strong R&D infrastructure supported by institutions like NASA's Jet Propulsion Laboratory, Aerospace Corporation, CalTech, UCLA and USC. Led all U.S. counties with \$3.5 billion in new direct contracts from the Department of Defense, including 36% of all national DARPA contracts awarded.

4 Kern County



Robust R&D and engineering ecosystem centered around California State University Bakersfield as well as several military installations including Edwards Air Force Base, Mojave Air and Space Port, and NASA's Armstrong Flight Research Center. Recently received \$2 million federal investment in the B3K Aerospace Innovation Hub,³⁶ which aims to boost technology transfer and commercialize aerospace innovations from the county's defense and research installations.

5 Southern Border



Strong aerospace & defense manufacturing sector, particularly in unmanned aerial systems, satellite communications, and defense technology. San Diego is anchored by companies including General Atomics, General Dynamics, and Viasat, as well as research institutions like UC San Diego. The Naval Air Facility Air Centro's uncongested airspace and proximity to both San Diego and Mexicali's aerospace industries also positions the region as a testing ground for rocket and jet technologies.³⁷



OVERVIEW

Clean Economy

In pursuit of sourcing 100% of its energy from renewable and zero-carbon resources by 2045 and building on a rich history of clean energy production, California’s robust and market-driven clean economy spans multiple subsectors and reaches nearly every region in the state.

As a top state for solar and wind generation² and a leading market for Zero Emission Vehicles (ZEVs),³ California is well positioned to accelerate its existing clean economy industries and become a leader in clean technology innovation across emerging sectors such as carbon management, critical minerals, offshore wind, and hydrogen, while ensuring communities most impacted by these activities share in the economic benefits.

California Can Capitalize on Global Opportunities in Clean Economy Subsectors

Sector Category:	Accelerate	Bet	Representative California Clean Economy
Batteries			
Onshore Wind			
Solar			
ZEVs			
Carbon Management			
Critical Minerals			
Offshore Wind			
Hydrogen			



California is Building on its Strengths to Further Develop its Clean Economy

As a state at the forefront of climate and clean energy innovation, with renewable energy supplying 54% of California's electricity compared to 40% for the U.S. overall,¹² the state is poised to lead on the future of the clean economy. California's clean energy sector is supported by **strong research institutions** and innovation assets

- **National research labs:** Lawrence Berkeley and Lawrence Livermore
- **University labs:** Stanford's Precourt Institute for Energy and Woods Institute for the Environment and UC Berkeley's Energy and Resources Group (ERG)¹³
- **Incubators:** Cyclotron Road (Bay Area), BlueTech Valley (Central San Joaquin), LACI (LA County), and the Southern California Energy Innovation Network (Southern Border)¹⁴

The state also **benefits from VC dollars**

- From 2020 to 2023, California received an average of \$115 million per year in VC funding and accounted for 27% of U.S. VC funding for clean economy startups¹⁵

Accelerate

California is a **leader in battery and ZEV production**

- **Several advanced battery manufacturers operate in California**, such as QuantumScape and Enovix,¹⁶ supporting the state's ~750% increase in battery storage over the past four years¹⁷ and ongoing efforts to expand its ZEV infrastructure
- California is also a leader in ZEV research and production as the home to the first mass-produced ZEV (General Motors EV1), the birthplace of Tesla and Gillig¹⁹, and a top state for ZEV exports in 2023²⁰

California also has a robust solar and wind energy sector

- California **produces more than double the solar energy output of any other state**²¹ and its solar market is valued at roughly \$100 billion²²
- In 2023, the state also ranked in the top ten for wind power production²¹

Bet

By leveraging its existing strengths in the clean economy, **California can help commercialize and scale emerging clean technologies** in a new way that integrates community voice

- Offshore wind projects near Morro and Humboldt Bay are expected to create nearly 6,000 annual operation and maintenance jobs and contribute \$45 billion to the state's economy²³
- California is well positioned to lead in the hydrogen market following the U.S. Department of Energy and California's Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) signing a **\$12.6 billion agreement to build a clean, renewable Hydrogen Hub in California**²⁴

- California is also developing its carbon management and critical mineral sectors, including a recently approved carbon management project in Kern County projected to provide \$64 million per year in tax revenues and create thousands of jobs²⁵, and the recently designated "Lithium Valley" in the Inland SoCal Region which contains enough lithium to support ~400 million batteries for ZEVs²⁶

How We Are Supporting the Clean Economy Sector

- **Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES):** Accelerates the development and deployment of California's renewable hydrogen market through non-profit public-private partnership²⁷
- **Electric Program Investment Charge (EPIC) Program:** Invests more than \$130 million annually to expand the use of renewable energy and advance electric technologies for buildings, businesses, and transportation²⁸
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to manufacturers that promote alternative energy (prioritizing lithium projects) and advanced transportation as well as tax-exempt bonds to finance green projects²⁹
- **California Energy Commission (CEC) Clean Transportation Program:** Provides funding to support in-state manufacturing of zero-emission vehicles (ZEVs) and ZEV-related supply chains³⁰
- **California Pollution Control Financing Authority:** Administers programs that incentivize capital investment in targeted economic activities, including issuing Green Bonds for pollution control and climate-focused environmental projects³¹
- **CalCompetes:** Provides tax credits to clean economy companies, including ~\$90 million to eight clean economy companies since 2022, creating nearly 2,400 clean economy jobs³²

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS¹⁶



BESS Manufacturing, a battery energy storage system manufacturer, plans to invest more than \$255 million to expand operations in Merced, creating over 850 new jobs



Paired Power, a battery energy storage system manufacturer, plans to invest more than \$3 million to expand operations in Campbell and the Central Valley, creating over 60 new jobs



AES Clean Energy Development, a renewable energy services provider, plans to invest more than \$1.5 billion to expand operations in Adelanto, Bakersfield, Blythe, Lancaster, San Jose, creating over 120 jobs



Recently, GILLIG and Teamsters Local 853 received funding from High Road Training Partnerships (HRTTP) to support high-quality jobs, establish a new training department within GILLIG, and build the plan for future HRTTP training work and certification development.³⁴

The Clean Economy Offers Opportunities for All Californians

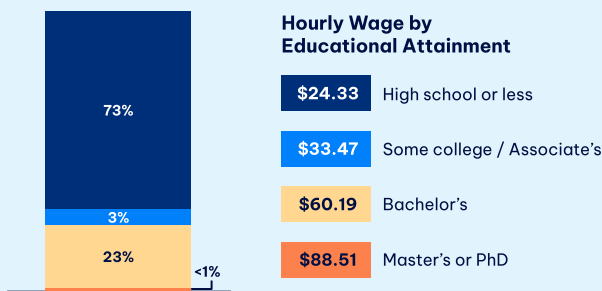
As the California’s energy production shifts towards renewable sources, the **clean economy workforce** is expected to grow across a variety of subsectors. As the clean economy continues to develop, it will create **high-quality, good-paying jobs**, many of which are **available to those without postsecondary education**:

- Clean energy jobs are more likely to include healthcare and retirement benefits than jobs across the rest of the private sector³⁵
- For some subsectors, such as hydrogen, large federally-funded programs like ARCHES are **expected to create hundreds of thousands of jobs**, drawing on California’s Building Trades Unions to build new infrastructure as well as creating permanent roles to manage the newly-built facilities³⁶

Workforce Profile: GILLIG

GILLIG, founded in California in 1890 as a carriage and wagon shop, has transformed into the leading manufacturer of public transit buses for municipalities and cities in the United States.³² The company offers a diverse range of clean energy transit solutions, including zero-emission Battery Electric and low-emissions Hybrid vehicles—with plans to explore new hydrogen solutions.³³

Typical Educational Attainment Required³⁷ Across Occupations for Clean Economy in California, 2023, %³⁸



Top Occupations Within the Clean Economy Sector in California, 2023³⁸

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role ³⁹	Forecast employment change above CA average? ⁴⁰
Assemblers and Fabricators	19.5k		
Laborers, Stock, and Material Movers	1.5k		
Software Developers	1.3k		
Inspectors, Testers, Sorters, and Weighers	1.2k		
Supervisors of Production and Operating Workers	1.1k		

~2.9%

Workforce Growth

Projected annual CA employment growth from 2023-2033⁴¹

6.1

Employment Multipliers

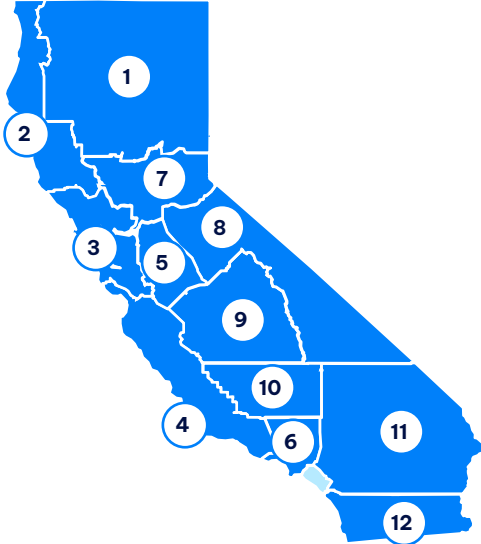
Number of indirect jobs created by clean economy jobs in CA⁴¹

Clean Economy



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **12 identified clean economy as a regional strategic sector**. Each Collaborative also identified subsector categories within the clean economy to focus their attention and resources.⁴²



1 North State 🌍 🏭

Exploring CO2 storage potential, with Glenn and Butte Counties offering significant sedimentary storage capacity (1.6–29 billion tons of CO2) alongside hydrogen production from biomass.

2 Redwood 🌳 🌬️

Nascent solar and on / offshore wind economies, including solar array deployment on brownfield redevelopment sites in Hoopa and the Blue Lake Rancheria Microgrid Initiative. Offshore wind projects already in development near Humboldt Bay.

3 Bay Area 🏠 🌬️ 🚗 🌬️

Plans to establish a battery manufacturing hub and assemble clean energy equipment such as wind turbines for onshore and offshore wind projects.

4 Central Coast 🌬️

Home to the largest of two federally designated floating offshore wind energy areas in the state.

Sector Category: ● Accelerate ● Bet

5 North San Joaquin 🏠 🏭 🌬️ 🚗

Emerging hub for solar and hydrogen (abundant sunlight, land; ARCHES supporting several hydrogen projects), EV manufacturing (e.g., Tesla's manufacturing facility in Lathrop producing parts / components for EVs), and carbon management (geological features offer substantial capacity for underground carbon storage).

6 Los Angeles County 🏠 🏭 🚗 🚗

Emerging battery sector (e.g., Southern California Edison programs to pilot clean energy solutions) alongside robust solar industry assets (solar farms, community solar projects). New hydrogen innovation efforts enabled by Cal State LA's Hydrogen Research and Fueling facility and ARCHES initiative. Exploring investments into ZEV production leveraging existing company base.

7 Capital 🏠 🚗

Emerging battery economy enabled by robust existing semiconductor industry, including strong base of chip manufacturers including Intel, Solidigm, and Bosch and mobility players / organizations like Siemens Mobility and the California Mobility Center.

8 Sierra 🏠

Exploring the feasibility of developing hydrogen storage and manufacturing facilities as part of the ARCHES initiative.

9 Central San Joaquin 🏠 🏭 🌬️ 🌬️ 🚗

Ample land to develop solar sites (solar deployment expected to grow 16% annually between 2025-2045) with plans to develop battery and ZEV component manufacturing. Department of Energy is investing in several carbon management projects in the region supported by transportation networks that allow for efficient movement of captured carbon.

10 Kern County 🌬️ 🏠 🌬️

Major wind (total wind power capacity of 4GW and more turbines than the entire northeast U.S.) and solar producer, with high potential for carbon management and storage technologies to provide transition opportunities for oil & gas workers in the region.

11 Inland SoCal 🏠 🏭 🚗 🏠

Proximity to Lithium Valley offers opportunities within the battery and ZEV manufacturing supply chain.

12 Southern Border 🏠 🏭 🌬️ 🏠 🌬️

San Diego ranks #2 in the country for solar deployment and is supporting on / offshore wind projects. Exploring opportunities in battery manufacturing building from Lithium Valley asset (highest concentration of lithium contained in geothermal brines in the world).

🏠 Batteries
 🌬️ Onshore Wind
 🏠 Solar
 🚗 ZEVs
 🌍 Carbon Management
 🏠 Critical Minerals
 🌬️ Offshore Wind
 🚗 Hydrogen



OVERVIEW

High-Tech

California’s high-tech sector stands as a cornerstone of the state’s economy, known for its influential role in driving the state’s reputation for innovation and outsized productivity.

The high-tech sector in California has been catalyzed by significant investments in research by leading universities (e.g., University of California (UC) Berkeley, Stanford, CalTech),¹ alongside private funding from venture capital (VC) firms.²

California Can Capitalize on Global Opportunities in High-Tech Subsectors

Sector Category: <input checked="" type="radio"/> Accelerate <input type="radio"/> Bet	Representative California High-Tech Employers
<p>Hardware Driven by demand for smart devices, the ~\$1.7 trillion IT devices market is expected to grow at a 9.6% CAGR through 2033³</p>	
<p>Semiconductors & Microelectronics Global 2024 semiconductor sales are expected to reach \$588 billion, driven by sales of GenAI chips and consumer electronics⁴</p>	
<p>Software & Services The global software market is expected to surpass \$700 billion in revenue in 2024 and to grow ~11% annually through 2034⁵</p>	
<p>Artificial Intelligence (AI) Investment in Generative AI (GenAI) has grown rapidly (\$57 billion equity investment in 2019 to \$86 billion in 2024)⁶</p>	
<p>Quantum Quantum technology expected to create trillions of dollars of value over the next decade, with substantial (50%) growth in public funding in 2022⁷</p>	
<p>Robotics Over the next decade, robotics will increasingly account for a large share of capital spending, particularly for retail and consumer goods companies⁸</p>	



California's World-Class High-Tech Ecosystem Sets the Stage for its Continued Success

California's high-tech sector accounted for **~\$620 billion of U.S. gross regional product** in 2022,⁹ the highest of any state

- California is home to some of the largest high-tech businesses, including **\$4 trillion market capitalization companies** (Apple, Nvidia, Alphabet, Meta)¹⁰
- California's **strong existing presence in hardware, software and services, and semiconductors** (including the most semiconductor manufacturing establishments and jobs in the U.S.¹¹) **positions the state to lead on emerging high-tech subsectors** including AI (California is home to 35 of the top 50 AI companies in the world¹²), quantum computing, and robotics

California research institutions house several supercomputers, including **El Capitan, the most powerful system in the world** located at Lawrence Livermore National Laboratory¹³

Higher education institutions in California **produce more graduates within computer and information sciences fields** (~23,000 in 2022) than any other state¹⁴ and have strong research programs across several subsectors

- **Artificial intelligence:** California has three of the top ten AI programs at UC Berkeley, Stanford, and UC San Diego¹⁵
- **Quantum computing:** Research centers at the University of Southern California (USC), UC Berkeley, UCLA, and Stanford as well as the Google Quantum AI Campus affiliated with UC Santa Barbara (UCSB) and the Amazon Web Services (AWS) Center for Quantum Computing at Caltech¹⁶
- **Robotics:** Advanced robotics research centers at USC, UCLA, and Stanford¹⁷

California businesses also invest heavily in R&D; California companies comprise 55% and 52% of nationwide corporate R&D spend on computer & electronic products and semiconductor machinery & components respectively¹⁸

California's **research strengths and exceptional talent base have helped attract the highest VC investment in the country** (\$81 billion)

- California's VC investments in the Software as a Service (SaaS) and AI & Machine Learning tech verticals comprise 51% and 56% of total U.S. VC investment in those areas²



How We Are Supporting the High-Tech Sector

- **California Community College Partnership with Nvidia:** Connects community colleges with Nvidia-developed AI resources and training materials, including curriculums and certifications, to bolster innovation in the state and help students get jobs in high-demand sectors¹⁹
- **Research & Development (R&D) Tax Credit:** Allows businesses to qualify for an income tax credit if they paid for or incurred qualified expenses while conducting research in California²⁰
- **CalCompetes:** Provides tax credits to high-tech companies, including ~\$90 million to six businesses during the last round of funding, creating over 3,000 high-tech jobs²¹
- **Employment Training Panel (ETP):** Prioritizes high-tech upskilling, providing funding to employers to assist in upgrading the skills of their workers through training that leads to good paying, long-term jobs²²
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) Full Sales and Use Tax Exclusion (STE) Program:** Allows select manufacturers, including semiconductor companies, to exclude purchases of "qualified property" from state and local sales and use taxes²³



High-Tech



High-Tech Offers Opportunities for All Californians

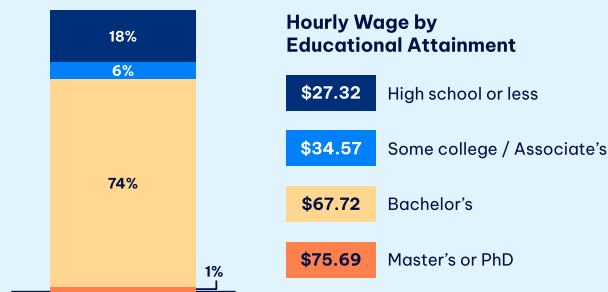
The high-tech sector is a core piece of California's economic health and future growth, **offering high-paying jobs, enabling innovation across all of California's strategic sectors, and attracting significant investment** to the state:

- The average annual compensation per worker in high-tech is more than double the average U.S. private sector wage, and **among non-college-educated workers, the sector pays approximately 50% more than non-high-tech industries**²⁶
- The **high-tech sector in California has a substantial share of pathway roles**, or roles with increased potential for career advancement and opportunities to transition to higher paid roles, with the top five high-tech pathway roles accounting for 14% of the state's total high-tech workforce²⁷
- California has **several high-tech metros**, including San Francisco, Los Angeles, and San Jose, which has the highest concentration of net tech employment as a percentage of its overall employment base²⁸

Workforce Profile: NPower California

NPower California, a nonprofit focused on launching digital careers for military-connected individuals, young adults, and women from under-resourced communities, is a recipient of the Breaking Barriers to Employment program grant from the California Workforce Development Board.²⁴ Through the Breaking Barriers program, NPower has served over 100 military veterans, veteran spouses, and young adults from low-income communities in Los Angeles County. In June, NPower graduated its first Breaking Barriers cohort from the NPower Fundamentals program, with 20+ students already placed in full-time tech jobs.²⁵

Typical Educational Attainment Required²⁹ Across Occupations for High-Tech in California, 2023, %³⁰



Top Occupations Within the High-Tech Sector in California, 2023³⁰

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role? ³¹	Forecast sector employment change above CA average? ³²
Software Developers	178.0k	✓	✓
Computer & Information Systems Managers	39.6k	✓	✓
Computer Occupations, All Other	31.3k	✓	✓
Sales Representatives of Services	26.8k	✓	✓
Computer User Support Specialists	23.2k	✓	✓

2%

Workforce Growth

Projected annual CA employment growth from 2023-2033³³

6.1

Employment Multipliers

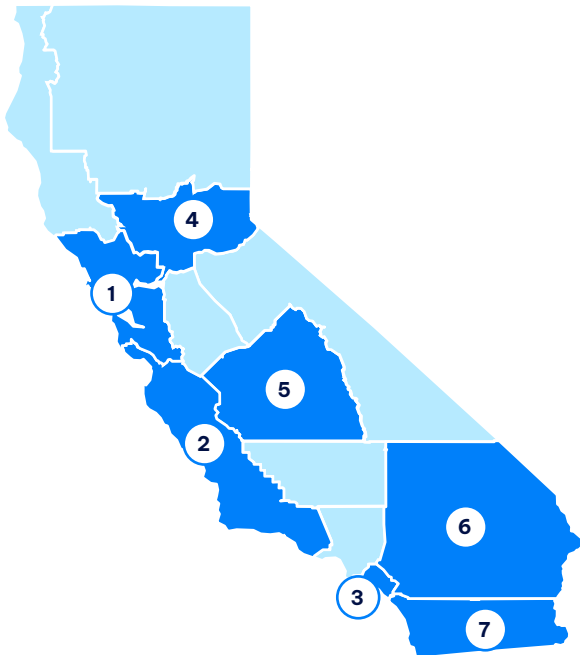
Number of indirect jobs created by high-tech jobs³³

High-Tech



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **seven identified high-tech as a regional strategic sector**. Each Collaborative also identified subsector categories within high-tech to focus their attention and resources.³⁴



Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS³⁶

helm.ai

Helm.ai, an autonomous AI company, will be expanding operations in San Francisco and the broader Bay Area, creating over 700 new jobs

euv▼tech

EUV Tech, a semiconductor manufacturer, will be expanding operations in Martinez, creating 50+ new jobs

Microsoft

Microsoft plans to invest \$400 million to expand operations in Mountain View, Carpinteria, Irvine, San Francisco, and Sunnyvale, creating over 1,700 jobs

BOSCH

Bosch plans to invest more than \$1.5 billion in a semiconductor facility located in Roseville

Sector Category: ● Accelerate ● Bet

Hardware Semiconductors Software & Services Artificial Intelligence Quantum Robotics

1 Bay Area



Employs ~400K tech workers, more than any other market in the US³⁵; key player in semiconductor and microelectronics manufacturing with the largest concentration of semiconductor jobs in the United States and top research universities including Stanford and UC Berkeley.

