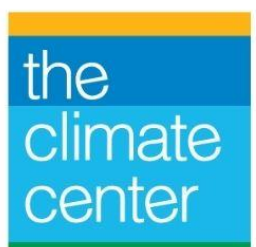




# **JOBS AND CLIMATE ACTION IN CALIFORNIA:** HISTORY, RESOURCES, AND OPPORTUNITIES

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AUGUST 2021



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Buddy Burch, The Climate Center  
August 2021

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## Introduction

The catastrophic impacts of global climate change are creating economic, social, and environmental devastation. The world urgently needs rapid, scalable solutions. However, some communities and workers whose livelihood depends on fossil fuel fear that certain solutions to climate change do not address their needs and that these solutions will leave them without an income or in worse living conditions than they currently experience.

In 2019, The Climate Center launched Climate-Safe California, a five-year campaign based on the most current science to spur the State of California, by no later than 2022, to commit to accelerating existing state timelines to achieve 80% below 1990 levels of GHG emissions and net-negative emissions by 2030. This entails enacting by 2025 a suite of policies to realize these goals:

- Accelerate the phase-out of fossil fuel development, production, and use
- Increase carbon sequestration
- Invest in community resilience
- Generate the funds needed for climate action at speed and scale

Climate-Safe California must integrate Just Transition into the campaign for at least three reasons. First, Just Transition fulfills a fundamental principle of Climate-Safe California, to ensure that workers, their families, and their communities dependent on fossil fuel industries are not left behind. Second, the job creation impacts of transitioning away from fossil fuels are considerable. According to a study by the Political Economy Research Institute at University of Massachusetts at Amherst, “...public and private investments in California to achieve the state’s mandated emissions and climate stabilization goals are capable of generating about 725,000 jobs through \$80 billion in public and private investments in 2020 – 2021, and larger numbers thereafter to 2030.” Third, organized labor and environmental justice communities are powerful political forces whose alignment is key to achieving Climate-Safe California.

This report uses the term “Just Transition” to mean that workers, their families, and communities must not suffer harm as industries and economies move away from fossil-fuel based activities. It is worth noting that although the term is widely used, “Just Transition” is not universally favored because some distrust what others may mean by the term. Nonetheless, this report uses the term in the absence of a better one.

Just Transition leaders envision the creation of a social safety net to support workers and communities in the transition from one obsolete, destructive system into a sustainable future. They hold that stakeholders must not pay a tax with their livelihood for a system they did not create.<sup>1</sup> Leaders promote a complementary relationship of “jobs *and* environment” rather than frame the issue as “jobs versus environment.”

This paper includes a review of six key documents on Just Transition, a historical overview of how labor and environmental justice communities use the term differently, and recommendations for incorporating Just Transition into the Climate-Safe California campaign.

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<sup>1</sup> Labor Network for Sustainability

## Objectives of the Report

- Describe Just Transition key concepts and resources
- Describe strategies and identify lessons and guiding principles for moving toward a Just Transition, including examples of past successes and failures – in California and globally
- Identify organizations and individuals at the forefront of Just Transition work
- Find potential gaps and opportunities for achieving a Just Transition
- Describe how Climate-Safe California can advance a Just Transition

Audiences for this report are The Climate Center, its allies, and supporters of Climate-Safe California.

## Key Documents on Just Transition

Several writings on the topic of Just Transition illuminate its history and detail the important work of its organizers and leaders. This paper highlights and summarizes the following documents, which are central to current conversations among leaders in the field. Familiarity with these works is important for engaging in meaningful discussions on the topic.

### UC Berkeley Labor Center: Putting California on the High Road: A Jobs and Climate Action Plan for 2030 (2020)

California's politicians have a history of political leadership on climate change. In 2017, Assembly Bill 398 required that the California Workforce Development Board study strategies for transitioning the state's labor force away from the fossil fuel sector. Key concerns of the study included job creation, job training and technical education, connecting disadvantaged communities with workforce opportunities, and funding sources. The report offers the "high-road" approach to aligning climate and workforce action plans.<sup>2</sup> The high-road approach combines demand-side levers for climate agencies, supply-side strategies for education and training institutions, and a planned Just Transition to improve job quality, meet skill needs, keep workers employed, and diversify local economies to avoid the legacy of fossil fuel dependency. Conversely, a low-road approach does not incorporate labor standards, expansive job training programs, or offer long-term planning for workers. The low-road approach leads the California economy deeper into the hole of fossil fuel dependency.

The demand-side strategies to the High Road Approach refer to policies that increase the availability of high-quality jobs. A variety of existing strategies and programs, such as community workforce agreements, project labor agreements, and community benefit agreements can be used to set standards and expectations for employers, workers, and communities, which saves time and money over the

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<sup>2</sup> See Appendix C

lifespan of project-based work. Other tools like wage standards and skill certification requirements increase employer confidence in the workforce and allow them to create more jobs with the expectation of hiring high quality workers.

Supply-side strategies create the highly trained and qualified workforce required to fill jobs in the growing clean energy sector. Workers can expect a higher chance of job placement and career advancement because of supply-side strategies. If workforce development policies are successful, this should include workers who have historically been excluded from seeking high quality jobs. The report details the following best practices for workforce development:

- Responds to actual labor market demand by partnering closely with industry
- Supports the state's high-road employers and pays attention to job quality
- Emphasizes broad skill training for an occupation rather than just for one technology
- Leverages the state's existing workforce education and training infrastructure rather than creating boutique programs unconnected to workers' education and career trajectories
- Assesses success of training based on outcomes, including job placement rates and improvements in wages and benefits improvements, higher worker productivity, and ongoing commitments by employers

Finally, Just Transition strategies ask policymakers to offer extra attention to the workers and communities hit hardest by transitions away from industries like fossil fuels. Through long-term and short-term support, communities and workers are protected, supported, and compensated, regardless of how immediately they are able to find employment. On a regional level, economic development planning and assistance in diversifying local economies offers critical opportunities for countering economic downturn in the absence of fossil fuel industry revenue streams.

### Labor Network for Sustainability: *Just Transition, Just What is It?* (2016)

The Labor Network for Sustainability (LNS), in partnership with organizing networks, grassroots organizers, labor organizations, and environmental organizations, conducted 17 interviews in 2015 and 2016 to define the term "Just Transition." As the term grows in popularity, the discrepancies in definitions across different groups can create tensions, disagreements, and misunderstanding about the steps forward. In addition to clarifying how various stakeholders use Just Transition language, the authors of this LNS report propose policies and case studies for moving toward success. The first provides three-year and four-year protections for workers who lose their jobs in the form of unemployment insurance, health care, and a pension, as well as job training and living expenses. Tax incentives could encourage companies to hire workers transitioning away from the fossil fuel industry. The right to organize and join unions is a critical part of this transition. Expanding other sectors such as energy efficiency, renewable/clean energy, local food production, health care, sustainable forestry and wood products, tourism, and environmental remediation, will offer opportunities for transitioning

workers. The authors argue that training is an insufficient protection without jobs to train for. The federal government would need to take the lead in implementing such an expansive program, and laborers and union participants should be deeply engaged in formulating the program.

The report also acknowledges that structural change must be part of a long-term Just Transition. The recommended strategies for beginning structural change focus on maintaining and generating wealth within communities. For example, Community Choice Energy programs also offer an opportunity to devolve power over energy generation, storage, and use down to the local level, such that communities can choose and benefit financially from their energy systems.

### **Labor Network for Sustainability (LNS): Workers and Communities in Transition: Report of the Just Transition Listening Project (2021)**

LNS updated its Just Transition Listening Project with a report based on more than 100 interviews with workers, including Indigenous and community leaders affected by workplace closings, climate change, and major shifts in local and regional economies. The report underscores the need to include workers and their communities in the transition to a green economy. In fact, the workers and their communities are critical in the process of developing a just transition to ensure it works fairly. Three overall concepts frame the report's recommendations: Go Big, Go Wide, and Go Far, meaning a just transition must be comprehensive, holistic, and future-oriented.

