

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

March 9, 2022
California Air Resources Board
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cc: CARB Chair Liane Randolph and CARB Board Members

There is a Better Way: Real Zero Emission Reductions

Fifteen years after the passage of Assembly Bill 32, environmental justice communities continue to wait for the realization of the promise that California's climate policy will benefit us. While some may point to the fact that California 'met' its 2020 GHG target as 'progress,' "air pollution and climate change continue to inflict disproportionate harm on Black people, Indigenous people and people of color. All clean air agencies have an obligation to focus regulatory attention on the communities that historically have borne the greatest burdens from air pollution and a changing climate, and who continue to do so today."¹ No one recognizes the urgency of our climate crisis more than frontline community residents and environmental justice advocates. The climate and health emergency must be met by bold action that focuses our efforts on direct emissions reductions. We call on the staff and board of CARB to be bold with us and chart a path for real zero emissions in the scoping plan.

Preliminary, Pre-modeling EJAC Recommendations

In 2008, then EJAC chair Angela Johnson Meszaros stated that there is a better way to reach emissions reductions. Here we are again with the same message. These EJAC recommendations offer a better path to reaching emissions reductions in multiple sectors that align with the mission of AB 32 – a path that focuses on direct emissions reductions and bringing in new sectors like Pesticides into the discussion on how we address climate change.

We are in a critical moment that many are calling a climate and health emergency. We recognize that we face an even greater imminent threat: environmental racism. This moment requires bold action and a commitment to do the hard thing of centering environmental justice solutions. This path moves us away from notions like 'net zero' and carbon negative and moving aggressively with actual 'real zero' direct emissions reductions. These preliminary recommendations represent the deep need in our communities to breathe clean air – we call on CARB to invest in an equitable and just transition now and refocus the scoping plan on meeting real zero targets.

Our recommendations focus on substantive measures to reduce emissions, and also speak to our equity and health concerns related to CARB's modeling approach that does not factor in the full social costs of carbon. Nor does it take into consideration a life cycle assessment of the technologies presented in its plan.

The scenarios presented to the EJAC by CARB staff thus far do not represent justice-based approaches to protecting the most burdened communities. **The EJAC's preliminary recommendations provide tangible and concrete strategies for the state to achieve a *total* state greenhouse gas emissions reduction of 83.3% (not including the industrial sector)**

¹ National Association of Clean Air Agencies. "Improving Our Nation's Clean Air Program: Recommendations from the National Association of Clean Air Agencies to President-Elect Biden's and Vice President-Elect Harris' Administration." January 15, 2021.

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

through immediate direct emissions reductions at the sources of pollution.² As the recent Working Group II contribution to the IPCC Sixth Assessment Report³ makes clear, there is no time for delay.

We call on CARB to collaborate with the EJAC to take a systemic approach to address the systemic problems EJ communities face in addressing the climate crisis. CARB must be bold in the use of its authority, and convene key state agencies and community stakeholders to implement an equitable and just transition. CARB cannot and should not attempt to do it alone.

We have some fundamental issues with the approach in this Scoping Plan, given the reliance on economic modeling that marginalizes health and equity concerns. This continues to put the interests of the fossil-fuel industry over the needs of communities and workers for clean air and high road jobs. The environmental justice movement has long discussed and called for a “regenerative economy” that seeks to undo the harm done by the current “extractive economy.”⁴ A healthy community and healthy economy will require visionary and bold leadership that is beyond the scope of the current modeling tools. The EJAC offers CARB a path for finding an equitable Just Transition.⁵

Because of the limited timeline CARB provided for this process, the EJAC has approved these recommendations with many caveats: (1) the need to conduct community engagement and consultation, (2) further discussion needed by EJAC members, and (3) developing a process to ensure Indigenous communities and Tribes have the opportunity to engage. The EJAC is still in the community engagement phase and determining ways to address the challenges and failures by CARB to engage Indigenous communities. The EJAC will continue to work to strengthen and ground-truth these recommendations and integrate voices that have been excluded through robust community engagement.

