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A Green New Deal for California Cities: Empowering Communities Through Climate Infrastructure

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Introduction

In an era defined by an escalating climate crisis and the urgent need for sustainable solutions, the [Inflation Reduction Act](#) (IRA), [Bipartisan Infrastructure Law](#) (BIL), and [CHIPS and Science Act](#) present opportunities to reshape the way communities approach energy, sustainability, and economic development. The success of these unprecedented investments in climate infrastructure depends on community leaders proactively seeking out funds and receiving the necessary financial and logistical resources to do so. Already, communities have applied for grants ranging from the [Environmental and Climate Justice](#) (ECJ) program to the [Climate Pollution Reduction Grant](#) (CPRG) program. Many of these programs are subject to requirements under the [Justice40 Initiative](#), which aims to invest 40% of all climate and energy benefits in communities that have traditionally been underserved. These and other funding opportunities could be [instrumental](#) in providing for just transitions in communities historically reliant on or crippled by pollutive industries — that is, economic transitions away from extractive and high-emissions industries that support workers and communities to ensure they are not left behind. But if just transitions are to be successful, they must be determined through democratic participation, guaranteeing that new industries are culturally, economically, and environmentally suited to their host communities. This means asking communities what they envision for their futures.

To that end, Data for Progress conducted five workshops focused on climate infrastructure across California — in Palo Alto, Eureka, Visalia, Palmdale, and San Diego — from June to November 2023. The aim was not to convince communities to accept climate infrastructure, but rather to understand from community members themselves what key factors drive openness or opposition to energy sources and climate technologies — which we refer to broadly as climate infrastructure — after learning more about them. These workshops focused on six utility-scale clean energy sources and technologies — solar, wind, nuclear, geothermal, battery storage, and transmission — as well as four carbon removal technologies — direct air capture (DAC), biomass with carbon sequestration and storage (BiCRS), enhanced rock weathering (ERW), and ocean alkalinity enhancement (OAE).

How Our Workshops Are Conducted

Following practices established by past community engagement [workshops](#) conducted by Data for Progress, these workshops afford community members the opportunity to voice their ideas about local benefits, redlines, and points of contention surrounding prospective development in their community. Participants are compensated for their time and expertise shared during these discussions.

During the workshops, Data for Progress subject matter experts first deliver a presentation with high-level information about the aforementioned climate infrastructure technologies, including their potential benefits and risks. This presentation aims to equip participants with a level playing

field of knowledge to consider and discuss the possible impacts of various climate infrastructure on their communities. Recognizing that a large body of research demonstrates that many communities, especially marginalized ones, have historically lacked the ability to influence major infrastructure developments impacting their neighborhoods, Data for Progress also presents information on pathways to negotiate infrastructure development processes with varying avenues for public input. This includes presenting information on different tiers of community engagement for development projects, ranging from a developer conducting one-directional outreach via mailers and ads, to communities leading on and even owning a development project.[1]

After providing an overview of all 10 climate technologies, Data for Progress conducts a question-and-answer session where participants are encouraged to ask any technical questions before they break into small groups for a moderated discussion. Participants are asked in their small groups what climate infrastructure development might look like in their community, what their preferences for such a project would be, how they think their community would respond, and how they might want to engage with a developer to negotiate local benefits like jobs, social services, and improvements to infrastructure, such as roads and sanitation.

In addition to collecting qualitative data during the five workshops, Data for Progress supplemented these findings with a statewide survey to assess Californians' attitudes toward climate infrastructure developments.[2]

This report posits that climate infrastructure can be a win-win for communities, enabling them to address pressing environmental challenges while also catalyzing local economic development. By placing communities at the forefront of climate infrastructure initiatives, we can create a sustainable future that benefits everyone.

In the sections to come, this report explores community histories and insights for climate infrastructure deployment. While these are only snapshots of vibrant, complex communities, they do shed light on the kinds of concerns and opportunities that diverse communities may identify in climate infrastructure development. Beyond the specific community conversations highlighted, this report also examines opportunities for community-engaged climate infrastructure implementation, especially as enabled by the IRA, within the broader context of climate action in California.

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[1] See Page 15 for a visualization of how we present this information to workshop participants.
[2] High-level backgrounds on each site, as well as a complete description of the workshop and survey methodologies, are detailed in the Appendix.

Climate Policy and the California Context

The Green New Deal, and the broader scientific consensus on the climate crisis, contends that climate transitions will require more than just new sources of energy. For communities to meaningfully participate in and benefit from climate infrastructure, it is necessary to pursue restorative justice and equitable policymaking for those who have been historically marginalized and most harmed by infrastructure development. In part, that means providing affordable housing for families that have been priced out of their communities, public transit for workers to take advantage of new job opportunities in climate infrastructure, and green spaces where informal democratic processes for community building can occur.

It will also mean that communities that have traditionally sloughed off their infrastructure burdens onto other communities (like wealthier communities with strong organizing power that benefit from renewable energy generation but block local installations) are obligated to take on their fair share. Rather than being punitive, this should be seen as an opportunity for the whole of society to be part of the solution.

This report sheds light on the unique opportunities available for communities to envision their climate infrastructure future. By providing a framework for direct engagement in climate infrastructure projects, federal, state, and local funding initiatives can enable communities to not only meet their own energy needs and sustainability goals, but also to cultivate economic sectors centered around exporting clean energy goods and services.

Federal funding programs represent a promising avenue for communities to lead the way in addressing climate change and driving local economic growth, but most of the benefits are poised to be captured by private industry. By reframing climate infrastructure as a public good and focusing on meaningful community engagement on projects – like those funded by IRA, BIL, and CHIPS, federal programs can be a means for project developers and local communities to address historical injustices and develop projects that substantially benefit and involve communities. Indeed, direct pay options, a key aspect of many of these programs, uniquely empower communities by streamlining financial incentives and removing barriers that traditionally hinder participation in climate infrastructure projects.

These initiatives encourage communities to think beyond conventional barriers to economic and environmental justice. Additionally, these financial incentives offer communities the ability to consider exporting clean energy goods and services at utility scale, an approach not often pursued by municipalities previously as a result of resource constraints. Utility-scale climate infrastructure projects hold the promise of reshaping local economies, fostering innovation, and driving progress toward climate goals.

At the heart of IRA and other federally funded climate programs lies a fundamental need for community engagement and empowerment. By offering communities a meaningful voice in development, these programs can achieve greater social buy-in and generate long-lasting positive impacts. This report will explore the critical role that active community involvement plays in the success of climate programs, like those in the IRA, emphasizing how climate infrastructure development can align more closely with local needs and aspirations, and can ensure that the benefits of such infrastructure projects are equitably distributed.

California is a critical leader on the climate crisis, given its ability to influence climate policy — and progressive climate policy, for that matter — at the national and even international level. California enjoys a legislative history on climate action marked by a long-standing commitment to environmental stewardship. The state has consistently led the U.S. in adopting policies to combat climate change and reduce greenhouse gas emissions, making the state a natural case in which to explore community responses to climate infrastructure development. One of the most significant milestones in California's climate action journey was the passage of the Global Warming Solutions Act, also known as Assembly Bill 32 (AB 32), in 2006. Through its scoping plan, AB 32 set ambitious targets to reduce greenhouse gas emissions to 1990 levels by 2020 and established the California Air Resources Board (CARB) as the agency responsible for implementing and enforcing the law. AB 32 also directed the state to achieve net-zero emissions by 2045 and net-negative emissions from then on. This landmark legislation laid the foundation for California's climate policies — including those on carbon management — and served as a model for other states and nations.

In the years following AB 32, California continued to push the boundaries of climate action. Senate Bill 32 (SB 32), passed in 2016, extended the goals of AB 32 by requiring the state to reduce emissions to 40% below 1990 levels by 2030. Though California is not currently on track to meet this target, this legislation reinforced California's commitment to long-term climate action and positioned the state as a global leader in addressing climate change. Additionally, the establishment of cap-and-trade programs, which place a cap on emissions and allow for the trading of carbon allowances, has played a pivotal role in incentivizing emission reductions and driving state investments in clean energy technologies.

California's legislative history on climate action also includes a strong focus on renewable energy. The passage of the Renewables Portfolio Standard (RPS) in 2002 and its subsequent strengthening in 2018 (SB 100) set aggressive targets for increasing the use of renewable energy sources in the state's electricity generation mix. SB 100, in particular, aims for 100% clean energy by 2045, signaling California's strong commitment to a sustainable energy future. Through these legislative efforts, California has not only reduced its carbon footprint but has also spurred innovation and economic growth in the clean energy and clean technology sector.

California's current administration, led by Governor Gavin Newsom, has positioned the state at the forefront of the battle against climate change, leveraging the state's economic might to drive

environmental policy and innovation. Under Newsom's leadership, California has expanded its commitment to renewable energy through SB 100, aiming for a carbon-neutral economy by 2045 and implementing aggressive measures to reduce greenhouse gas emissions. The Newsom administration has also championed complementary climate initiatives, ranging from phasing out gasoline-powered vehicles to investing in large-scale renewable energy projects, reflecting a holistic approach to environmental stewardship. Newsom isn't without critics on climate, though, as climate advocates have rebuked him for not doing enough to hold the state's utility companies and fossil fuel companies accountable for their contributions to the climate crisis, or to address environmental injustice and California's grid failures and high electricity prices. Newsom's administration has also recently drawn ire from consumer and solar advocates for greenlighting a solar energy program via the California Public Utilities Commission, which advocates say will hamstring the development of community solar in the state. Even still, these advocates also acknowledge the Newsom administration has made significant strides to advance the state's climate goals.

Beyond specific critiques from climate advocates, not all of Newsom's policies have been met with open arms, despite California's reputation as a state with environmentally minded and liberal citizens. His commitment to phase out gasoline-powered vehicles in favor of electric vehicles, for example, has received pushback from people across the state. And, while California has led the country in building some of the first utility-scale clean energy projects, this development is being met with considerable — and well-organized — community opposition. The potential for climate policy, and especially climate infrastructure development, to receive pushback from communities (and thus jeopardize broader goals) points to a strong need to engage with residents ahead of potential development and policy deployment to understand redlines, barriers, and perceived opportunities of such actions. These workshops attempt to do just that.

Workshop Site Background

Data for Progress selected Palo Alto, Eureka, Visalia, Palmdale, and San Diego, California, as workshop sites in an effort to represent the diversity of the state's population, history, industries, geography, and socioeconomic context. Each community has a distinct history with industry, power, climate change, and infrastructure development.

	Palo Alto	**Eureka**	**Visalia**	**Palmdale**	**San Diego**
Population Estimate	66,000	26,000	143,000	163,000	1,380,000
Demographics	53% white, 7% Latino, 35% Asian, 2% Black	72% white, 16% Latino, 6% Asian, 3% Black	54% white, 53% Latino, 6% Asian, 3% Black	35% white, 63% Latino, 5% Asian, 12% Black	55% white, 30% Latino, 17% Asian, 6% Black
Median Household Income	$194,782	$46,926	$75,658	$78,414	$98,657
Percent of Population With a Four-Year College Degree	82%	30%	23%	17%	49%
Top Industries	Education, Health Care, Software, Technology	Health Care, Retail, Education, Hospitality	Agriculture, Health Care, Education, Retail	Aerospace, Defense, Retail, Health Care	Tourism, Defense, Health Care, Biotechnology

More detailed information on each site can be found in Appendix C.

Workshop Findings

Over the course of the five workshops in California, we assessed community perspectives both on a suite of climate technologies and on potential community pathways for involvement in climate infrastructure development. Through approach-neutral presentations, we shared information about the potential risks and opportunities of these technologies in an attempt to give our audience, which was largely unfamiliar with the technologies discussed, unbiased and clear-eyed information about environmental, social, and human health risks of the technologies, as well as the potential opportunities, like the number and kind of jobs or amount of energy they may bring. In addition, we presented attendees with options for community involvement in development projects.

The goal during these workshops was to understand *whether* and *how* community members might support these various pathways to climate infrastructure development. In particular, we found that communities across the workshops held disparate views about which actors they would trust to manage potential climate infrastructure projects, what risks and opportunities they perceived could come from distinct types of infrastructure development, and how best to align new infrastructure with the existing character and context of their community.

Trusted Actors

Trust between stakeholders is the cornerstone of successful infrastructure projects. It serves as the foundation for meaningful collaboration, enabling diverse groups to work together effectively toward shared objectives. When stakeholders trust one another, there is a greater likelihood of transparent communication, which helps to preempt misunderstandings and conflict. Trust is the foundation for building community buy-in for a project, facilitating the smoother negotiation of roles, responsibilities, and resources, and creating an atmosphere where community input is not only sought, but valued and integrated into planning and decision-making. This mutual confidence bolsters meaningful stakeholder engagement, ensuring that decisions are made with a broader consensus and that the outcomes are more likely to be accepted and supported by all parties involved. Ultimately, the presence of trust in stakeholder relationships leads to more resilient and sustainable infrastructure projects that are better aligned with the needs and expectations of the community. Importantly, the question of whether climate infrastructure development can earn community trust depends not only on *who* is engaging with the community, but *how* they propose to do so.

Varied Trust in Government and Utilities: Two key actors came up across each of the workshops, with participants in nearly every small group bringing up the roles that the government and utility companies may play in climate infrastructure. The level of trust in these actors varied across sites, with participants in Palo Alto emphasizing the role of government in advancing climate initiatives. Several participants in Palo Alto were aware of and drew

connections between existing climate policies in California and national ones, from California's EV mandate to the IRA. Participants suggested that local, state, and federal policy could and should be a tool to make Palo Altans, and Californians, adopt climate infrastructure.

This stands in contrast to skepticism of the government shared by participants in Palmdale and Visalia, who pointed to a need for transparency and community engagement on any infrastructure project to build trust. Palmdale participants were widely skeptical of local, state, and federal government, as well as technology in general, with many citing poor engagement on recent development projects and disinvestment in local transportation, affordable housing, and health care infrastructure as reasons for their lack of trust, in addition to some participants citing conspiracy theories. One participant described a feeling of powerlessness among residents, "We give our opinions, but we're not the decision-maker. The moneymakers are the decision-makers."