### **Department of Economics and Political Economy Research Institute (PERI) University of Massachusetts-Amherst: *A Program for Economic Recovery and Clean Energy Transition in California* (2021)**

Nineteen labor unions endorsed this report upon its release in June 2021. It details a plan for California Climate Jobs, and forecasts the jobs that would result if California implemented the climate policies that are already in state law. The level of needed clean energy infrastructure will require large-scale investments to first, dramatically raise energy efficiency standards in the state and, second, to equally dramatically expand the supply of clean renewable energy supplies. The authors assert that this climate stabilization program for California can serve as a major new engine of job creation and economic well-being throughout the state, both in the short- and longer run. They estimate that the clean energy investment for this project will be about \$76 billion per year on average between 2021 – 2030, and that this level of investment will generate roughly 418,000 jobs throughout the state's economy.

### **Movement Generation: From Tanks and Banks to Cooperation and Caring (2016)**

The authors assert that the global economy is an extractive system.<sup>3</sup> Humans are living beyond the capacity of the planet. People and governments must transition towards a regenerative economy that enables all people to enjoy health, well-being, sustenance, and equality. While the emphasis of Just Transition tends to be future-oriented to address the global climate crisis, a Just Transition is also an urgent call for economic and social reorganization by those left behind by racial capitalism, white supremacy, the cisheteropatriarchy<sup>4</sup>, settler colonialism, and other systems of oppression. Many parts of our economy consume resources without replenishing their source. Even conventional farming ruins soil rather than sustaining it for future crops, by using pesticides and by growing non-native, non-regenerative crops. Finally, transporting food consumes fossil fuels, since corporations often grow it far from the people who eat it.

### Climate Equity Network: A Roadmap to an Equitable Low-Carbon Future: Four Pillars for a Just Transition (2019)

This report frames Just Transition as an opportunity to close the “climate gap.”<sup>5</sup> The authors state that the cost of a nationwide climate stabilization would be \$50 billion annually, with \$500 million invested in a labor transition. For a transition to be just, according to the authors, the policy framework must acknowledge and apologize for past wrongs done to environmental justice communities, engage in a decision-making framework led by the community, and ensure that future policies reduce inequity. One section of the report highlights four policy recommendations to achieve that goal:

- *Strong governmental support:* In the short term, policies should supply socially and financially stabilizing support to populations in areas where carbon-emitting plants close. Long-term strategies should involve government support for new industries (and diversifying sources of revenue and jobs) and creating socially or economically practical uses for former fossil fuel extraction and production sites.
- *Dedicated funding streams:* To achieve the programs offered through strong governmental support, short-term and long-term funding of those programs must be guaranteed.
- *Strong and diverse coalitions:* Before facilities close, workers and communities must organize a plan for transition that addresses all stakeholders. While there are obvious direct impacts on workers, changes around carbon-emitting sites and industries will affect entire communities. In addition to engaging community members in bringing new revenue streams to their community,

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<sup>3</sup> See Appendix A

<sup>4</sup> A system that reinforces the domination of man over woman, the existence of a gender binary, and preferential treatment of man/woman couples as social norms. Anyone whose identities fall outside of these norms will likely face social and physical barriers to their participation in society.

<sup>5</sup> See Glossary



the coalition should engage in a discussion of repairing past harm that the industry created in the community and offer restoration.

- *Economic diversification:* There is an immediate need to reimagine local economies that do not rely on the fossil fuel industry. A goal of such strategies should be to avoid reliance on a single industry and diversify the income sources, revenue streams, and opportunities within a community to create resilience.

## Greg Karras Prepared on behalf of Communities for a Better Environment: Decommissioning California Refineries: Climate and Health Paths in an Oil State (2020)

Chapter 6 of this report offers a “Blueprint for Just Transitions from Oil.” First, the author asserts that a Just Transition is possible in part because oil refining and extracting jobs account for a small percentage of jobs in the state. California imports most of the oil it consumes, suggesting that in-state extraction and refining is not economically critical. Next, the author reiterates the necessity of a Just Transition. Finally, the report offers the following list of recommendations and ideal actors for a Just Transition from fossil fuels:

### *Support Just Transitions*

1. Extend the social safety net so that all those whose jobs or communities are now dependent on oil are guaranteed support for job transition, health care, college tuition, housing, and retirement security. State officials could take this action.
2. Set up Just Transition Bonds to remedy site-specific legacy impacts, including pollution and deferred development of sustainable economic alternatives. Secure a Bond from each refiner up front to ensure against abandonment upon closure. City, county, and state officials could take this action.
3. Quantify local taxes and fees paid by oil companies and develop sustainable alternatives to replace these revenues locally as refineries decommission. City and county officials could take this action.

### *Decommission refining capacity*

4. Acknowledge that quickly starting a managed decommissioning of refining capacity is an essential step towards achieving state climate goals with proven technology. The California Air Resources Board could take this action.
5. Set facility-specific refinery combustion emission limits on pollutant mass and the amount of oil that can be refined monthly, which decrease at rates needed to ensure that state climate and health protection goals are met (e.g., –5% and –6% per year starting in 2020 and 2022, respectively, assuming action number 9 below). City, county, regional, and state officials could take this action.
6. Ensure that California’s transportation fuel-switching effort outpaces its need to decommission refining capacity through aggressive measures to ensure clean mobility for all people. State officials could take this action.

### *Change the rules*

7. Challenge the environmental injustice of permitting harmful refinery emissions solely to export fuels that Californians do not use or need. City, county, regional, and state officials can take this action.
8. Revise state law to rescind the exemption from carbon-cutting emission limits on refineries and the carbon trading-only policy for oil refining enacted by Assembly Bill 398 in 2017. State legislators and Governor Newsom could take this action.
9. Reject new construction projects that would expand or prolong the operable duration of oil refining capacity. Governor Newsom could take this “moratorium” action by executive order. Alternatively, communities can continue to push public officials to reject these projects.

David Ciplet & Jill Lindsey Harrison, *Environmental Politics: “Transition tensions: Mapping conflicts in movements for a just and sustainable transition”* (2020)

This article directly addresses gaps in academic literature on the topic of Just Transition. In addition, it provides insights on the challenges and tensions that exist between environmentalist and environmental justice communities. As Ciplet and Harrison state:

“First, the ‘sustainability-inclusivity’ tension involves conflicts between rapid and bold policy action in time-sensitive contexts and inclusive governance processes. Second, the ‘sustainability-recognition’ tension involves conflicts between sustainability performance and recognition of diverse value systems and rights. Third, the ‘sustainability-equity’ tension involves conflicts between achieving sustainability performance and equitable distribution of benefits and burdens.”

While the authors do not offer specific solutions to these three tensions, naming them allows stakeholders to engage in meaningful examination of their own biases and perspectives.

## The Labor History of Just Transition

The history of Just Transition, including support for labor during pivotal movements of change, has roots in the post-WWII GI Bill and earlier programs to support returning soldiers. At the end of the Cold War, the debate about transitioning away from a perpetual arms race and toward a peacetime economy prompted the first use of the language by labor unions. The term “Just Transition” originated in the 1970s labor movement. Following the Civil Rights Act of 1964, the entry of women and people of color into unions led to a brief window in which unions became very robust. The civil rights struggle of the 1960s informed the politics of new union participants, who were critical of power structures in the workplace. Especially key were organizers coming from the Oil, Chemical and Atomic Workers Union (OCAW) who wanted to improve both environmental and social conditions. However, by the 1990s, the “jobs versus environment” rhetoric had taken hold, strongly backed by the neoconservative right and studies published by large corporations. To this day, workers have concerns about Just Transition being a front for environmentalists to take away their high-paying jobs. As clarified by the LNS

in their report “Just Transition, Just What is It?”, the labor definition of Just Transition typically refers to “a path or plan for those workers displaced by transformations in the economy.”