2 Central Coast



Specializes in microelectronics, including Santa Barbara emerging as a quantum player, anchored by Google's Quantum AI campus and strong research universities including Cal Poly-San Luis Obispo and UC Santa Barbara (Nanotech Lab, Materials Research Lab, and Quantum Foundry).

3 Orange County



History of chip manufacturing though anchor companies including Broadcom, Tower Semiconductor and Skyworks Solutions and strong research universities, such as UC Irvine.

4 Capital



The Greater Sacramento area has 26x more concentrated semiconductor growth capital than the U.S. average,³⁶ anchored by solid-state memory applications and products R&D, with leading chip manufacturers including Intel, Solidigm, and Bosch.

5 Central San Joaquin



Working to attract circular manufacturers in computer and electronic product manufacturing, with plans to reskill and upskill its existing base of ~50K manufacturing jobs.

6 Inland SoCal



Hub for cybersecurity services, anchored by the Cybersecurity Center at Cal State San Bernardino, which has received multiple high profile federal training excellence designations and initiated a first-in-the-state cybersecurity apprenticeship program.

7 Southern Border



Home to over 4.5K manufacturing businesses, including robotics and automation, supporting ~121K jobs, and anchored by companies including Shield AI and Brain Corp and UC San Diego (Robotics Institute).




OVERVIEW

Life Sciences

As the birthplace of biotechnology, dating back to the founding of Genentech in 1976 in South San Francisco and the commercialization of recombinant DNA technology,¹ California is one of the national leaders in life science innovation.

Anchored by the Bay Area, Los Angeles County, and Southern Border regions, California is known for its history of innovative medical technology (medtech) and pharmaceutical companies, contributing to the rise of the state’s pioneering biotech economy.² California’s life sciences sector is bolstered by its leading research institutions (including Stanford; University of California, Berkeley; and University of California, San Francisco), and large share of venture capital investment relative to other states.³

California Can Capitalize on Global Opportunities in Life Sciences

Sector Category:  Accelerate

Representative California Life Sciences Employers



Medtech

Driven by R&D investment in advanced medical devices and easy approval for those devices by regulatory authorities, the global medtech market was valued at ~\$640 billion in 2024, with an expected 6% CAGR for the next decade⁴

INTUITIVE

 Agilent

 ResMed

Applied Medical 

FUJIFILM

 Edwards Lifesciences

 CooperCompanies



Pharma / Biotech

The global pharma / biotechnology sector reached ~\$1.4 trillion in 2023 and is expected to grow at a ~12% CAGR for the next decade, largely driven by advancements in genomics and Polymerase Chain Reaction (PCR) technologies as well as favorable government policy and increased healthcare infrastructure⁵

illumina[®] BiOMARIN[®]



Genentech AMGEN





Life Sciences

California is Building on its Strengths to Accelerate Life Sciences

In 2023, the state **exported \$9.3 billion in pharmaceutical and medicine products** and was the #1 exporter of medical equipment and supplies, with \$6.6 billion in exports³

California invests heavily in life sciences R&D

- The state invests **\$55 million of its higher education R&D into life sciences, the most of any sector**⁷
- California **accounted for 30-40% of the total annual patent applications filed nationally in life science sectors from 2018 to 2023**—the largest single U.S. state total
- California leads states in life sciences degrees conferred in 2022 (~91,000, as much as New York, Massachusetts, and Texas combined) and is **24th among U.S. states in percentage of graduates in STEM fields**⁸

California life science companies receive more VC funding than any other state (~\$60 billion in private investment⁶ in 2023)²

- Life sciences comprises California’s third top sector for VC funding³
- California receives the most federal funding from the National Institutes of Health (NIH) and National Science Foundation (NSF) out of any state²

Medtech: With roughly 13,600 medtech enterprises and 19 global-scale medical devices companies headquartered in California, the state accounts for **~30% of the medical device industry revenue across the US**⁹

- California has a strong medtech workforce of over 100,000, with the subsector contributing ~\$32 billion in nominal GDP in 2023¹⁰

Pharma / Biotech: California is home to **three life science markets ranked in the top ten** in the U.S. in R&D, manufacturing, or medtech (San Francisco, San Diego, and LA / Orange County)¹¹ and ~16K life science establishments, including some of the largest biotech and pharmaceutical companies in the world, such as Genentech, Illumina, Amgen, and Gilead²

- California’s biotech R&D workforce is nearly 70,000, with pharma / biotech adding ~\$65 billion in nominal GDP in 2023¹⁰
- California universities had multiple research breakthroughs over the past few years, including discovering MYC Protein at UC Riverside, advancing chemotherapy treatments at UC Santa Barbara, and developing the Human Pangenome Project at UC Santa Cruz¹²



How We Are Supporting the Life Sciences Sector

- **Research and Development Tax Credit:** Allows companies to reduce their tax liability based on qualified research expenditures with a credit for up to 15% for qualified in-house research expenses and 24% for payments to outside contractors¹³
- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to advanced manufacturers (including industrial biotechnology) to reduce the equipment purchasing costs¹⁴
- **CalCompetes:** Provides tax credits to life sciences companies, including ~\$10 million to four businesses since 2022, creating over 300 life sciences jobs¹⁶
- **Employment Training Panel (ETP):** Supports life sciences employers with upskilling their workforce¹⁷
- **Manufacturing and R&D Partial Sales and Use Tax Exemption:** Offers a partial exemption in state sales and use tax (3.9375%) to manufacturers and businesses primarily engaged in R&D related to life sciences industries¹⁵



Life Sciences



Why Life Sciences is a Strategic Sector for California

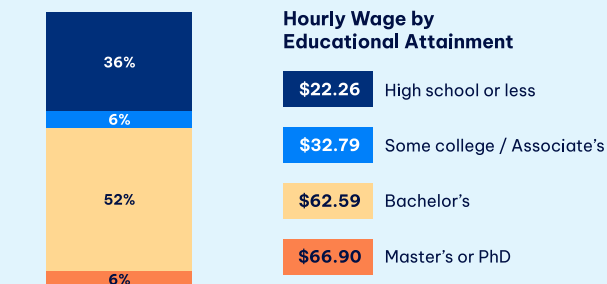
The life sciences sector is a crucial driver of **California's economic strength and future growth, creating high-paying jobs** (including many accessible entry-level positions) while **supporting the healthcare industry statewide and nationally:**

- Annual compensation for life science workers is more than double the average U.S. private sector wage, and over a third of top life science sector occupations typically **do not require a bachelor's degree**²⁰
- As one of the most diverse states in the country,²¹ California's life sciences sector has the **potential to leverage its uniquely diverse workforce to address health questions with a focus on equity** in life sciences innovation

Personal Stories: Luissaidee

Contra Costa Medical Career College sponsored by Rubicon Programs, a nonprofit providing comprehensive workforce development and reentry programs to over 2,000 Bay Area residents annually,¹⁸ helped Luissaidee, a Lab Assistant II and mother of two, land her dream job. In 2023, Rubicon Programs provided services for over 2,700 people, including helping 225 participants secure jobs.¹⁹

Typical Educational Attainment Required Across Occupations for Life Sciences in California, 2023, %^{20, 22}



Top Occupations Within the Life Sciences Sector in California, 2023²⁰

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role? ²³	Forecast sector employment change above CA average? ²⁴
Software Developers	9.5k		✓
Assemblers and Fabricators	9.0k		
Inspectors, Testers, Sorters, and Weighers	5.0k	✓	✓
Medical Scientists	5.0k		✓
Packaging and Filling Machine Operators	4.4k		

~466K

Life Sciences Workforce
Across all subsectors in CA²⁵

5.0

Employment Multiplier
Number of indirect jobs created by life sciences jobs in CA¹⁰

\$414B

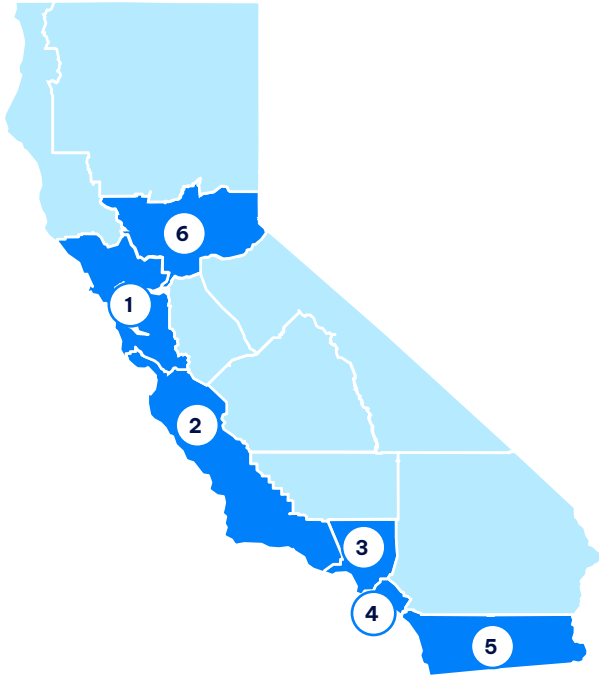
Annual Economic Output
From life sciences sector in CA²



Life Sciences

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **six identified life sciences as a regional strategic sector**. Each Collaborative also identified subsector categories within life sciences focus their attention and resources.²⁶



Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS¹⁶

agenus

Agenus, a biopharmaceutical company, plans to invest more than \$225 million in expanding operations in Vacaville, Emeryville, and Berkeley, creating over 350 new jobs

Element Biosciences

Element Biosciences, a biotech company based in San Diego, plans to invest more than \$125 million in expanding operations, creating over 420 new jobs

MicroVenture TERUMO

MicroVenture, a medical devices manufacturer based in Aliso Viejo, plans to invest more than \$54 million in expanding operations, creating over 220 new jobs

Sector Category: ● Accelerate



Medtech



Pharma / Biotech

1 Bay Area



In 2023, the Bay Area's biotech industry contributed ~\$140 billion to regional economic output, supported ~330,000 jobs, and brought in over \$2 billion in NIH grants.²⁷ The region is home to world class research institutions including UCSF, Stanford, and UC Berkeley, and several cutting-edge medtech and biotech companies including Intuitive Surgical, Align, Genentech, and more.

2 Central Coast



Thousand Oaks biotech hub is anchored by Amgen. strong research universities led by UC Santa Cruz (strengths in drug discovery, genomics, and RNA biology). The region is involved in the UC Berkeley- based California Institute for Quantitative Biosciences and University of California Drug Discovery Consortium and is home to several medtech companies including Wyatt Products and Cognixion.

3 Los Angeles County



LA's biotech industry generated ~\$70 billion in economic output in 2023, supported ~220,000 jobs, and brought in over \$1.5 billion in NIH grants.²⁷ LA is home to leading research institutions including UCLA, Caltech, and University of Southern California, over 3,100 life science companies and research facilities, with major medtech and biotech employers including Amgen, Takeda, Grifols, Kite Pharma, and Xencor.

4 Orange County



Strong base of ~20,000 jobs in medical supplies and equipment manufacturing (dominated by Surgical and Medical Instrument Manufacturing and Dental Laboratories). The region's innovation is driven by incubators and accelerators such as Octane OC and The Cove @ UCI with partnerships between academia and local industry leaders such as Edwards Lifesciences, Applied Medical, and Medtronic.

5 Southern Border



In 2023, San Diego's biotech industry generated ~\$60 billion in economic output, supported ~180,000 jobs, and brought in over \$2 billion in NIH grants.²⁷ The regional higher education ecosystem is anchored by Scripps Research Institute and the Salk Institute; the region is home to several cutting-edge biotech companies including Illumina and Pfizer.

6 Capital



Over the past ten years, the region produced 4,400 new patented therapies and 130 regional startups securing growth capital totaling \$1.7 billion. The region is home to UC Davis and the future Aggie Square, a 1.1 million-square-foot district focused on translating food and biotechnology innovations into needed products and services, with a number of medtech and biotech companies including StemExpress, Penumbra, and OrcaBio.²⁸



OVERVIEW

Working Lands & Water

California’s working lands and water sector is a powerhouse of agricultural production and innovation, driving the state’s economy across a diverse set of subsectors.

Working lands in California is anchored by the Central Valley, which leads the country in agricultural production and food / beverage processing. California’s robust agtech industry is driven by substantial Silicon Valley investment (e.g. AgFunder, SVG Ventures), while the state’s nascent bioeconomy and blue economies are enabled by substantial organic resources (wood products, biomass) and access to the coastline.¹

California Can Capitalize on Global Opportunities in Working Lands & Water Subsectors

Sector Category: ● Strengthen ● Accelerate ● Bet	Representative California Working Lands & Water Employers
<p>Agricultural Production</p> <p>The global gross production value of the agricultural production market is projected to reach \$4.6 trillion in 2024 and expected to grow at a ~4% CAGR through 2029²</p>	
<p>Food Processing</p> <p>Driven by growing sustainable food consumption, global revenues in the food and beverage market are expected to reach nearly \$10 trillion in 2025³</p>	
<p>Agtech & Farm Equipment</p> <p>Agrifoodtech startups raised \$6.7 billion globally, with investments into farm robotics / equipment growing 9% year-over-year for the past five years to \$760 million in 2023</p>	
<p>Bioeconomy</p> <p>The global bioeconomy has an estimated value of \$4 trillion and according to some projections, may grow to \$30 trillion, driven by increasing emphasis on managing climate change⁵</p>	
<p>Blue Economy / Tech</p> <p>The global ocean economy generates \$3-6 trillion per year, with fisheries and aquaculture contributing ~\$100 billion per year and supporting 260 million jobs worldwide⁶</p>	



California's Strong Base in Agriculture and Food Production Supports the Success of its Working Lands & Water Sector

● Strengthen

As the **nation's leading state in agricultural production and exports**,⁷ California cultivates over a third of the country's vegetables and nearly three-quarters of its fruits,⁸ generating at least \$100 billion in agricultural production-related economic activity each year⁹

- The state is **home to some of the best agricultural science programs in the world**, including UC Davis (ranked 13th best Agricultural Science university in the world and 3rd in the U.S.)¹⁰
- California is also **home to ~70,000 farms & ranches**,⁹ with **~24 million farm acres in operation**,¹¹ mostly in the Central Valley¹²
- As of 2017, California **led the country in number of food and beverage processing plants**,¹³ including wineries (nearly 1,500), fruit and vegetable processing (333 plants), and coffee and tea manufacturing (100 plants); the subsector employed an estimated 236,000 people in 2023¹⁴

● Accelerate

Grounded in California's strengths in agricultural production and food processing, **the state leads the country in agtech and farm equipment technologies**

- Agtech startups in California **attracted an average of ~\$1.5 billion in VC funding from 2020-2023**, accounting for 37% of U.S. VC funding¹⁵
- Recently, the Capital and North San Joaquin Valley regions were **recognized as a Regional Innovation Cluster for AgriFood technologies**, the only national AgriFood innovation cluster award, by the U.S. Small Business Administration (SBA)¹⁶

● Bet

Looking forward, California **has an opportunity to develop its bioeconomy**, with a focus on sustainable and regenerative practices, by utilizing its substantial biomass resources (47 million dry tons in estimated biomass resource potential from logging debris, urban wood waste, and agricultural wastes¹⁷) and developing its bioindustrial and biocircular manufacturing capabilities. California also has the potential to **bolster its blue economy by leveraging the state's coastline**

- **In 2023, biomass provided ~5% of California's in-state generated energy supply**;¹⁸ the industry reports that it reuses over 7.3 million tons of the state's solid wastes and residues annually¹⁹
- California plans to develop its bioeconomy by **enhancing forest restoration and funding innovation programs to develop bio-based products**, such as biofuels, while streamlining regulations and establishing tracking systems²⁰

- California's **blue economy has an estimated \$40 billion economic impact**, with annual revenues at blue economy businesses increasing by 18% and jobs by 163% over the past ten years²¹

How We Are Supporting the Working Lands & Water Sector

Forest Biomass to Carbon-Negative Biofuels Pilot Program:

Creates carbon-negative hydrogen and / or liquid fuel from forest biomass from forest vegetation management within California's Sierra Nevada²²

Organics Grant Program: Helps grow California companies engaged in food and yard waste recycling to cut climate pollution and create green jobs. The latest investment of \$130 million will lead to 114 new jobs for California's clean economy and keep over 7.7 million tons of organic waste out of landfills²³

Food Production Investment Program: Helps accelerate adoption of state-of-the-art energy farming technologies that substantially reduce energy use, costs, and GHG emissions²⁴

Farm Equipment and Machinery Sales & Use Tax

Exemption: Provides a partial exemption on taxes related to the sale, storage, or use of farm equipment, machinery and their parts²⁵

CalCompetes: Provides tax credits to working lands and water companies, including \$50 million to 11 businesses since 2022, creating over 1,000 working lands and water jobs²⁶

Upskilling & workforce initiatives:

- **AgTEC Workforce:** Improves the skills of agricultural workers in the San Joaquin Valley by aligning community colleges with industry approved certificate programs to increase wages²⁷
- **Labor Workforce Development Agency (LWDA):** Funds outreach, employment, and training services to farmworkers through initiatives such as La Cooperativa Campesina de California²⁸
- **Specialty Crop Workforce Development Program:** Engages specialty crop employers, develops training and curriculum, and conducts outreach and education to farmworkers²⁹

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS¹⁶



Sakata Seed America, a plant and seed manufacturer, plans to invest more than \$25 million to expand operations, creating over 50 jobs



Baldwin Richardson Foods Co., a beverage manufacturer, plans to invest ~\$50 million to expand operations, creating over 140 jobs

Working Lands & Water



to provide Spanish-speaking farm employees with essential language skills and management training to advance their careers.³¹

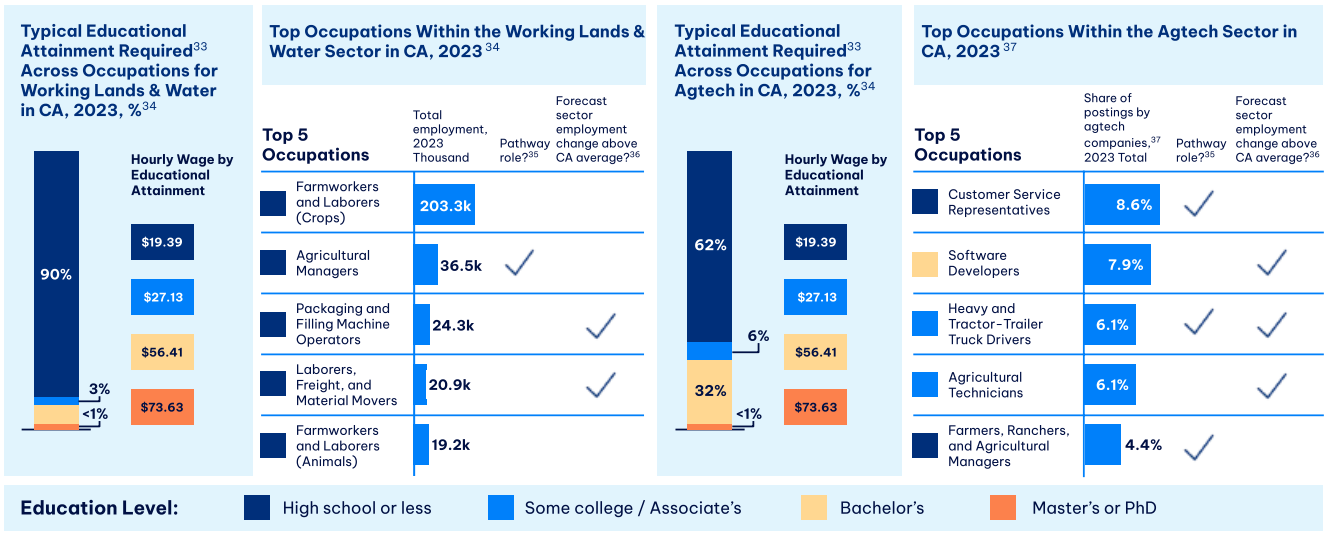
Working Lands & Water Offers Opportunities for All Californians

Building on a long history of agricultural production, California's working lands and water sector has the potential **to evolve in the coming decades to reflect the state's commitment to building a working lands and water economy centered on living-wage jobs and the implementation of sustainable farming and food production practices:**

- With legislation such as the Sustainable Groundwater Management Act (SGMA) and funding from Proposition 4, the state is investing in climate-focused farming techniques to create a working lands and water economy that will benefit Californians for decades to come by **doubling down on climate-focused farming techniques and long-term resource management**³²
- The working lands and water sector also has **opportunities to upskill and reskill** its workforce to build pathways into higher wage jobs with greater upward mobility for farm workers

Workforce Profile: Center for Land-Based Learning

The Center for Land-Based Learning, a High Road Training Partnership grantee, aims to train incumbent English-language learner workers in farm management and agricultural operations across California.³⁰ As a leading agricultural workforce development organization in California, the Center for Land-Based Learning offers a variety of training and career advancement programs, including the California Farm Academy's Beginning Farm and Ranch Manager Apprenticeship, a two-year program of paid on-the-job training and instruction. The Center also runs Spanish-language Leadership Training, an initiative designed



~13%

Annual Exports

Share of U.S. agricultural exports in 2022³⁸

\$145M

USDA National Institute of Food and Agriculture Grants

In fiscal year 2023 grants to CA³⁹

~700K

Working Lands & Water Workforce

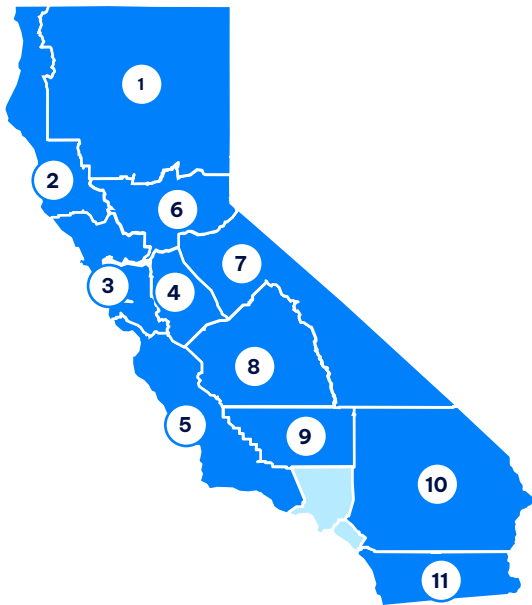
Across all subsectors in CA¹⁴

Working Lands & Water



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **11 identified working lands and water as a regional strategic sector**. Each Collaborative also identified subsector categories within the clean economy to focus their attention and resources.⁴⁰



1 North State

Roughly \$4.5 billion agricultural production subsector, anchored by rice (~\$900 million), almonds (~\$770 million), and walnuts (~\$720 million). Positioned to develop a circular bioeconomy based on wood utilization facilities.

2 Redwood

Hub for commodities including wood (produced 54% of statewide lumber market in 2023), seafood (12% of statewide aquaculture production by market value), livestock, wine, and cannabis.

3 Bay Area

Focus on sustainable agricultural practices and agtech innovation. Emerging efforts to prioritize recruiting and upskilling indigenous and immigrant farmworker populations.

Sector Category: ● Strengthen ● Accelerate ● Bet

Agricultural Production
 Food Processing
 Agtech & Farm Equipment
 Bioeconomy
 Blue Economy / Tech

5 North San Joaquin

Grossed nearly \$11.5 billion from agricultural goods in 2022. Recently certified as an AA-rated Bioeconomy Development Opportunity Zone (BDO Zone), the first in the state, by the BDO Zone Initiative, building from progress advanced by BEAM Circular, a bioeconomy focused initiative that received funding from the Regional Investment Initiative.

6 Central Coast

Home to 125,000 individuals engaged in agricultural production, several notable agtech companies (including FarmBot and FarmNG), and top research institutions (UC Santa Barbara, UC Santa Cruz). Strong geographic positioning and existing state / federal assets (research labs, initiatives) for blue economy.

7 Capital

Agriculture, food, and wood economy jobs accounted for about 40% of total employment in the four tradable sectors as prioritized by the region in 2022. Regional leader in investment intensity in agricultural innovation (3-30x the national average), anchored by UC Davis, a leading institution worldwide for agriculture and forestry.

8 Sierra

Developing a workforce plan for managing ecosystems and establishing a biomass-based economy by converting low-value biomass materials for export for more extensive bioeconomy uses such as biofuels or wood products.

9 Central San Joaquin

Produces 25% of the nation's food, 60% of its fruits and nuts, and 30% of its vegetables, with an annual agricultural economy output of \$70 billion. Well-positioned to advance the bioeconomy subsector using renewable organic material from plants and animals to produce biofuels.

10 Kern County

Robust agriculture industry (80,000 jobs or about 15% of total employment) with plans to invest in agtech and the bioeconomy (focus on biofuels).

11 Inland SoCal

Nascent center for water quality innovation (e.g. onsite water treatment, and recycling, uncovered filtration systems) to offset waste from advanced manufacturing processes.

12 Southern Border

Agriculture contributes \$5 billion to the Imperial County economy. San Diego County generates \$1.8 billion in agriculture and seafood sales, is home to several state-of-the-art water treatment and desalination facilities, and is an emerging hub for agtech (e.g. AgX Initiative).



OVERVIEW

Manufacturing

In 2023, California was home to the largest manufacturing workforce in the United States.¹ Moving forward, the state can lean into its strengths in high value-add manufacturing, including precision and advanced manufacturing, to support its “Accelerate” and “Bet” sectors.

California is Leaning Into its Value-Add Manufacturing Strengths

- California has a **strong manufacturing economy**, generating ~\$397 billion in annual gross domestic product output in 2023¹
- California’s **1.3 million manufacturing jobs** account for **about 7% of its workforce**¹

Value-Add Manufacturing Across Sectors

- California’s advanced & precision manufacturing capabilities **support many of the state’s strategic sectors**:



Defining Manufacturing Subsectors in California

Sector Category: ● Strengthen ● Accelerate



General

Producing goods on a large-scale using machinery and assembly lines, typically for mass-market products²



Precision

High-accuracy production processes, often used for intricate components in industries like aerospace or life sciences³



Advanced

Technology-driven manufacturing incorporating automation and robotics for enhanced efficiency and customization⁴

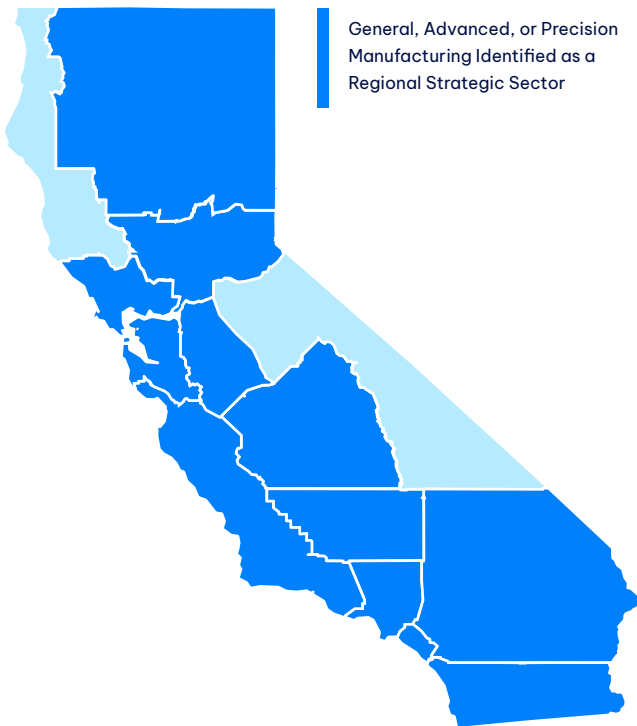


How We Are Supporting the Manufacturing Sector

- **California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA):** Offers a sales and use tax (STE) exclusion to advanced manufacturers to reduce the equipment purchasing costs⁵
- **Manufacturing and R&D Partial Sales and Use Tax Exemption:** Offers a partial exemption in state sales and use tax (3.9375%) on qualified purchases to businesses engaged in manufacturing, research and development (R&D), and electric power generation⁶
- **Capital Investment Incentive Program:** Authorizes local governments to rebate a capital investment incentive amount to a manufacturer that is equal to the property taxes owed on the manufacturing property⁷
- **Made in California Labeling Program:** Builds consumer awareness around products produced within the state ecosystem⁸
- **Industrial Development Bond:** Offers tax exempt securities up to \$10 million to provide money for the acquisition, construction, rehabilitation, and equipping of manufacturing and processing facilities for private companies⁹
- **Employment Training Panel (ETP) partnership with California Manufacturing Technology Consulting (CMTA) and California Manufacturers & Technology Association (CMTA):** Provides small and medium-sized California manufacturers with subsidized, high-quality training¹⁰
- **California Energy Commission Manufacturing Grants:** Provides support to ZEV manufacturers through the Clean Transportation Program and to food processors through the Food Production Investment Program¹¹

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **11 identified general, precision, or advanced manufacturing as regional strategic sectors**¹²



- **North State:** Opportunities to build from its natural resources to engage in value-add timber manufacturing
- **Capital:** Precision manufacturing employs ~20,000 people, accounting for ~\$4 billion in gross regional product
- **Bay Area:** Manufacturing employs ~400,000 people, concentrated in southern and eastern areas of region
- **North San Joaquin:** General and advanced manufacturing employs ~60,000 people (~10,000 people employed in advanced)
- **Central San Joaquin:** ~50,000 manufacturing jobs, mostly food-based; new opportunities in circular and clean energy manufacturing
- **Central Coast:** Precision manufacturing employs ~34,000, accounting for ~\$15 billion in regional exports
- **Kern County:** Advanced manufacturing concentrated in working lands, clean energy, and aerospace and defense
- **Los Angeles County:** Strong advanced manufacturing workforce, with nearly ~200,000 in aerospace manufacturing alone
- **Orange County:** Computer / electronic product and miscellaneous manufacturing (dominated by medical device manufacturing), accounts for ~50,000 jobs
- **Inland SoCal:** Nearly 100,000 manufacturing jobs in the region, with a greater share identified as quality or promising based on regional analysis relative to the overall economy
- **Southern Border:** Manufacturing (precision & advanced) employs ~120,000 people, generating \$28 billion in economic activity



Manufacturing

Manufacturing Offers Pathways to Good-Paying Jobs

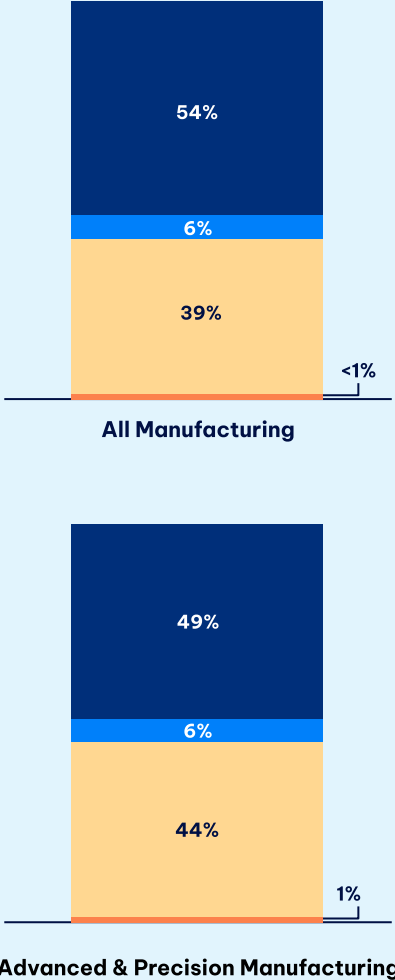
- In 2023, manufacturing employed more than a million Californians, with average hourly wages of \$36¹
- Manufacturing is relatively accessible to all education levels, with many roles requiring only a high school degree or G.E.D.¹³ and opportunities to earn more through specializations or apprenticeships in fields like CNC machining and advanced welding¹⁴

Top Occupations Within Manufacturing in California, 2023¹³

Top 10 Occupations	Total employment, 2023 Thousand	Pathway role? ¹⁵	Forecast sector employment change above CA average?
Miscellaneous Assemblers and Fabricators	83.2k		
Software Developers	43.6k		✓
Laborers and Freight, Stock, and Material Movers, Hand	39.7k		
Electrical, Electronic, and Electromechanical Assemblers*	37.6k		
Inspectors, Testers, Sorters, Samplers, and Weighers	35.5k	✓	
First-Line Supervisors of Production and Operating Workers	33.4k		
Packaging and Filling Machine Operators and Tenders	32.0k	✓	
Sales Representatives, Wholesale and Manufacturing	26.4k		
Shipping, Receiving, and Inventory Clerks	24.6k		
General and Operations Managers	21.0k		

*Except Coil Winders, Tapers, and Finishers
 ** Except Technical and Scientific Products

Typical Educational Attainment Required Across Occupations for Manufacturing in California, 2023, %^{13, 16}



Education Level:





OVERVIEW

Creative Economy

The creative economy has deep roots in California’s history and continues to be an engine for innovation, cultural expression, and economic growth.

California is renowned for its long and storied history in film and television production as the home to Hollywood and many of the world’s largest studios,¹ and as the birthplace of some of the technologies that gave rise to its international influence –including the development of the first electronic television in San Francisco.²

But California’s creative economy doesn’t end there. Major music and sound recording companies, publishers, design schools (e.g., California Institute of the Arts and NewSchool of Architecture and Design³), and performing arts venues (such as the Greek Theater and Paramount Theatre⁴) can be found around the state, reflecting California’s significant role across the creative industries.