Despite California's high taxes, Palmdale participants didn't perceive widespread benefits from public funds in the form of public goods, instead describing existing infrastructure problems, including those with roads, freeways, and airports. Additionally, participants felt that benefits funded by their tax dollars were accruing to corporations and residents of more influential Los Angeles, with residents of Palmdale left behind. Similarly, Visalia participants were cognizant of which actors held most sway over local government, with several citing the power held by the agricultural and industrial industries, whose support they felt could fast-track any proposed infrastructure project.

San Diego participants also expressed broad distrust of government, saying that "government never listens to people," as well as skepticism toward large infrastructure projects; however, participants reported that elected bodies or civil society organizations at the neighborhood level with more direct relationships with the community tended to garner more trust. One participant commented that, for big infrastructure projects, it seems like corporations and the government often give the illusion that they're going to ask for and incorporate community input, when they've already decided that a project will happen regardless of the level of community support for it.

Participants across all five sites expressed wide dislike of and distrust in utility companies. In Palo Alto, participants complained about high utility bills, but were grateful to have their own city utility because they've largely avoided the rolling blackouts and brownouts experienced by consumers of Pacific Gas & Electric Company (PG&E) and other California utilities.

In Eureka, participants had few – if any – good things to say about their utility provider, PG&E. Participants described sky-high prices and unreliable service. Some even suggested taxing PG&E directly to pay for climate infrastructure and other improvements in the area: "I like the idea of taxing PG&E. A hundred percent."

Stories from participants in Visalia, Palmdale, and San Diego about their experiences with their utility providers were similarly bleak, stressing rising prices and poor service. In Visalia, participants also pointed to costly surge pricing from their providers, PG&E and Southern California Edison, and the measures they've individually taken to avoid high prices during peak daytime hours: "You've got to go through and unplug everything in your house, don't leave anything plugged in. That's the only way you're going to save [on] electricity around here."

In Palmdale, participants pointed out the stranglehold monopoly utilities and service providers have on their community: "They can jack the price up because there's nobody else to get telephone service from, or there's nobody else to buy electricity from except Southern California Edison." Complaints about utility providers also went hand in hand with concerns about mismanagement and increased wildfire risk. San Diego participants also had choice words for their utility provider, San Diego Gas and Electric (SDG&E). One participant condemned SDG&E's poor upkeep of transmission lines, which they report comes at the expense of ratepayers:

> *Because the transmission lines right now, because they're supposed to maintain [them] and keep [them] clear and not cause fires. They don't, they pay their shareholders with the profits. They don't do the maintenance and so when there are wildfires that burn down communities, then they come back to the ratepayers to pay all of that.*

Given widespread distrust of government and utility companies, project developers must work to first create a foundation for trust between stakeholders by embedding transparency, community engagement, and utility accountability.

The Role of Local Institutions and Organizations: In each site, many participants were concerned that there are few, if any, trusted local organizations to represent community interests on a potential new infrastructure project. Participants often couldn't name a trusted local organization that they felt could represent their interests if a project were proposed in their area. Instead, many indicated support for direct governance of new infrastructure projects through community advisory boards or community ownership, with Data for Progress often hearing variations of the phrase, "I wouldn't trust anyone but me or my community to represent my interests." This pattern highlights the need to build robust civil society through trusted community figures, nonprofit organizations, public institutions, and a strong social fabric in communities as either a precursor or complement to community-aligned climate infrastructure. Such an investment in civil society presents an opportunity to foster and strengthen existing institutions and social ties, which can help ensure projects are in line with local values. Indeed, strengthening civil society offers the potential to turn skepticism into collaboration, underlining the importance of intermediaries that can bridge communities and project implementers.

Risks and Opportunities of Large-Scale Climate Infrastructure

Large-scale climate infrastructure projects can address pressing environmental and health concerns while driving economic revitalization. Although these projects pose potential risks (such as habitat disruption, pollution, and seismicity) if mismanaged, they also offer significant opportunities to improve public health by reducing environmental contaminants and making progress in the long term to address climate change. By focusing on sustainable development, projects can rejuvenate ecosystems and enhance biodiversity, which in turn supports community health and well-being. Economically, while the upfront investment is substantial and not without financial risk, the downstream effects of climate infrastructure development can be transformative, spurring job creation and industry innovation within the green sector. These projects not only promise a reduction in long-term climate-related costs and health care expenses, but also could put local economies on a more resilient and sustainable trajectory, ensuring that climate action is a catalyst for comprehensive societal benefits.

Environmental and Health Concerns: The potential environmental and health risks of new climate infrastructure projects were a significant concern across all sites, with participants acknowledging concerns about the risks presented in the workshops as well as site-specific concerns for their communities. In Eureka, participants voiced apprehension about potential environmental damage from development. Participants described the fragile nature of the ecosystem in Eureka and the broader Humboldt County area, stressing the need to protect the area's environment with any new infrastructure.

These concerns were echoed in Palmdale and Visalia, where past and current industrial pollution affect community health and environmental quality. Palmdale participants cited concerns about pollution from the local <u>aerospace industry</u> and Air Force base, providing personal anecdotes on experiences with cancer. In particular, participants mentioned local cancers caused by <u>chromium contamination of groundwater</u>, with one participant saying: "I live out in Lake LA, and it's in groundwater and in one of the areas, the well tested positive for chromium and that caused a cancer cluster and it affected women more than it did the men." Beyond groundwater pollution, participants also described how Palmdale's geography, climate, and location east of Los Angeles contributed to its poor air quality and the spread of a dangerous fungal infection, "Valley fever," which can be exacerbated by the terrain disruption caused during development processes. One participant described how Palmdale's <u>poor air quality</u>, combined with its physical distance from a hospital, forced them to seek respiratory care for their child:

> *I did not have a nebulizer for my son when I first moved up here [to Palmdale]. And you're a long ways from a hospital out there in that community. If something happens, hopefully, they're going to get to you in time to get you to the hospital right away.*

Visalia participants were also highly aware of the area's <u>air quality challenges</u>, and recognized the interplay between the region's geography and polluting industries. Community members

described the Central Valley in which Visalia sits as the "armpit of California," where poor air collects and stagnates. Several also shared stories about the direct human health impacts of the region's degraded air quality, describing high rates of asthma. Participants in both Palmdale and Visalia, as a result, were excited by the prospect of technologies potentially lessening air pollution burdens.

Participants in Eureka and San Diego raised concerns about mining and waste from climate infrastructure, as well as past experiences with poorly maintained and mismanaged transmission lines starting wildfires in the state. In talking about mining, Eureka and San Diego participants expressed concern that the raw minerals used in solar panels, wind turbines, and other climate infrastructure will cause adverse environmental, social, and human health impacts. One Eureka participant remarked:

> A lot of these minerals aren't coming from here … I'd like to know more about that and where it comes from because it might come from the other side of the world. Certainly, the solar chemicals and a lot of the battery storage chemicals come from foreign places that have less environmental regulations on pulling those things out.

More than other sites, Eureka participants expressed concern about potential environmental and health impacts of climate infrastructure beyond their community. In describing potential environmental justice impacts of carbon dioxide sequestration, one participant noted:

> We're not going to store anything deep in the ground around here, this isn't the place to do it. So if we're creating something, sequestering carbon something, some oil from some smokestack that we're burning all our redwood branches or something, it's like no, that's going to have to go somewhere and get stored. And probably it never gets stored next to the really nice neighborhoods.

Given potential environmental and human health risks of new climate infrastructure development, as well as local environmental and health histories, participants across all sites were hopeful that any proposed new development would reduce, or at a minimum not worsen, existing pollution and health burdens. In particular, given California's geographic situation upon several fault lines and vulnerability to earthquakes, participants across all five sites were particularly worried about potential seismic impacts from technologies operating in the subsurface, including geothermal energy and carbon sequestration via direct air capture and BiCRS. Similarly, participants were also concerned about negative consequences of nuclear energy buildout in the event of an accident, disaster, or earthquake.

Economic Revitalization Through Climate Action: Across all sites, participants expressed clear anticipation of potential economic uplift from new industries. With the exception of Palo Alto, participants at all sites expressed optimism that new industries could provide needed local economic opportunity and jobs, especially with well-crafted local-hire requirements, job training

programs, and job accessibility assurances. In Palo Alto, however, participants didn't necessarily see new local jobs as a potential benefit of (or need from) climate infrastructure, with one participant summing up a commonly held view among the largely white-collar group:

> *Well, I mean most of this stuff, most people don't want it on their doorstep. The only reason you'd want it on your doorstep is if there are a lot of jobs. And there's already a lot of jobs around here, so you don't need those jobs. We're not in the middle of Pennsylvania or the Rust Belt or wherever, where they need the jobs. They don't need the jobs here and they don't want them.*

In contrast, Palmdale participants viewed potential new jobs as an alluring benefit, with one participant remarking that local jobs could reduce the number of residents forced to commute into Los Angeles for work. They contended that any projects that bring jobs directly to Palmdale, and the broader Antelope Valley, would benefit locals who lack nearby opportunities for work. Utility-scale clean energy development was not new to Palmdale participants, many of whom pointed out the proliferation of wind and solar farms nearby. Notably, despite the scale of renewable energy development around Palmdale, participants quipped that they hadn't seen direct benefits — like lower utility bills or long-term jobs — from such development. In this regard, one participant said:

> *When they were first putting the solar farms out here, there was lots of ads and opportunities to help build them, but once they're built, they maintain themselves. The same thing with the wind farms. You see an ad every once in a while for a technician to help maintain the windmill, but it's not like there's a sustained amount of jobs.*

As in Palmdale, Visalia participants were hopeful that new infrastructure could help the area overcome ongoing economic difficulties with local job opportunities available to applicants from a wide range of backgrounds. Visalia participants placed greater emphasis on potential infrastructure projects offering tangible economic revitalization, relative to addressing concerns about potential environmental risks. Participants particularly noted a need for any new jobs to be long-term and reliable, thus enabling the community to grow. Others also emphasized that, even though new employers and jobs — like Amazon — have come to Visalia in recent years, jobs in these industries are often located outside of Visalia and thus are largely inaccessible to residents without cars who rely on meager public transportation.

In Eureka, participants saw an opportunity to leverage the local university, Cal Poly Humboldt, to train and retain students in new climate industries in the area, with one saying:

> *[Cal Poly Humboldt has] a really good pipeline of school-work opportunities where they do work with the community and then added the polytechnical aspect of it. There's no reason why we shouldn't have industry here as well for those same kind of avenues where they can put realtime practice in while they're going to school.*

Eureka participants were also hopeful that new industries and workers could help build the small city's municipal tax base, bring money into the community, and address the ongoing housing crisis. Residents of urban San Diego shared concerns about a rising cost of living in the area, stressing that new industries and infrastructure projects would need to pay workers well to sustain a life in the city.

Many participants saw the appeal of economic opportunity and jobs that might emerge from new climate technologies, yet emphasized that such opportunities couldn't merely be numbers promised on paper, but must be tangible, long-term jobs that prioritize local workers (including young people and people from marginalized backgrounds), job training, and strong wages and wraparound benefits.

Aligning Climate Infrastructure With Communities' Sense of Place

California's majestic giant redwoods and Joshua trees, miles of beautiful coastline stretching the length of the state, and abundant vineyards lining rolling hills are just a few of the unique environmental features central to the state's identity, and the identity of communities within it. These same environmental features have at times faced considerable risks, including from industrial extraction, wildfires, and extended drought. It is in these moments of heightened risk that environmental initiatives and movements have drawn upon the environment's importance in shaping identity to build collective power and strong community movements for change.

Given this deep connection between local identity and environmental initiatives, aligning climate infrastructure with communities' sense of place is an essential aspect of climate development. Projects that are attuned to the cultural, economic, historical, and social fabric of a community can foster a sense of ownership and pride, thereby enhancing public engagement and support. Working to build community-aligned climate infrastructure can help ensure that such projects both mitigate environmental challenges and resonate with a community's unique characteristics and values. Such a process aims to integrate new development projects harmoniously into existing landscapes, preserving and celebrating local distinctiveness, and reinforcing a community's bond to its environment. It can ensure that climate resilience goes hand in hand with maintaining the essence of what makes each community special. This integration can transform climate infrastructure from a mere functional asset into a meaningful element of a community's collective identity, securing its role in the narrative of a place and its people.