One of the greatest concerns among labor organizations is that a just transition will only replace fossil fuel industry jobs with “green” jobs, rather than instituting worker wage and retirement protection and retraining programs in addition to transitioning industries.<sup>6</sup> While green jobs do employ many people in California, the quality of jobs and wages are not competitive with those in the fossil fuel industry and are unionized at lower rates.<sup>7</sup> According to the State Building and Construction Trades Council of California 2020 report *Would Green Jobs Offset Those Lost from a Phase-Out of Oil and Gas Production?*, green jobs employ approximately 500 thousand Californians. Meanwhile the oil and gas industry in California maintains 55 thousand jobs and creates \$20 billion in economic output. For folks in the growing green jobs industry, average annual pay has yet to reach the level available to those in the oil and gas industry.<sup>8</sup> Additional concerns include the fact that highly specialized training in the oil and gas industry does not directly translate into green energy industries, and green manufacturing is unlikely to stimulate job growth in-state due to the amount of renewable energy technologies and infrastructure components already produced outside of California.

## Environmental Justice Approach to Just Transition

While the labor definition of a Just Transition tends to focus more on the short-term provision of green jobs and improved labor conditions, frontline and fenceline communities have adopted the language of Just Transition to describe a longer-term process of dismantling systems of oppression and rebuilding just, regenerative systems. In 1997, the Just Transition Alliance engaged in the coordination of environmental justice communities and labor organizations to preserve their health, environment, income, and economic assets. While activists, communities of color, and low-income communities had connected the destruction of the environment to their struggle, the more contemporary climate justice movement appeared in the early 2010s, according to the Labor Network for Sustainability. The climate justice movement elevates the concerns of environmental justice communities to ensure that sustainability goals do not overlook the pursuit of racial, economic, and gender justice.

Frontline and fenceline communities live and work near polluting, carbon-emitting sources. Residents suffer from health consequences, disinvestment due to lower land values, and the degradation of the natural environment around them. Growing inequalities also affect the distribution of greenhouse gas emissions.

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<sup>6</sup> The Department of Labor Bureau of Labor Statistics defined green jobs as (1) jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources; or (2) jobs in which workers' duties involve reducing the environmental footprint of their establishment's production processes or using fewer natural resources.

<sup>7</sup> Cha and Skinner, 2017

<sup>8</sup> See Appendix F for comparison of average annual pay

According to OXFAM, “the richest 10 percent are responsible for almost 50 percent of lifestyle consumption emissions.”<sup>9</sup>

Mainstream climate change mitigation strategies can create unintended consequences in environmental justice communities.<sup>10</sup> Authors Ciplet and Harrison propose in their article “Transition tensions: Mapping conflicts in movements for a just and sustainable transition” that a Just Transition would offer not only bold and timely sustainability action, but also:

- decision-making that is representative of impacted constituents
- strong recognition of diverse rights and values of marginalized peoples
- equitable distribution of burdens and harms

As they point out, green jobs alone do not solve the systemic issues that are central to the “growth at all costs” mindset that has been a key cause of global climate change. Solutions that create justice, better labor conditions, and deep inclusion in decision-making may produce the best results for greenhouse gas emissions reductions. The Indigenous Environmental Network proposes specific actions that result in justice and start to reorient societal value systems in their guide “A People’s Orientation to a Regenerative Economy.” These policies are critical to establishing a Just Transition because they place health and wellness over profit and production. They remove the conditions that trap people in a fear mindset and allow them to embrace changes to systems and transitions in job markets without worrying about losing their quality of life. Additionally, they guarantee that communities have what they need to be resilient socially, economically, and environmentally without being impeded by systemic racism and other legacies of oppression that have resulted in unequal access to resources. Within these 14 general categories, they include more than 80 specific policy ideas to work toward a regenerative economy. Some examples include justice for Black communities, Indigenous and Tribal sovereignty, justice for immigrant communities, a homes guarantee, healthcare for all, and more.

## Just Transition Examples

This section offers examples of priority areas and policy approaches that might be viable for implementation in California.

### Germany

Germany’s national plan to phase out coal by 2038 provides an example of strong governmental action for a Just Transition. Up until 2020, coal supplied 40 percent of Germany’s electricity.<sup>11</sup> The national government set up a coal exit commission that offered recommendations for specific pathways to phase out hard coal and lignite. According to their Just Transition Fund, the commission included “... a diverse group of experts representing

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<sup>9</sup> Just Transitions, 32

<sup>10</sup> See Appendix E

<sup>11</sup> Löhle, 2020

labor unions, utilities, industry associations, coal companies, renewable energy industry, policy makers, environmental NGOs and activists, climate scientists, and energy experts. Some of the stakeholders specifically represent the coal regions and their particular interests.” The parliament adopted the commission’s recommendations at the national policy level in July 2020.

The process for closing plants and reducing energy production by coal and lignite will involve an expected investment of over 40 billion Euros by the national government. The concept of “innovation regions,” which was born out of the monthly commission meetings, selected regions that rely heavily on coal production and showed the various hurdles to a diversified or updated local economy. New technological investment, road infrastructure, and renewables, for example, could be the target of government investment to move one region towards a sustainable social, economic, and environmental future.

The coal exit law that parliament passed in July 2020 sets detailed timetables by sector, region, and operator. With these specific timelines, they were able to establish concrete expectations for mine operators to phase out and close facilities. A special pool of compensation is available on top of the stated investment for older workers to transition to early retirement. The German government preemptively addressed the impact of this phase-out on the European Union Emissions Trading System by cancelling the number of permits that would have been available based on the emissions reductions from the plan. This will reduce the allowances that Germany has for trading in the larger market. In addition to these stipulations, the government is offering financial incentives per kilowatt hour for bringing new renewable power online at existing coal power plants. The policy ensures that government investment will not disappear if a mine or power plant closes ahead of schedule and builds in assessment periods to decide if the policy could be fully executed ahead of the 2038 schedule (Wettengel).

## **New York State**

The passage of the Climate and Communities Protection Act (CCPA) in New York State provides a clear example of grassroots organizing translating into climate action that is just and sustainable. The political will behind this suite of laws originated in a network of organizations called New York Renews. Following the 2014 Climate March, a group of organizations recognized the swell of political will to pass legislation on emissions reductions, jobs and economic activity, and equity.

They traveled throughout New York to learn what policies mattered most to individuals, communities, and local climate organizations. These listening sessions informed their legislative platform and organizing principles. After securing funding through Tides Advocacy, the coalition grew over four years, reaching a peak of 150 member organizations. Though the CCPA arrived in and passed in the State Assembly in 2016, it took until 2018 for the State Senate to consider the bill. The coalition tapped into national political support for the Green New Deal and a sea change in the state’s Senate majority leadership (certain member organizations engaged in electoral politics separately from the coalition) to get the bill through the Legislature and signed by Governor Cuomo in July of 2019.

The CCPA lays out policy frameworks, such as green building codes, and funding guidelines to achieve 50 percent of electricity from clean renewables by 2030, 40 percent of clean energy funds invested in disadvantaged communities, and 100 percent of human-caused climate pollution eliminated by 2050 throughout the state of New York. Congressional representatives from the state, such as Rep. Alexandria Ocasio-Cortez and Sen. Kirsten Gillibrand, praised the policy and the value of its replication nationwide.