Procedural Concerns

The EJAC continues to have concerns about the overall Scoping Plan process. The structure that CARB staff have presented for the 2022 Scoping Plan continues to be part of a ‘decide, announce, and defend’ approach to policy making. This approach is antithetical to cooperation and meaningful engagement of environmental justice principles from policy inception to evaluation, including in the rulemaking and evaluation phase. CARB has failed to incorporate past EJAC recommendations, including evaluation of previous Scoping Plan measures. Therefore, a robust public health

² Letter to CARB & EJAC dated February 25, 2022 “RE: Environmental Justice Recommendations and Framework for CARB Scoping Plan.” https://ww2.arb.ca.gov/sites/default/files/2022-02/Letter%20to%20EJAC%20re%20framework%20%26%20substance%20for%20SP%20reccs%20to%20CARB%20-%202022_25_22.pdf

³ IPCC, 2022: *Climate Change 2022: Impacts, Adaptation, and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press. <https://www.ipcc.ch/report/ar6/wg2/>

⁴ “From Banks and Tanks to Cooperation and Caring: A Strategic Framework for a Just Transition” Movement Generation Justice and Ecology Project. Accessible at [A Strategic Framework for a Just Transition](#). Pages 7-9.

⁵ “A Program For Economic Recovery and Clean Energy Transition in California” By Robert Pollin, Jeannette Wicks-Lim, Shouvik Chakraborty, Caitlin Kline, and Gregor Semieniuk. Department of Economics and Political Economy Research Institute (PERI), University of Massachusetts-Amherst. June 2021. [A PROGRAM FOR ECONOMIC RECOVERY AND CLEAN ENERGY TRANSITION IN CALIFORNIA](#).

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

and equity analysis is needed. CARB should engage a third party to objectively assess the impacts of previous Scoping Plans' implementation, both in terms of the benefits and burdens for impacted communities.

The EJAC continues to feel the pressure of CARB's unrealistic timeline. EJAC members still have not yet received the resources that we need to do our own technical assistance. Community engagement is being sacrificed to meet CARB's timeline. For example, until the last EJAC meeting, the EJAC has never had Indigenous representation. Community concerns about the lack of Language Justice principles and practices by CARB, as well as practices enabling the equitable participation of people with disabilities have also been raised.

Inadequacies of Modeling and the Lack of Modeling Results Data to Inform Recommendations

The Natural and Working Lands sector is being modeled separately from the other sectors. It is unclear how the distinct models fit together and what the implications could be for environmental justice and Tribal communities. Furthermore, both for the PATHWAYS and the Natural and Working Lands models, the lack of geographic specificity and granularity continue to be a huge challenge for our ability to adequately evaluate the various proposed scenarios' potential impacts.

There is a Better Way

CARB's overall approach represents a business-as-usual approach that extends the life of fossil fuel extraction in ways that are inconsistent with the goals of AB 32 and AB 197. The EJAC co-chairs continue to have grave concerns that without significant course correction this Scoping Plan will fail to fulfill its promise to the environmental justice communities. The following EJAC recommendations represent a better pathway for reaching the deep emissions reductions the science tells us we need and the deep transformation communities and workers need for an equitable and just transition.

In the spirit of collaboration,

Martha Dina-Argüello, EJAC Co-Chair, Physicians for Social Responsibility-Los Angeles