California’s Creative Economy Powers Economic Growth and Provides High-Quality Jobs

Although there is increasing competition in TV and film production, California **remains a creative economy powerhouse**:

- In 2023, **California was home to ~220,000 creative economy jobs, one in every four creative economy jobs in the U.S.**⁵
- The **average salary paid to creative workers in 2023 was ~\$160,000**, more than 50% higher than the California average⁶

Workforce Profile: BRIC Foundation

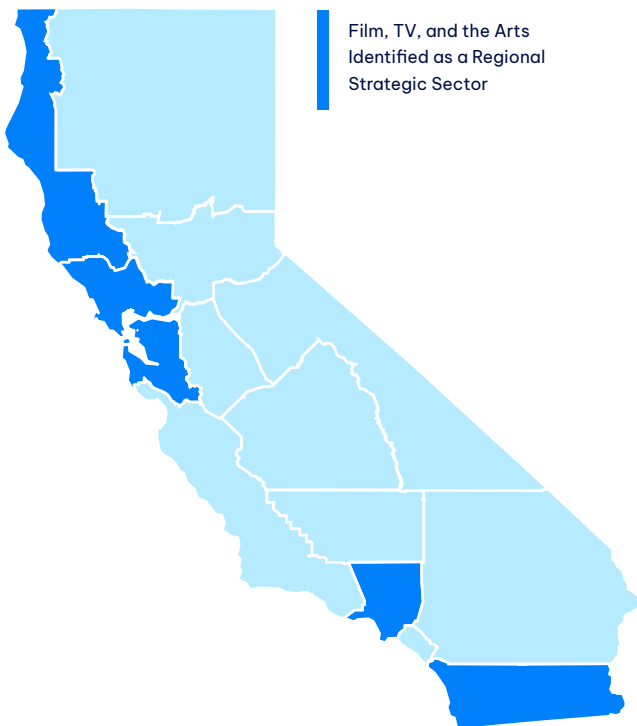
The BRIC Foundation is a nonprofit dedicated to effectively preparing underrepresented workers to thrive in Arts, Media, and Entertainment (AME) jobs.⁸ Since 2018, BRIC has worked with over 3,000 underserved high schoolers on creative projects with an emphasis on career readiness and has developed an apprenticeship program with 18 employer partners.⁹ Last year, BRIC secured a three-year, \$3.5 million contract from the California Workforce Development Board to support a network of registered apprenticeship program sponsors and community-based organizations that provide paid on-the-job training, continuous mentorship, career coaching, and ongoing support for participants.¹⁰





How We Are Supporting the Creative Economy Sector

- **California Film and TV Tax Credit Program:** Provides refundable tax credits based on qualified expenditures for eligible productions that are produced in California¹¹
 - **Recent proposal by Governor Newsom to increase California's Film & Television Tax Credit Program from \$330 million to \$750 million annually** to attract more entertainment projects back to California¹¹
 - Since 2009, the program has **generated over \$26 billion in economic activity and supported ~200,000 jobs**, with studies showing that every tax credit dollar yields substantial returns in GDP, wages, and local tax revenue¹¹
- **California Film Commission:** Supports productions of all sizes and budgets, including film and TV tax credits, an extensive digital location library, free online permitting, low-cost use of state properties as shooting locations, and production assistance¹²
- **Employment Training Panel (ETP):** Provides funding to help employers within the creative economy—from film and TV to music and the performing arts—upskill their workforce¹³
- **California Arts Council:** Promotes and supports arts and culture across the state by providing grants, fostering accessibility and equity in arts programming, and enriching community engagement, arts education, and creative industries¹⁴
- **Soundstage Filming Tax Credit Program:** Allows a tax credit in an amount equal to 20% or 25% of qualified expenditures for the production of a qualified motion picture in CA at a certified studio construction project¹⁵
- **Tele-production and Post-Production Equipment Exemption:** Exempts sales of tele-production and post-production equipment to businesses primarily engaged in those activities from the state's sales and use tax rate¹⁶
- **Motion Picture Production Services Exemption:** Exempts transfers of qualified motion pictures or related rights or services involved in production of those qualified motion pictures from the state's sales and use tax¹⁶
- **Leases of Motion Picture and Television Films and Tapes Exemption:** Exempts leases of motion pictures, animated films, and TV shows from tax, as they are not treated as sales, with the lessor considered the end consumer of the leased property¹⁶



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **four identified film, TV, and the arts as regional strategic sectors:**¹⁷

- **Redwood:** Production and film tourism hub in Humboldt, anchored by Humboldt-Del Norte Film Commission, seasonal festivals and heritage sites celebrating indigenous and other local cultures¹⁸
- **Bay Area:** Arts and culture sector in the Bay Area employed more than 82,000 workers in 2022, including employees of museums, art galleries, historical sites, performing arts companies, and the film industry, as well as independent artists, writers, performers, and recreation / spectator sports; arts, entertainment, and recreation sector projected to grow nearly 57% from 2020 to 2030, adding more than 14,600 jobs
- **Los Angeles County:** Video Production and Distribution sector accounts for ~140,000 jobs in the county with an average wage of ~\$125,000; home to seven of the top twenty-five film schools in the country and the largest inventory of indoor filmable sound stages in the United States
- **Southern Border:** Generates \$10.8 billion dollars in total economic impact annually; supports 170,000 direct and indirect jobs



OVERVIEW

Financial & Professional Services

Accounting for about 8% of California's gross domestic product (GDP),¹ the state's financial & professional services sector supports the rest of the state's economic activities.

- **Financial services**, including banking, investing, and insurance, provide capital and risk management needed for business expansion, innovation, and job creation across sectors²
- **Professional services**, ranging from accounting to legal support to marketing and publishing, deliver expertise that helps businesses navigate complex regulatory environments, optimize operations, and strategize for growth³
- Both services **not only directly contribute to the economy but also foster economic stability, innovation, and productivity**

California's Financial & Professional Services Sector Provides Thousand of High Paying Jobs

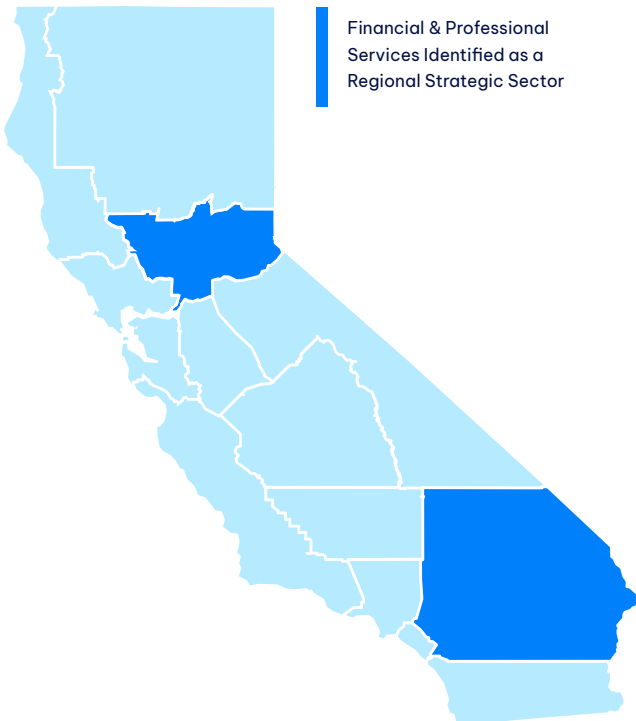
In 2023, **tourism provided employment for 1.2 million Californians** and generated \$150 billion in visitor spending (surpassing the prior record of ~\$145 billion in 2019) and **\$12.7 billion in state and local tax revenues**¹

- In 2023, California's financial services sector accounted for approximately 190,000 jobs, while the professional services sector supported around 670,000 jobs, including roughly 560,000 in business services and 110,000 in marketing and publishing¹
- Careers in financial & professional services often **offer flexible working arrangements, benefits packages, and opportunities for career growth**⁴



How We Are Supporting the Financial & Professional Services Sector

- **Exemption from the Minimum Tax for First-Year Corporations and Exemption from the Annual Tax for First-Year Limited Liability Companies (LLCs), Limited Partnerships (LPs), and Limited Liability Partnerships (LLPs):** Exempts corporations from paying a minimum franchise tax of \$800 in their first year. LLCs, LLPs, and LPs also have an \$800 annual tax, with an exemption in their first year for tax years 2020, 2021, and 2022⁵
- **Employment Training Panel (ETP):** Provides funding to employers in finance, insurance, and professional services, insurance to upskill their workforce⁶
- **California Capitol Access (CalCap) and iBank Loan Guarantee Programs:** Encourages lenders to provide financing to small businesses, including professional services firms⁷
- **CalCompetes:** Provides tax credits to financial & professional services companies, including more than \$17 million since 2022⁸



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **two identified financial & professional services as regional strategic sectors:**⁹

- **Capital:** ~60,000 jobs in business services (~20,000 in technical services and ~25,000 in business administration), generating ~\$12 billion in gross regional product with an average salary of ~\$115,000
- **Inland SoCal:** Plans to create pathways into management careers, providing opportunities for skills development, leadership training, and career advancement, particularly among those from groups historically underrepresented in corporate leadership and develop an entrepreneurial ecosystem for high-growth startups and main street businesses

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS¹⁶

Clutch

Clutch, a business management consulting services company based in **Sacramento**, plans to invest ~\$15 million to expand operations, creating over 520 new jobs

SYSTEM1

System1, an online advertising company based in **Marina Del Rey**, plans to invest ~\$7 million to expand operations, creating almost 200 new jobs



OVERVIEW

Tourism & Outdoor Recreation

Hollywood. Beaches. Yosemite. Disney. Highway 101. Golden Gate Bridge. Tahoe. Napa Valley...And that's not even scratching the surface. Thanks to its exceptional natural beauty and tourist attractions, California leads the nation in total spending on tourism.¹

While the pandemic caused temporary declines in tourism, the number of tourists to California has **returned to record highs**, attracting ~260 million visitors in 2023 and generating billions for California businesses.² California is committed to continuing to support the tourism and outdoor recreation sector with an emphasis on **fostering good-paying jobs**.

California's Tourism and Outdoor Recreation Sector Provides Millions of Jobs and Drives Billions in Visitor Spending

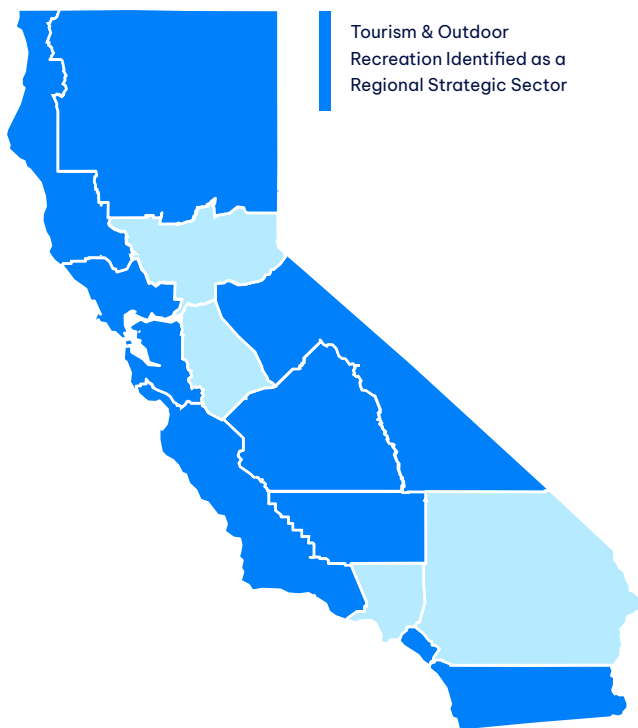
In 2023, **tourism provided employment for 1.2 million Californians**, generated **\$150 billion in visitor spending** (surpassing the prior record of ~\$145 billion in 2019), and **\$12.7 billion in state and local tax revenues**³

- The state has the **largest outdoor recreation industry economy in the nation**, contributing ~\$81 billion in GDP and supporting 545,000 direct jobs⁴
- Every year, **~68 million people visit California's state parks**⁵ and in 2023, **~36 million people** visited the state's nine national parks and 19 designated sites, spending \$3.2 billion, **supporting ~40,000 jobs**, and providing \$5.1 billion to the state economy⁶
- In January 2025, President Biden added **two new national monuments** covering more than 840,000 acres that will protect sacred tribal lands and enhance regional recreation opportunities⁷



How We Are Supporting the Tourism and Outdoor Recreation Sector

- **California Office of Tourism:** Supports the promotion of California as a global tourism destination, provides information services to visitors, and funds Visit California⁸
- **Visit California:** Develops and maintains marketing programs promoting California as a travel destination; received ~\$120 million from the state in 2023-24⁹ and a one-time \$95 million stimulus in 2021 to boost California's tourism economy¹⁰
- **State Parks:** In 2024-25, California's budget allocated over a billion dollars to support its state parks, including ~\$880 million for state operations and ~\$140 million for local assistance¹¹
- **Route to Parks Grants:** Reduces transportation barriers to help people access state parks and encourage outdoor recreation and tourism¹²
- **Land and Water Conservation Fund:** Provides funding for the acquisition or development of land to create new outdoor recreation opportunities for the health and wellness of Californians¹³



REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **nine identified tourism & outdoor recreation as regional strategic sectors:**¹⁴

- **North State:** Developing a regional tourism marketing plan and coordinating with local businesses to provide destination and ecology-based experiences to visitors, such as the Sierra Buttes Trail Stewardship's Connected Communities Trails Master Plan and agri-tourism activities
- **Redwood:** The area's state and national parks attract approximately 5 million visitors annually who generate about \$1.3 billion in spending—about \$4,000 per Redwood resident
- **Sierra:** Outdoor recreation and tourism represents ~25% of all regional employment; however, there is opportunity for wage improvement, as many jobs pay less than \$50,000 annually
- **Bay Area:** In 2023, San Francisco welcomed ~23 million visitors who spent \$8.8 billion¹⁵
- **Central San Joaquin:** Plan to develop agri- and eco-tourism sector to educate the public, create hundreds of direct and indirect jobs, and conserve land
- **Central Coast:** Strong base of tourism assets, with hospitality accounting for ~18% of region's overall employment growth from 2012 to 2022
- **Kern County:** Opportunities for small businesses and hospitality services to support the region's scenic and recreational areas, like the Kern River Valley
- **Orange County:** Driven by local assets including Disneyland and Anaheim Convention Center, the region has a strong accommodations industry, providing ~25,000 jobs in 2023
- **Southern Border:** Imperial County's historical tourism sector is one of its fastest growing; San Diego plans to expand its cultural and agri-tourism sectors

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS¹⁶



Viking River Cruise, a River and Ocean Cruises company based in Woodland Hills, plans to invest ~\$9 million to expand their headquarters, creating over 180 new jobs.



OVERVIEW

Transport & Logistics

California's transport & logistics sector is diverse, spanning goods transport across air, ground, rail, and water and a broad network of warehouses and wholesalers.

The State has invested significant dollars towards greener, more equitable transport and logistics initiatives, positioning California to continue setting the standard in sustainable and inclusive development.¹

Although the transport & logistics sector faces challenges around environmental and public health impacts,² working conditions,³ and job displacement due to automation,⁴ California has an opportunity to encourage efforts to institute practices that protect workers, the environment, and nearby communities impacted by polluting activities.

California's Transport & Logistics Sector is a Major Employer and Economic Force in the State

- California leads the nation with **\$659.1 billion in goods exported**,⁵ with the transport & logistics sector employing over **830,000 Californians**⁶

Transport

- **Air:** With 15 airports with major cargo operations, California is the #1 state in the U.S. for inbound and outbound freight flights. Los Angeles International Airport (LAX) ranks 8th busiest cargo airport in the nation, handling over 2.1 million metric tons of cargo annually⁷
- **Ports:** The San Pedro Bay Port Complex, comprised of the Port of Los Angeles and the Port of Long Beach, is ranked 9th in the world by container volume, comprising 75% market share on the West Coast and 29% nationally⁸
- **Rail:** The state has the largest intermodal rail system, spanning 5,000 miles⁵
- **Highways:** California's highways extend over 50,500 miles,⁵ creating an efficient network for truck transportation; the state employed approximately 200,000 heavy and tractor-trailer truck drivers in 2023⁹

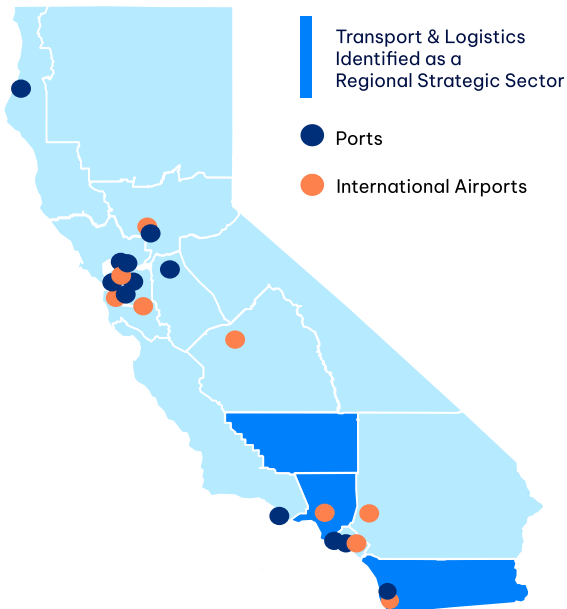
Logistics

- **Wholesale:** The wholesale industry, which supports the trade of food products, furniture, metals, and more, employs over 450,000 Californians⁶
- **Warehousing:** The state is home to 1.17 billion square feet of warehouse space, the most in the country, with the Inland SoCal region alone accounting for over 562 million square feet⁵



How We Are Supporting the Transport & Logistics Sector

- Port and Freight Infrastructure Program (PFIP):** Channels approximately \$1.2 billion into developing a more sustainable and efficient supply chain, with numerous projects incorporating zero-emission infrastructure including:¹⁰
 - Port Action, Climate, and Environment Development (PACED):** A \$216 million project that received \$79 million from PFIP to enhance port container and automobile import / export line of business¹⁰
 - Freight Air Quality Solutions (FAQS):** A \$240 million project that received \$76 million from PFIP for the deployment of Direct Current Fast Chargers and hydrogen refueling dispensers at seven locations to support zero-emission drayage fleets¹⁰
- The California Trade Corridor Enhancement Program (TCEP):** Provides \$300 million annually to tackle factors such as freight reliability, transportation congestion reduction, air quality impact, and economic / jobs growth¹¹
- California Containerized Ports Interoperability Grant Program:** Invests \$27 million into improving and supply chain functionality across 5 ports, including the Ports of Los Angeles, Long Beach, Oakland, San Diego, and Hueneme¹²
- California Freight Advisory Committee:** Advisory body that advises on freight-related priorities and needs¹³
- Employment Training Panel (ETP):** Provides funding to transport & logistics employers to upskill their workforce¹⁴



Personal Story: Marisol

Thanks to the Valley Transportation Authority (VTA) Joint Work Investment program, Marisol, a bus operator and single mother of three has been launched into a new career. Through the VTA's apprenticeship program, participants like Marisol can earn up to 18 college credits at Mission College in Santa Clara, allowing her to earn a Certificate of Achievement in Transportation while working. In 2019, VTA's program was the first in the country to offer a bus operator apprenticeship officially sanctioned by the U.S. Department of Labor.¹⁵

REGIONAL OVERVIEW

Across the state's 13 Jobs First Collaboratives, **three identified transport & logistics as regional strategic sectors:**¹⁶

- Kern County:** Highlights the importance of the sector's job accessibility and growth as a way to provide near-term jobs for severely disinvested communities struggling with chronic unemployment
- Los Angeles County:** In LA County alone, 1.3 million jobs are goods movement related; 350,000 more jobs will likely be needed to maintain the flow of goods in the LA metro area by 2030
- Southern Border:** Leveraging its location near urban centers, competitive land costs, and access to major transport hubs, the region has become a leader in logistics, with Calexico Port commercial truck crossings rising from 300,000 in 2010 to over 450,000 in 2023 and updates to the single largest commercial border crossing in North America underway at Otay Mesa Port of Entry¹⁷

Employers Expanding Their Presence in California with Calcompetes Support

COMPANY HIGHLIGHTS SOURCED FROM CALCOMPETES AWARDS¹⁶



OK Produce, a produce wholesaler, plans to invest more than \$36 million to expand its operations in Fresno in addition to creating 130 jobs.



FN Logistics, a family-owned and operated company that provides warehouse, logistics, and distribution services to online clothing retailer Fashion Nova plans to invest nearly \$114 million to expand its presence in Santa Fe Springs supporting more than 3,000 new employees.

Anchors

Across the state’s 13 Jobs First Regional Collaborative, **eight anchors**—education, healthcare, housing, childcare, and critical infrastructure, including transmission and distribution, water, transportation, and broadband—have been identified as critical for **supporting and sustaining regional economies and local communities**. Together, **these anchors fuel California’s global competitiveness and strengthen the fabric of our communities**.