## Colorado

As mentioned in the report *Roadmap to an Equitable Future*, governments must be at the forefront of securing a Just Transition through displays of support and security for their constituents. One positive example of this is the State of Colorado’s Office of Just Transition. According to the Office’s website:

Colorado created the Office of Just Transition in 2019 to assist workers and communities that will be adversely affected by the loss of jobs and revenues due to the closure of coal mines and coal-fired power plants. Its purpose is to help workers continue to thrive by transitioning to good new jobs, and to help communities continue to thrive by expanding and attracting diverse businesses, creating jobs, and replacing lost revenues. As market forces, along with health and environmental imperatives, move our nation away from the use of coal, 2,000 Colorado workers stand to lose well-paying jobs. And the communities where they work and live stand to lose significant percentages of their job base and property tax revenues. In 2019, the Colorado General Assembly passed, and Governor Jared Polis signed House Bill 19-1314, which made a “moral commitment” to a “Just Transition” for these workers and communities. In addition to the Office of Just Transition, the bill created the Just Transition Advisory Committee to help develop a plan for how the state will fulfill this commitment.

The Office of Just Transition has created a clear line of communication among communities, workers, and government officials. The discussions and preparations conducted by this office will put Colorado on track to successfully support its residents and businesses. According to the office website, they will be submitting the final draft of the Just Transition Plan to the Governor and Colorado General Assembly by the end of December 2020.

## Diablo Canyon California

The closure of California’s Diablo Canyon power plant demonstrates the value of proactive transitions made with the cooperation of both workers and the surrounding communities that will be impacted. The coalition that organized to prepare for the phase-out of Diablo Canyon included PG&E, the Natural Resources Defense Council, Environment California, the Alliance for Nuclear Responsibility, the pertinent unions—e.g., IBEW Local 1245—and the Coalition of California Utility Employees. The team created a very robust plan, which the California Public Utilities Commission only accepted in part. Rather than accept this outcome, the coalition passed SB1090 through the state legislature, which requires the CPUC to meet the demands organized by the diverse group of stakeholders. The full plan for phase-out “... includes replacing Diablo Canyon with a greenhouse-gas-free portfolio to substitute for the Diablo Canyon power; an employee retention, retraining, and compensation plan; and mitigation to the local community for the loss of tax revenue and other economic costs of closure.”<sup>12</sup>

## Status of Just Transition in California

The transition away from fossil fuels is already underway in California, based on key indicators. Only 29,818 Californians are employed in the oil and gas industry, and the in-state oil production has plummeted since 1990,

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<sup>12</sup> Cha et. al.

while the number of idle wells has jumped.<sup>13</sup> But will any leadership emerge to manage this transition? Strong leadership and a cohesive vision is critical and deserves financial and political support to bring together current efforts into a successful movement to ensure and accelerate a Just Transition in California.

Efforts to manage a Just Transition in California are emerging. The State legislature passed AB639 in 2020, which requires the state to prepare to mitigate the impacts of automation on employment at California's ports. Assembly Bill 398 began the process of studying the transition of California's labor force away from greenhouse gas emitting industries, and it resulted in the UC Berkeley Labor Center report referenced earlier in this paper. Los Angeles County formed a Just Transition task force to create a strategy for oil well remediation, a public health and safety concern for Angelenos as well as a critical phase in moving away from fossil fuels. Targeted and local efforts to facilitate a just transition can also be seen in examples such as the Diablo Canyon closure.

Additional efforts at the State level have included budget provisions and long-term planning. Executive order N-79-20, signed by Governor Gavin Newsom in February 2020, required the Office of Planning and Research (OPR) to establish a Just Transition Roadmap as soon as July 2021. This plan will ensure a collaborative approach in establishing the framework for moving into new industries and diversifying the economy.

To gather public input for the Roadmap, OPR held three similar workshops at the end of May 2021. Highlights from OPR's presentation at the workshops:

- Although the State of California will not necessarily be the decisionmaker on what rises in the economy, the State can set guardrails within the climate crisis policy context.
- The Roadmap will be a set of principles to help in planning and showing the relationships among the many facets of creating a just transition.
- OPR envisions the Roadmap as a living, online interactive resource amenable to ongoing public participation.
- The first version available for comment will be introduced sometime in July with an implementation phase to follow.
- OPR expects the State to budget \$750 million total for Just Transition to include about \$700 million for implementation and about \$30 million for regional planning.

California's June 2021 budget agreement between the Legislature and the Governor (not signed as of June 30, 2021) included the following:

- \$600M for Community Economic Resilience, which builds on the Administration's Just Transition Roadmap and provides funding for economic transition, high-road job industries, quality job creation, and workforce strategies in sectors/regions most impacted by the transition to carbon neutrality
- \$75M to the Workforce Development Board for High Training Partnerships
- \$25M to the Workforce Development Board for High Road Training Partnerships with the California Community Colleges

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<sup>13</sup> The Climate Center, "Phasing Out Fossil Fuels: A Just Transition in the Oil & Gas Drilling and Refining Sectors" Webinar, February 23, 2021

In addition, the Legislature and the Governor agreed to allocate \$201 million in the 2021-22 budget “for toxic site cleanup and investigations of high-priority contaminated properties in impacted communities across the state, which will be prioritized based on public health risk criteria.”<sup>14</sup> This effort will potentially create jobs that will require training and will bring benefits to communities that have suffered from environmental degradation.

In the legislature, Senators Scott Weiner and Monique Limón introduced SB 467 in February 2021 to ban fracking in California and “also takes up an unfinished argument from last year, calling for a 2500-foot buffer between existing, active oil wells and homes, schools, and health care facilities.”<sup>15</sup> The bill died in the Senate’s Community Affairs Committee on April 30. Nonetheless, organizers and advocates in California remain focused on the cleanup and ultimately the elimination of oil and gas wells, a focus with great implications for fossil fuel workers, families, and their communities.

The main challenge facing the state is the lack of a unified strategy and the absence of a champion at higher levels of political influence. The Governor’s Office has added to the confusion regarding California’s priorities and direction. Despite calls to ban drilling on- and off-shore, Governor Newsom issued permits for oil wells as recently as 2020. Union leaders and communities need clear signals and information from policymakers about what to expect to support their constituents, and the political, labor, climate, and environmental justice groups have yet to share in a conversation to align their values, objectives, and priorities.

## Discussion

Just Transition presents a spectrum of options. On one end is a holistic approach involving large-scale systems change and replacement of racial capitalism and neoliberalism with a regenerative economy. In a regenerative economy, peoples’ happiness and health and the health of ecosystems around them are held as the highest priorities rather than economic productivity. People receive healthcare, housing, food security, effective public transportation, and whatever else they need to live without it being conditional on their labor and the extraction of finite resources. A just transition at this magnitude requires massive levels of government spending, including support from the federal government because individual states and municipalities lack the capacity to implement them on their own.

On the other end of the spectrum is a more focused approach on a Just Transition for labor, their families, and communities. This approach entails more than substituting a green job for a fossil-fuel based job and must include other support such as improved worker rights and protections.

The success of Climate-Safe California depends on its incorporation of a Just Transition. The Climate Center should start with the focused approach to Just Transition while aiming for the holistic approach and a regenerative economy.

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<sup>14</sup> Office of Governor Gavin Newsom, 2021

<sup>15</sup> Curry, 2021



Organized labor asserts that it must be the leader of creating a Just Transition pathway.<sup>16</sup> But its leadership is currently missing. This poses a thorny challenge for The Climate Center and its allies: How to support the leadership of organized labor without usurping their leadership. Regardless of how problematic it is, this challenge must be met.