Sharifa Taylor, EJAC Co-Chair, Communities for a Better Environment

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Non-Fossil Fuel Energy Generation	
<i>“CARB should” is implied at the start of every recommendation.</i>	
Overarching	
NF1	Prioritize programs reducing energy use and energy efficiency programs because they produce the “cleanest,” lowest emissions energy. Because energy efficiency programs are de facto “local” programs, they increase equity in energy access by reducing utility bills and creating local workforce development opportunities.
NF2	Support local non-fossil fuel projects. Large, remote non-fossil fuel projects require large capital. Such projects increase profits for large corporations and increase utility bills, resulting in increased wealth inequality in low-income and people of color communities.
NF3	Examine all types of non-fossil fuel energy generation for life cycle harm to environmental justice communities. For instance, energy produced by nuclear power plants is hailed as carbon-free, though the mining and storage of nuclear fuel causes major harm for Indigenous communities. The harm caused by mining for uranium, nuclear weapons testing, and nuclear accidents falls most heavily on frontline, Black, Indigenous, People of Color (BIPOC) communities.
Workforce Development	
NF4	Follow the recommendation of the Building, Energy, Equity, and Power (BEEP) Coalition: Ensure job access for local and priority populations underrepresented in high-road construction jobs, such as through community workforce agreements. Include water efficiency in policy changes to facilitate meaningful job development in impacted sectors. Job quality of electrification and decarbonization work to-date is more reflective of a low-road versus high-road approach due to lack of focus on workforce development and high-quality job creation. Reductions in natural gas use and development will impact many union jobs. <i>(Preliminary Report: Community Priorities for Equitable Building Decarbonization. 2022. https://ww2.arb.ca.gov/sites/default/files/2022-03/BEEP%20Letter%20and%20Report_Equitable%20Decarb%20March%202022.pdf.)</i>
N5	Further recommendations for workforce development in this sector are under development.
Electric Vehicles	
NF6	To address concerns about lithium mining out of geothermal sites and impacts on EJ communities CARB, CEC, and other relevant agencies must conduct a full life cycle assessment of lithium extraction methods by a disinterested third-party.
NF7	Eliminate equity barriers to EV adoption in California, such as affordability and access to charging stations in California including affordability, and access to charging stations. An 2018 EV survey conducted in 2018 found that only 2% of EV’s are owned by Black households.
NF8	Prioritize funding incentives of electrification of mass transit and heavy- duty vehicles (HDVs) to reduce Diesel Particulate Matter (DPM), rather than electrification of single-passenger vehicles.
Rooftop Solar	
NF9	Address the equity issues of solar ownership. Low-income people don’t have solar because public and private utilities are profiting from utility-scale solar. Investor-owned utilities make most of their profit on long distance transmission lines. Rooftop solar reduces utility revenues and the need for long distance transmission lines.
NF10	Targeted incentives are needed for low-income households so they can go solar and pay for energy efficiency. Rather than the punitive proposed revision of NEM 3.0 currently being considered by the CPUC, a graduated solar tariff increasing as household income

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Non-Fossil Fuel Energy Generation	
	decreases is needed to address equity in access to rooftop solar. Energy efficiency programs can be made affordable through grants, combined with on-bill repayment mechanisms, guaranteed to reduce energy bills at no upfront cost, from day one.
NF11	Ensure that the Scoping Plan prioritizes and directs significant public dollars to invest in local clean energy resources for energy equity in low income and BIPOC communities that are most burdened by pollution.
NF12	CARB must work with the CPUC and CEC to promote community ownership and control of local solar and wind facilities. This will reduce the cost of energy by eliminating the need for long-distance transmission lines and for paying corporate shareholder profits and provide a more reliable and resilient local source of non-polluting energy for decarbonized buildings in these communities during power outages.
NF13	CARB must work with the CPUC and CEC to promote community ownership and control of local solar and wind facilities. This will reduce the cost of energy by eliminating the need for long-distance transmission lines and for paying corporate shareholder profits and provide a more reliable and resilient local source of non-polluting energy for decarbonized buildings in these communities during power outages.
NF14	Invest in community-controlled and community-owned microgrids, powered by community solar. Such investment must play a major role in supplying future electricity needs. If islandable, these mini power plants can continue to provide power during grid outages. They also maximize the efficiency of energy use overall, reducing electrical demand and cost to customers. Microgrids also can be a mechanism for sharing electricity between households within a community.
NF15	Prioritize and direct public investments in rooftop solar to benefit the most disadvantaged communities most impacted by poverty, pollution, and climate impacts, first. The California Environmental Justice Alliance has called for the CPUC to increase funding for the proposed Equity Fund from \$150 million to \$1 billion. The Equity Fund would be used for distributed energy resources in low income and disadvantaged communities.
NF16	Increase support for rooftop solar. CARB's own modeling to achieve climate targets for 2030 depends on rooftop solar contributions to non-fossil fuel energy resources to increase 2.5 times to 23 gigawatts (GW). The California Energy Commission includes 28.2 GW of customer-owned solar to meet the tripling of electricity demand anticipated by 2045.
NF17	CARB must prioritize immediate emissions reduction via rooftop solar. It reduces emissions beginning with installation, which takes three to four months, on average. Move away from Utility-scale solar projects can take up to six years from concept to implementation.
NF18	Do not support electrification that results in the increased use of fossil fuels. Using fossil fuel-sourced power plants to meet increased electrical demand negates electrification efforts to keep fossil fuels in the ground and to reduce GHG emissions at the scale and pace that is demanded by science to address the climate emergency.
Utility-Scale Renewable Energy	
NF19	Overcome both policy and technical barriers to offshore wind production.
NF20	Overcome barriers to tidal energy production..
NF21	Incorporate full-cost accounting to correctly assess the economic savings from investing public resources in community-owned, community-controlled, and local clean energy resources over utility-scale, IOU-owned renewable power generation. Utility-scale solar energy is only counted as less expensive than rooftop solar because the cost of transmission from remote facilities to distribution centers is not included in that cost. When construction costs of transmission lines are added to the cost of energy produced, utility-scale solar costs are about equal to rooftop solar. If the operation and maintenance costs of transmission lines are also added to the energy costs, utility-scale solar is more expensive