Community participation in infrastructure initiatives can range from unidirectional, basic information sharing to completely community-led decision-making. At the most basic level of community involvement, outreach may entail the community simply receiving information about upcoming projects. Deeper engagement may include developers or government representatives asking for the community's opinions through surveys, written comments, or public listening sessions. Beyond a two-way dialogue between the community and the developer of an

infrastructure project, the community can be further empowered by having a say in project decisions at forums like town halls, allowing concerns to be heard. Collaborative engagement takes this a step further by ensuring community members actively work alongside project planners to shape project decisions, such as through community oversight boards. At the highest level of community involvement, community stakeholders take charge to own, lead, and make final decisions about a project, guaranteeing that it serves their needs and that the benefits are spread throughout the community. Each level of engagement presents community members with a greater degree of involvement and influence over the projects that impact their environment and daily lives.
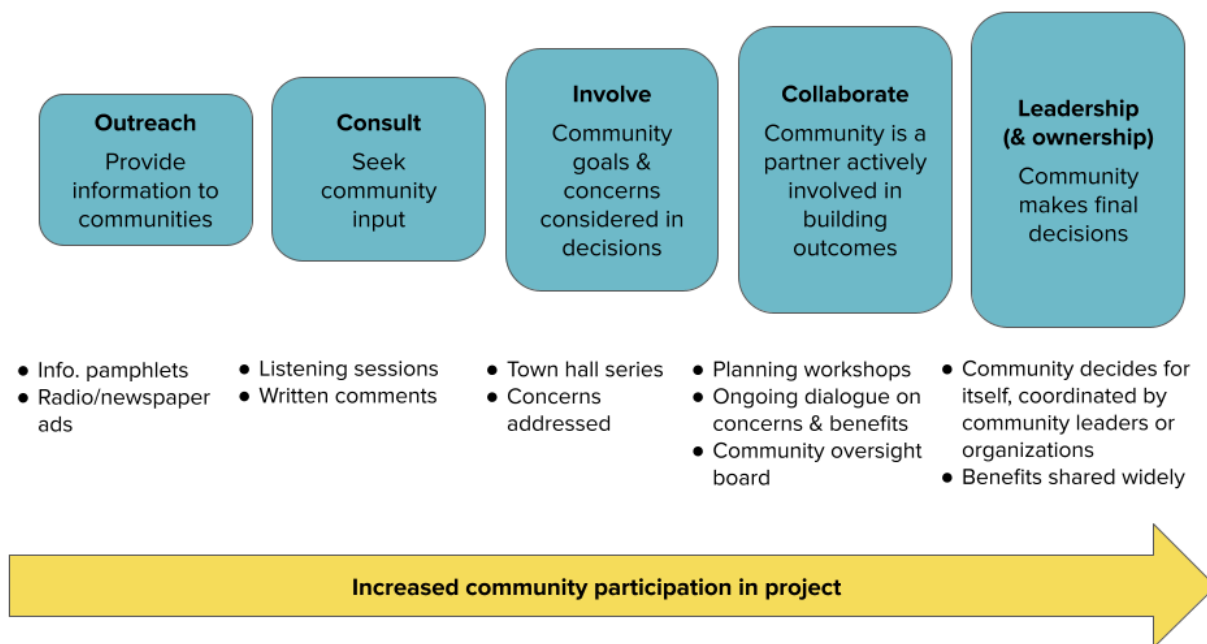
Credit: Adapted figure created by Sara Nawaz, American University's Institute for Responsible Carbon Removal

Safeguarding Local Identity and Natural Environment: Workshop participants across California expressed varying attitudes toward local development. In Palo Alto, "NIMBY" ("not in my backyard") sentiments were prevalent, with many participants directly referencing the phrase when describing the character of their community and its responses to climate, housing, and other development. Indeed, most participants could identify multiple cases that exemplified a wider pattern of NIMBYism, where nominal support for sustainable initiatives faltered when local implementation was suggested. In Palo Alto, preserving the community's visible character was paramount, with one participant remarking, "Anything that [Palo Altans] think may be unsightly or impact their property values, or their saleability of their house, they would be opposed to."

Palo Alto participants noted that many residents support climate infrastructure generally, and reported awareness of climate tech and clean energy companies based in Palo Alto and the

Silicon Valley. One participant captured the tension between Palo Alto's role as a climate innovation hub and its frequent opposition to local development, saying, "People like the ideas. I think they prefer to pay for it than see it built in their neighborhood. That's kind of how it works, a lot of time." Palo Alto participants saw themselves as the creators, financiers, and beneficiaries of climate infrastructure, but not as those who would ultimately bear any of the physical, social, or environmental costs that may come with living in proximity to it.

In contrast, Eureka participants expressed a readiness to embrace climate innovation and adopt novel technologies, with a participant noting, "It's great all this new stuff is coming out, because I think ... we're done talking about it. Something needs to happen." Eureka participants recognized the inherent trade-offs of building climate infrastructure, including its potential to affect the natural landscape, as well as the necessity to build clean energy and carbon removal technologies to address climate change and environmental problems.

Participants in Eureka also stressed the importance of embedding meaningful Tribal engagement and sovereignty within any proposed climate infrastructure projects. One participant said:

> There's a large indigenous community up here, the Yurok Tribe, Blue Lake Rancheria. I would like to see collaboration in that regard. They have their own stuff if you're there, try to practice their own self-tribal sovereignty, but I think it would also garner a lot more support from the community if there was that 'go ahead' from the local Tribes.

For many participants in Eureka, engagement and buy-in from Tribal groups was essential to garner broad community support for climate infrastructure development. Notably, the Yurok Tribe recently voted to oppose a proposed floating wind farm off the coast of Eureka, signaling again the importance of engagement to understand potential redlines for climate infrastructure deployment and opportunities for building Tribal-aligned infrastructure.

Visalia and Palmdale participants contended that to be truly community-aligned, projects must be careful to not undermine community resilience, affordability, and aspirations for a healthier future, while offering climate and job benefits. One Visalia participant put it plainly: "Positive future effects [of climate infrastructure] would be great. That's what the whole deal is. To make the positive, to prevent bad, and to help bring more good in the environment." Similarly, one Palmdale participant stressed that bringing jobs and economic opportunity wouldn't be enough, and that minimizing environmental and human health impacts of new projects would also be paramount: "When a company says, 'It's going to create all these jobs and you're going to make so much money.' I'm like, 'And? And? Is it going to pollute? Is it going to pollute? Is it going to hurt people?'"

Situated in northern Los Angeles County, Palmdale participants also worried about potential urbanization threats from new climate infrastructure projects, fearing a loss of their unique community identity. Palmdale's sense of isolation from Los Angeles and distrust of both local and

state government have fostered a cautious stance toward new infrastructure projects among participants, with one participant describing a resentment toward Los Angeles and Los Angeles County as a whole, "(It) kind of feels like we're getting the leftovers. LA County is getting the majority of all the services and then we're getting a little bit of what's left."

One Palmdale participant highlighted how these tensions underscore a need for meaningful and direct community engagement around proposed climate infrastructure projects, saying:

> *City hall, no, that's not our community. That's city hall. Again, that's money people. I'm talking about people that actually live in that community. Not the mayor, not the governor, not my local [representative]. I want the people that actually live in the community [to engage with developers] because you can't come to my community and build something when you don't know nothing about it. That doesn't make sense.*

Compared with Palmdale, where participants feared that promises of community-aligned infrastructure could not be realized, San Diegans expressed openness to projects that could integrate into the city's diverse and dynamic character, aiming for initiatives that bring tangible benefits without compromising the city's charm or widening inequalities. One participant put it simply, "Our theme was, 'Location, location, location.'" As residents of a large city, San Diego participants' commitment to grassroots initiatives stemmed from the expressed belief that decisions made at the community level are better attuned to meet unique needs and preferences, leading participants to advocate for a decentralized approach to climate infrastructure projects. One participant highlighted their belief in a hyperlocal approach, suggesting that their own neighborhood would be easier to organize than the entire City of San Diego:

> *If it was University Heights, a neighborhood, deciding then I'd be like okay, we're deciding, that's good. It's a little tiny pocket community, we can handle this. It would be, I think, a fairly unified view for that community. But if you're saying community as in San Diego, I think it's a much bigger community with a lot of different neighborhoods and pockets. Each one of those have different needs and opinions and that would be very difficult to meet and satisfy those areas from one group.*

San Diego's preference for neighborhood-centric projects mirrors a wider preference across workshops for localizing and customizing climate solutions to meet specific needs and enhance community vibrancy. These findings emphasize the importance of tailoring community engagement and project scope and type to local contexts and communities.

Community Ownership and Empowerment: Conversations across sites revealed a pronounced preference for various models of community ownership and oversight, especially where distrust toward corporations and utilities was evident. In Eureka, this led to strongly expressed support for a community ownership model, with participants envisioning a future where climate infrastructure

benefits, like reduced energy costs and increased reliability, are directly felt by the residents. Perhaps indicative of higher trust in government, Eureka participants felt that public and community ownership models could better garner public trust, citing concerns about private developers and ownership structures, with one participant remarking:

> *A private corporation scares me just because they don't have the same safeguards for people's rights that the government does. Private industry people don't really understand that they don't really have to do things the way the government does because the government people have fought for many years to get certain rights and regulations in there to protect 'we the people.' But corporate is about the money and that's the bottom line.*

Eureka participants stressed a need for transparency on projects, and were excited about a diverse community governing board representative of Eureka and Humboldt County more broadly:

> *I just think it would have to be local people that the community support and trust and they would have to obviously be totally onboard and it would have to be a diverse group. It would have to be environmentalists. It would have to be business. It'd have to be tribal. We'd need a farmer in there. A rancher.*

Participants in Eureka also pointed out their dislike of using public funds for climate infrastructure, then ceding ownership of and profits from infrastructure to private companies, such as utility providers, with one saying, "I am pretty against, as taxpayers, paying for it all and having a private entity then take complete ownership of it."

San Diego participants also favored community empowerment and oversight, with some suggesting establishing a community oversight board that could monitor projects and hold companies accountable. One participant suggested publicly financing projects to create community owned projects, remarking, "What about, I hate to say this, but like a small city tax? Instead of a private company, we have this funded through a single city, a small city tax. This way everybody owns a small piece of it."

Across these communities, the dialogue underscored the importance of designing and implementing climate projects in a way that respects and enhances local identities, values, and aspirations. This approach can not only ensure higher chances of project success and sustainability, but also facilitate project acceptance and integration into community life.

California Survey Results

Following the five workshops across California, Data for Progress fielded a statewide [survey](#) of 654 adults to assess knowledge of and attitudes toward different types of climate infrastructure, as well as community preferences for the development of climate infrastructure.[3]

Majorities of California adults have heard either "a lot" or "a little" about solar energy (92%), oil and gas (90%), nuclear energy (78%), onshore wind energy (63%), and offshore wind energy (64%). Californians were less familiar, however, with geothermal energy (51%), carbon dioxide removal technologies (46%), direct air capture (35%), biomass with carbon removal and storage (36%), ocean alkalinity enhancement (33%), and enhanced rock weathering (27%). In a split test, respondents were randomly shown either the term "natural gas" or "methane gas." There is nearly universal awareness of natural gas, with 91% of respondents who saw the term indicating they are at least a little familiar with this energy source, compared with only 59% who say they have the same level of familiarity with methane gas after seeing that term — despite these two terms being synonymous.

Next, to understand perceptions of these energy sources and technologies, California adults who indicated they had heard "a lot" or "a little" about each term were then asked their opinion of it. Californians express extremely strong favorability toward solar energy, with 89% finding it either somewhat or very favorable, followed by natural gas (77%), offshore wind energy (73%), onshore wind energy (71%), carbon dioxide removal technologies (70%), geothermal energy (67%), biomass with carbon removal and storage (632%), direct air capture (62%), enhanced rock weathering (58%), ocean alkalinity enhancement (56%), and oil and gas (55%). Californians view nuclear energy (46%), methane gas (34%), and coal (34%) less favorably. Importantly, however, name recognition for "methane gas" and the suite of carbon dioxide removal technologies is lower than other technologies tested.

Reflecting the climate-conscious reputation of the state and sentiments heard across workshops, strong majorities of Californians are somewhat or very concerned about climate change (73%), air and water pollution (80%), and extreme weather events or natural disasters (71%). What's more, a majority (66%) of Californians believe climate change is mostly caused by human activity, not natural changes in the climate cycle.

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[3] See Appendix B for full survey methodology.

When asked about building new infrastructure projects, like housing or energy sources, in the state, however, a majority (62%) of adults say it's "somewhat too hard" or "far too hard" to build new infrastructure. This aligns with perceptions of California NIMBYism delaying or preventing development that were expressed in the workshops, particularly in Palo Alto, and similarly the slow development of transportation and housing infrastructure that workshop participants in the Central Valley recalled.

A Majority of Californians Say That Developing New Infrastructure Projects Is Too Hard in the State

Thinking about the state of California, under current policies, do you think it is too easy or too hard to build new infrastructure projects like housing, transportation, or energy sources in the state?

	Far too easy	Somewhat too easy	Don't know	Somewhat too hard	Far too hard
California adults		20%	11%	45%	17%
Partisanship					
Democrat		23%		52%	13%
Independent / Third party		23%	20%	42%	10%
Republican		14%	13%	36%	30%

0%   25%   50%   75%   100%
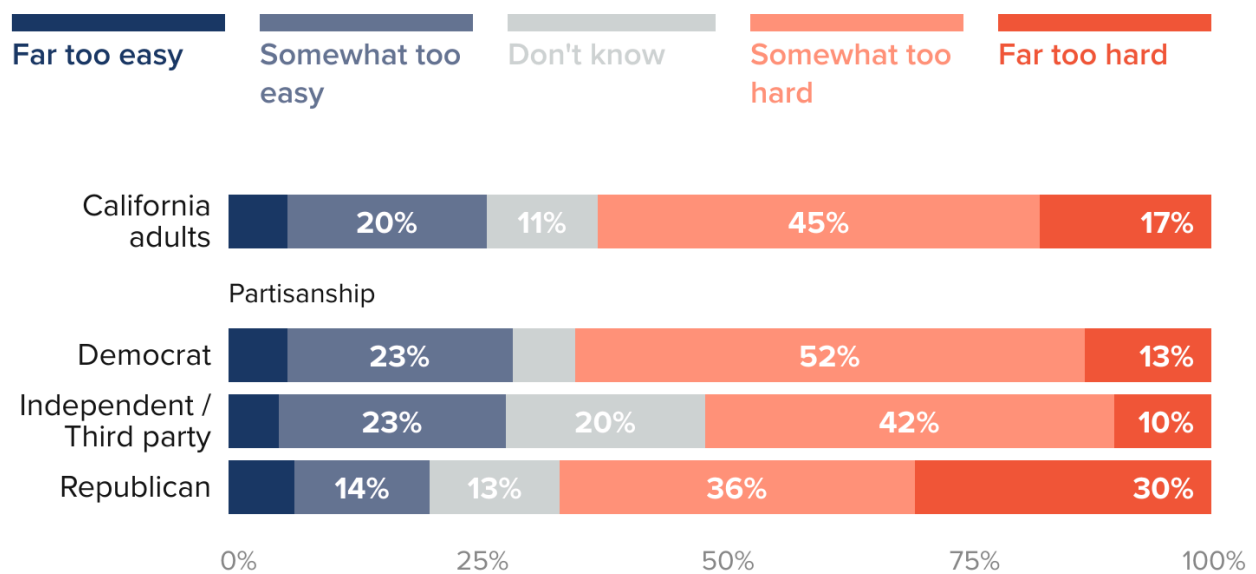
April 24-May 1, 2024 survey of 654 California adults

DATA FOR **PROGRESS**
ID: 332C27

When asked which, if any, institutions, they trust to deliver on promises to create new jobs and offer benefits to their community, Californians cite their local government the most, with 51% saying they trust local government "somewhat" or "a great deal," followed by their state government (45%) and the federal government (42%). Notably, only a third of Californians say they trust big corporations at least somewhat. These findings reflect high levels of distrust of big corporations expressed across workshops, as many participants saw such companies as operating in the interest of their shareholders and maximizing profits, instead of serving their consumers and workers.