Anchors	Importance to the California Economy	Selection of Key Initiatives
<p>Education & Skilled Workforce</p> 	<p>Education plays a crucial role in developing a skilled workforce that meets industry needs. As the economy evolves, the state’s education systems must adapt to meet the workforce demands of the future.¹ California has the largest higher education system in the nation.² Additionally, in the 2023–2024 school year, ~5.8M K–12 students were enrolled in one of 9,997 schools across 1,019 school.³ The system is stressed, and persistent achievement gaps continue to exist among disadvantaged students and across geographies.⁴</p>	<p>California has developed a Master Plan for Career Education to create a coordinated approach to building California’s talent pipeline focused on breaking down silos between sectors, strengthening career pathways, prioritizing paid earn-and-learn programs, and enhancing access to education and career training.¹ Additionally, to encourage clear pathways from education to careers, CA developed the Regional K–16 Education Collaborative Grant program.⁵</p>
<p>Healthcare*</p> 	<p>A robust healthcare system is linked to increased labor force participation and reduced absenteeism from illness.⁶ Improving access to quality healthcare, particularly in rural regions, is critical for community well-being, as well as attracting potential employers and employees.⁷ California’s healthcare system is expansive, covering the state’s 39 million residents, with ~15 million enrolled in Medi-Cal, 8.1.7 million in Covered California,⁹ and over 400 hospitals statewide.⁸ However, many rural hospitals face funding shortfalls that result in decreasing services,¹⁰ and many predominantly rural counties have fewer per-capita primary care physicians.¹¹</p>	<p>The state is expanding its behavioral health system with the \$6.4 billion in bonds approved via a ballot measure (Proposition 1) in 2024. Proposition 1 aims to increase the state’s capacity to provide behavioral health and housing services to vulnerable populations with the highest needs.¹² In May 2023, California allocated \$300 million in zero-interest loans to 17 community hospitals facing financial distress through the Distressed Hospital Loan program, providing the critical capital needed for these hospitals to remain open.¹³</p>
<p>Housing*</p> 	<p>An adequate housing supply allows people to live in their preferred locations and near their workplaces, with one study finding that 75% of surveyed employers reported high housing costs negatively impacted employee retention.¹⁴ Increasing housing availability also helps stabilize the state’s workforce and reduces homelessness-related costs.¹⁵ High housing costs contribute to affordability challenges for many Californians. The state’s median home price reached ~\$800,000 as of 2024,¹⁶ and over half of renters in 27 of California’s 58 counties are moderately or severely cost burdened.¹⁷</p>	<p>To expand access to housing, the state created the Housing Accountability Unit under the CA Department of Housing and Community Development (HCD) to hold localities accountable for creating 2.5 million new units by 2030, including 1 million affordable units.¹⁸ The HCD also offers a robust set of grants such as Homekey+. This initiative, funded through ballot measure Proposition 1 in March 2024, provides \$2.2 billion to build permanent housing for veterans and individuals with mental health or substance use challenges who are at risk of or experiencing homelessness.¹⁹</p>
<p>Childcare</p> 	<p>Childcare is essential for many Californians, helping with the balance between work and family responsibilities and contributing to higher workforce participation among parents, particularly women.²⁰ ~6.3 million children aged 0–12 are served through 10,800 licensed childcare centers and more than 33,300 family childcare homes.²¹ However, the cost of childcare remains a major challenge in California; in 2020, the annual price for infant care was \$16,900, making it the 48th most expensive in the United States.²²</p>	<p>In 2021–22, the state committed to funding 200,000 new childcare slots by 2026–27,²³ and has successfully created 119,000 new slots as of 2024.²⁴ Additionally, the state signed legislation recognizing 40,000 family childcare providers under the Child Care Providers Union as a formal union, establishing a framework to support the childcare system and its workers.²⁵</p>

* Although many of these anchors provide good-paying jobs, the Blueprint will focus on healthcare and construction (underpinning housing and infrastructure)



Anchors: Infrastructure*

Anchors	Importance to the California Economy	Selection of Key Initiatives
<p>Transmission & Distribution</p> 	<p>Energy is a basic building block for industry and residential activities in communities around the state. Robust transmission & distribution networks enable access to a reliable grid capable of withstanding extreme weather, while also promoting affordable power through increased efficiency of energy systems.²⁶ Modernizing infrastructure can be key to meeting the rising electricity demands of CA's growing economy.²⁷ California's transmission & distribution network spans ~26,000 miles of high-voltage transmission lines and ~240,000 miles of distribution lines,²⁸ serviced by more than 31,000 prevailing wage roles at the state's Investor-Owned Utilities.²⁹</p>	<p>California has added 17,200 megawatts of energy resources to the CA Independent System Operator (CAISO) transmission system from 2020 to 2023, expanding capacity to meet CA's climate goals and reliability needs.³⁰ The California Public Utilities Commission is also addressing future distribution planning and energization needs through its ongoing proceedings, with key successes including establishing set energization timelines.³¹</p>
<p>Water</p> 	<p>Access to water is critical for maintaining healthy ecosystems, enabling the production of food, and providing clean drinking water to communities statewide.³² California's water infrastructure delivers water to millions of residents and irrigates ~750,000 acres of farmland.³³ Currently, 98% of Californians receive safe drinking water, but around 700,000 people—mainly low-income residents in rural and some Native American communities—receive water that does not consistently meet quality standards,³⁴ reflecting a \$3.8 billion funding need over the next 5 years to address drinking water infrastructure for failing systems.³⁵</p>	<p>In November 2024, California passed Proposition 4, authorizing \$3.8 billion in bonds to improve water quality, reduce the risk of flooding and droughts, and restore rivers and lakes.³⁶ Furthermore, the State Water Resources Control Board distributed \$880 million in funding in fiscal year 2023-24 to projects improving water infrastructure and access to safe drinking water, ultimately benefiting around 12 million Californians.³⁷</p>
<p>Transportation Infrastructure</p> 	<p>Investing in transportation infrastructure enhances mobility and connectivity, allowing workers to commute to their workplace and enabling businesses to transport their products.³⁸ California's transportation infrastructure encompasses over 182,000 miles of public roads, ~26,000 bridges, 24 public use airports, and 10 major water ports. However, challenges persist, with an estimated ~24% of roads designated as in poor condition as of 2022.³⁹</p>	<p>California has successfully employed a mix of state and federal funding to boost its transportation infrastructure. In October 2024, the Transit and Intercity Rail Capital Program (TIRCP) announced over \$1.3 billion in funding for 27 public transportation projects, building on previous investments to total over \$4.8 billion since 2023.⁴⁰ The state has also secured \$41.9 billion in federal funding through the Infrastructure Investment and Jobs Act (IIJA),⁴¹ including support for Brightline West, an all-electric high-speed rail line connecting Las Vegas with Southern California.⁴¹</p>
<p>Broadband</p> 	<p>Broadband access helps enable at-home technology use, expands digital workforce opportunities, and increases access to virtual healthcare services.⁴² Increasing broadband access and adoption in rural regions is also linked to increased job and population growth, higher rates of new business formation and home values, and lower unemployment rates.⁴³ 91% of Californians are connected to broadband, leaving 3.5 million without connection to internet services. Furthermore, there are more than 450,000 locations across California that are either unserved or underserved.⁴⁴</p>	<p>In 2021, California allocated \$6 billion toward broadband infrastructure and bridging the digital divide, funding programs such as middle mile and last mile infrastructure build outs as well as loan loss reserves for locally driven infrastructure development.⁴⁵ California has also participated in federal programs, receiving \$1.86 billion through the Broadband Equity, Access, and Deployment (BEAD) program to expand broadband.⁴⁶</p>

* Although many of these anchors provide good-paying jobs, the Blueprint will focus on healthcare and construction (underpinning housing and infrastructure)



OVERVIEW

Construction

The construction and building industry in California helps provide housing and critical infrastructure for all Californians, generating over \$78 billion in economic activity in both the residential and non-residential construction sectors in the process.¹

Globally, there is increased interest in eco-friendly construction, driven by shifting consumer preferences and a push for net-zero emissions.² California has helped lead the way with legislation such as CALGreen, the first in the nation state-mandated green building code designed to reduce greenhouse gas emissions and improve energy efficiency.³

Demand for construction workers, especially in eco-focused fields like electrical work, is expected to grow as California updates building codes to prioritize electrification, retrofits older structures to meet new sustainability standards, and builds out new clean energy infrastructure.⁴

How We Are Supporting Our Construction Workforce

- **Equal Representation in Construction Apprenticeship Grant:** Increases opportunities for women, non-binary, and underserved communities to enter and stay in high-paying jobs in the construction industry by distributing \$25 million to cover the costs of childcare and bolstering outreach⁵
- **High Road Construction Careers (HRCC):** Connects local construction trades councils with community colleges, workforce boards, and community-based organizations to create pathways to state-certified apprenticeships⁶
- **High Road Training Partnerships (H RTP):** Builds industry-led partnerships to develop skills employers need and create opportunities for low-income workers⁷
- **Employment Training Panel (ETP):** Funds employers and other organizations to assist in upgrading apprentices and workers' skills through training that leads to high wage, high skill jobs with construction as a priority industry; allocated ~\$95 million in fiscal year 2024-25 to single employers, small businesses, critical proposals, multiple employer contracts, and apprenticeship programs⁸



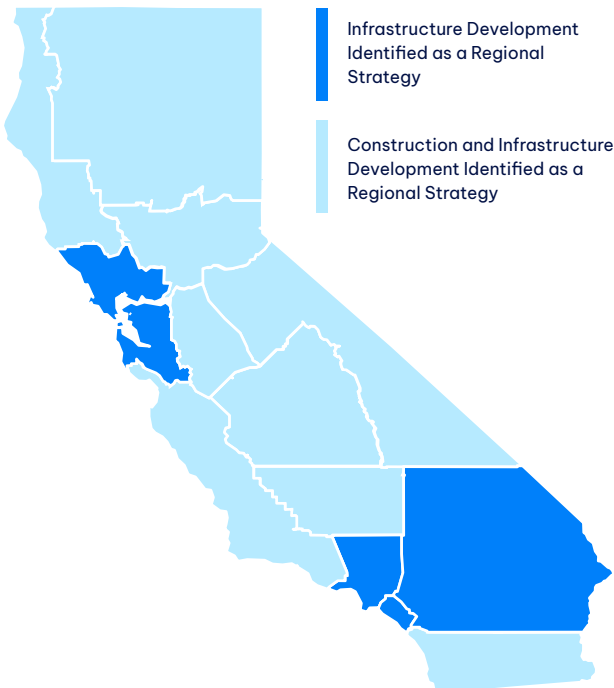
Personal Stories

“My hope is that I inspire other women to consider a career in construction because it is respected, well-paid, and offers great benefits.”⁹

Through the North Bay Trades Introductory Program (TIP), a certificated apprenticeship readiness program that prepares participants for state-registered trade apprenticeships in building and construction through skills training, industry connections, certifications, and field experiences¹⁰—Jocelyn, a skilled elevator mechanic, was able to learn her trade. At TIP, Jocelyn received classroom instruction and hands-on training to prepare for a career in the construction industry. After graduating from the program, Jocelyn has continued to speak to high school women, TIP applicants, and policymakers to share her experiences as a woman in the trades and promote programs like TIP.⁹

Construction Offers Pathways to Accessible, Good-Paying Jobs

- In 2023, **construction provided employment for around a million Californians**, with a range of hourly wages by role, from construction laborers (~\$27 per hour) to carpenters (~\$32 per hour) to general / operating managers (~\$58 per hour)¹¹
- The **construction sector in California is accessible to all education levels**, with **12 of the 15** of the top occupations **by employment accessible** to individuals with a high school degree or less¹² and **construction and building tradespeople needed across all regions of the state**¹³
- There are many pathways to **enter the construction and building trades, including through apprenticeships and vocational training programs**,¹⁴ as well as **opportunities to earn higher wages through additional specialization**¹⁵
- California also has an opportunity to **diversify its construction workforce**; nationally, the construction industry was comprised of 10.8% women, 6.7% black or African American, 1.7% Asian, and 34% Hispanic or Latino workers as of 2023¹⁰



REGIONAL OVERVIEW

Across the state’s 13 Jobs First Collaboratives, **12 identified infrastructure or housing as a foundational anchor, with four explicitly identifying construction as a priority**:¹³

- **Bay Area:** Construction sector employs ~235,000 workers in the region as of 2022 (including management and office / administrative support); growing emphasis on incorporating decarbonization, green materials, and clean energy
- **Los Angeles County:** Construction industry employs ~120,000 people and is forecasted to grow 8.5% per year through 2028, driven by one-time events (e.g., 2028 Olympics, LA metro expansions) and regional trends (e.g., need for housing, legacy building retrofits)
- **Orange County:** Construction industry employs ~90,000 people; focused on building affordable housing, implementing green technology, and creating more accessible, high-wage jobs
- **Inland SoCal:** Identified need for skilled tradespeople to support energy infrastructure projects, building retrofits, and other activities related to climate action and regional growth



OVERVIEW

Healthcare

California’s healthcare workforce plays an essential role in ensuring Californians can live, work, and have access to quality healthcare in all parts of the state.

With California’s aging population, there is a rising demand for healthcare professionals, especially in nursing and primary care, leading to increased recruitment and training initiatives across the state.¹

There is a growing need for a more diverse workforce to better serve the state’s culturally- and linguistically-varied population.²

The rise of telehealth has also created new employment opportunities in IT, data analysis, and remote care, reflecting an industry shift toward digital health solutions and remote patient monitoring.³

How We Are Supporting Our Healthcare Workforce

- **Song-Brown Registered Nurse Education programs:** Aims to increase the number of students and residents receiving quality primary care education and training in areas of unmet need throughout California⁴
- **Workforce for a Healthy California Initiative:** Offers grant opportunities to support training providers, community-based organizations, education institutions, and health employers to build and train the health workforce including:⁵
 - **Funding** to support nursing and social work education, emergency medical services (EMS) recruitment and training programs, primary care residency programs, and mental and behavioral health service providers, among others⁵
 - **\$90 million awarded to Healthcare High Road Training Partnerships** between community-based organizations, local workforce boards, labor unions, educational institutions, and employers to support training and career advancement programs in the healthcare sector for individuals who typically face barriers to employment⁶
- **CalGrows:** Provided free training and up to \$6,000 in incentives to caregivers for older adults and adults with disabilities, aiming to strengthen California’s healthcare workforce and support caregivers’ career growth⁷
- **Eligible Training Provider List (ETPL) programs:** Provides over 550 healthcare-related ETPL programs around the state aligned to California’s top 15 healthcare occupations⁸
- **Proposition One:** Aims to strengthen California’s behavioral health system, including by making significant investments into workforce education and training⁹
- **Behavioral Health Community-Based Organized Networks of Equitable Care and Treatment (BH-CONNECT):** Invests \$1.9 billion into California’s behavioral health workforce and allows for up to six months of transitional rent to support those in recovery¹⁰



Personal Story: Lisa

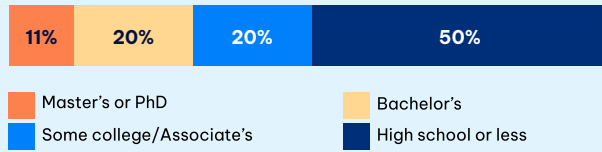
Shirley Ware Education Center Health Care Workers Union Local, a High Road Training Partnership (H RTP), has been creating pathways for California residents from disadvantaged backgrounds to access high quality jobs in the healthcare industry since 1998.¹¹

Thanks to this program, Lisa, a licensed vocational nurse, advanced her career through continuing education classes. Through her hard work, support from her counselor, and the program’s resources, Lisa was able to transition from a certified nursing assistant to a licensed vocational nurse.¹²

Healthcare Offers Pathways to Accessible, Good-Paying Jobs

- In 2023, California’s healthcare sector **provided employment for around two million workers**, with a **range of hourly wages**, from home health and personal care aides and medical assistants earning ~\$16 and ~\$22 per hour respectively, to registered nurses (RN) earning \$64 per hour¹³
- The healthcare sector in California has 6 of 15 of the top healthcare occupations available to individuals with a high school degree or less¹⁴

Typical Educational Attainment Required¹⁴ Across Occupations for Healthcare in California, 2023, %¹³



Top Occupations with Wages Above \$19 Per Hour Within Healthcare in California, 2023¹³

Top 5 Occupations	Total employment, 2023 Thousand	Pathway role? ¹⁵	Forecast sector employment change above CA average? ¹⁶
Registered Nurses	277.2k		✓
Medical Assistants	102.3k		✓
Medical Secretaries and Admin Assistants	100.6k	✓	✓
Nursing Assistants	95.7k		✓
Licensed Practical & Vocational Nurses	65.7k	✓	✓

REGIONAL OVERVIEW

Across the state’s 13 Jobs First Collaboratives, **all 13 identified healthcare workforce development as an important strategy in their regional plans.**¹⁷ To develop their healthcare workforces, regions are focused on:

- **Developing appropriate skill-based education**, training opportunities, and programs
- **Creating upskilling and upward mobility pathways** for local workers to move into higher-wage healthcare jobs
- **Building robust local workforce pipelines** between educational and healthcare institutions

Several regions, including the North State, Redwood, Sierra, and others, **identified expanding healthcare access to rural and underserved areas as a regional priority and are focused on:**

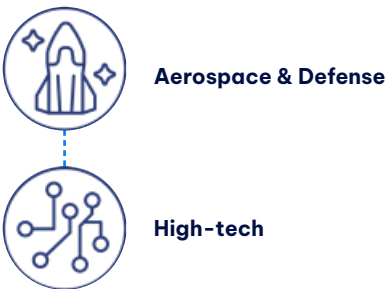
- **Investing in rural policy advocacy** to advance solutions responsive to rural regions
- **Developing a shared rural California advocacy campaign** to increase funding and access to rural healthcare and increase awareness of local health needs
- **Expanding mobile and telehealth services** to reach remote and underserved areas

California’s Strategic Sectors Build on Each Other to Create a Dynamic State Economy: California is home to multiple leading sector clusters and benefits from the innovation and growth potential that arises from the intersection of these sectors.