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Non-Fossil Fuel Energy Generation	
	than rooftop solar. If the costs of wildfire destruction from transmission line-caused wildfires is added, utility-scale costs rise even higher above rooftop solar.
NF22	Develop guidelines for utility-scale solar and wind projects that address environmental and social impacts so that utility-scale projects are required to address and mitigate their threats to sensitive ecosystems and endangered species, as well as Indigenous sacred sites and other types of land use in California.
Building Decarbonization	
NF23	Closely follow the Building Energy, Equity, and Power (BEEP) Coalition’s energy justice principles and listening session report with recommendations. <i>(Preliminary Report: Community Priorities for Equitable Building Decarbonization. 2022. https://ww2.arb.ca.gov/sites/default/files/2022-03/BEEP%20Letter%20and%20Report_Equitable%20Decarb%20March%202022.pdf.)</i>
NF24	Closely follow the approach of the Strategic Actions for a Just Economy’s (SAJE) report. (SAJE. 2021. <i>Los Angeles Building Decarbonization: Tenant Impact and Recommendations</i> . https://www.saje.net/resources/reports/building-decarbonization/ .)
NF25	Establish official funding for community engagement for each sector of the Scoping Plan in order to perform meaningful community engagement and investigate potential unintended consequences. For building decarbonization, the funding needs to be seven-figured. Funding will be used for staffing of local organizations, organizing events, stipends for participants, and translation services.
NF26	Provide resources, capacity, and time for key stakeholders, such as affordable housing groups (groups with specific needs and financial concerns about building decarbonization), in recognition that building decarbonization is a highly intersectional movement.
NF27	Perform decarbonization in phases and prioritize new buildings, the largest buildings and largest emitters, and publicly owned buildings. <ul style="list-style-type: none"> i. Roll decarbonization out in phases. Roll decarbonization out in phases. Owners of large buildings are typically better able to comply with a decarbonization mandate. It should target all new construction, privately owned buildings 20,000 square feet or larger, and public buildings larger than 7,500 square feet (commercial and residential) first. ii. Recognize the needs of smaller landlords and subsidized housing providers. By targeting public buildings, there is no expectation of landlord harassment of tenants. By prioritizing the largest buildings, policymakers will have more time to identify funding and technical assistance for smaller landlords and subsidized housing providers who may need the most support.
NF28	For existing buildings, prioritize energy affordability and tenant protections from cost increases, harassment, displacement, evictions, or energy debt burdens. Prevent landlords from absorbing decarbonization subsidies while passing the costs to tenants. <ul style="list-style-type: none"> i. Only support efforts that do not increase rents and tenants’ risk of displacement. Low-income renters live in the least-efficient homes and have the highest energy burdens. Research shows that under landlord-tenant laws, decarbonization is expected to increase rents and tenants’ risk of displacement. ii. Work with local and state housing policymakers to (1) strengthen the current tenant anti-harassment policies to protect tenants from decarbonization-related harassment and include budget resources for enforcement; (2) ban pass-through costs for decarbonization retrofits to rent stabilization ordinance (RSO) tenants, tenants in covenanted affordable units, and low-income tenants in non-RSO units; (3) establish new permanent relocation amounts for tenants displaced by decarbonization retrofits