Californians Most Trust Local and State Government to Create New Jobs and Benefits in Their Communities

When the following institutions promise to create new jobs and offer benefits to your community, how much do you trust them, if at all, to deliver on those promises?

A great deal	Somewhat	Not very much	Not at all	Don't know

California adults

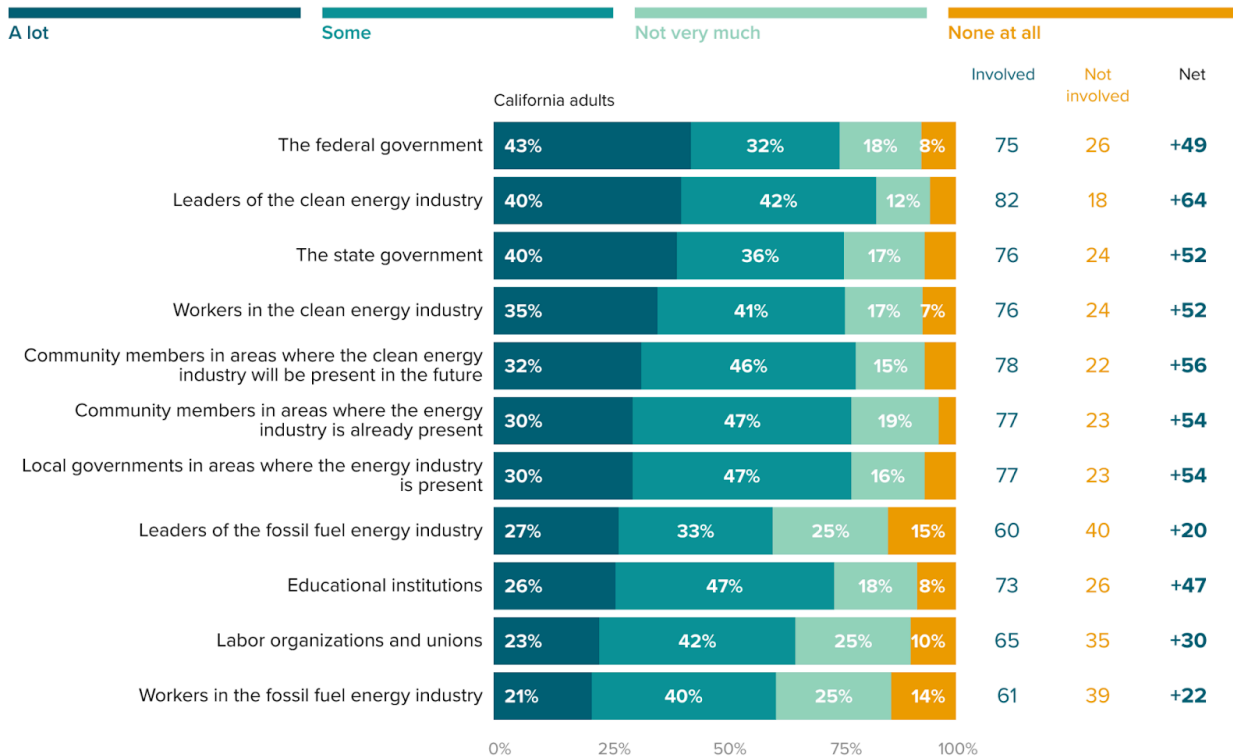|	A great deal	Somewhat	Not very much	Not at all
The local government	11%	40%	28%	17%
The state government	12%	33%	30%	21%
The federal government	9%	33%	31%	22%
Big corporations	8%	25%	36%	24%

0%   25%   50%   75%   100%
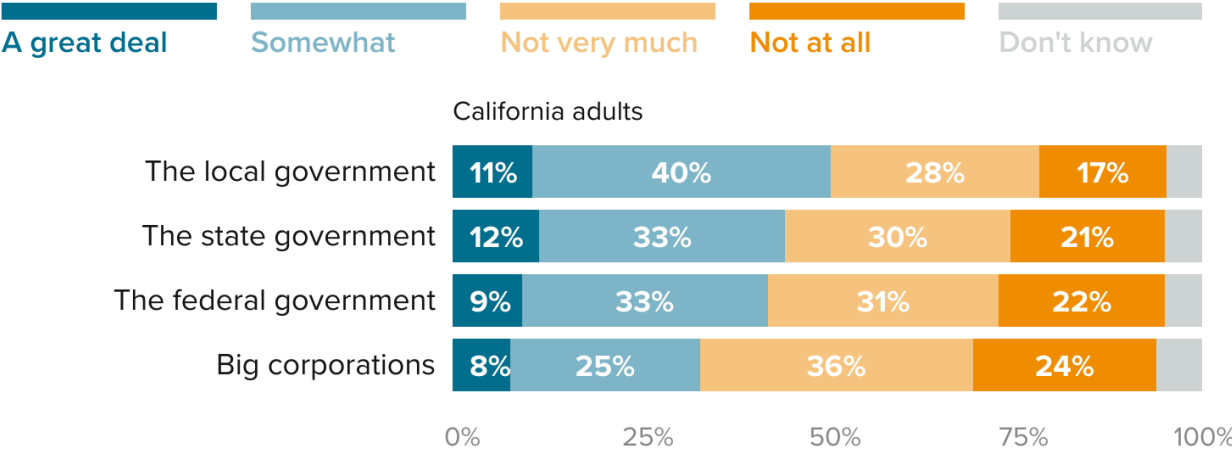
April 24-May 1, 2024 survey of 654 California adults

📊 DATA FOR **PROGRESS**

When it comes to making decisions about addressing climate change and transitioning away from fossil fuel energy, Californians see a role for government, clean energy companies and workers, local communities, and educational institutions. Strong majorities of Californians want leaders of the clean energy industry (82%), community members both in areas where the energy industry is already present and where the clean energy industry will be present in the future (77% and 78%, respectively), local governments in areas where the energy industry is present (77%), workers in the clean energy industry (76%), the state government (76%), educational institutions (73%), and the federal government (75%) to be involved "a lot" or "some" in making decisions to address climate change. These findings reflect desires for community- and worker-led climate infrastructure heard in workshops across California.

Californians Want the Clean Energy Industry and Community Members to Be Most Involved in Decisions About the Energy Transition

How much involvement, if any, do you think each of the following groups should have in making decisions about addressing climate change, including the transition away from fossil fuel energy?

	A lot	Some	Not very much	None at all	Involved	Not involved	Net
The federal government	43%	32%	18%	8%	75	26	**+49**
Leaders of the clean energy industry	40%	42%	12%		82	18	**+64**
The state government	40%	36%	17%		76	24	**+52**
Workers in the clean energy industry	35%	41%	17%	7%	76	24	**+52**
Community members in areas where the clean energy industry will be present in the future	32%	46%	15%		78	22	**+56**
Community members in areas where the energy industry is already present	30%	47%	19%		77	23	**+54**
Local governments in areas where the energy industry is present	30%	47%	16%		77	23	**+54**
Leaders of the fossil fuel energy industry	27%	33%	25%	15%	60	40	**+20**
Educational institutions	26%	47%	18%	8%	73	26	**+47**
Labor organizations and unions	23%	42%	25%	10%	65	35	**+30**
Workers in the fossil fuel energy industry	21%	40%	25%	14%	61	39	**+22**

California adults

0%   25%   50%   75%   100%

April 24-May 1, 2024 survey of 654 California adults

DATA FOR **PROGRESS**

In addition, a strong majority of California adults (82%) support a new clean infrastructure project, like a clean energy source, being built in their community. This includes majorities of Democrats (88%), Independents (78%), and Republicans (75%).

A Majority of Californians Support Clean Infrastructure Being Built in Their Community

In general, would **you** support or oppose a **new clean infrastructure project**, such as a new clean energy source, being built in your community?

	Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose

				Support	Oppose	Net
California adults	43%	39%		82	12	**+70**
Partisanship						
Democrat	56%	32%		88	6	**+82**
Independent / Third party	34%	44%	12%	78	11	**+67**
Republican	28%	47%	9% 12%	75	21	**+54**

0%   25%   50%   75%   100%
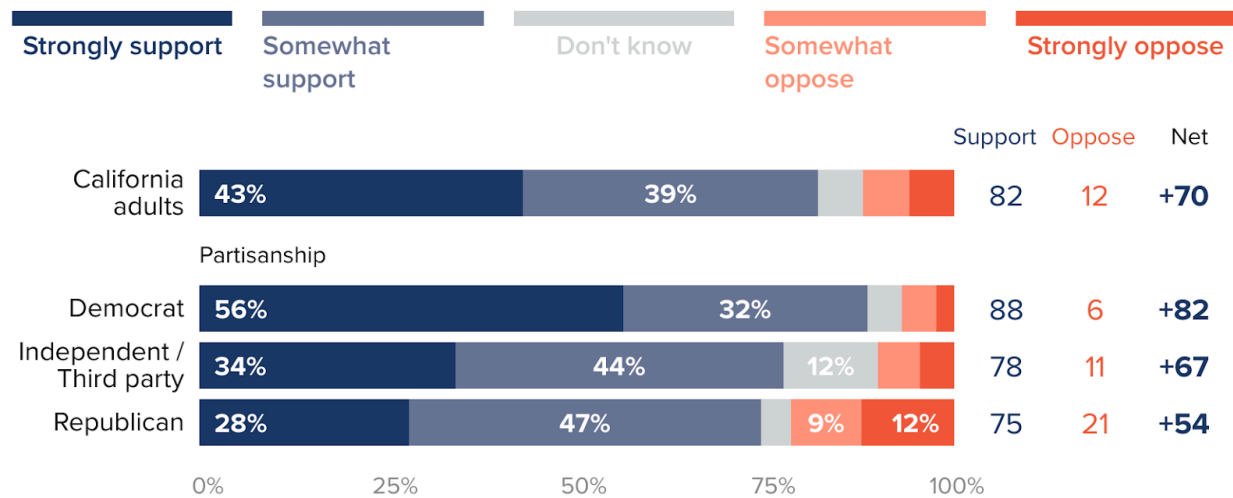
DATA FOR **PROGRESS**

While more than 4 in 5 Californians would support a new clean energy project in their community, respondents perceive their community's appetite for new clean infrastructure projects to be slightly lower, with 75% of Californians thinking people in their community would support such a project. This finding may reflect a false perception by Californians of NIMBYism among their peers, despite generally high levels of support for local siting of clean infrastructure projects and high favorability of several types of clean infrastructure.

Three-Quarters of Californians Believe People in Their Community Would Support a New Clean Infrastructure Project Being Built Locally

In general, do you think **people in your community** would support or oppose a **new clean infrastructure project**, such as a new clean energy source, being built in your community?

	Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose	Support	Oppose	Net
California adults	27%	48%		14%		75	18	**+57**
Partisanship								
Democrat	34%	45%		11%		79	15	**+64**
Independent / Third party	21%	43%	14%	19%		64	23	**+41**
Republican	19%	57%		16%		76	22	**+54**

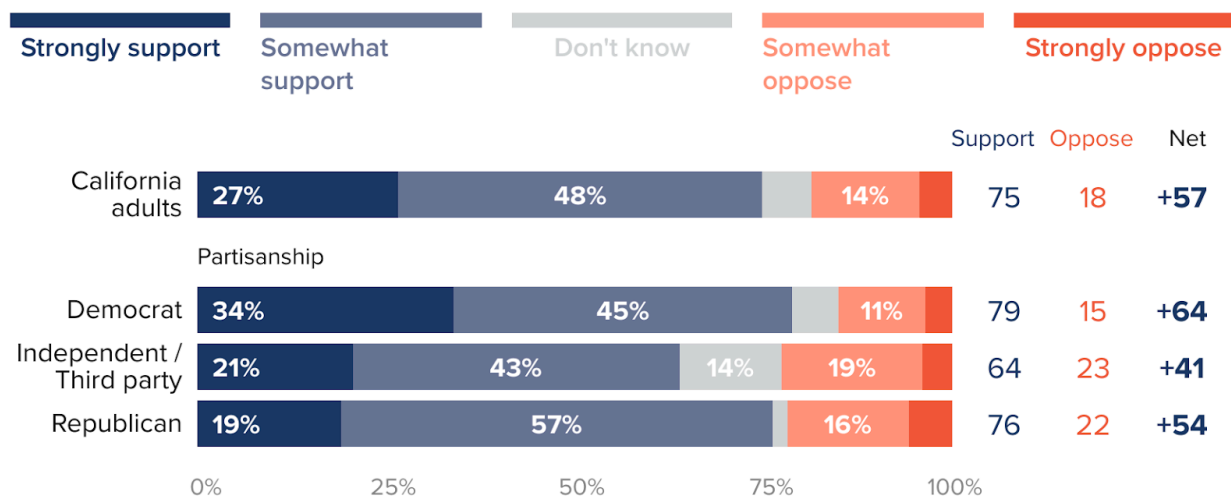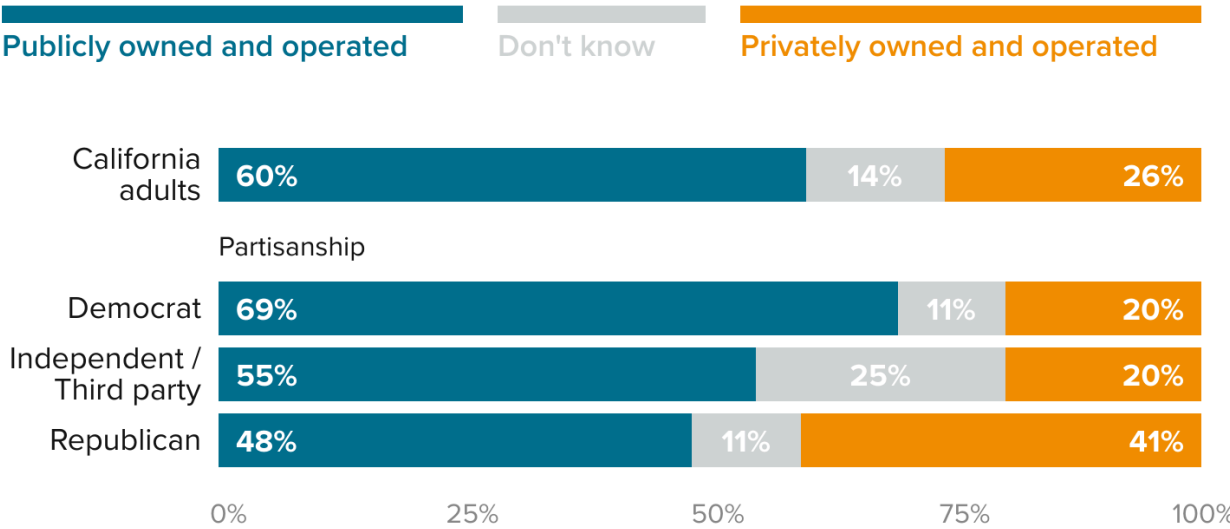April 24-May 1, 2024 survey of 654 California adults