California’s **transportation infrastructure—and its ports in particular—plays a critical role enabling international and inter-state trade** of California’s agricultural products

- In 2023, the **San Pedro Port Complex ranked No. 9 in the world by container volume**, comprising 75% market share on the West Coast and 29% nationally¹
- The Port of Los Angeles is responsible for large-scale agricultural exports, with pet / animal feed and soybeans ranking in its top five exports¹
- The **Port of Oakland is also considered a critical port for agriculture distribution** given its central location, proximity to the Central Valley, and direct rail link to the Midwest²



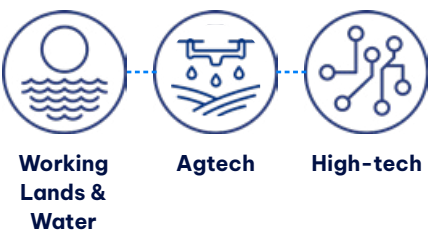
California’s **high-tech sector enables the development of cutting-edge aerospace and defense technologies and equipment**

- Advances in artificial intelligence and robotics have **created new aerospace and defense products**, such as advanced autonomous drones, advanced satellite communications, and cybersecurity solutions³
- **High-tech breakthroughs also support the space sector**, with software enhancing spacecraft autonomy, navigation, and communication systems⁴ and developments in hardware and semiconductors enabling more efficient, miniaturized components for satellites and spacecraft⁵



California’s **clean economy is tightly interwoven with its financial & professional services sector**, which provides essential funding, expertise, and advisory services for sustainable growth and innovation

- **VC and private equity firms fuel capital intensive clean tech and renewable energy projects** by directing investments into solar, wind, zero-emission vehicle, and carbon management projects⁶
- The **state’s banking sector also supports clean economy businesses with sustainable finance products**, such as green bonds and ESG (environmental, social, governance) advisory services, enabling companies to access capital aligned with eco-friendly goals⁷



An **advanced agtech ecosystem has emerged from the combined strengths of California’s working lands & water and high-tech sectors**

- High-tech innovations are transforming traditional agricultural practices through tools like **precision farming, drone-based crop monitoring, and Internet of Things (IoT)-enabled soil sensors**, which help farmers optimize water use, monitor soil health, and predict crop yields with greater accuracy⁸

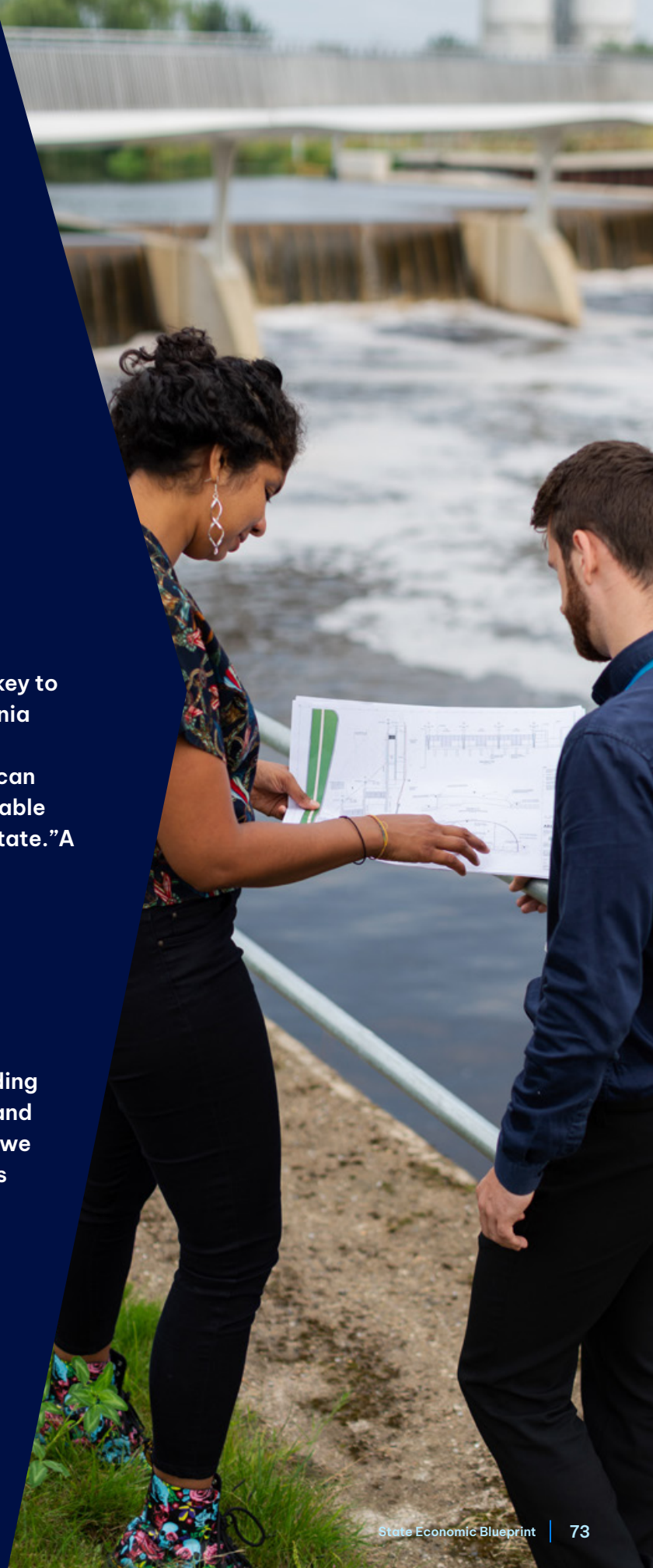
Bridging the Gap

“Whole-of-government collaboration is key to achieving the ambitious goals of California Jobs First. By working together and leveraging our collective resources, we can build a clean economy and drive sustainable and equitable development across the state.”A

- **Secretary Yana Garcia**
California Environmental
Protection Agency (CalEPA)

“Mobilizing state resources is crucial to helping regions effectively execute their strategies. By aligning our efforts, including essential infrastructure like broadband and transmission and distribution networks, we can make sure every community receives the backing they need to achieve their economic goals.”

- **President Alice Reynolds**
California Public Utilities
Commission (CPUC)



Bridging the Gap

In the following section, we outline strategies for the next 10 years intended to help regions execute their plans and make this Blueprint a reality.

To implement these strategies, we will modernize how we organize the Labor and Workforce Development (LWDA) and the Governor’s Office of Business and Economic Development (GO-Biz) to support each of the strategic sectors. This includes standing up the Office of Regional Economic Development Initiatives at GO-Biz to lead sector-building efforts in partnership with the Jobs First Council while supporting regions with advancing their regional plans and aligning the team at the California Workforce Development Board (CWDB) to support workforce development for California Jobs First sectors.



We will continue to help regions execute their strategic priorities, focusing our initial efforts in the next two years on the four pilot sectors and subsectors (agtech & farm equipment, life sciences, semiconductors & microelectronics, and space, defense, & satellites) to prove that this approach can drive impact before expanding to the remaining strategic sectors by 2035.

Support Sustainable & Equitable Growth Across Regions and Populations

STRATEGIC THEME:

Continue to Empower Regions to Advance their Strategic Priorities through the Regional Investment Initiative

California Jobs First and the Regional Investment Initiative are committed to building a new model of economic development that centers disadvantaged communities and empowers our regions to chart more sustainable and equitable economic futures. This commitment continues as we transition from the substantial planning work that took place over the last two years into the next phase: implementation. The Administration has funded the 13 Jobs First Collaboratives for an additional two years, helping bridge this transition as they each work to turn their strategies into realities. We will continue to partner closely with regions to help them execute these strategies:

1. **Onboard and train regional sector coordinators** to advance the strategies developed during the initial training phase. We have provided funding to each region to bring on four sector coordinators and align them to the sectors that, based on the substantial research and community engagement completed during the planning process, the region believes requires immediate action. Regions are beginning this hiring process now; to maximize the impact of these sector coordinators, we will invest in GO-Biz -led trainings to onboard them to this initiative, covering topics such as best practices for grant writing to secure federal and philanthropic grants and how to best collaborate across regions.

CONNECTING ACROSS REGIONS

The four regions that comprise the space triangle—the Central Coast, Inland SoCal, Kern County, and LA County—are strengthening their communities and the state by collaborating to expand aerospace and defense in California. Each have prioritized this sector and plan for their sector coordinators to work in partnership to attract investment and promote job creation.

2. **Help Collaboratives build out Activation Plans** for each sector they assign a coordinator through the delivery of targeted technical assistance. Activation Plans will allow each region to outline the critical next steps for implementing the strategies identified by the diverse members of their community. These plans will also provide a roadmap of opportunities for partnership and investment, helping potential partners identify ways to immediately support community-backed projects. While the specific Activation Plans will be held internally by each region, they are structured around common elements—strategy, tactics, and actionable steps—that outline the pathway to economic progress. Each region will complete their first Activation Plan by January 31st and all Plans for sectors supported by their regional sector coordinators by June 30th of 2025.

Strategy: The region's specific sector play and how the Collaborative will organize, resource, and track progress towards this sector play

Tactic: The steps the Collaborative and its partners will take over the next 12–18 months to achieve the region's sector strategy

Tasks: The actions that individuals or organizations are responsible for, and by when

3. **Help regions identify additional funding.** To implement their Regional Plan, Collaboratives will need to identify more than California Jobs First funding. We have developed a Playbook that helps align regional economic strategies with California’s broader economic goals to help support regions in demonstrating their investment readiness, and equips them with information on federal and state funding opportunities that can support their efforts. We will also host a series of webinars and in-person convenings that provide opportunities for regions to learn about how to secure funding for their projects and to engage with private and philanthropic investors that can serve as potential funders.



View the Playbook here: jobsfirst.ca.gov

4. **Allocate Regional Investment Initiative implementation dollars to help regions advance strategic sectors.** The state has allocated around \$125 million to help regions advance their projects with a primary emphasis on the sectors in the “Accelerate” category where there is near-term potential for growth in good-paying jobs—particularly within pilot sectors—and a secondary emphasis on sectors in the “Bet” categories where there is an opportunity to lay the groundwork for future growth. All 13 regions have identified priorities that align to sectors in either the “Accelerate” or “Bet” categories of the sector framework, making them eligible to apply for implementation funding.¹ The state will also dedicate \$15 million of funding towards the Tribal Investment Initiative to ensure California Native American Tribes are able to access funding to support economic development within their communities.

\$125M

Funding to Help Regions Advance Their Strategic Sectors

\$15M

Funding Towards the Tribal Investment Initiative

STRATEGIC THEME:

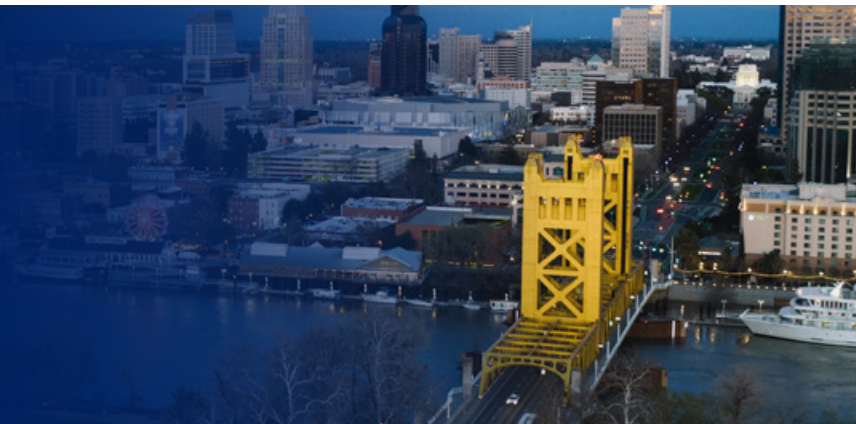
Mobilize Broader State Resources to Support Community-Vetted Regional Strategies

Through the engagement of the Jobs First Council and via dedicated investments into ecosystem coordination, we aim to direct funding and energy in a way that maximizes the impact of every dollar. We will specifically pursue the following actions:

1. **Coordinate sector working groups** to support sector-building activities for each of the four pilots, the “Bet” sectors, and the healthcare workforce. GO-Biz and LWDA will convene relevant state agencies and regional representatives to coordinate activities across regions and help implement aligned regional projects. For pilot sectors, these working groups will focus on identifying and resolving specific permitting, regulatory, or siting challenges that stand in the way of successful execution of strategic projects. These working groups will also develop coordinated workforce development and business outreach strategies to help foster sector activity around the state.

FUNDING IN THE FUTURE

In fall 2024, leaders from each California Jobs First region met in Sacramento to learn from and meet with investors from banks and venture funds, while sharing information about their regional priorities. Two additional Investor Exchanges are planned for spring 2025.



2. **Align state funding to regional strategies.** We will pilot a new model that identifies projects aligned to Jobs First regional strategies as “critical proposals” following a similar process used in the partnership between GO-Biz and the Employer Training Panel at LWDA.² Jobs First agencies will factor in certification as a “critical proposal” in the decision making criteria for their grants or other funding opportunities, helping guide state funding towards the most strategic uses. As a test case, LWDA may explore using this approach for its upcoming High Road Training Partnership grant program expected to open in early 2025.
3. **Strengthen coordination of investments across agencies and departments** to maximize impact for regions and projects. Looking at competitive funding opportunities (e.g., grants, loans, tax credits) housed under the Jobs First Council, there is more than \$1.7 billion available in fiscal year 2024-25 to support development of the state’s “Strengthen,” “Accelerate,” and “Bet” sectors across 59 different programs and more than \$11.2 billion supporting the state’s “Anchors” across another 111 programs. Several funding opportunities target the same sectors and subsectors; for example, four different agencies (i.e., California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), and California Department of Food and Agriculture (CDFA)) have 14 different grants in service of the state’s agricultural production subsector for programs spanning workforce training to upskill farmworkers, promotion of specific products, cleanup of agricultural properties, and conservation projects to support sustainable agriculture practices.³ Currently, each of these programs are deployed independently, making it more difficult to drive impact at scale. Going forward, GO-Biz will pilot efforts to convene multiple agencies and departments working to advance the state’s pilot and strategic sectors to identify opportunities to better coordinate their funding to amplify the impact of our limited dollars.
4. **Dedicate staff** at GO-Biz to help regions identify and access funding critical to their communities. As regions build out the ecosystem around select strategic sectors, we want to provide a resource that can help them navigate and access the opportunities that already exist through state, federal, or philanthropic funds.



5. **Explore options for creating state matching funds** that provide follow-on funding for regional and local governments who make investments into projects identified through the Jobs First process. These matching funds could be prioritized to support projects going after federal dollars that require local cost sharing, extending the impact of our dollars even further.

In fiscal year 2024-25, Jobs First agencies will distribute \$12.8 billion in funding that advances the state’s strategic sectors:³

\$1.7B

To Support “Strengthen,” “Accelerate,” and “Bet” Sector Development

\$11.1B

To Support “Anchor” Development

Invest in the Workforce for the Sectors of the Future

The new Master Plan for Career Education addresses the pain points that have made it challenging for Californians to learn—and get credit for—the skills they need for rewarding, good-paying jobs.^A

The Plan Has Identified Four Primary Recommendations:

1. Create state and regional coordinating bodies that make it easier to access information, funding, and support
2. Align TK-12, postsecondary, and workforce training opportunities so it is easier to build skills in a variety of settings
3. Create incentives and improve coordination so that more people can participate in hands-on learning
4. Make it easier to access public benefits so that learners can afford to participate in education and training, improving universal access⁴

The California Jobs First Blueprint and the Master Plan for Career Education will work hand-in-hand to advance our shared objectives of increasing access to good-paying jobs. The Master Plan will lead on several of the strategies outlined here that are critical to the success of California Jobs First.



To learn more about the Master Plan for Career Education, visit: careereducation.gov.ca.gov/master-plan-engage



STRATEGIC THEME:

Design Skill-Based Pathways into In-Demand Occupations for Strategic Sectors

In today's rapidly evolving economy, it is critical we equip our workforce with specialized skills and competencies that help workers access good-paying jobs and enable us to maintain our competitive edge in the sectors of the future. By developing targeted educational and workforce training programs that align with the specific needs of the strategic sectors, we will not only ensure that individuals are better prepared to enter high-demand fields but also support the sustainable development of our economy. We are already taking action to design skills-based pathways that address current labor market demands, anticipate future trends, and help connect California workers to jobs.



Going forward, we will:

1. **Take a data-driven approach to design**, aligning workforce training programs to the specific skills needed within strategic sectors. We have started to lay the groundwork for this work by developing a methodology that can be replicated and scaled:
 - Identify promising occupations within strategic sectors that are accessible to Californians without a Bachelor’s degree, that can serve as pathway roles that offer progression to higher-wage opportunities,⁵ and where there is projected employment growth (see “Analysis of Top Occupations Within the Manufacturing Sector in California” below as an example).

Analysis of Top Occupations within the Manufacturing Sector in California⁶

Top 15 Occupations	Total employment, 2023 Thousand	Median hourly wage and typical education required, 2023	Pathway role ⁵	Forecast change in sector employment, CAGR 2024-'29
Assemblers and Fabricators	83.1k	\$21.30		0.3%
Software Developers	43.4k	\$81.09		2.1%
Laborers and Material Movers	39.6k	\$19.49		0.2%
Electrical and Electromechanical Assemblers	37.5k	\$22.09		0.5%
Inspectors, Testers, Sorters, and Weighers	35.5k	\$23.32	✓	0.1%
Supervisors of Production Workers	33.4k	\$35.73		0.6%
Packaging and Filling Machine Operators	32.0k	\$18.65		0.8%
Sales Representatives (Wholesale and Manufacturing)	26.4k	\$34.90	✓	-0.1%
Shipping, Receiving, and Inventory Clerks	24.6k	\$20.40		-1.0%
General and Operations Managers	20.9k	\$58.72		0.5%
Industrial Production Managers	17.5k	\$61.97		0.3%
Packers and Packagers, Hand	17.2k	\$17.65		0.0%
Machinists	17.0k	\$28.24	✓	0.8%
Production, Planning, and Expediting Clerks	17.0k	\$28.93		0.1%
Industrial Engineers	16.8k	\$53.74		2.2%

Typical Education Level Required,⁷ 2023

High school or less

Bachelor's

Deep dive occupation to follow

Specialized Skill Demand and Deficits for Inspectors and Machinists⁶

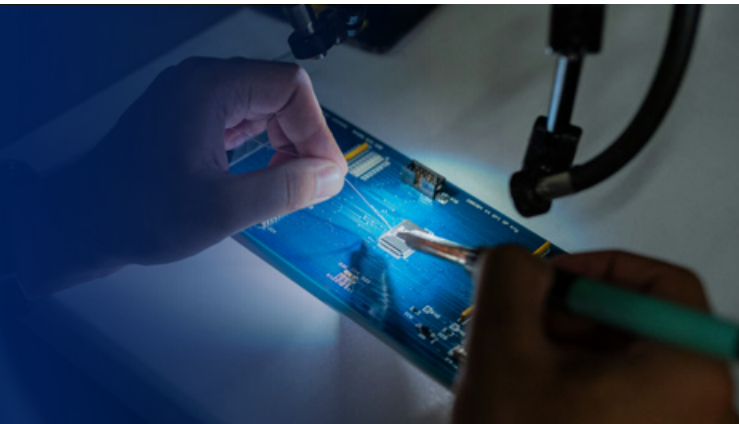
	Fastest growing specialized skill ⁹ companies are seeking to hire ⁹	Skill demand trends		Comparative skill deficits	
		Job postings requesting skill, 2023	Change in share of posts requesting skill, p.p. 2019-'23	Share of postings and online profiles listing skill	Share of postings vs. profiles listing skill p. p.
Inspectors, Testers, Sorters, and Weighers	Quality Management Systems	2.1k	1.0%	1.4%	14%
	Calipers	2.1k	2.2%	1.4%	13%
	Micrometer	1.9k	1.1%	1.4%	12%
	Quality Management	1.8k	1.0%	1.4%	11%
	Product Testing	1.2k	40.9%	1.4%	8%
Machinists	CNC Machining	0.5k	1.2%	1.4%	14%
	Machine Setup	0.5k	2.2%	1.4%	17%
	Metal Lathes	0.4k	0.6%	1.4%	13%
	Deburring	0.4k	1.3%	1.4%	14%
	Blueprint Reading	0.3k	1.4%	1.4%	8%

■ Online Profiles □ Job Postings, 2023

- Map in-demand skills for promising occupations in strategic sectors in close partnership with employers. Initial analyses reflect growth in demand for specialized skills within occupations (e.g., ability to use deburring tools for machinists reflected in the chart above) and potential supply gaps, as indicated by existing job postings and profiles (see comparative skill gaps, also in the chart above). However, we know that employer needs are also rapidly evolving and building effective workforce programming that addresses employer’s specific, forward-looking needs will require greater industry input. In partnership with GO-Biz, the California Workforce Development Board (CWDB) at LWDA will lead employer engagement efforts to understand the specific workforce needs for their sector.
- CWDB will align its existing staff to support this work, charging them with using labor market data and information from employers on promising occupations and required skills to identify potential gaps in our existing workforce portfolio. CWDB will then engage educational and workforce partners from around the state to develop new programming or to support the creation of curriculum aligned to these in-demand occupations and skills that can be shared broadly across institutions.