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

	<p>or increase existing ones; and (4) close the remodel eviction loophole in AB 1482—the statewide rent control law—that could lead to displacement of non-RSO tenants.</p> <p>iii. Ensure that incentive programs have tenant protections tied to them. Most do not. A landlord can get a grant or subsidy to electrify their kitchen but still pass the cost onto the tenant. Ensure that any incentive program includes tenant protections, so if the property owners take advantage of incentives, they cannot increase rent.</p>
NF29	<p>Address building decarbonization in tandem with affordable housing preservation.</p> <p>i. Ensure that policies that affect the residential market are carefully considered and designed to directly support affordable housing and low-income households. There is a significant need to not only build new affordable housing but also to protect and retrofit existing units in ways that improve habitability, reduce household expenses, and support a healthier environment.</p> <p>ii. Include sector stakeholders in the policy design process to avoid perpetuating the cycle of disenfranchisement. Lack of funding, limited access to capital, the complexity of financing structures, backlogs of deferred maintenance, and other challenges make affordable housing the least likely to transition by market forces alone.</p> <p>iii. Enact policy approaches to support social equity tools (such as displacement and rent increase protections) to expand the pool of regulated affordable housing and support alternative ownership, and wealth-building opportunities for tenants. Decarbonization can be leveraged to drive investment into existing affordable housing to improve performance and keep units fit for purpose in a changing climate.</p> <p>iv. Coordinate with other public agencies to make sure all building decarbonization efforts preserve and improve affordable housing.</p>
NF30	<p>Include policy protections to protect and empower small landlords and homeowners, and prevent consolidation of corporate building ownership.</p> <p>i. Covid-19 has created financial issues that might force small landlords to sell their properties. The high upfront costs of a decarbonization retrofit could intensify cash flow issues for smaller landlords, prompting them to sell, enabling deep-pocketed corporations to buy their properties.</p> <p>ii. Target subsidies toward small landlords and homeowners. At the very least, corporate landlords should not be eligible to receive public assistance for decarbonization, as they are the most well-positioned to finance this transition.</p> <p>iii. Coordinate with public agencies to prioritize tenant and Community Land Trust purchases of buildings sold by landlords, allowing them the first option to buy a building for sale. Some landlords will exit the rental market when confronted with the cost of decarbonization, and this provides an opportunity to promote homeownership of tenants and communities.</p>
NF31	<p>Pair building decarbonization with other critically needed renovation efforts to make buildings healthier and resilient, and design a consumer-friendly one-stop shop for retrofits.</p> <p>i. Issue a mandate for holistic decarbonization retrofit that results in habitable, energy-efficient, all-electric, and climate-resilient homes. Fuel switching in buildings from natural gas to electric appliances will, alone, achieve emission reductions because electricity generation is getting cleaner. However, coupling fuel switching with both energy efficiency measures and building envelope improvements can further reduce energy cost burdens, reduce peak demand for electricity (both seasonally and over the course of a day) to mitigate grid impacts, and better protect inhabitants from extreme weather events like heat waves.</p> <p>ii. To maximize benefits to occupants and return on investment, upgrades should produce healthy, high-quality indoor environments by using materials without hazardous chemicals and address issues like mold, moisture, and ventilation. Public financial support for comprehensive building improvements in the rental market can</p>