## Recommendations for The Climate Center, Allies, and Supporters of Climate-Safe California

1. Because the success of the Climate-Safe California campaign depends on a Just Transition, give this endeavor top priority within the organization's work.
2. The Climate Center must find ways to support the leadership of organized labor in creating a Just Transition pathway. Consider establishing a working group on Just Transition that, to whatever extent possible, includes organized labor. The purpose of the working group would be to identify, assess, prioritize, and advocate for the enactment of policies and other actions that accelerate a just transition in California. Such policies might include establishment of a California State Just Transition Office following the State of Colorado's example, and investments by the State in retraining programs.
3. Start with the focused approach to Just Transition while aiming for the holistic approach and a regenerative economy. (See discussion above.)

## Glossary

*Climate Gap:* The disproportionate burden that marginalized communities face from the impacts of climate change.

*Community Benefits Agreement:* A contract between developers/companies/other entities from outside of a community with the local community stating that the entity will provide certain amenities or mitigations to that community.

*Community Workforce Agreement:* Pre-hire contracts between an employer and a local community stating that local labor will be hired by an industry or project.

*Energy Insecurity:* The inability to pay for energy bills without making a significant trade-off such as not paying for other basic needs such as food, medical care, transportation, or rent.

*Environmental Justice Communities:* Communities made up predominantly by people of color or people living on low incomes; underrepresented in the policy-setting or decision-making process; subject to disproportionate impact from one or more environmental hazards; and likely to experience disparate implementation of environmental regulations and socioeconomic investments. (CPUC)

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<sup>16</sup> Labor Network for Sustainability (LNS): Workers and Communities in Transition: Report of the Just Transition Listening Project (2021)

*Extractive Economy:* An economy based on the removal of wealth from communities through the depletion and degradation of natural resources, the exploitation of human labor (a particularly precious natural resource) and the accumulation of wealth by interests outside the community (i.e., big banks, big oil, and big box stores). The purpose of the Extractive Economy is the accumulation of wealth and power in the hands of a few enforced through the exploitative control of land, labor, and capital. This process results in the erosion of biological and cultural diversity.

*Fenceline Communities:* Communities found within three miles of 12,000 high-risk chemical facilities in America and facing the daily threat of chemical leaks, spills, and explosions that imperil their families' health, safety, and lives. Fenceline communities are disproportionately Black and Latinx. (Coming Clean)

*Frontline Communities:* Those communities that experience "first and worst" the consequences of climate change. These are communities of color and low-income areas whose neighborhoods often lack basic infrastructure to support them and who will be increasingly vulnerable as our climate deteriorates. These include Native communities experiencing resource exploitation and laborers living and working in polluted, toxic environments. (Holland)

*Green Jobs:* Jobs in businesses that produce goods or supply services that help the environment or conserve natural resources, or jobs in which workers' duties involve making their establishment's production processes more environmentally friendly or use fewer natural resources. (Bureau of Labor Statistics)

*Project Labor Agreement:* Pre-hire contracts between an employer and labor unions stating that unionized labor will be hired by an industry for a specific project.

*Regenerative Economy:* An economy based on reflective, responsive, reciprocal relationships of interdependence between human communities and the living world upon which we depend. The purpose of a Regenerative Economy must be social and ecological well-being.

*Sacrifice Zones:* Communities that have been permanently impaired by environmental damage or economic disinvestment.

*Workforce Development:* Developing the skills and abilities of a pool of workers in order to benefit their careers and the productivity of their current or future employer.

## Sources

- Bay Area Council Economic Institute. 2020. *Linking the Environment and the Economy: An Economic Impact Analysis of California Climate Resilience Bond Proposals*.  
[http://www.bayareaeconomy.org/report/linking the environment and the economy/](http://www.bayareaeconomy.org/report/linking%20the%20environment%20and%20the%20economy/)
- Brooks, Chris, and Lane Windham. 2018. "Labor and the Long Seventies." Jacobin magazine.  
<https://www.jacobinmag.com/2018/02/lane-windham-interview-knocking-on-labors-door-unions>
- Cha, Mijin, J Manuel Pastor, Madeline Wander, James Sadd, and Rachel Morello-Frosch. 2019. *A Roadmap To an Equitable Future: Four Pillars for a Just Transition*. Prepared for the Climate Equity Network.  
[https://dornsife.usc.edu/assets/sites/242/docs/Just Transition Final Report 2019.pdf](https://dornsife.usc.edu/assets/sites/242/docs/Just%20Transition%20Final%20Report%202019.pdf)
- Cha, Mijin, and Lara Skinner. 2017. *Reversing Inequality, Combatting Climate Change*. The Worker Institute at Cornell University IRL School.  
<https://archive.ilr.cornell.edu/sites/default/files/InequalityClimateChangeReport.pdf>
- Ciplet, David and Jill Lindsey Harrison. 2020. "Transition tensions: Mapping conflicts in movements for a just and sustainable transition." *Environmental Politics* 29:3, 435-456.
- The Climate Center. 2021. "Phasing Out Fossil Fuels: A Just Transition in the Oil & Gas Drilling and Refining Sectors". Climate Safe California Webinar Series. <https://theclimatcenter.org/climate-safe-california-phase-out-fossil-fuels/>
- Colorado Department of Labor and Employment. 2020. "Just Transition." <https://cdle.colorado.gov/the-office-of-just-transition>
- Coming Clean. 2020. *Life at the Fence Line*. Accessed: <https://comingcleaninc.org/fencelines>
- Curry, Melanie. 2021. "CA Bill Would Ban New Fracking Permits and Phase Out the Practice". *StreetsBlog Cal*. <https://cal.streetsblog.org/2021/02/17/ca-bill-would-ban-new-fracking-permits-and-phase-out-the-practice/>
- Department of Labor, Bureau of Labor Statistics. 2010. Notice of comments received and final definition of green jobs. 75 Federal Register No. 182, pages 57506 and 5711
- Greenlining Institute, and Energy Efficiency for All. 2019. *Equitable Building Electrification: A Framework for Powering Resilient Communities*. [https://greenlining.org/wp-content/uploads/2019/10/Greenlining EquitableElectrification Report 2019 WEB.pdf](https://greenlining.org/wp-content/uploads/2019/10/Greenlining%20EquitableElectrification%20Report%202019%20WEB.pdf)
- Holland, Carolyn. 2017. "Centering front line communities." Ecotrust Blog. Accessed: <https://ecotrust.org/centering-frontline-communities/#:~:text=Frontline%20communities%20are%20those%20that,vulnerable%20as%20our%20climate%20deteriorates>.

