

THE FUTURE OF ENERGY, ENVIRONMENT, AND NATURAL RESOURCES

A CALIFORNIA 100 ISSUE ROADMAP FROM RESEARCH TO ACTION

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A prosperous and livable California depends on a stable climate and sustainable energy and water supplies. Studies estimate that the costs of climate change in California are likely to be in the tens of billions of dollars stemming from damage to coastal properties, wildfires, droughts, mega-floods, and more. In the face of accelerating climate change and rising fossil energy costs, the state has established itself as a global leader in reducing global greenhouse gas (GHG) emissions, producing only 7 percent of the nation's GHG in 2017 despite accounting for 12 percent of its population.

However, California's work on climate protection is far from complete. Transition to zero-carbon transportation has just begun, and the state needs to do much more to reach a low-carbon electric sector. California also needs to make progress on water management in the face of more intense droughts, heat storms, wildfire, flooding, reduced snowfall in the Sierras, and increased evaporation in reservoirs and canals. California's aquifers are being over-pumped and its agricultural industry is threatened.

There is a long history of California leadership on pollution control, water management, low-carbon product development and market structures. By enacting sound policies and focusing its innovative might on climate mitigation and climate adaptation, California has the opportunity to influence other states and national governments, and gaining enormous employment and public health benefits along the way.

FROM RESEARCH TO ACTION

What will these changes mean for current and future generations of Californians, and how can we make sure that California's environmental future remains innovative, resilient, inclusive, sustainable, and equitable?

In March 2022, the California 100 Initiative released a policy and future scenarios report on energy, environment, and natural resources produced by the **UC Berkeley, Goldman School, Center For Environmental Public Policy (CEPP)**. CEPP authors conducted extensive research for the report, and met with a wide variety of experts to examine possible scenarios and policy options for future-focused action.

"The current climate crisis requires us to redouble efforts to reduce dependence on fossil fuels," said **David Wooley, executive director of CEPP**. "California must achieve a Net-Zero Carbon Economy by mid-century with deep reductions by 2030. We can do that. California has already achieved strong momentum toward a zero-carbon electricity sector, achieving a 50% reduction in carbon emissions since 2008. Progress on clean energy, air quality and climate stability depend on an escape from fossil dependence and on California leadership nationally and internationally."



FUTURE SCENARIOS

Other key takeaways from the California 100 report include a consideration of policy options that improve environmental outcomes under **four future scenarios** that center around two critical dimensions over the next 25 to 30 years: whether or not California can realize unified public/private leadership towards a zero-carbon future, and whether the state's economy is strong or weak during this decisive period, as reflected in technology and market innovation.

In a context of strongly aligned political will across public and private actors in California, the scenarios range from incremental progress towards a zero-carbon future in the face of weak economic growth and frequent downturns, to large-scale progress under conditions of healthy economic growth, supportive regulatory regimes, and market innovations. In a context of divided opinion and waning political will, the scenarios range from modest improvements in resilience investments driven largely by the private sector, to a significant rollback in progress towards climate change mitigation in the face of severe economic downturns.

Regardless of the scenario, the research commissioned by California 100 indicates that we should refrain from “doing nothing” as a fall-back option. In order for California to perform better under these various scenarios, we need public- and private-sector agencies to research, deliberate over, and enact solutions that advance **innovation** (through technological, policy, and process improvements), **resilience** (such as ensuring that water systems have backup supplies to meet various needs), **inclusion** (by deepening community awareness and engagement in climate solutions), **sustainability** (by improving the ability to make climate progress even during economic downturns), and **equity** (by prioritizing the benefits of new policies and technologies to communities of color and low-income communities that have historically borne the brunt of environmental burdens).



Artist rendering of future scenarios in energy, environment, and natural resources
Source: California 100



THE CALIFORNIA 100 ROADMAP

The California 100 report on policies and future scenarios is the first step in a multi-stage process that is designed to inspire and engage Californians—from a variety of sectors and all walks of life—to build a stronger future for current and future generations. In the summer of 2022, our expert and intergenerational Commission will conduct a series of listening sessions throughout the state, to solicit feedback on the ideas generated by our research and to generate additional big and bold ideas for consideration by public and private agencies, as well as by everyday Californians. We will also be generating insights from our policy innovation projects throughout the state that cover a variety of topics, and our deep engagement on questions of science and technology as they relate to a variety of issues, including energy, environment, and natural resources.

In early 2023, we will take these various policy ideas and scenarios, and engage in a process of deliberative democracy featuring a representative cross-section of California residents. The goal of this deliberative exercise is to understand the conditions under which Californians from various walks of life can come to agreement on the long-term challenges facing the state and, importantly, the kind of bold and visionary solutions we need to put the state on a stronger trajectory for the next century.

California 100 will also be engaging intentionally with young Californians, who have the most to gain or lose in the coming century. Our team members will engage young people throughout the state, including in high school and college settings, and will organize a statewide youth summit that will produce a manifesto for the future of California.

Finally, in Winter and Spring 2023, our intergenerational Commission will draft a vision and strategy document for the future of California, based on briefing materials that build on insights from the various streams of work. California 100 will then launch a culminating event in early summer 2023 that serves as the formal launch of the vision and strategy document and, importantly, also brings together leaders and partners from our various streams of work and prior engagement.

Our culminating event in the summer of 2023 will:

1. Showcase the pressing need for California to prioritize long-term futures,
2. Build an ambitious yet achievable vision and strategy that are grounded in rigorous research and community engagement, and
3. Inspire others to do the same, providing tools that a variety of partners (including policymakers, government agency officials, business leaders, activists, researchers, and next-gen leaders from various sectors) can use to build their own aspirational visions and strategies for California's long-term success.

ABOUT CALIFORNIA 100

The California 100 Initiative envisions a future that is innovative, sustainable, and equitable for all. Our mission is to strengthen California's ability to collectively solve problems and shape our long-term future over the next 100 years. California 100 is organized around 15 policy domains and driven by interrelated stages of work: research, policy innovation and engagement with Californians. California 100's work is guided by an expert and intergenerational Commission. Through various projects and activities, California 100 seeks to move California towards an aspirational vision—changing policies and practices, attitudes and mindsets, to inspire a more vibrant future.

California 100 staff members compiled this roadmap document, drawing on research in two publications—a Policies and Future Scenarios Report and a Facts-Origins-Trends Report—by authors from the UC Berkeley Goldman School of Public Policy's Center For Environmental Public Policy (CEPP). The two environment-related publications are part of California 100's larger research stream of work, built in partnership with 20 research institutions across the state.

California 100 sponsored grants for data-driven and future-oriented research focused on understanding today and planning for tomorrow. This research, anchored in California 100's 15 core policy domains, forms the foundation for the initiative's subsequent work by considering how California has gotten to where it is and by exploring scenarios and policy alternatives for what California can become over the next 100 years.

The California 100 Initiative is incubated through the University of California and Stanford.

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READ MORE

To learn more about the future of energy, environment, and natural resources in California, visit the California 100 website at California100.org, where you will find our detailed reports on the topic, and more information about our research partners.