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

	<p>be coupled with anti-displacement measures that preserve and expand housing and energy affordability. Upgrading schools and colleges both reduces operational expenditures and improves ventilation and indoor air quality for students and teachers.</p> <p>iii. Assist local government and community groups with designing and implementing a consumer-friendly one-stop shop for retrofits. The City of San Francisco and PODER are developing this together.</p>
NF32	<p>Prioritize creation of local, unionized or family-sustaining “high road” jobs in partnership with labor unions, community colleges, and green jobs training centers, particularly for youth, people of color, formerly incarcerated people, and people with other barriers to employment.</p> <p>i. UCLA’s Luskin Center for Innovation estimates that, in general, the electrification of buildings statewide is expected to create more than 100,000 jobs annually for 25 years in California in the construction, energy, and manufacturing industries.</p> <p>ii. Think upfront about who will perform the work to improve building performance. Engaging a skilled and trained workforce is fundamental in ensuring that the expected energy savings and emission reductions are actually achieved. Adopting hiring standards on publicly funded projects and coordinating with apprenticeship readiness programs can ensure job access for priority populations underrepresented in high-road construction jobs. For example, support, training, and capacity building of women and minority-owned business enterprises (WMBEs) can ensure diversity, equity, and inclusion on the contracting side.</p> <p>iii. Coordinate building decarbonization efforts with labor agencies to ensure that this job creation is inclusive and uplifting for vulnerable populations.</p>
NF33	<p>Design and promote financial interventions that address overlooked consumer groups that do not qualify for commercial loans due to unduly restrictive credit score requirements.</p> <p>i. Building decarbonization has high upfront costs. Many consumers will need to take out commercial loans to finance the upgrades. However, these commercial loan products are designed to minimize risk for institutional investors and unduly prevent the adoption of energy upgrades. These barriers are unduly restrictive because credit score is not an accurate indicator of a household’s ability to pay for energy upgrades. For example, Posigen is a solar and energy efficiency provider for low-income, low-credit score, and low-income/low-credit score customers that does not consider individual credit scores. The overall performance of PosiGen’s 14,000-low-income-household portfolio is comparable to the general market for similar loans with a default rate of 0.4%.</p> <p>ii. Lenders do not issue loans to consumers with FICO credit scores below 650. Research of the Inclusive Solar Finance Framework estimates that 30% of all consumers in the U.S. have bad and poor credit scores (below 650), and 35% of the U.S. households qualify as low-income. Interventions for the loan underwriting process are needed for these U.S. consumers, estimated to encompass 44 million to 78 million households.</p> <p>iii. Work with related agencies to design financial interventions. California needs to innovate and implement equity-focused financing interventions to underwrite the loans for low-income and low-credit-score consumers. It is important to ensure the building decarbonization transition is inclusive so we do not repeat the same stories where solar and EV adoption exacerbates existing disparities.</p> <p>iv. Finance expanded pilots to create on-bill financing or “pay for performance” inclusive financing programs to amortize the upfront cost of expensive appliances or</p>

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

	rehabilitation construction work over a period of time. These are paid on the customers' utility bill from the bill savings of the energy efficiency improvements. On-bill financing enables customers of all incomes to pay for decarbonization measures at no upfront cost and is currently being piloted by East Bay Community Energy (EBCE), with BlocPower and Revalue.io.
NF34	Include decentralized or distributed rooftop solar as eligible renewable energy source as opposed to larger-scale energy projects, per SB 100 implementation.
NF35	Increase scrutiny on utility credits and enhanced enforcement. Burning waste increases heat/efficiency of combustion but is a hazard to surrounding area, as is dumping.
NF36	Recognize that centralized energy generation (such as rooftop solar and microgrid systems) is far better for greenhouse gases (GHGs), air quality, and health than utility-scale generation.
NF37	Don't assume that all generation options are clean; there will be some carbon from construction because there is no carbon-free source. Even with solar, the panel must be produced.
NF38	Push to electrify transportation; explain how transportation relates to non-fossil fuel energy generation.
NF39	CARB, prior to any investment in technology fixes, must and should conduct a full life cycle assessment of the technology. This includes hydrogen, CCS, and LCFS projects.
NF40	Include truly green hydrogen powered by photovoltaic that is decentralized and used as energy storage that could power electric vehicles and assess the water treatment issues related to hydrogen production.
NF41	Do not include blue or gray hydrogen, which is more polluting than natural gas.
NF42	Be innovative in exploring a range of alternatives.
NF43	Incentivize grey water systems for established single-family units and mandatory greywater systems for single-family and multi-family homes.
NF44	Develop siting rules that specify what is considered "clean generation."
NF45	Do not remove agricultural lands from production to site energy generation facilities on that land.

Fossil Fuel Industry and Transportation

"CARB should" is implied at the start of every recommendation.

F1 Transportation / Reducing Vehicle Miles Traveled (VMT)