ADVANCING AI

Understanding the importance of AI to our future, we embarked on a first-of-its kind collaboration between the state and Nvidia in summer 2024. The partnership will help students in California’s community colleges prepare for careers that will drive their prosperity and our state’s competitiveness.¹⁰



2. **Encourage alignment of local and regional workforce systems** to strategic sectors. Ultimately, a significant portion of workforce program design and delivery will take place at the local level, often via California’s 45 local workforce development boards (WDBs)¹¹ which oversee the delivery of workforce services relevant to their residents and businesses.¹² We will equip partners with the information they need to align state and regional sector priorities, including community and population needs, by publishing detailed labor market data that extends to the regional level, creating a shared fact base that can inform local decision making. We will also partner with select WDBs to test what it would take to realign their training programs towards in-demand career pathways and skills identified as priorities within regional strategies, demonstrating how community-informed economic development and locally-led workforce development can work together to deliver tangible outcomes for Californians.
3. **Support employers in developing programming** aligned to the state’s strategic sectors. We will encourage LWDA’s Employer Training Panel (ETP) representing business, unions, and state government to designate strategic sectors, beginning with the four pilots, as priorities for funding, explore specific funding allocations for these sectors, and consider options for increasing financial support for the program. Because ETP provides funding directly to employers and allows them to determine their own training needs, this programming will reflect what employers believe is necessary to upskill their workforce.¹³

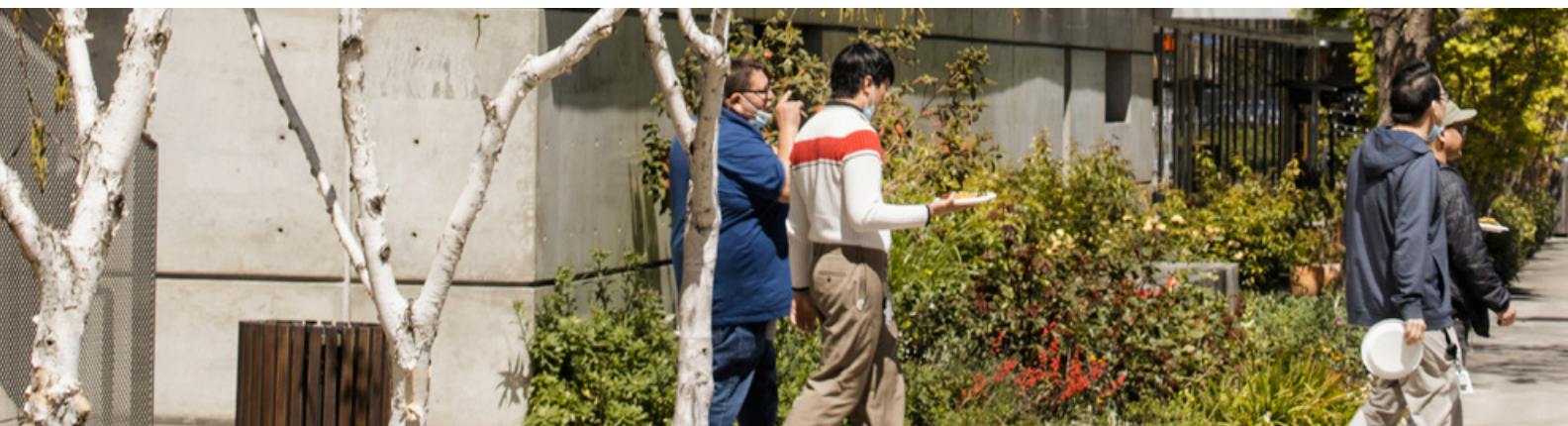
STRATEGIC THEME:

Lower Barriers to Accessing Job Opportunities in Partnership with the Master Plan for Career Education

Postsecondary educational programs can provide knowledge and skills that are critical for workplace success. However, many Californians find that the financial burden of education poses a significant barrier to pursuing post-secondary education, particularly as driven by the high cost of living. As a result, these credential requirements can stand in the way of connecting high-potential candidates with job opportunities.¹⁴

In response to some of these barriers, there has been a growing shift globally towards competency-based frameworks and hands-on learning opportunities. We are already taking the following steps to support this transition:

1. **Introduce new policies to encourage recognition of credit for prior learning** that acknowledge demonstrated competencies from other contexts. For many learners, these policies help ensure they successfully complete credentialing programs that can help them advance their careers: evidence has found that adult learners who receive credit for prior learning are almost twice as likely to complete a program of study than those who did not (49% vs 27%).¹⁵ LWDA and California Community Colleges Chancellor’s Office (CCCCO) are making sure that higher education institutions around the state consistently recognize the learning opportunities that happen outside of the classroom—whether through military service, workforce training, or other contexts.





STRATEGIC THEME:

Streamline Workforce Programs Across the State

California's workforce programs provide diverse offerings that cater to a variety of different populations and sectors. However, these programs can, at times, be complex or difficult for both workers and employers to manage. By streamlining these programs, the state can promote greater alignment in the quality and transparency of jobs and programs, while simplifying the process for users.

1. **Align workforce programs across state agencies.** Although LWDA is the primary lead for our efforts to promote good jobs for all, a significant number of state agencies independently operate workforce programs aligned to their missions. To improve outcomes across programs and make administrative tasks simpler, we will identify key standards for all workforce programs to adopt, and where it will create the most benefit for Californians, administer programs through LWDA and its departments. We will pilot this operating model with one or more agency partners in 2025.
2. **Harmonize reporting requirements** across workforce programs at all agencies. We are in process of developing the Cradle to Career Data System, a statewide longitudinal tool that will help students reach their goals and deliver information on education and workforce.²¹ Through this effort, we are working on streamlining data reporting and visualization for our broad array of programs to provide insights that can be used by education, workforce training providers, and public benefit systems to increase the impact of our programs.
2. **Foster the creation of new earn-and-learn apprenticeship partnerships**, with an emphasis on employers aligned to strategic sectors. Governor Newsom set an ambitious goal to expand our earn-and-learn apprenticeship system to serve 500,000 apprentices by 2029.¹⁶ The state is making significant progress: as of December 2024, we have served nearly 200,000 apprentices.¹⁷ We continue to make investments to help us achieve our goal, having dedicated over \$221 million in the fiscal year 2023-24¹⁸ budget with an additional \$188 million expected for fiscal year 2024-25.¹⁹ Going forward, we will emphasize developing employer partnerships in strategic sectors. We will explore additional opportunities to provide financial incentives to both employers (e.g., by mirroring tax incentive structures as used by the Inflation Reduction Act¹⁸) and wraparound services that can provide the support individuals need to successfully participate in earn-to-learn programs.²⁰

Create an Attractive Environment for Employers

STRATEGIC THEME:

Improve, Align, and Simplify the Incentive Toolkit

California offers a range of incentives to encourage employers to hire Californians and expand their footprint in the state, but we have an opportunity to expand and better coordinate these incentives over the next several years to craft a more cohesive and powerful mechanism to attract and retain employers in the state. Working in close partnership with employers to test and refine specific program updates, we will explore the following actions:

1. **Improve** our toolkit by exploring updates to existing incentives programs and the introduction of new ones to meet the goals of California Jobs First. The state has several large-scale incentive programs, including the California Competes Tax Credit (CalCompetes),²² the R&D tax credit,²³ the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) full sales and use tax exclusion program,²⁴ and the Employment Training Panel (ETP)²⁵ where there may be opportunities to make it easier for companies to access these incentives that help foster the creation of good-paying jobs in the state. We will examine these incentives, consider possible additions to the portfolio, such as establishing a flexible fund dedicated to supporting manufacturing across the state's strategic sectors, and develop recommendations for changes that will increase California's competitiveness as businesses decide where to locate their facilities. While broader changes are considered, we will look to reinvest in the CalCompetes grant to support businesses that want to locate or stay and grow in California.
2. Using existing administrative authority, **align existing programs**, such as CalCompetes and CAEATFA, with strategic sectors. This alignment could involve prioritizing strategic sectors in the evaluation criteria of competitive programs or allocating separate funding pools for these sectors. For example, the CAEATFA program previously favored lithium as an emerging strategic industry in its evaluation criteria.²⁶ CalCompetes, on the other hand, does not currently prioritize any given industry. Additionally, we can broaden the reach of these programs by specifically marketing incentives to employers in strategic sectors, thereby increasing their effectiveness as an attraction tool. Aligning these programs would allow concentration of resources toward our strategic sectors, which will in turn lead to more cohesive programming to advance our state goals.





STRATEGIC THEME:

Streamline and Expedite the Process for Siting Industrial Operations While Maintaining Our Strong Environmental Protections

Availability of suitable sites is crucial to employers' decision-making when selecting locations. A lack of available sites and a cumbersome process for securing those sites can quickly deter employers from selecting a state for their operations. Currently, our limited supply, minimal communication, and at times challenging process for siting can make it more difficult for employers to establish operations here. To enhance our siting process, we can implement strategies to improve across four key areas:

1. **Create a portfolio of available economic development sites** in partnership with local and regional economic development entities. In collaboration with economic development organizations and other stakeholders, we will support the development of an online site portfolio that allows prospective employers to view relevant information such as site size, land features, proximity to infrastructure, and site readiness. This resource would offer businesses visibility into potential site options and simplify the decision-making process for locating sites. GO-Biz, the California Department of Toxic Substances Control (DTSC), the California State Water Resources Control Board, and regional entities can also develop a common definition for "shovel-ready," and state and local governments can use both existing funding (e.g., brownfield restoration²⁹) and identify additional funding to develop traditional and mega-sites.³⁰
3. **Simplify** our incentive toolkit to improve navigation for businesses to better understand what to apply for and when. We plan to do this through the following:
 - **Simplify the requirements for specialized tax credit programs** such as the New Employment Credit and Homeless Hiring Tax Credit. These programs offer tax credits for hiring qualified employees, with the goal of promoting employment among target groups such as those in Designated Geographical Areas (DGA), veterans, and individuals who are currently or formerly unhoused.²⁷ Currently, the complexity of these programs makes them difficult for employers to take advantage of, resulting in underutilization and limited impact.²⁸ Easing the requirements could lead to greater program adoption and thereby drive greater impact for these populations.
 - **Align application cycles and award announcements** to a unified timeline to allow employers to plan ahead and make informed financial decisions based on all available incentives.
 - **Create an easy-to-navigate, customer-centric resource for our incentive programs**, providing employers with a single, consolidated point of reference for our full portfolio of support. This could include a single intake form that then provides line-of-sight into which incentives an employer is eligible.



2. Ensure timely connection to energy to address one of the most significant challenges facing employers considering siting in California in partnership with our local government partners. Currently, industrial customers in the state expect grid connection wait times of a year or more.³¹ In response, the CPUC established new statewide energization timelines in September 2024 (D. 24-09-020) to accelerate the process for new and upgraded electrical services. If the proposed targets are met, the timelines for new grid connections could be shortened by up to 49% compared to current operations.³² The CPUC is preparing for Phase 2 of the proceedings to explore additional strategies for advancing energization in the state. Solutions may range from creative financing options for employers to invest in short term energy infrastructure, to expanding data transparency around existing grid capacity across available sites. In parallel, GO-Biz is implementing AB 585 (Ch. 336, Stat. 2023), which requires it to assess challenges to deploying clean energy projects.³³ It will complete this work in coordination with the CPUC, California Energy Commission, and California Air Resources Board, and the Infrastructure Strike Team will incorporate the findings into its work.



3. **Build on momentum for improved coordination, shortened timelines, and tracking of permitting** advanced through the Infrastructure Strike Team's (IST) work. Siloed approaches to permitting and regulatory approvals can be lengthy.³⁴ Addressing this challenge requires building greater collaboration across and between local, state, and federal entities to facilitate fast and effective project delivery, for example, through concurrent versus sequential processes and reviews. We will explore building on the work of the IST and specific departments and explore scaling with a particular emphasis on pilot sectors. Additionally, we will work with the legislature to pursue new efforts to expand existing mechanisms to cover additional project types, such as California Environmental Quality Act (CEQA) judicial streamlining, which expedites judicial review of CEQA lawsuits to 270 days,³⁵ as well as the California Energy Commission's (CEC) Opt-In Certification, which streamlines permitting for renewable energy projects.³⁶ Agencies will also review opportunities for alignment with federal regulatory processes, such as the National Environmental Policy Act (NEPA), to further reduce redundancies between state and federal requirements.

Strengthen the California Innovation Economy

STRATEGIC THEME:

Partner with our Educational Systems to Foster and Expand Innovation

California's universities operate at the forefront of research and innovation, making discoveries that change California and the world, including the invention of the internet³⁷ and the genome editing technology known as CRISPR-Cas9 that is reshaping research in biology, agriculture and medicine.³⁸ Technology transfer plays a crucial role in transforming academic discoveries from ideas to realities. While several universities in the state (e.g., Stanford University, University of California – San Francisco) are national leaders in startup formation,³⁹ others would benefit from targeted support to enhance their commercialization efforts. Led by a newly appointed role at GO-Biz, we will pursue the following efforts to help translate research into market-ready products:

1. **Launch a pilot program to scale best-in class processes for commercialization** for public educational institutions across the state. This process may include establishing new support structures for tech transfer offices, as well as building mechanisms for encouraging partnerships with VCs to tap into industry resources.
2. **Support follow-on funding for the Innovation and Entrepreneurship Expansion program at the University of California (UC) and expand to both the California State University (CSU) system and the California Community Colleges.** We can build from the successes of our original program, which provided \$2.2 million to each of the 10 UC campuses to build out innovation infrastructure, incubators, and entrepreneurship programs and spurred \$270 million in follow-on funding for startups involved in its programming.⁴⁰

3. **Create a marketplace for patent transference** across our universities and community colleges. Doing so will allow us to draw upon the individual strengths of each university, allowing patents to be transferred to the institutions with the most experience commercializing products in specific fields.

STRATEGIC THEME:

Develop Support System to Drive Access to Federal Innovation Programs

While state dollars play an important role in accelerating innovation across California, they are often insufficient on their own. Federal innovation programs, from one-time funding opportunities (e.g., the Department of Energy's Regional Clean Hydrogen Hubs program⁴¹) to ongoing programs such as the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) program,⁴² provide additional resourcing to make large-scale bets on new but uncertain technologies or to help startups develop their technologies and move closer to commercialization.

To help entrepreneurs, regions, and research institutions access these programs, we can provide technical assistance and fund matching opportunities in the following ways:

1. **Designate GO-Biz to apply on behalf of the state for the Federal and State Technology (FAST) Partnership program**, which provides funding to organizations aiming to expand the pool of SBIR / STTR applicants, particularly in underrepresented groups, through training, outreach, and technical assistance on applications.⁴³ By submitting a centralized application, we can help direct this support to strategically advance state and regional priorities.

2. **Leverage GO-Biz’s Technical Assistance Program to provide “Phase 0” assistance** to help entrepreneurs and small businesses strengthen their initial SBIR / STTR proposals. Several states offer cash grants or provide proposal development services to support applicants through the process.⁴⁴
3. **Launch a matching fund for SBIR / STTR awardees** to amplify the impact of federal funding. Currently, more than half of states have an SBIR / STTR matching program, with the largest programs matching up to 50% of the federal program funds.⁴⁵
4. **Create pathways for enhancing the competitiveness of local applications to federal programs**, either through state matching funds or formal processes to designate letters of support. These measures could help broaden access to federal programs across California and increase funding opportunities for entrepreneurs statewide.

STRATEGIC THEME:

Support Advancements of Strategic Sectors in California’s Innovation Ecosystem

As a leader in innovation, we boast an expansive ecosystem of programs driving progress statewide. However, our efforts have historically lacked coordination across our vast array of partners and programs. With this Blueprint, we aim to add clarity around the state’s goals and align our innovation ecosystem to the state’s sectors and regional strategic sectors to better support California’s economic competitiveness and ensure the state’s resources are fully behind our economic priorities.

Example activities that will support this effort include:

- **Dedicate leadership within GO-Biz** to support the advancement of innovation and emerging technologies within the state. This role will directly coordinate with the Regional Economic Development Initiatives (REDI) team and the business development teams, including California Business Investment Services (CalBIS), to advance the “Bet” sectors and lead innovation efforts within GO-Biz.
- **Leverage the Accelerate California Inclusive Innovation Hubs**, which are a network of innovation hubs around the state that provide a range of services to entrepreneurs (e.g., guidance on how to raise funding, connections to industry mentors), to support Jobs First efforts.⁴⁶ The California Office of the Small Business Advocate (CalOSBA) will work to align these innovation hubs to the priorities identified through the regional planning process, while also fostering collaboration to encourage resource sharing and to minimize competition between hubs.

Additionally, we will work to coordinate across the broader innovation ecosystem, from the network of private accelerators and incubators to some of the programs run by our federal partners. Doing so will ensure we are working in partnership with each other to maximize the impact of our investments and to encourage the next moonshot to happen here in California.

STREAMLINED LETTERS OF SUPPORT

To support California-based applications to the federal CHIPS for America program, the state developed a process to designate letters of support. This successful process could be expanded to support additional federal grant program opportunities.

Early Signs of Success

“California Jobs First is building on early momentum, including NSF Engine Awards to BEAM Circular to advance the bioeconomy in the North San Joaquin Valley and to the Southern California Tribal Chairman’s Association to support the clean energy economy. These early successes highlight the initiative’s potential to accelerate economic development for diverse regions and communities around the state.”

- **Secretary Karen Ross**
California Department
of Food & Agriculture (CDFA)

Early Signs of Success

Certification of Regional Plans as Comprehensive Economic Development Strategies (CEDS)

As of January 2025, all 13 Regional Investment Initiative (RII) regional plans have been submitted to the U.S. Economic Development Administration (EDA) for certification as CEDS, which are strategic plans for regional economic development intended to foster strategic regional, and public-private collaboration to strengthen and diversify local economies. A key advantage of CEDS certification is eligibility for EDA funding.¹ Funding opportunities include programs such as Economic Adjustment Assistance (EAA), which offers a range of technical, planning, and implementation assistance such as grants for infrastructure and site development.² Obtaining certification as CEDS will open the door to significant funding and support mechanisms for regions, enabling them to better achieve the goals and priorities outlined in their plans. We believe this certification will also act as a positive signal to increase a region's competitiveness for federal programs and private sector investments.

Regional Investment Initiative Pilot Program Progress

In May 2023, the State invested \$39 million into eight ready-to-implement pilot projects chosen to demonstrate the effectiveness of a community-led approach to economic development.³ Each of these projects align with the goals and priorities of the regional collaboratives and provided regions with the opportunity to present innovative projects that support their communities.