DATA FOR **PROGRESS**

When asked about who should own clean infrastructure projects, a majority of Californians (60%) prefer such projects to be publicly owned and operated, instead of privately owned (26%). This includes a majority of Democrats (69%) and Independents (55%).

A Majority of Californians Want Clean Infrastructure Projects to Be Publicly Owned

Would you prefer for clean infrastructure projects, such as new clean energy sources or carbon removal projects, to be privately or publicly owned and operated?

Publicly owned and operated   Don't know   **Privately owned and operated**

	Publicly owned	Don't know	Privately owned
California adults	60%	14%	26%

Partisanship

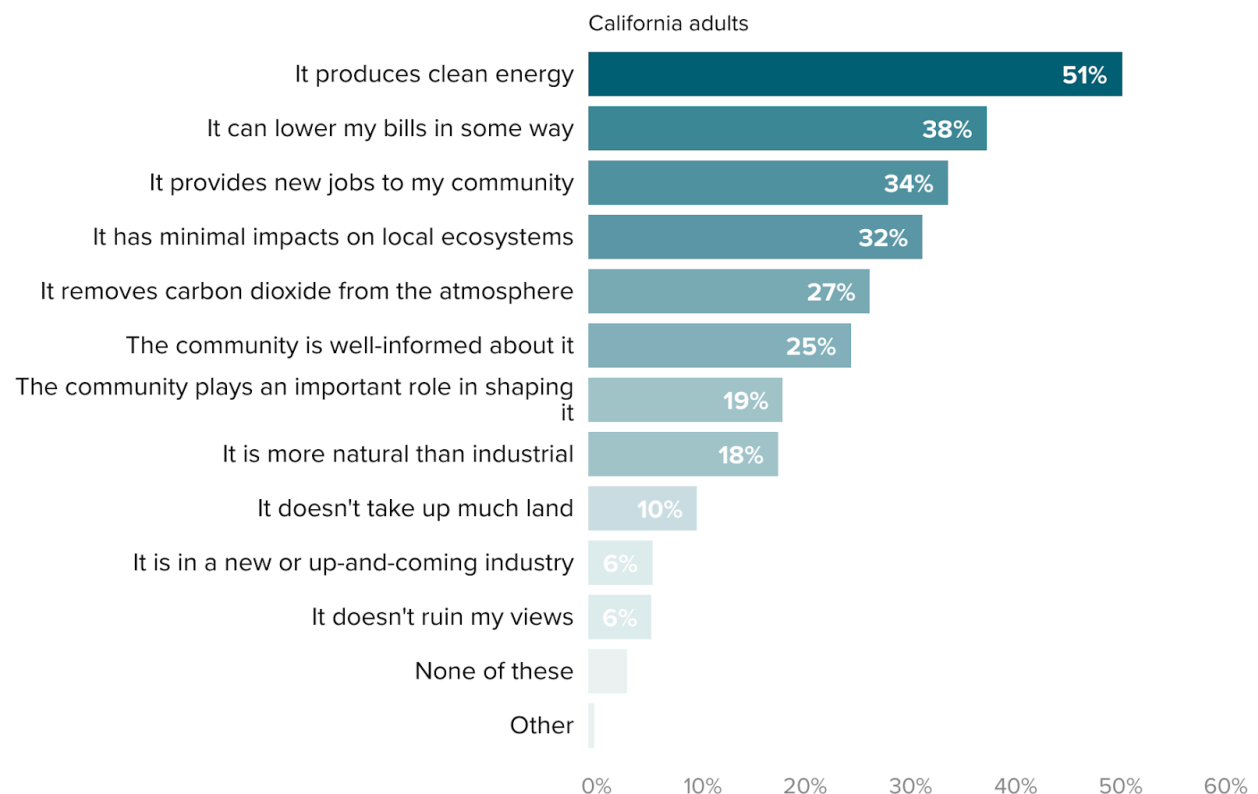|	Publicly owned	Don't know	Privately owned
Democrat	69%	11%	20%
Independent / Third party	55%	25%	20%
Republican	48%	11%	41%

0%   25%   50%   75%   100%

April 24-May 1, 2024 survey of 654 California adults

📊 DATA FOR **PROGRESS**

Next, respondents saw a list of potential features of a new clean infrastructure project, and were asked which attributes would be the three most important if such a project was being developed in their community. For Californians, it is most important that a project produces clean energy (51%), lowers their bills in some way (38%), provides new jobs in their community (34%), and has minimal impacts on local ecosystems (32%).

Californians Say They Care Most About Clean Energy, Lower Bills, New Jobs, and Minimal Ecosystem Impacts When It Comes to Clean Infrastructure Projects

Of the following, which are the **three most important** attributes to you if a clean infrastructure project was being developed **in your community**?

California adults

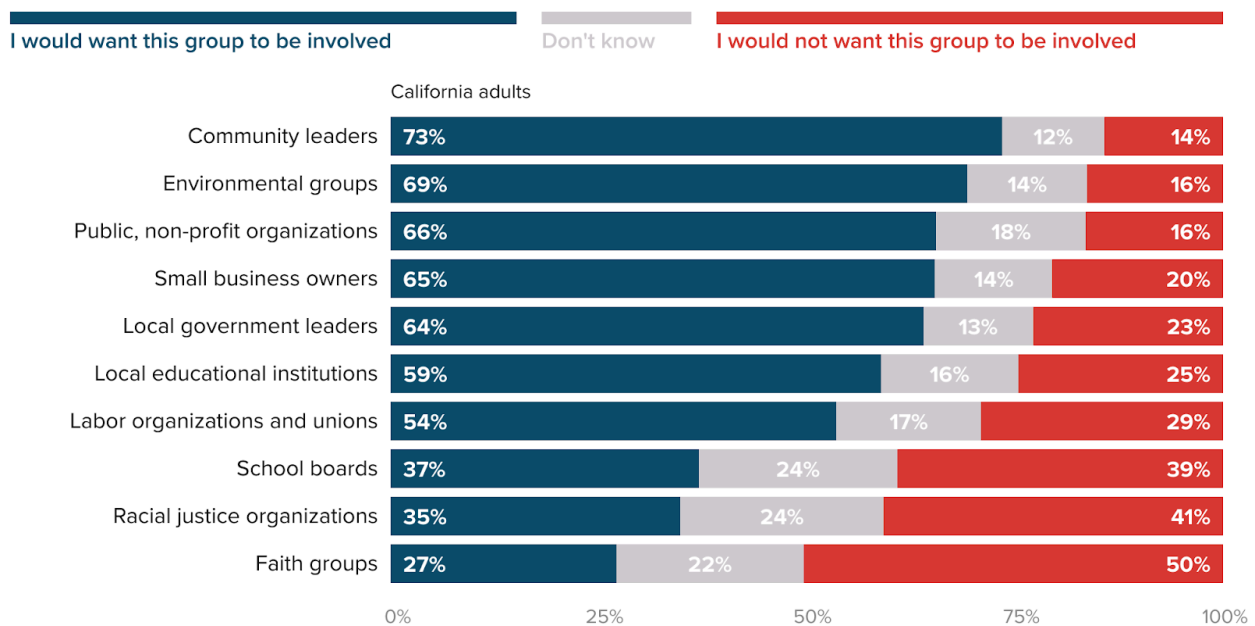| Attribute	%
It produces clean energy	51%
It can lower my bills in some way	38%
It provides new jobs to my community	34%
It has minimal impacts on local ecosystems	32%
It removes carbon dioxide from the atmosphere	27%
The community is well-informed about it	25%
The community plays an important role in shaping it	19%
It is more natural than industrial	18%
It doesn't take up much land	10%
It is in a new or up-and-coming industry	6%
It doesn't ruin my views	6%
None of these	
Other	

DATA FOR **PROGRESS**

After reading that a growing number of communities are engaging directly with developers to negotiate tangible benefits that may come from development projects, like local hiring commitments or funding for community programs, respondents express strong preferences for local groups to engage in the negotiation process with developers over prospective development projects in their community. When asked which groups they'd want to be involved in negotiating agreements on their behalf with developers of a proposed new infrastructure project in their community, Californians most want community leaders (73%), environmental groups (69%), public, nonprofit organizations (66%), small business owners (65%), local government leaders (64%), local educational institutions (59%), and labor organizations and unions (54%) to negotiate on their behalf.

Californians Most Want Community Leaders and Environmental Groups to Negotiate Agreements on Their Behalf for New, Proposed Infrastructure Projects

Some groups have proposed allowing communities to negotiate agreements with developers of new infrastructure projects in order to receive benefits from the project, like local hiring commitments or funding for community programs.

If a new infrastructure project was being considered in your community, would you want or not want each of the following groups to negotiate with developers on **behalf of your community**?
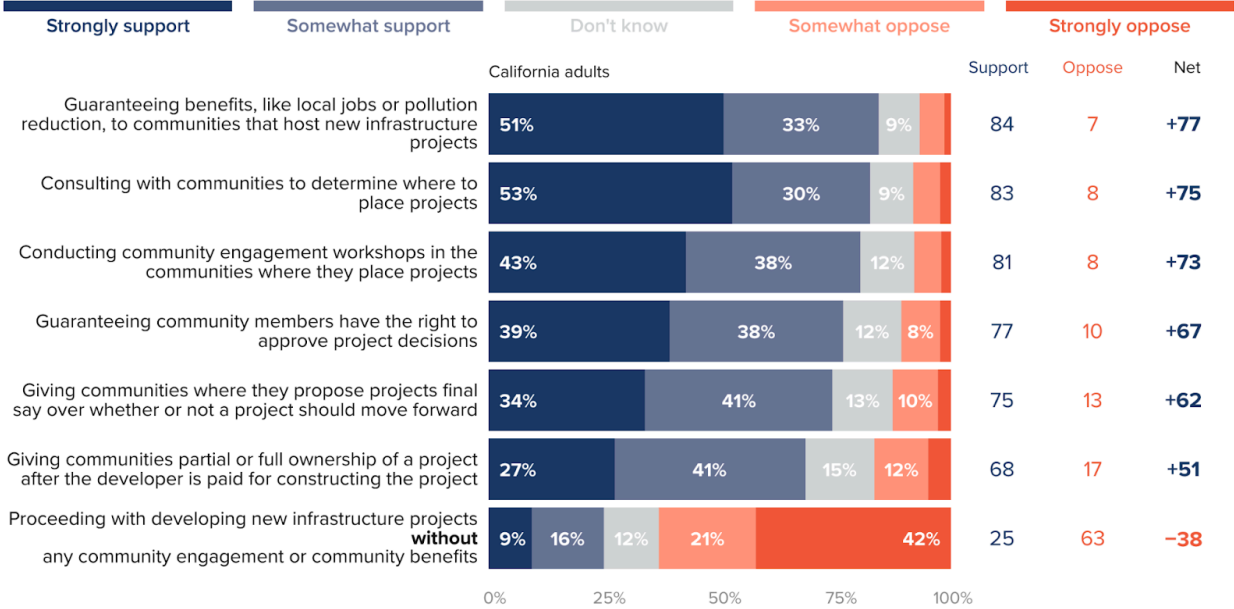
	I would want this group to be involved	Don't know	I would not want this group to be involved

California adults

Group	Want	Don't know	Not want
Community leaders	73%	12%	14%
Environmental groups	69%	14%	16%
Public, non-profit organizations	66%	18%	16%
Small business owners	65%	14%	20%
Local government leaders	64%	13%	23%
Local educational institutions	59%	16%	25%
Labor organizations and unions	54%	17%	29%
School boards	37%	24%	39%
Racial justice organizations	35%	24%	41%
Faith groups	27%	22%	50%

0%   25%   50%   75%   100%

DATA FOR **PROGRESS**

Throughout the workshops, participants shared strong enthusiasm for robust community engagement and involvement in development projects, as well as ambitious plans about what these projects could deliver to local communities. To address more specific goals for new climate infrastructure in their community, majorities of Californians support project developers guaranteeing benefits, like local jobs, to host communities (84%), consulting with communities to determine where to place projects (83%), conducting community engagement workshops in the communities where they place projects (81%), guaranteeing community members have the right to approve project decisions (77%), giving communities a say over whether or not a project should move forward (75%), and giving communities full or partial ownership of a project after a developer is paid for constructing the project (68%).