- Indigenous Environmental Network. 2020. *A People's Orientation to a Regenerative Economy*.  
<https://www.ienearth.org/wp-content/uploads/2020/06/ProtectRepairInvesBuildTransformDRAFT02.pdf>
- Indigenous Environmental Network. 2019. *Indigenous Principles of Just Transition*.  
<https://www.ienearth.org/justtransition/>
- Institute for Applied Economics, and Los Angeles County Economic Development Corporation. 2019. *Oil & Gas In California: The Industry, Its Economic Contribution and User Industries at Risk*.  
<https://laedc.org/2019/08/27/oil-and-gas-industry-in-california-2019-report/>
- International Labour Organization (ILO). 2015. *Guidelines for a Just Transition towards Environmentally Sustainable Economies and Societies for All*. October: 5–9.  
[https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/---emp\\_ent/documents/publication/wcms\\_432859.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf)
- Just Transition Alliance. 2020. *False Solutions to Climate Change*. <http://jtalliance.org/wp-content/uploads/2020/02/False-Solutions.pdf>
- Karras, Greg. 2020. *Decommissioning California Refineries: Climate and Health Paths in an Oil State*. Prepared on behalf of Communities for a Better Environment.  
[https://drive.google.com/file/d/1I1nx2LLhW\\_-kzGdZIp8mLFGOJxRflmn-/view](https://drive.google.com/file/d/1I1nx2LLhW_-kzGdZIp8mLFGOJxRflmn-/view)
- Labor Network for Sustainability and Strategic Practice. 2016. *"Just Transition, Just What Is It?"*  
<https://www.labor4sustainability.org/uncategorized/just-transition-just-what-is-it/#:~:text=In%20labor%20terms%2C%20%E2%80%9Cjust%20transition,from%20jobs%20in%20coal%20plants.>
- Labor Network for Sustainability. *"Workers and Communities in Transition: Report of the Just Transition Listening Project,"* 2021. <https://www.labor4sustainability.org/jt1p-2021/jt1p-report/>
- Löhle, Nora. 2020. "Germany's Coal Commission – An Institutional Approach to Phase-out of Coal?" Just Transition Fund. <https://www.justtransitionfund.org/blog/germanys-coal-commission-an-institutional-approach-to-phase-out-of-coal>
- McCauley, Darren, and Raphael Heffron. 2018. "Just Transition: Integrating Climate, Energy and Environmental Justice." *Energy Policy* 119 (December 2017): 1–7.  
<https://doi.org/10.1016/j.enpol.2018.04.014>.
- Morena, Edouard, Dimitris Stevis, Rebecca Shelton, Hadrian Mertins-Kirkwood, Vivian Price, Diego Azzi, Nicole Helmerich, et al. 2018. *Mapping Just Transition(s) to a Low-Carbon World*. Just Transitions Research Collaborative.  
[http://www.unrisd.org/80256B3C005BCCF9/httpNetITFramePDF?ReadForm&parentunid=9B3F4F10301092C7C12583530035C2A5&parentdoctype=book&netitpath=80256B3C005BCCF9/\(httpAuxPages\)/9B3F4F10301092C7C12583530035C2A5/\\$file/Report---JTRC-2018.pdf](http://www.unrisd.org/80256B3C005BCCF9/httpNetITFramePDF?ReadForm&parentunid=9B3F4F10301092C7C12583530035C2A5&parentdoctype=book&netitpath=80256B3C005BCCF9/(httpAuxPages)/9B3F4F10301092C7C12583530035C2A5/$file/Report---JTRC-2018.pdf)

- Movement Generation. 2016. *From Tanks and Banks to Cooperation and Caring: A Strategic Framework for a Just Transition*. [https://movementgeneration.org/wp-content/uploads/2016/11/IT\\_booklet\\_English\\_SPREADs\\_web.pdf](https://movementgeneration.org/wp-content/uploads/2016/11/IT_booklet_English_SPREADs_web.pdf)
- Office of Governor Gavin Newsom. 2021. "Governor Gavin Newsom Proposes 2021-22 State Budget." <https://www.gov.ca.gov/2021/01/08/governor-newsom-proposes-2021-22-state-budget/>
- Pollin, Robert. 2020. *A Fair and Sustainable Economic Recovery Program for California*. Political Economy Research Institute (PERI) at the University of Massachusetts-Amherst [https://www.peri.umass.edu/images/CA-EconRecProgram-6-12-20\\_Final.pdf](https://www.peri.umass.edu/images/CA-EconRecProgram-6-12-20_Final.pdf)
- Pollin, Robert et al. 2021. *A Program for Economic Recovery and Clean Energy Transition in California*. Department of Economics and Political Economy Research Institute (PERI) at the University of Massachusetts-Amherst: (2021) <https://static1.squarespace.com/static/60b43a18079fdd42c6d01286/t/60c18578a87f6318ff2a5a1a/1623295356282/Pollin+et+al--CA+Economic+Recovery--Clean+Energy+Transition---6-8-21.pdf>
- Regenerate California. 2020. *Protect Working Families Now!* <https://regeneratecalifornia.org/wp-content/uploads/2020/01/Gas-Coalition-Factsheet.pdf>
- State Building and Construction Trades Council of California. 2020. *Would Green Jobs Offset Those Lost from a Phase-Out of Oil and Gas Production?* <https://cabuildingtrades.org/would-green-jobs-offset-those-lost-from-a-phase-out-of-oil-and-gas-production/>
- U.S. Bureau of Labor Statistics. *Measuring Green Jobs*. <https://www.bls.gov/green/#definition>
- Wettengel, Julian. 2020. "Spelling out the coal exit – Germany's phase-out plan". *Clean Energy Wire*. <https://www.cleanenergywire.org/factsheets/spelling-out-coal-phase-out-germanys-exit-law-draft>

## Acknowledgments

This paper would not have been possible without the aid of individuals who agreed to interviews and who supplied advice along the way. We owe a special thanks to Mark Kyle, Jason Pfeifle, Veronica Wilson, Anthony Rogers Wright, Vivian Price, and Woody Hastings for sharing their knowledge and perspectives on a Just Transition. We also acknowledge and appreciate the Labor Network for Sustainability and the work they do to create a holistic understanding of a Just Transition.

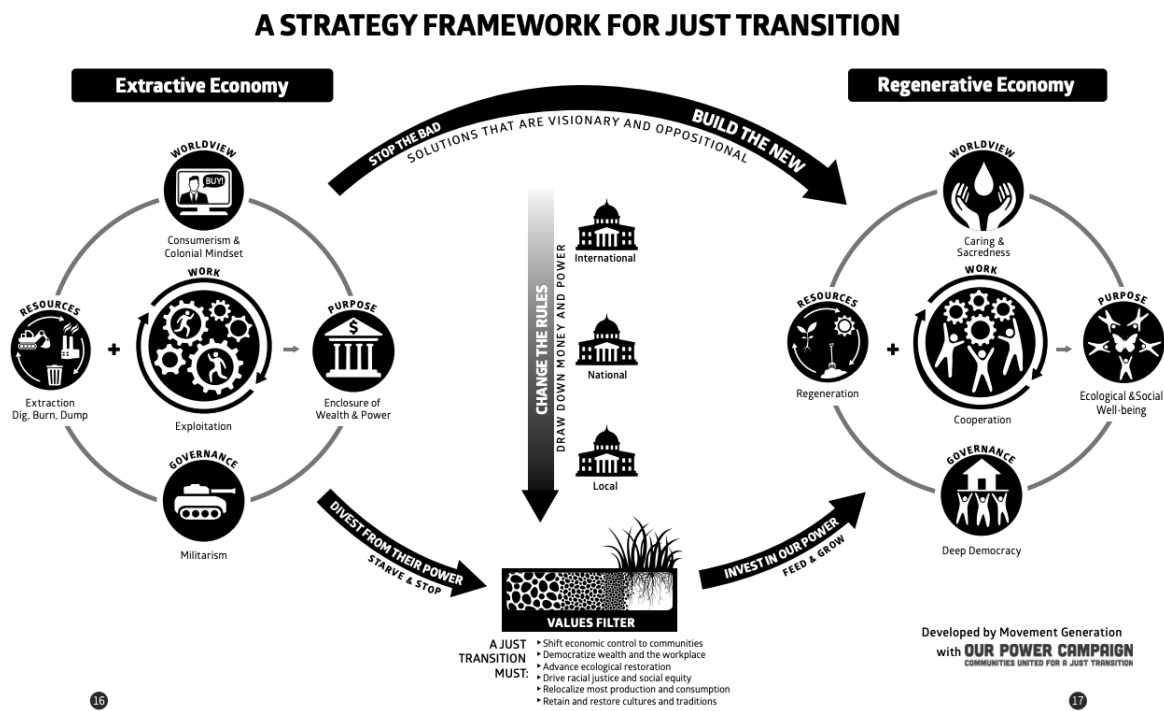
## Appendices

The following appendices augment the content in the body of the paper through illustrative diagrams, data visualization, and more.

## About the Author

Isabella (Buddy) Burch lives in Los Angeles and is an Environmental Planner at GPA Consulting. She worked for The Climate Center as a research assistant for two years. She received her Masters degree in Urban Planning from the University of Southern California.