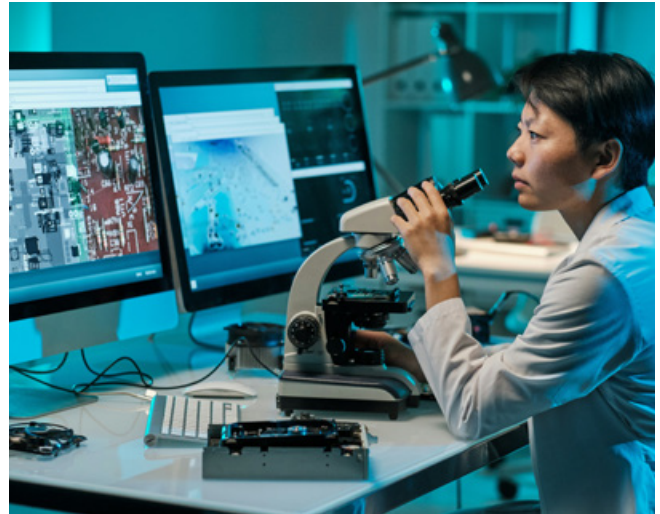
To date, a little over 10% of the awarded funds have been spent, with much of the projects' impact expected to unfold in the coming years.⁴ Example pilot projects include the following:⁵

- Pacific Asian Consortium in Employment (PACE) Green Loan Fund (PGLF):** \$5 million awarded to PACE to fund its Green Loan Fund, a revolving loan designed to support the development of green businesses in Los Angeles County. This project aims to advance the clean economy sector by providing economic opportunities to underserved communities through access to low-cost capital. This project is anticipated to create a minimum of 75 jobs for low-income individuals and support at least 20 small businesses, 15 of which are identified as underserved. As of April 2024, the Green Loan Fund has already approved its first green loan request for \$350,000, to be used to maintain six full-time positions, retain 20 full-time union jobs, and create four additional full-time positions.⁵ Our RII dollars may have encouraged other funders to act; PACE has since secured \$1 million additional funding from philanthropic sources.⁶



- \$3.2 million awarded to the Noyo Harbor District in Fort Bragg to support their Noyo Harbor Revitalization Project. The project has identified three goals: to install a new solar-powered ice making facility, to create and sustain an entrepreneurial marine-based business training program, and to stand up a 'Community Fish Market Incubator' to provide additional sales outlet for the fishing fleet.⁷ The installation of the new ice making facility is expected stabilize and retain over 300 deckhand / captain, processor and shipper jobs in the Harbor, and transition 100 jobs to higher wage positions.⁸
- **Latino Workers and Entrepreneurs Resiliency Pathway:** \$3.5 million awarded to Latino Workers and Entrepreneurs Resiliency Pathway, a collaboration between Ventures and El Pajaro Community Development Corporation (El Pajaro CDC). This project aims to provide financial education and access to capital to promote economic mobility for rural, Latino, and immigrant populations in the Central Coast, particularly in the clean economy and healthcare sectors. Potential programming includes workshops on credit building and financial services, as well as providing capital through loans and grants. Projects already implemented include adult school programs in partnership with the North Monterey County Unified School District, as well as workshops for youth in collaboration with the County Parks of Santa Cruz. In addition to state allocations, the project has secured \$75,000 in funding from philanthropic sources.⁹

To continue momentum from these early pilots, we plan to invest an additional \$125 million to support implementation of projects and project clusters that will catalyze sector-driven regional economic development and the creation of good-paying jobs around the state.A



Selection of Sunnyvale as Location for the CHIPS for America Design and Collaboration Facility

In November 2024, the Department of Commerce along with Natcast, an operator of the National Semiconductor Technology Center (NSTC), announced Sunnyvale, California as the anticipated location for the CHIPS for America Design and Collaboration Facility (DCF).¹⁰ Sunnyvale, located in the heart of Silicon Valley, was chosen based on its robust semiconductor ecosystem, with a range of established businesses, startups, leading research and academic institutions, investors, and stakeholders across the value chain.¹¹

The DCF is anticipated to significantly boost growth in California's semiconductor and microelectronics sector, with potential to drive more than \$1 billion in research funding and create more than 200 jobs over the next 10 years.¹¹ Specifically, DCF research will work to advance chip design, electronic design automation (EDA), chip and system architecture, and hardware security, and is expected to play a pivotal role ensuring the United States' technological competitiveness in the global semiconductor market.¹⁰ Moreover, the proposed workforce investments via the NSTC Workforce Center of Excellence will help build the talent pipeline to support the workforce needs of the growing semiconductor industry,¹¹ making California even more attractive for other companies in the sector.

CHIPS and Science Act Funding

From October - December 2024, the U.S. Department of Commerce awarded four California companies, Akash Systems, Applied Materials, Bosch, and Infinera, with non-binding terms for funding under the national CHIPS and Science Act (CHIPS) aimed at driving a new era of semiconductor manufacturing in the U.S. These four awards mark significant California funding wins under CHIPS, helping secure our position as a current and future leader in the U.S.'s semiconductor market. The details of the awards are outlined below:

- **Akash Systems:** \$18.2 million in proposed direct funding was awarded to Akash Systems, a manufacturer specialized in producing cooling systems to improve the thermal performance of semiconductors. This funding will be used to support the construction of a new manufacturing facility in West Oakland. The facility is anticipated to create 400 direct construction and manufacturing jobs in California's semiconductor & microelectronics subsector.¹² This deal builds on investments made through our CalCompetes program, which provided a tax credit to Akash Systems in 2023 to expand its Oakland facility and create 339 new jobs, laying the groundwork for this new funding.¹³
- **Applied Materials:** Up to \$100 million expected to be awarded to Applied Materials in Santa Clara to develop and scale a disruptive silicon-core substrate technology for next-generation advanced packaging and 3D heterogeneous integration for semiconductors.¹⁴
- **Bosch:** \$225 million in proposed direct funding was awarded to Bosch to support the company's planned \$1.9 billion transformation of its Roseville facility to

produce silicon carbide (SiC) power semiconductors.¹⁵ The funding layers on CalCompetes tax credits awarded in 2023,¹⁶ collectively helping Bosch expand their largest SiC device factory globally and significantly increase their production capacity. This project is expected to create up to 1,000 construction jobs and 700 manufacturing, engineering, and R&D jobs in California.¹⁵

- **Infinera:** \$93 million in proposed direct funding was awarded to Infinera, an optical compound semiconductor manufacturer, to support two new projects, including the construction of a new fab in San Jose, California. These projects are anticipated to increase Infinera's manufacturing capacity by a factor of 10, and to create 500 new manufacturing jobs and 1,200 new construction jobs. Given this demand, Infinera is expected to build out the semiconductor talent pipeline in the region through programs such as the Semiconductor and Nanotechnology Apprenticeship Pioneers (SNAP) program, one of the first Registered Apprenticeships in California.¹⁷ Infinera has also previously been awarded a CalCompetes grant to expand and modernize its facilities in 2023, creating 235 new jobs.¹⁸

These investments build a strong foundation for California to secure future CHIPS funding and to continue to propel the semiconductor & microelectronics subsector in the state.A





Infrastructure Investment and Jobs Act (IIJA) Projects

In November 2021, Congress passed the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Deal. IIJA allocated an estimated \$1.2 trillion in total funding over ten years towards transportation and core infrastructure like broadband and water.¹⁹ To date, California projects have received significant funding from IIJA-funded programs, with select examples highlighted below:

- Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES):** California was awarded up to \$1.2 billion from the U.S. Department of Energy as one of seven Regional Clean Hydrogen Hubs aimed at supporting the production and use of clean hydrogen. ARCHES is a statewide public-private partnership between GO-Biz, the University of California, Lawrence Berkeley National Laboratory, state agencies, elected leaders, organized labor, and non-profit organizations and is expected to create over 220,000 new green jobs and result in nearly \$3 billion in economic value annually beginning in 2030.²⁰
- Carbon Capture Demonstrations Projects:** The Sutter Decarbonization Project will receive up to \$270 million in funding to demonstrate and deploy a commercial-scale carbon capture system at the Sutter Energy Center in Yuba City. The project will be the first in the world to deploy an air-cooling system at a carbon capture facility, which will eliminate the use of cooling water and significantly minimize freshwater usage.²¹

- Charging and Fueling Infrastructure Awards:** California projects were awarded \$318 million to invest in publicly accessible electric vehicle charging and alternative fueling infrastructure to support the adoption and use of ZEVs in the state.²²
- Energy Improvements in Rural or Remote Areas:** West Biofuels received an award for up to \$30 million to deploy three community-scale forest biomass-to-energy power plants in Burney, Mammoth Lakes, and Mariposa that will provide a reliable, renewable energy source while also producing 15 good paying jobs at each facility.²³
- Grid Resilience and Innovation Partnerships (GRIP):** The California Harnessing Advanced Reliable Grid Enhancing Technologies for Transmission (CHARGE-2T) project led by a public-private partnership between California Energy Commission (CEC), California Independent System Operator (CAISO), Pacific Gas and Electric Company (PG&E), and Southern California Edison (SCE) was awarded more than \$600 million to increase California’s system capacity for integrating more renewable energy onto the grid.²⁴
- Industrial Demonstrations Program:**

 - Cement and Concrete:** The Lebec Net Zero Project led by the National Cement Company of California received up to \$500 million to support their goal of producing carbon-neutral cement through three strategies: using locally-sourced biomass for energy production; producing limestone calcined clay cement using a less carbon intensive alternative; and capturing and sequestering the plant’s remaining carbon dioxide emissions. The plant upgrades are expected to generate 20-25 permanent jobs.²⁵





- **Heat:** The Hybrid Electric Glass Furnace Project led by Gallo Glass Company plans to install a demonstration hybrid electric furnace to reduce natural gas use by up to 70%, increase recycled content in its glass bottle production process, and demonstrate cradle-to-gate reductions in carbon intensity while generating new union jobs. Gallo Glass will also work to expand and align its existing training programs to skills needed for these new technologies in partnership with local educational and workforce organizations.²⁶
- **Nationally Significant Multimodal Freight & Highway Projects:** The Port of Humboldt received a \$426.7 million grant to support the construction and operation of offshore wind turbines that will contribute to California's goal of at least 25 gigawatts of power generated by offshore wind by 2024.²⁷

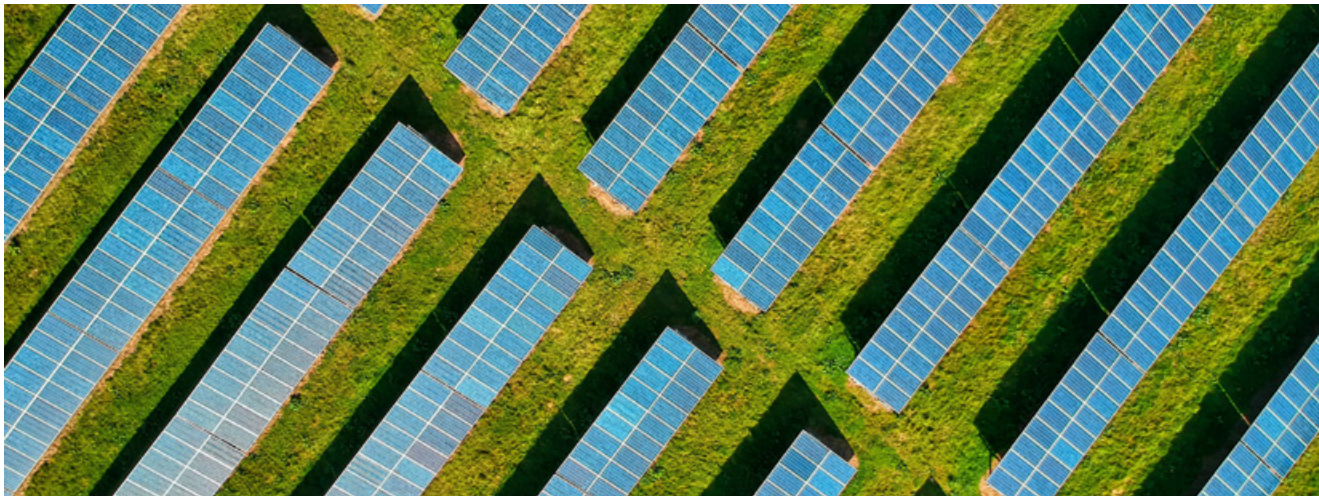
These federal dollars will play an important role in building out our "Anchor" infrastructure in communities across the state while seeding projects in emerging sectors such as hydrogen and the bioeconomy.

Inflation Reduction Act (IRA) Climate-Related Investments

In August 2022, the United States passed the Inflation Reduction Act (IRA), directing nearly \$400 billion towards climate-related efforts with the goal of substantially lowering the nation's carbon emissions.

This funding has been used to invest in clean energy and clean transportation, as well as strengthening the country's manufacturing base.²⁸ A range of California projects have been supported by IRA-funded programs, such as:

- **Clean Ports Program:** Seven California ports received over \$1 billion in funding through the U.S. Environmental Protection Agency (EPA) Clean Ports Program to deploy zero-emission port infrastructure and climate and air quality planning projects,²⁹ the most of any state.³⁰
- **Climate Pollution Reduction Grants:** The South Coast Air Quality Management District received nearly \$500 million to decarbonize transportation and goods movement in Southern California by providing incentives for ZEV infrastructure, increasing zero-emission freight vehicles, and replacing or converting cargo handling equipment and diesel freight switcher locomotives.³¹
- **Fueling Aviation's Sustainable Transition:** California projects aimed at accelerating the production and use of sustainable aviation fuels (SAF) and the development of low-emission aviation technologies received more than \$120 million in grants, 40% of the program's total funding.³²
- **National Clean Infrastructure Fund:** The California Economic and Infrastructure Development Bank (IBank) and the State Treasurer's Office together will serve as the California Green Bank, seeded with \$450 million from the National Clean Infrastructure Fund as a subrecipient in the Coalition for Green Capital's \$5 billion award. The California Green Bank will prioritize investments into zero-emission transportation, net-zero energy buildings, and distributed generation & storage.³³



- Qualifying Advanced Energy Project Credit:** Two California companies have received tax credits through the program. EnergySource Minerals received \$260.7 million to support a new manufacturing facility in Imperial County that will produce battery quality lithium hydroxide monohydrate from geothermal brines. Twelve Benefit Corporation has received another \$28.5 million to develop a manufacturing facility for its Opus CO₂ electrolyzers used to produce power-to-liquid sustainable aviation fuel and other value-added chemicals.³⁴
- Tribal Energy Financing Program:** The Viejas Microgrid Project received a commitment for an up to \$72.8 million partial loan guarantee to finance the development of a solar-plus long-duration energy storage microgrid on the Tribal lands of the Viejas Band of the Kumeyaay Indians near Alpine, California and support Tribal energy sovereignty. The project was previously provided with a \$31 million grant by the California Energy Commission in 2022.³⁵

IRA funding will play a critical role in helping California meet its goal of carbon neutrality by 2045 while simultaneously advancing the clean economy sector and helping green other carbon-intensive sectors, such as transport and logistics.

Projects Supported by Executive Order 14017 on America's Supply Chains

President Biden signed Executive Order 14017 in February 2021 aimed at strengthening the resilience of America's supply chains to ensure national economic prosperity and security.³⁶ The operationalization of this executive order has included investments into California companies that will help catalyze the critical minerals sector:

- 5E Advanced Materials:** The Export-Import Bank of the United States' Make More in America Initiative has granted up to \$285 million in debt financing to 5E Advanced Materials, a boron and lithium company in southern California. Funds will be used to support commercial scale development and construction of the company's Boron Americas Complex, which has been designated as Critical Infrastructure by the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency.³⁷
- MP Materials:** The Department of Defense has awarded a \$35 million contract to MP Materials to design and build a facility to process heavy rare earth elements at its Mountain Pass production site, establishing the first processing and separation facility of its kind to support both defense and commercial applications.³⁸



National Science Foundation Engine Awards

In May 2023, the National Science Foundation (NSF) announced the inaugural Regional Innovation Engines Development Awards to fund regional projects in developing their innovation ecosystems. The program awarded 44 teams with up to \$1 million for two years, with the potential to secure up to \$160 million in future funding.³⁹ These Development Awards are a part of the broader NSF Engines program—the largest investment into place-based research and development in the nation’s history—aimed at creating new jobs and spurring innovation in breakthrough technologies.⁴⁰ California received two of these development awards, outlined below:

- University of California, Merced – Circular Bioeconomy Innovation Collaborative (CBIO Collaborative):** The CBIO Collaborative—led by UC Merced, BEAM Circular, and Lawrence Berkeley National Laboratory—aims at advancing the circular bioeconomy in North San Joaquin Valley (NSJV). The collaborative aims at drawing on the strengths of NSJV’s food and agriculture sectors, manufacturing capabilities, and its proximity to biotechnology hubs to develop a bioeconomy innovation ecosystem. By building regional specialization in the bioeconomy sector, the CBIO Collaborative can strengthen the regional economy of a historically underserved area,

improve the sustainability of agricultural supply chains, and create accessible, good-paying jobs. The development award funds will be used to address key areas, including R&D into knowledge gaps in biomanufacturing processes, supporting the translation of discoveries into scalable, market ready solutions, and developing workforce programs to build pathways to accessible, high-quality jobs in the field.⁴¹

- Southern California Tribal Chairman’s Association (SCTCA):** SCTCA’s Tribal Energy Innovation Accelerator (TEIA) aims at developing a dynamic innovation ecosystem for clean energy technologies and solutions in tribal communities in Southern California. The TEIA covers 25 SCTCA member tribes and is well positioned for transformative investments in clean energy. The development award funds will be used for a range of services, including TEIA development and partnerships, resources for clean energy R&D, pilot projects and manufacturing facilities, and workforce development and job training services.⁴²

These development awards can play an instrumental role in advancing regional innovation across California and pave the way for future funding and development.



Looking Forward

“California Jobs First is committed to providing all of Californians, including our veterans, with increased access to economic opportunities. We are working to ensure California’s veteran community stays the most connected, protected, and respected in the nation.”

- **Secretary Lindsey Sin**
California Department
of Veterans Affairs (CalVet)

Looking Forward

California Jobs First represents a transformative approach to economic development that is deeply rooted in community engagement and regional specificity.

By empowering local communities to define their economic futures and providing them with resources and support to implement these visions, we are setting a new standard for inclusive and sustainable growth. The next phase of this journey will involve implementing the strategies outlined in the Blueprint.

Over the next two years, we will bring a coordinated approach to developing our pilot sectors that successfully creates, attracts, and increases access to good-paying jobs, proving out a model that can be replicated for the rest of California’s strategic sectors through 2035.

Doing so will require sustained commitment and engagement from state agencies, Jobs First Collaboratives, private and social sector partners, and our California communities themselves.

As we move forward, we are confident that the strategies and partnerships each of California’s 13 regions have built with us will enable the state to navigate the challenges ahead and seize the opportunities in front of us, once again ensuring that the future happens in California first.



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