Californians Most Want Project Developers to Guarantee Community Benefits, Consult Communities When Selecting a Site, and Conduct Community Engagement Workshops on Projects

When thinking about how communities should be involved in the construction of new infrastructure projects, would you support or oppose **project developers** doing each of the following actions:
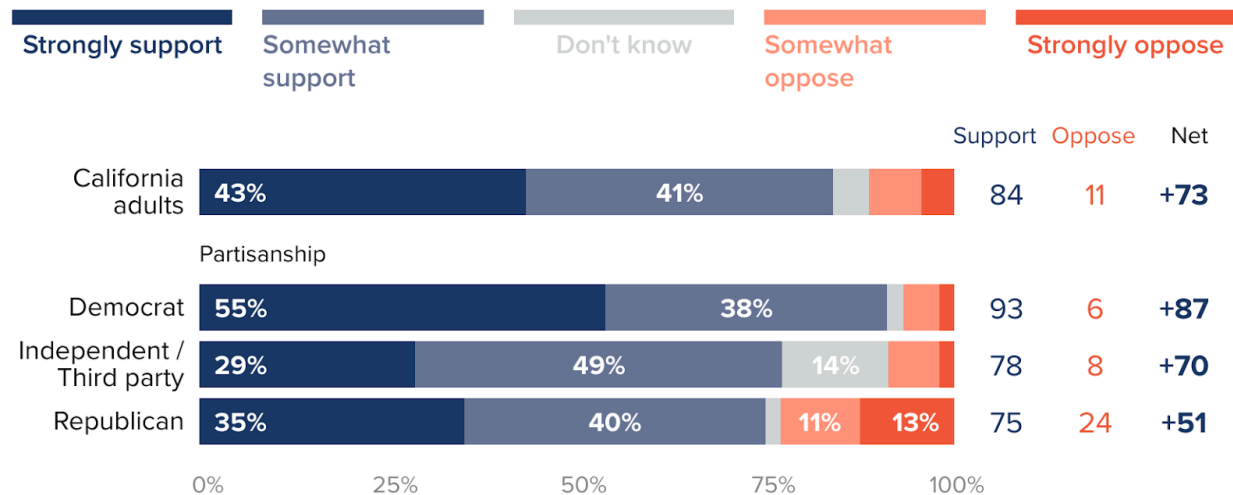
After this section, respondents read a passage offering more background on carbon dioxide removal technologies before being asked a series of questions focused on these technologies. Upon reading this passage, a majority of Californians (84%) say they support building carbon dioxide removal projects in the state, including majorities of Democrats (93%), Independents (78%), and Republicans (75%).

A Majority of Californians Support Building Carbon Dioxide Removal Projects in the State

Carbon dioxide is a pollutant that contributes to climate change and is created during oil, gas, and coal production.

New technologies and practices are able to remove carbon dioxide emissions from the atmosphere.

Would you support or oppose California allowing these carbon dioxide removal projects to be built in the state?

	Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose

		Support	Oppose	Net
California adults	43% / 41%	84	11	**+73**
Partisanship				
Democrat	55% / 38%	93	6	**+87**
Independent / Third party	29% / 49% / 14%	78	8	**+70**
Republican	35% / 40% / 11% / 13%	75	24	**+51**

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DATA FOR **PROGRESS**

Respondents then read a series of statements describing the role that the fossil fuel industry and the government could play in the implementation of carbon removal practices and technologies. A majority of Californians (66%) agree with a statement claiming that fossil fuel companies should be required to pay for CDR projects because their industry created excess carbon pollution in the atmosphere and lied about it for decades. A majority (66%) also agree with a statement saying, "We should leverage the experience that fossil fuel companies might have about removing carbon dioxide from the atmosphere. But, we should first make these companies be publicly owned, to ensure that the people can decide how or if they contribute to CDR."
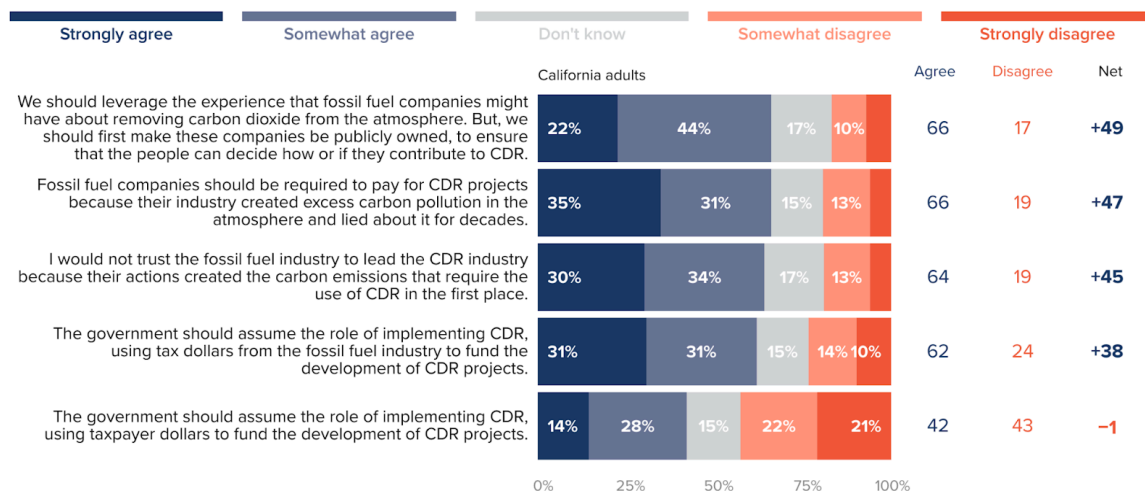
A majority of respondents (64%) also express distrust of the fossil fuel industry playing any role in CDR development, agreeing with a statement saying, "I would not trust the fossil fuel industry to lead the CDR industry because their actions created the carbon emissions that require the use of CDR in the first place."

Respondents read two similar statements about the role of the government in implementing CDR, one mentioning using tax dollars from the fossil fuel industry, and the other mentioning taxpayer dollars more generally. A majority agree with the statement focused on using fossil fuel tax dollars to fund federal implementation of CDR (62%), while a plurality disagree with the statement focused on taxpayer dollars more generally (42% agree, a -1-point margin), suggesting that appetites for carbon removal may be contingent upon who bears the costs of implementing these technologies.

Around Two-Thirds of Voters Agree That Fossil Fuel Companies Should Be Publicly Owned to Leverage Expertise That Could Be Used for CDR, And Required to Pay Directly for CDR Projects

Carbon dioxide removal (CDR) refers to a range of industrial facilities and practices that can remove past emissions of carbon dioxide from the atmosphere

For each of the following statements about the role different groups could play in implementing CDR, please say whether you agree or disagree:

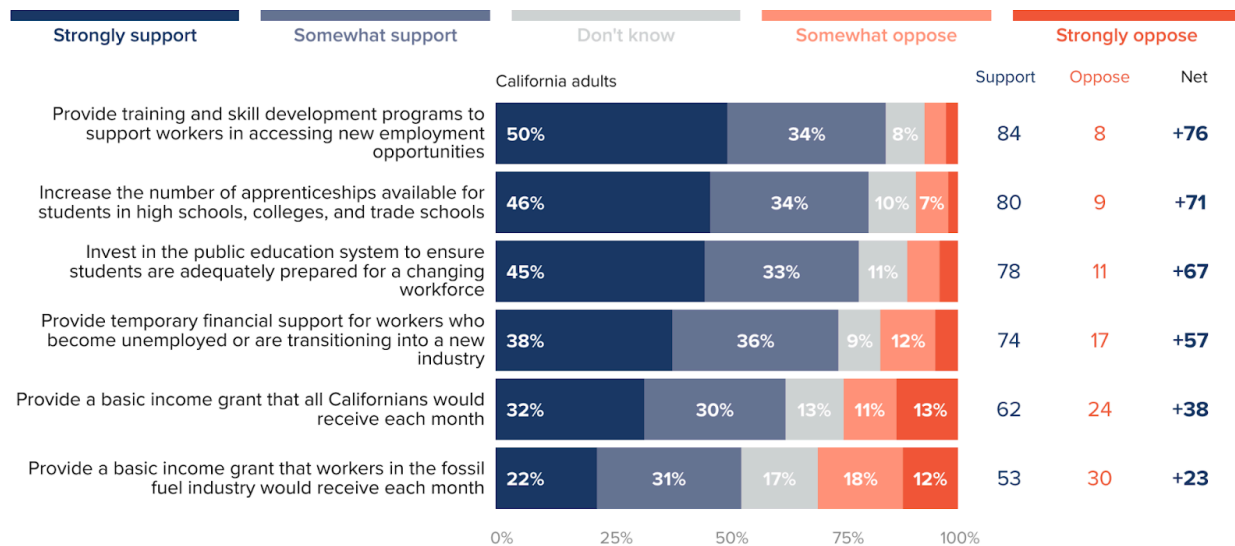|	Strongly agree	Somewhat agree	Don't know	Somewhat disagree	Strongly disagree	Agree	Disagree	Net
We should leverage the experience that fossil fuel companies might have about removing carbon dioxide from the atmosphere. But, we should first make these companies be publicly owned, to ensure that the people can decide how or if they contribute to CDR.	22%	44%	17%	10%		66	17	+49
Fossil fuel companies should be required to pay for CDR projects because their industry created excess carbon pollution in the atmosphere and lied about it for decades.	35%	31%	15%	13%		66	19	+47
I would not trust the fossil fuel industry to lead the CDR industry because their actions created the carbon emissions that require the use of CDR in the first place.	30%	34%	17%	13%		64	19	+45
The government should assume the role of implementing CDR, using tax dollars from the fossil fuel industry to fund the development of CDR projects.	31%	31%	15%	14%	10%	62	24	+38
The government should assume the role of implementing CDR, using taxpayer dollars to fund the development of CDR projects.	14%	28%	15%	22%	21%	42	43	−1

0%   25%   50%   75%   100%

DATA FOR **PROGRESS**

Beyond policies around CDR, respondents were also asked about policies to aid in the broader transition away from fossil fuel energy that could address potential employment and income impacts of such a transition. A majority of Californians support all policies listed, with strong support in particular for providing training and skill development projects to workers accessing new employment opportunities (84%), increasing the number of apprenticeships available for students in high schools, colleges, and trade schools (80%), investing in the public education system to ensure students are adequately prepared for a changing workforce (78%), and providing temporary financial support for workers who become unemployed or transition into new industries (74%).

In the Transition Away From Fossil Fuels, Californians Most Support Expanding Job Training and Apprenticeship Programs and Investing in Public Education Systems to Prepare for a Changing Workforce

Transitioning away from the use of fossil fuel energy to reduce the impacts of climate change may affect employment opportunities and income while the economy adjusts to changing energy resource usage.

Do you support or oppose lawmakers adopting the following policies to address these potential employment and income impacts?

Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose

California adults

	Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose	Support	Oppose	Net
Provide training and skill development programs to support workers in accessing new employment opportunities	50%	34%	8%			84	8	+76
Increase the number of apprenticeships available for students in high schools, colleges, and trade schools	46%	34%	10%	7%		80	9	+71
Invest in the public education system to ensure students are adequately prepared for a changing workforce	45%	33%	11%			78	11	+67
Provide temporary financial support for workers who become unemployed or are transitioning into a new industry	38%	36%	9%	12%		74	17	+57
Provide a basic income grant that all Californians would receive each month	32%	30%	13%	11%	13%	62	24	+38
Provide a basic income grant that workers in the fossil fuel industry would receive each month	22%	31%	17%	18%	12%	53	30	+23

0%   25%   50%   75%   100%

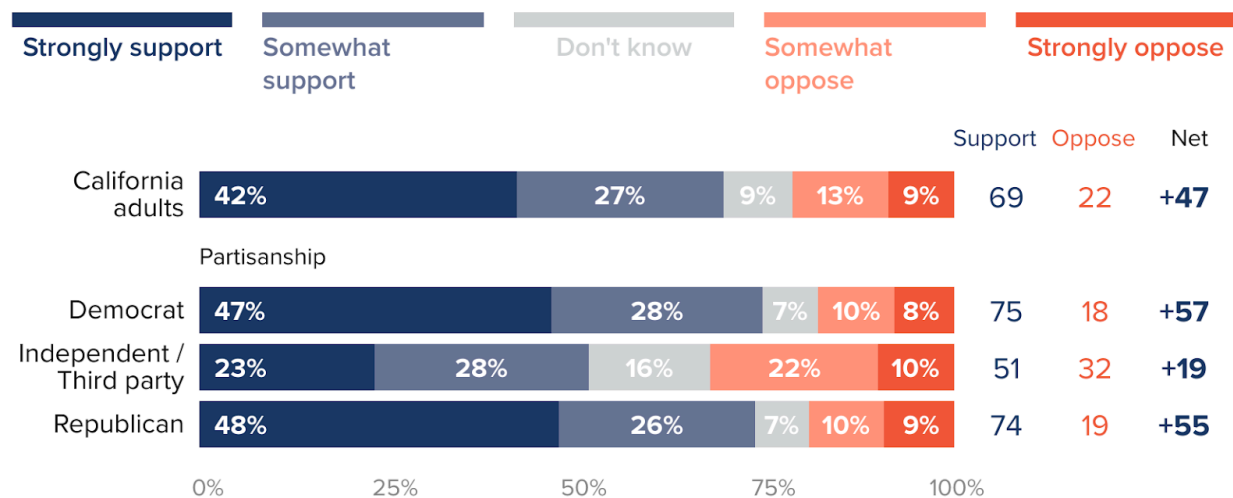April 24-May 1, 2024 survey of 654 California adults

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Given the frequency with which California utility providers came up during the workshop discussions in all sites, the survey closed with a few questions about utility companies and policy. When informed that utility providers often use money collected from customers' monthly bills to fund their political activities, including lobbying, a bipartisan majority of Californians (69%) support state legislation to prevent utility providers from using money collected from customers' monthly bills to fund political activities.