## Appendix A: Movement Generation's Diagram on the Extractive to Regenerative Economy



## Appendix B: Organizations Active in Just Transition Work

\*\* Organizations in **bold** are those at the forefront of Just Transition policymaking in California.

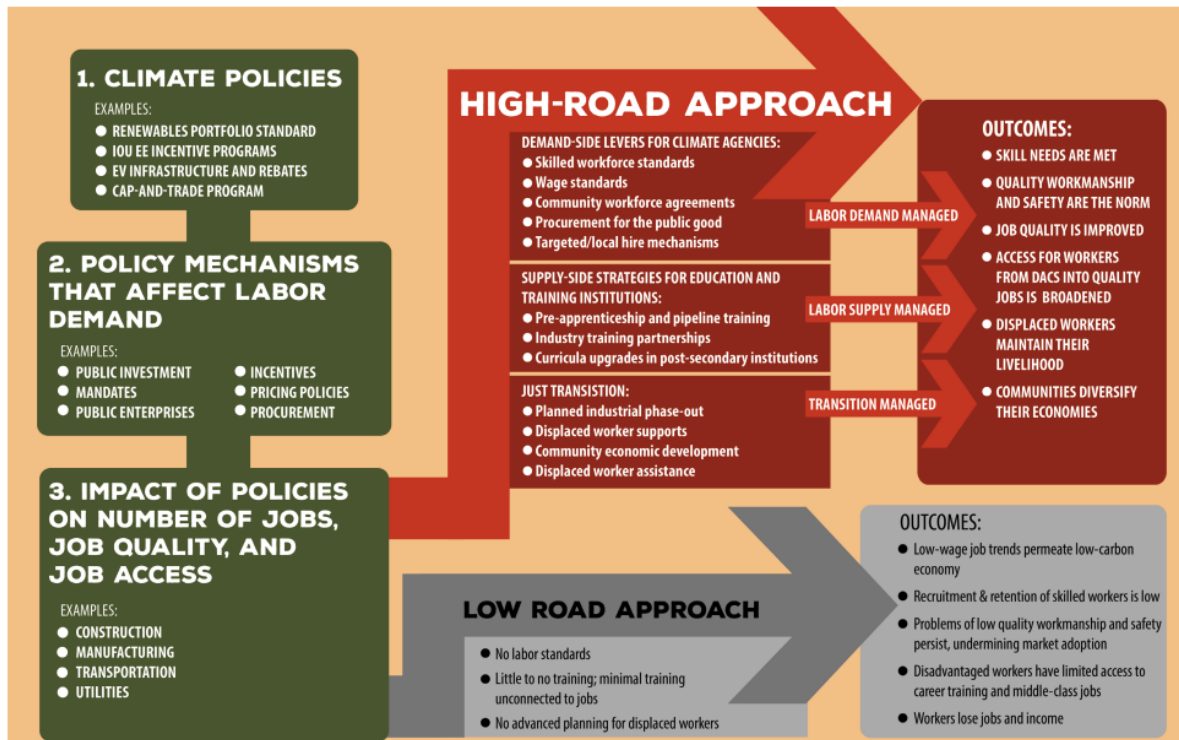
- **Asian Pacific Environmental Network** (Oakland and Richmond)
- Bay Area Environmental Health Collaborative (Norcal)
- BlueGreen Alliance (National)
- California Climate Equity Coalition (California)
- **California Environmental Justice Alliance** (Oakland and Huntington Park)
- California Environmental Justice Coalition (California)
- Californians Against Fracking Network (California)
- Center for Biological Diversity (National/International)
- Center for Earth, Energy, and Democracy (National)

- Center for Environmental Health (Oakland)
- Center for Story-Based Strategy (National)
- Clean Up Green Up (SoCal)
- **Climate Justice Alliance** (International)
- Coalition for Clean Air (California)
- **Communities for a Better Environment** (Oakland and Huntington Park)
- Ditching Dirty Diesel Coalition (NorCal)
- Don't Waste LA (SoCal)
- Dream Corps (NorCal)
- East Oakland Building Healthy Communities Initiative (NorCal)
- East Yard Communities for Environmental Justice (East Los Angeles)
- Ella Baker Center for Human Rights (California)
- Energy Justice Network (National)
- Environmental Justice Air Quality Coalition (EJAQC) (NorCal)
- Global Justice Ecology Project (National)
- Green LA Coalition (SoCal)
- **Greenlining Institute** (California)
- Greenpeace (National)
- Indigenous Environmental Network
- Jobs with Justice (National)
- **Just Transition Alliance** (National)
- Labor Community Strategy Center (Los Angeles)
- **Labor Network for Sustainability** (National)
- Local Clean Energy Alliance (NorCal)
- Los Angeles Alliance for a New Economy (LAANE)
- Los Angeles Apollo Alliance (SoCal)
- Movement Generation (National)
- Movement Strategy Center (National)
- NAACP Environmental and Climate Justice Program (National)
- National Family Farm Coalition (National)
- Native Organizers Alliance (National)
- Natural Resources Defense Council (National/International)
- New Economy Coalition (National)
- Parable of the Sower Intentional Community Cooperative (Vallejo)
- PODER - People Organizing to Demand Environmental and Economic Rights (San Francisco)
- PowerPAC (National)
- Public Advocates (California)
- Regenerate California (CEJA & Sierra Club)
- Rich City Rides (Richmond)
- Richmond Equitable Development Initiative (REDI) (NorCal)
- Right to the City Alliance (National)
- Rising Tide North America (National/International)

- Rootskeeper (California)
- SCOPE LA (SoCal)
- Shore Up Marin (Bay Area)
- Silicon Valley Toxics Coalition (NorCal)
- Soil Not Oil Coalition (NorCal)
- Sunflower Alliance (Bay Area)
- Sunrise Movement (National)
- Sustainable Economies Law Center (Oakland)
- The Ruckus Society (National)
- Trade Union for Energy Democracy (International)
- Transition Network (International)
- Tri-Valley CAREs (Communities Against a Radioactive Environment) (Central Valley)
- **UC Berkeley Labor Center** (California)
- UC Berkeley Labor Occupational Health Program (LOHP)
- United Steelworkers International Local 5 (International)
- Urban Tilth (Richmond)
- US Food Sovereignty Alliance (National)
- USW Local 675 (Carson)
- Valley Improvement Projects (Central Valley)
- West Berkeley Alliance for Clean Air and Safe Jobs (NorCal)
- West County Toxics Coalition (Contra Costa County)
- West Oakland Environmental Indicators Project (NorCal)
- Youth United for Community Action (East Palo Alto)



## Appendix C: Conceptual Framework for the “High-Road” Approach to Aligning Climate and Workforce Action Plans, from the UC Berkeley Labor Center



Putting California on the High Road: A Jobs and Climate Action Plan for 2030

## Appendix D: Economic Impacts of Climate Resilience Investments in California, from the Bay Area Council Economic Institute

Spending Category	\$5 Billion Total Spending	\$8 Billion Total Spending	Jobs per \$1 Million
	Employment Impact	Employment Impact	
Wildfire / Forest Health	28,456	45,530	16.26
Water	21,346	34,153	13.77
Coastal Resilience / Sea Level Rise	15,919	25,471	15.92
Heat / Community Resilience	8,776	14,042	12.54
<b>TOTAL IMPACT</b>	<b>74,498</b>	<b>119,197</b>	<b>14.90</b>

## Appendix E: Just Transition Alliance’s “False Solutions to Address Climate Change”

# FALSE SOLUTIONS TO ADDRESS CLIMATE CHANGE

## Geoengineering

Geoengineering techniques do not yet exist, but there are three proposed methods. The first, Solar Radiation Management, is intended to reflect the sunlight back to space to reduce climate change. Carbon Dioxide Removal aims to suck carbon out of the atmosphere and Earth Radiation Management is meant to offset the effects of climate change by allowing heat to escape into space. EJ communities are left out of the talk around geoengineering, and it is favored largely by former climate change deniers and billionaires, specifically in the global North. Geoengineering would have a disproportionate impact on the global south and EJ communities.