A Bipartisan Majority of Californians Support Preventing Utility Providers From Using Money Collected From Customers' Monthly Bills to Fund Political Activities

Utility providers often use money collected from customers' monthly bills to fund their political activities, including lobbying, advertisements, and trade association membership dues.

Some lawmakers in California are considering legislation to prevent utility providers from using money collected from customers' monthly bills to fund political activities.

Do you support or oppose lawmakers adopting this policy?

	Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose	Support	Oppose	Net
California adults	42%	27%	9%	13%	9%	69	22	+47
Partisanship								
Democrat	47%	28%	7%	10%	8%	75	18	+57
Independent / Third party	23%	28%	16%	22%	10%	51	32	+19
Republican	48%	26%	7%	10%	9%	74	19	+55

0%   25%   50%   75%   100%

April 24-May 1, 2024 survey of 654 California adults

DATA FOR **PROGRESS**

Next, as workshop participants in several sites mentioned during discussion, respondents read that after California's 2018 Paradise wildfire, which resulted in up to $30 billion in economic losses and 85 fatalities, an investigation determined a power line owned by Pacific Gas and Electric Co. (PG&E) started the fire. Respondents also read that the costs led PG&E to file for bankruptcy in 2019, with the state of California ultimately bailing out PG&E and allowing it to continue to operate as a private utility, leading to proposals for the state government to take control of the company as a public utility. After learning this information, more than two-thirds (69%) of respondents support California lawmakers adopting legislation to have the California Public Utilities Commission take control of PG&E, making it a publicly owned utility operated by the state of California.

Over Two-Thirds of Californians Support Making Pacific Gas & Electric Co. Publicly Owned

After the 2018 Paradise wildfire, an investigation determined a powerline owned by Pacific Gas & Electric Co. (PG&E) started the fire when the line was downed during a windstorm, resulting in up to $30 billion in economic losses and 85 fatalities.

The costs led PG&E to file for bankruptcy in 2019, and ultimately the State of California bailed PG&E out to allow it to continue to operate as a private utility.

Because of this and other cases of PG&E mismanaging energy production and distribution, some lawmakers in California are considering legislation to have the California Public Utilities Commission take control of PG&E, making it a publicly owned utility operated by the State of California.

Do you support or oppose lawmakers adopting this policy?

	Strongly support	Somewhat support	Don't know	Somewhat oppose	Strongly oppose	Support	Oppose	Net
California adults	31%	38%	9%	14%	8%	69	22	**+47**
Partisanship								
Democrat	41%	37%		11%		78	15	**+63**
Independent / Third party	19%	42%	20%	14%		61	19	**+42**
Republican	23%	38%		17%	16%	61	33	**+28**
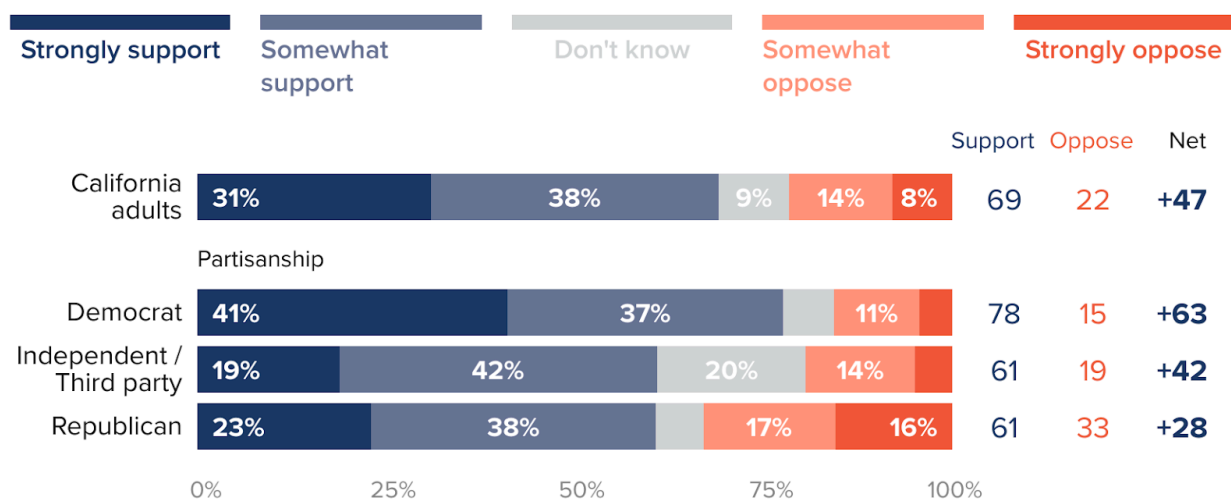
DATA FOR **PROGRESS**

These findings echo the strong sentiments of dislike and mistrust of utility companies across all workshops, particularly for mismanaging transmission lines and other infrastructure, leading to deadly and costly wildfires, and charging customers steep rates for energy despite also presiding over rolling brownouts.

Building Community-Driven Climate Infrastructure in California

In light of the findings from our workshops and survey in California, we offer a series of recommendations to build community-driven and equitable climate infrastructure in the state, including suggestions for how to leverage existing federal and state funding opportunities toward this end.

- ***Build trust by embedding community co-creation, oversight, and potential for co-ownership:*** Climate infrastructure can and must be regulated and governed as a public good to meet climate goals — where communities and workers have the opportunity to own and co-create projects to maximize the benefits presented by this suite of technologies. In particular, climate infrastructure projects in areas already overburdened by extractive industries and high historic pollution burdens, like Visalia and Palmdale, should be premised on community co-creation and partial or full ownership, community pollution reduction, rigorous data transparency, and the right to refuse projects. In many communities historically overburdened by industry, local government officials and even state agency oversight of local industrial activities have been captured by industry interests. Where communities have experienced industry capture, they may not trust government officials to be partners in new projects, and public projects seeking to build community buy-in should involve trusted community leaders, like community members, civic society leaders, or workers. In addition to distrusting government actors, participants at several sites could not point to local institutions or organizations that they trusted to carry out a project or represent their interests, further stressing a need for direct and representative democracy in project development where trust is low, such as through an elected community board that oversees project operations.

  California's [Transformative Climate Communities](#) (TCC) Program is one program that could enable communities to craft projects in their vision with the potential for community ownership. TCC is a powerful initiative aimed at fostering community-led and created transformations to achieve sustainability across the state's most disadvantaged communities. Established by Assembly Bill 2722, the program focuses on funding the development and implementation of neighborhood-level plans. These plans include multiple coordinated projects aimed at reducing greenhouse gas emissions while also delivering local economic, environmental, and health benefits.

The TCC Program is unique in its approach, empowering communities most affected by pollution to define their own objectives, strategies, and projects. This community-driven methodology ensures that the projects align with the specific needs and goals of the communities, emphasizing reductions in greenhouse gas emissions and local air pollution. The program funds a range of development and infrastructure projects, integrating various project types to foster transformative change at the neighborhood level.

- ***Address high costs, regulatory failures, and mismanagement of California's utilities:*** Across all five sites, participants reported high utility prices, service outages during brownouts or blackouts, and mistrust of utility companies, who many perceive to work for the benefit of the shareholders, not the public. Many also cited utility mismanagement of transmission lines and other infrastructure as a key driver of wildfires in the state. As a result, new climate infrastructure projects must work to address these shortcomings by working to cap utility bill prices and ultimately deliver savings on those bills and preventing mismanagement of projects, like transmission lines.

  Notably, California has already proposed some reforms to address these issues. In March, California's Public Utilities Commission (PUC) tabled a proposed plan which would've required California utilities to charge customers based on income, instead proposing to charge utility customers fixed rates. The PUC's initial proposal sought to address the higher energy burdens faced by low-income communities and communities of color — who spend a larger portion of their income on energy than other groups — with an equitable pricing scheme. Though the PUC's plan is tabled for now, such equity-driven pricing programs can be a model for helping to reduce energy burden inequities in California.

  Beyond reforms to pricing mechanisms, activists across the state have proposed more sweeping changes, including bringing private utilities, like PG&E, under public control. From San Diego to San Francisco, policymakers and advocates are working to claim ownership over their utilities, arguing that — by eliminating shareholders and profit motives and giving citizens a direct say over decision-making — public utilities can better serve the needs of local communities. Publicly owned utilities, while not perfect, can offer California communities better avenues for embedding democracy, advancing climate action, and ensuring energy affordability and reliability across the state.

- ***Establish a role for public, Tribal and community leadership in climate infrastructure:*** Participants across all five sites expressed a hope that their community would play an active role in shaping, and potentially owning, new climate infrastructure projects. In Eureka, participants especially underscored a need for deep, meaningful Tribal engagement and leadership.

However, much of climate infrastructure development and deployment has been rooted in the assumption that the private sector will lead the implementation of such technologies. Rather than hand the reins to the private sector, whose profit motives do not always align with meaningful climate progress, we call for clearly establishing the roles of federal and state governments, individual communities, and workers in determining the scope of climate infrastructure projects and claiming ownership in the production and execution of individual projects. We strongly believe that public and cooperative ownership structures that put communities or workers in charge offer greater avenues to embed equity, responsibility, and justice into projects. Community- or worker-owned climate infrastructure projects would enable communities and workers to self-determine the terms and conditions for a project and its potential community and labor benefits, while leveraging the expertise of private sector technical experts. Moreover, in addition to meaningfully consulting Tribal groups, we urge government, policymakers, and other stakeholders to make special efforts to facilitate Tribal leadership in and ownership of climate infrastructure projects.

For example, a public climate infrastructure project could be run by an elected board of community members and workers, and funded by a tax or fee on historically pollutive industries. That board could facilitate community determination of a project's scope, location, and specific benefits, and partner with local unions to set the terms for workers employed on the project. Profits made could then be used to target existing community needs and fund community projects, like job training programs, after-school programming, and conservation projects. Others have laid out a vision for carbon management owned by cities and municipalities, where projects operate like other public infrastructure, including water treatment facilities. In this model, citizens could inform a project through local referendums and elections. There is a role, of course, for the private sector, but we strongly encourage defining the private sector's role as technology licensors rather than as top-down decision-makers in the industry.

- ***Ensure climate infrastructure projects are sensitive to place-based concerns and needs:*** Participants across all five sites highlighted the diverse and complex histories and place-based concerns of the communities in which they work, live, and play. Community engagement, attitudes, and leadership on climate infrastructure must be sensitive to the differing needs and histories of communities. For example, according to Visalia participants, a place-based project could invest in access to transportation for workers or bolster the area's affordable housing stock, thus addressing pressing community needs through a project.

  The EPA's Inflation Reduction Act Community Change Grants program could be leveraged for place-based, community-led climate initiatives and investments. Allotted about $2 million by the IRA, the Community Change Grants program funds projects driven by community-based organizations (CBOs) that aim to reduce pollution, increase climate

resilience, and bolster the ability of disadvantaged communities to address ongoing climate and environmental justice challenges. California communities and CBOs can and should leverage such funds to build community-driven and place-based climate infrastructure projects that address local needs.

- ***Establish guardrails for fossil fuel-led climate infrastructure:*** New climate infrastructure, and, in particular, CDR technologies cannot avoid the issue of the fossil fuel industry, which has knowingly led society into the climate crisis and necessitated the creation of carbon management technologies in the first place. As we and 16 other climate and environmental justice organizations pointed out in our letter to U.S. Energy Secretary Jennifer Granholm, the carbon management industry, and particularly DAC, is potentially on a dangerous road to capture by the fossil fuel industry. Without strong governance structures, the carbon management industry especially risks further entrenching environmental injustices and contributing to industry greenwashing.

    Climate technologies must be deployed alongside plans to fully phase out dirty industries. Responsible climate policy requires the simultaneous elimination of the industries that have knowingly driven the climate crisis while delaying mitigation strategies, ultimately necessitating these clean energy and carbon management technologies.

- ***Alleviate cumulative impacts in overburdened communities:*** Of the five sites studied, Visalia and Palmdale stand out for the cumulative burden of air and water pollution they face. Located in California's Central Valley, these communities face some of the worst air quality in the nation, as well as water pollution from the agriculture and aerospace industries. On top of these threats, Valley fever is common in the region, with risks of the disease compounding if soil is disturbed in the region — a disruption common with construction.

    Despite being only one of several air pollutants emitted by industry, carbon dioxide has been the focus of carbon management and greenhouse gas management technologies, often to the exclusion of gasses that impact human health at local scales, and that are actively impacting communities in Palmdale and Visalia. Deployment of CDR technologies must require and independently validate estimates of co-pollutants from CDR projects. In communities already overburdened by pollution, projects must define and respond to cumulative impacts of existing polluting infrastructure and proposed new projects. Beyond considering cumulative impacts, projects should work to actively reduce cumulative impacts in already overburdened communities, so new projects don't further endanger communities like Palmdale and Visalia.

    The EPA's Brownfields Program is one federal funding opportunity that can help communities assess and clean up brownfields, environmentally contaminated sites previously home to industrial or commercial development. Grants from the Brownfields

Program can help communities clean up polluted sites and establish areas for future climate infrastructure development, while reducing existing pollution burdens. Beyond just cleaning up old sites, such funding opportunities can help California communities alleviate future pollution and climate burdens through investments in climate-positive infrastructure.

- ***Build the unionized, local, and diverse workforce of the future:*** Across all sites, participants identified jobs as a potential benefit of new climate infrastructure projects, with all sites (except Palo Alto) expressing excitement at local, long-term, well-paying jobs with wraparound benefits and job pathways with training programs that bring new workers, especially young people, into the workforce. As such, new projects should include project labor agreements (PLAs), which are overwhelmingly popular — with 76% percent of voters in support of using PLAs on development projects. Developers can earn community trust by signing binding PLAs or other agreements that guarantee the quantity, quality, and conditions of jobs on a project. Projects should aim first to develop PLAs with unions before considering nonunion workers. Wraparound benefits for workers may include health care, PTO, parental leave, transportation allowances, and more. For nonunion shops, wages and conditions should match union wages, and standards and workers must have a free and fair chance to join a union, with employers signing union neutrality agreements.

  Moreover, projects should prioritize jobs for local workers, people from traditionally underserved communities, and workers traditionally underrepresented in climate and other infrastructure projects, including women, low-income people, and BIPOC communities. In a previous national voters survey, Data for Progress found that the inclusion of local hiring commitments and funding for job training programs within community benefits agreements are broadly popular.

  Finally, projects should invest in job training and workforce development, creating pathways to careers in climate infrastructure, including for fossil fuel workers and workers without a college degree. Apprenticeships and pre-apprenticeship programs, like those that begin in high school, should be leveraged to bring low-income people, people of color, women, people without college degrees, and other traditionally underrepresented groups into the workforce. For example, the recently launched American Climate Corps (ACC) is partnering with the North America's Building Trades Unions' nonprofit partner, TradesFutures, to give ACC members access to TradesFutures' apprenticeship program curricula. The program will enable ACC members to gain technical skills in the emerging clean energy and climate resilience economy, while creating pathways to union jobs once their service term is completed.

- **Make community benefits plans and agreements public, transparent, and legally binding:** Many participants were distrustful of private project developers, and were cautious to accept potential promises made by developers on face, stressing the importance of properly documenting and enforcing any community benefits agreed upon by a developer. Like our participants, national voters largely agree that project agreements must include tools to enforce them. For projects receiving federal funds, DOE should encourage developers to make any project agreements, like community benefit plans (CBPs) and community benefits agreements (CBAs), public in full. Transparency will be essential to hold developers accountable for commitments made during the application process. It will be impossible for either to occur if CBPs are not transparent and available for comment from community members and organizations.

- **Prioritize equity- and consent-based siting practices:** Participants across all sites voiced a desire for their community to have a voice in the scoping and siting of a potential project. Communities should have the final say in what projects happen in the community, with the right to reject climate infrastructure projects outright if a project is deemed incompatible with their needs, even if a project proposal promises significant economic or labor benefits. Just development projects must give communities the final say, given legacies of discriminatory policies and siting practices. In a previous national poll, Data for Progress found that more than three-quarters of voters favor policies that give communities the right to refuse projects. Project developers, policymakers, and other stakeholders should incorporate consent-based siting practices when siting projects, using programs like DOE's Consent-Based Siting for Spent Nuclear Fuel as a model for such engagement.

  Importantly, equity-based siting practices and robust community consultation could encourage climate infrastructure development in communities that have traditionally avoided infrastructure development. One study found that rich, white communities were much more likely to oppose wind energy projects, exemplified by the NIMBY attitudes voiced by the Palo Alto participants in our workshops who came from a community significantly more well-off and privileged than the participants at any of our other workshops. Researchers term this phenomenon "energy privilege," where opposition and cancellation of climate infrastructure projects in wealthier, white communities entrenches historic practices of concentrating polluting and industrial projects in low-income communities and communities of color.

  As a result, communities, climate infrastructure developers, lawmakers, and other stakeholders must consider historic infrastructure burden and relative privilege in siting and deploying projects. Early community consultation can help mitigate NIMBY attitudes and backlash to climate development in areas most able to fight new development projects. Climate and restorative justice demands that we work to equitably site new infrastructure projects to not just *maximize local benefits*, like jobs, but also *minimize*

cumulative burdens in long-overburdened communities – which may demand that communities like Palo Alto take on new climate infrastructure projects instead of communities in California's Central Valley that long have been forced to accommodate new industries and infrastructure.

Conclusion

Workshops in five California communities and a statewide survey demonstrate diverse perspectives on climate infrastructure, highlighting the complex interplay between environmental action and community values — and the need to link the two. These findings underscore the critical importance of embedding community voices in the planning and implementation phases of climate projects. Trust, transparency, and genuine participatory processes emerge as nonnegotiable pillars for aligning projects with the unique cultural, historical, and environmental fabrics of communities. This approach not only can help secure community buy-in but also leverage local knowledge to mitigate risks and amplify benefits, ensuring that infrastructure developments address the needs of those they are intended to serve.

These findings point to climate action that prioritizes the co-creation of projects with communities and seeks to distribute the economic and environmental benefits equitably. Such a strategy acknowledges the diverse needs and aspirations across communities, aiming to revitalize local economies while respecting and preserving local identities. Rather than focusing on solely reducing emissions, policymakers should approach climate infrastructure in the context of economic and public health opportunities they present communities, and ensure that projects do not just land in communities but grow with them. This perspective is especially crucial in areas historically burdened by pollution and economic neglect, where climate infrastructure can serve as a catalyst for transformative change.

Ultimately, this work points toward a future where climate infrastructure acts as a bridge to a more sustainable *and* equitable world — the dual focus of the Green New Deal. By emphasizing community ownership, leadership, and empowerment, we pave the way for projects that are not only environmentally sound but also socially just. This means moving beyond traditional, top-down approaches to development, and instead championing initiatives that are conceived of and led by communities themselves. Such an inclusive model promises not only to address the pressing challenges of climate change, but to do so in a way that heals, unites, and uplifts communities across California and beyond.

Appendix

Appendix A: Workshop Methodology

Following site selection for each workshop, workshop venues were selected in consultation with local and state partners. Venues were prioritized for their size, technological capabilities, proximity to the city center, and cultural significance to the community. Each workshop was held in a local school or university, community recreational space, or conference center.

Workshop participants were recruited via local recruitment firms in each locality, which prioritized recruiting a demographically representative subset of each community. Data for Progress wrote a screener to ensure representative demography across factors such as race, gender, and income. Each workshop consisted of between 18-22 participants.

Workshop participants were compensated for their time and expertise, at $125 per hour, amounting to $375 per attendee. In addition to the labor contributed to the workshop, this compensation was intended to cover transportation, gas, child care, and parking. Participants were also provided with lunch or dinner and refreshments throughout the duration of the workshop.

The community workshops were three hours in length and consisted of the following format:

- Section 1: Introductions and Pre-Workshop Survey (15 minutes): Participants each introduced themselves and completed a pre-workshop survey, which served as a baseline to assess each participant's understanding of and support for climate infrastructure.
- Section 2: Presentation About Climate Infrastructure (30 minutes): The Data for Progress team gave high-level background information on climate infrastructure. Technologies discussed included: solar energy, wind energy, nuclear energy, geothermal energy, transmission lines, battery storage, direct air capture, biomass with carbon removal and storage, enhanced rock weathering, and ocean alkalinity enhancement.
- Meal and Q&A (30 minutes): Participants were provided with a meal and the opportunity to ask technical questions about the climate infrastructure presented.
- Section 3: Group Discussions (1 hour, 25 minutes): Participants were divided into small groups (4-6 participants per group) to discuss the ideal configuration of, and location for, climate infrastructure in their community (if any). Groups also discussed prospective provisions for community benefits agreements for climate infrastructure projects in their area.
- Section 4: Synthesis and Post-Workshop Survey (10 minutes): The Data for Progress team synthesized and verbally confirmed points of discussion raised during small-group

discussions. Workshop participants completed a post-workshop survey to track differences in initial perceptions of climate infrastructure, and the overall shift post-discussion. Participants were provided with contact information to follow up with additional questions and comments.

For the duration of each workshop, participants shared insights on the need to engage communities early and often in order to ensure equitable development of climate infrastructure projects, as well as local benefits. Perspectives on how specifically to deploy these projects, and whether they should be deployed in the first place, varied among the four workshop sites.

Appendix B: Survey Methodology

From April 24 to May 1, 2024, Data for Progress conducted a survey of 654 adults in California using web panel respondents. The sample was weighted to be representative of California adults by age, gender, education, race, geography, and 2020 recall vote. The survey was conducted in English. The margin of error associated with the sample size is ±4 percentage points. Results for subgroups of the sample are subject to increased margins of error. Partisanship reflected in tabulations is based on self-identified party affiliation, not partisan registration. For more information please visit https://dataforprogress.org/our-methodology.

Appendix C: Detailed Site Background

Palo Alto

Home to Stanford University and the "Birthplace of Silicon Valley," Palo Alto lies on the southeastern side of San Francisco Bay. A range of tech companies, including Google, Hewlett-Packard, Apple, Facebook, and Tesla, got their start or have their headquarters in Palo Alto. More recently, Palo Alto and Silicon Valley have seen a boom in venture capital investment in climate tech and climate tech companies, many of which are developing and deploying the very technologies discussed in our workshops. Ironically, however, Palo Alto is not often the site for the very technologies developed and invested in Palo Alto, with developers instead looking to site projects in areas where industry and infrastructure projects already exist. Given the racist, classist, and colonial legacies of infrastructure siting, areas with significant infrastructure and industry presences are often low-income and majority nonwhite.

Palo Alto, in contrast, is home to 66,000 people, around 51 percent of whom are white, 35 percent are Asian, 7 percent are Latino, and 2 percent are Black. With a median household income of $214,118, Palo Altoans have a median household income about 2.9 times higher than the average American. And Palo Alto is highly educated – with about 82 percent of residents holding a Bachelor's degree, compared to a national average of about 34 percent.

Eureka

Like Palo Alto, Eureka is a university town, hosting the recently renamed California Polytechnic (Cal Poly) Humboldt University. Workshop participants highlighted the strength of Cal Poly Humboldt's environmental science program, which informs and is informed by the high environmental awareness of the local community. Historically, the logging and timber industries have had a significant presence in the greater Humboldt County region. Today, Eureka's top industries are health care, retail, education, and hospitality.

Eureka is home to 26,000 people, around 72 percent of whom are white, 16 percent are Latino, 6 percent are Asian, 3 percent are Black, and 2 percent are American Indian or Alaska Native. Falling below the national average, the median income of Eureka is $51,971. Despite the presence of Cal Poly Humboldt, just 30 percent of Eureka residents hold a bachelor's degree.

Visalia

Visalia, California, is a rapidly growing city located in the heart of the San Joaquin Valley in Tulare County. Visalia's population of about 145,000 reflects a mix of ethnicities and backgrounds, with significant Hispanic and Latino populations. Visalia's population is 54 percent white, 53 percent Latino, 6 percent Asian, and 3 percent Black, and its median income is $75,658. The city is also known for its family-friendly atmosphere, with a relatively young median age compared with the national average.

Major industries in Visalia have historically centered around agriculture and agribusiness. The region's fertile soil and favorable climate make it a prime location for farming, and as a result, agriculture has been a cornerstone of the local economy. Visalia is renowned for its production of citrus fruits, nuts, and dairy products. Additionally, the city has seen growth in health care, education, and retail sectors over the years, contributing to economic diversification.

Like many other areas in California's Central Valley, Visalia has grappled with air quality issues due to its topographical location, surrounded by mountains that trap pollutants. High levels of particulate matter and ozone have especially been a challenge for residents. Efforts to address pollution have included the implementation of stricter emission standards and regulations to improve air quality. The city and its residents have been actively involved in initiatives to reduce pollution and promote sustainability.

Palmdale

Palmdale, California, is situated in the Antelope Valley region of Los Angeles County. Since its founding in the early 19th century, Palmdale has evolved from a small agricultural community into a thriving urban center.

Home to around 161,000 people, Palmdale is known for its diverse population, with nearly two-thirds of its population identifying as Hispanic or Latino and 12 percent as African American. Nearly double the national average, the city's median income is $78,414. The city has seen recent population growth, driven in part by its affordable housing options compared with the more expensive areas of Los Angeles County.

Palmdale has a strong connection to aerospace and defense industries. The city hosts numerous aerospace companies and facilities, including Lockheed Martin, Northrop Grumman, and NASA's Armstrong Flight Research Center. These institutions contribute significantly to the local economy and provide high-tech job opportunities for residents. Additionally, retail, health care, and education sectors also play vital roles in Palmdale's economic landscape.

Environmental quality in Palmdale has been a subject of concern due to its location in the high desert region. The city experiences hot, dry summers and relatively mild winters. Air quality has been an issue, with occasional smog and dust storms due to its proximity to the Mojave Desert. Efforts have been made to improve air quality, but challenges remain. Palmdale also faces periodic drought conditions, leading to water conservation initiatives to manage this precious resource effectively.

San Diego

San Diego, California, is a vibrant and diverse city located in the southwestern part of the United States, along the coast of the Pacific Ocean. With a rich history dating back to the early 16th century, when it was first explored by Spanish conquistadors, San Diego has grown to become the second-largest city in California and the eighth-largest in the United States.

Demographically, San Diego is a melting pot of cultures and backgrounds. The city's population of nearly 1.4 million people is incredibly diverse, with a significant Hispanic and Latino population, making up around one-third of the city's residents. Additionally, there is a substantial presence of Asian, Pacific islander, and other ethnic communities, contributing to the city's multicultural atmosphere. San Diego is also home to a large military population due to the presence of several military bases and installations in the area.

San Diego's economy is diverse and robust, with major industries that span various sectors. One of the most significant sectors is tourism, thanks to its beautiful beaches, world-renowned attractions like the San Diego Zoo and Balboa Park, and a thriving arts and culture scene. The city is a hub for defense-related industries, with several military bases, defense contractors, and research institutions. Additionally, San Diego is a leader in the health care and biotechnology sectors, and its strategic location on the U.S.-Mexico border also fosters a thriving trade and cross-border commerce industry.

In recent years, San Diego has been at the [forefront](#) of renewable energy and sustainability initiatives, further diversifying its economy. The city has made significant investments in clean technology and green industries, making it a hub for innovation and environmentally friendly practices.

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