## Biofuels

Biofuels are made from recently living plant matter and are used to replace other transportation fuels like petroleum. Large quantities of biofuel are made from corn, but other foods that are used to produce biofuel include sugar cane and soybeans. Biofuels are a false solution because they speed up deforestation and cause disputes whether land should be used for food or fuel crops. Biofuels also create competition for resources such as water and food. The increasing use of biofuels causes food costs to increase, especially in developing countries. Like many of these false solutions, biofuels maintain our reliance on dirty energy.

## Incineration

Waste-to-Energy is a method of incineration that burns waste at high temperatures, generating electric energy and heat. The main method of incineration uses combustion (a chemical reaction). One type of incineration is called Plasma Arc Recycling. This type of incineration does not use combustion. Instead, the waste is heated at even higher temperatures so the waste melts and vaporizes. In theory, two products come from this process. One is a synga, which is a mixture of carbon monoxide and hydrogen and is used for energy. The other is an aggregate, which is a glass-like material, used for construction. Toxic gases can be found in the synga and the aggregate may have contaminated materials. Incineration has been ineffective at eliminating plastic pollution in numerous countries and is dangerous for human health and marine life. Incinerators can still emit toxins into the air, and have other issues such as toxic flue ash and other hazardous waste. It also violates the principles of Environmental Justice.

## Forest Management / REDD and REDD+

Forest Management and REDD and REDD+ is a similar exploitative model to cap and trade, but globalized. Indigenous peoples in primarily the Global South are asked to help plant or replant forests (usually using invasive species) at a massive level so the Global North can keep its pace polluting the air. If the Global North has its way, its plan is to increase the amount of pollution and shift the burden of "saving the planet" on the Global South with this ridiculous scam. Forest Management has heavy corporate interest. REDD and REDD+ has also been the mechanism for massive land grabs and in some cases even evicting indigenous people from their traditional and ancestral lands.

## Carbon Markets/Cap and Trade/Cap and Invest

Cap and Trade schemes have been models of exploitation in communities of color and Low Income communities also known as Environmental Justice (EJ) communities in the United States by mainstream green groups (NRDC's Reclaim Program in South Central Los Angeles was one of the first of these programs) with the intent of mass reduction of greenhouse gas emissions. The consequences of this program and others has been an increase in the air contamination in EJ communities because the majority of emission sources are in these areas, a phenomenon EJ communities call hot zones. Carbon Markets continues our reliance on dirty energy. We cannot monetize the air and expect to survive as a species on this planet.

## Industrial Carbon Capture and Sequestration (CCS)

This technique captures, transfers and stores carbon dioxide. While it stops some of the CO<sub>2</sub> from polluting, it ignores the root cause of climate change. It delays the transition to renewables and is more expensive than renewables. It promotes increased extraction and pollution of fossil fuels. CCS benefits the fossil fuel industry and keeps us reliant on dirty energy.

## Nuclear Energy

The entire lifespan of nuclear energy is one of massive contamination. Uranium mining woefully contaminates with toxins that last hundreds of thousands of years. There are currently over 15,000 abandoned uranium mine sites on Navajo and Hopi lands. There are many more abandoned mines throughout native lands. Nuclear energy is sometimes called the "Clean Energy" by governments, but rest assured that this energy source is not clean and very much the opposite. Nuclear energy plants have been known to leak or come close to meltdowns, there are now radioactive traces in all fish species in the Pacific Ocean from the Fukushima explosion. Indigenous Peoples and their lands are targeted for mining and nuclear waste sites. Currently there are no nuclear waste sites available so most of the waste is being stored on site at the nuclear power plant themselves.

## Climate Smart Agriculture

Climate smart agriculture took off from the Global Alliance for Climate Smart Agriculture (GACSA) which is made up of 21 national governments, agribusinesses, and some civil society groups. It is a false solution because instead of reducing pollution at the source, the idea is to take a band-aid approach and plant so called "carbon absorbing plants" and with turning the soil regularly this is supposed to curb harmful air emissions and help cool down the planet. This approach has a heavy corporate influence while ignoring non-corporate farmer and community voices.

## Final Thoughts

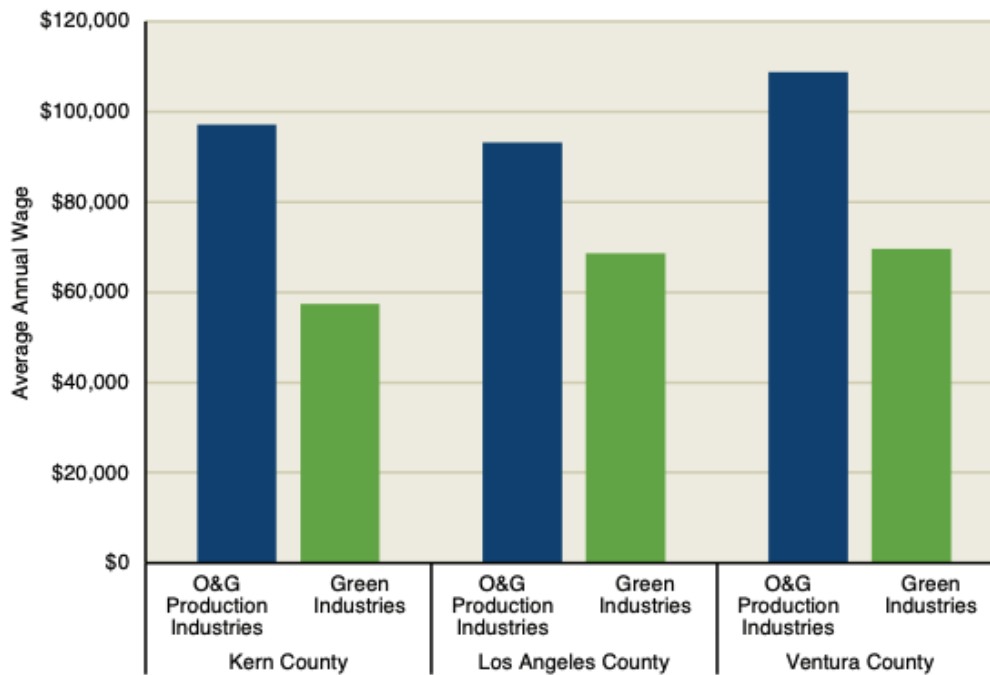
These False Solutions violate the principles of Environmental Justice (EJ). They maintain our reliance on dirty energy, disproportionately affecting the Global South and Indigenous, EJ/low income communities, and does not address the root cause of climate change. Elected officials need to confront the problem of overconsumption of resources by industrialized nations and the reliance on fossil fuels. The best solution is to switch to renewables immediately. The burden should not be on Indigenous, EJ/low income communities, but Indigenous, EJ/low income communities, and workers should be at the forefront of planning the solutions.

For more information visit the Just Transition Alliance at [www.JTAlliance.org](http://www.JTAlliance.org)



## Appendix F: Comparing Average Annual Pay in the Oil and Gas Industry with the Green Jobs Industry (Source: State Building and Construction Trades Council of California)

**Average Annual Pay, O&G Production vs Green Industry Jobs  
(Kern, Los Angeles, and Ventura Counties, 2018)**



**Average Pay of Key Occupations in O&G Production (Blue Bars) and Green Industries (Green Bars), Kern County, March 2020**