F1A	<p>Maintain aggressive zero emission vehicle (ZEV) goals to meet AB 32 climate goals. Light-duty vehicle sales must be 100% ZEV by 2035 and aggressive interim targets for 2026 and 2030 must be set at 46% and 75% sales, respectively. Both are feasible and will deliver significant health and climate benefits. These interim targets will allow California to meet climate goals while protecting the most vulnerable neighborhoods along transportation corridors. Additionally, CARB should put in place mandatory and enforceable equity measures that will enhance access to ZEVs for low-income communities of color.</p> <p>On the medium- and heavy-duty side, CARB must accelerate its 100% sales mandate to 2035. Additionally, CARB must include a mandatory retirement of 18 years or 800,000 miles for medium- and heavy-duty trucks. CARB's current lack of dirty truck retirement mandates will prolong the pollution burden in EJ communities by allowing diesel trucks to continue operating well beyond 2035 and potentially into 2050.</p> <p>CARB's budget plan for 2021–22 vastly underspent in equity programs targeted to meet the scale of what climate justice demands. For example, the Charge Ahead Coalition is asking</p>
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Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Fossil Fuel Industry and Transportation	
	for \$1.5 billion this coming year in clean transit equity investments alone. CARB must greatly increase funding for transit equity.
F1B	<p>CARB climate policies must not be achieved at the expense of environmental justice communities impacted by lithium mining.</p> <p>Support all requests and recommendations of environmental justice communities impacted by lithium mining. A just transition must include mitigation and workforce investment.</p>
F1C	<p>Significantly increase funding for CARB’s Clean Transportation Equity Investments.</p> <p>Transportation equity programs are currently oversubscribed and only available in some parts of the state.</p> <p>Dramatically increase funding for Clean Truck and Bus Vouchers (HVIP), Clean Off-Road Equipment Vouchers (CORE), and demonstration and pilot projects to advance zero emission technology. Additionally, facilitate the fleet adoption of ZEV trucks by providing direct funding to small fleets and enable greater private market financing through large fleets. Prioritize the majority of investments in ZEV and charging to be spent only in the top 25% disadvantaged communities (DACs) to ensure an equitable transition to electric vehicles to benefit environmental justice (EJ) communities.</p>
F1D	<p>Support the implementation of the Caltrans California Transportation Plan 2050. Set VMT reduction targets of statewide mode share for transit of 11% by 2035, with a corresponding VMT reduction of at least 30%. Transit mode share could increase to 22% by 2045 with a corresponding VMT reduction by continuing to double the investments in transit. This corresponds to implementing the combined land-use and transportation scenario in the Caltrans California Transportation Plan 2050.</p> <p>(California Department of Transportation (Caltrans), https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/ctp-2050-v3-a11y.pdf.)</p> <p>Signal the need for additional policy and investments in mass transit for EJ communities for regional capacity building. These should focus on increasing accessibility, frequency, reliability, and affordability of zero-emission transit options such as expanding electric bus and light rail service by increasing frequency, reducing transit fares, or improving transit stops.</p> <p>Set higher Metropolitan Planning Organization (MPO) greenhouse gas (GHG) emission reduction targets at sliding scales relative to each region in the Scoping Plan. Each region can increase the ambition for GHG reductions by implementing localized VMT reduction strategies. For example, the San Diego Association of Governments (SANDAG) GHG reduction target can be increased from 18% to 25% by 2035.</p>
F1E	<p>Send a strong signal that CARB plans to amend the Low Carbon Fuel Standard (LCFS) to reflect serious climate and sustainability concerns. CARB must be clear about the very limited supply of sustainable, carbon-free liquid and gaseous fuels and avoid using them in any sectors where it is feasible to implement solutions that are zero-emission for both air pollution and GHGs. In particular, CARB should highlight environmental sustainability concerns with particular types of biofuel feedstock that it identified in the 2018 CARB LCFS Environmental Assessment. The Scoping Plan should make clear that California fuels policy will reflect the latest consequential life cycle analyses of biofuels by feedstock and the finite availability of feedstock for food system crop-based biofuels.</p> <p>(Malins and Sandford. 2022. <i>Animal, vegetable or mineral (oil)?</i> Cerology. https://theicct.org/wp-content/uploads/2022/01/impact-renewable-diesel-us-jan22.pdf.)</p>

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Fossil Fuel Industry and Transportation	
	<i>(Final Environmental Analysis Prepared for the Proposed Amendments to the Low Carbon Fuel Standard and the Alternative Diesel Fuels Regulation, California Air Resources Board: Sacramento, CA, 2018; https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2018/lcfs18/finalea.pdf.)</i>
F1F	Refer to the EJAC's active transportation recommendations in the 2017 Scoping Plan. These include not only GHG and emissions reductions, but also promote healthy lifestyles.
F2	Oil Refineries
F2A	<p>Sound the Alarm for a Fossil Fuel Worker and Community Safety Net Fund</p> <p>With urgency, the 2022 Scoping Plan must call for an immediate, robust safety net fund for displaced fossil fuel workers and communities that will otherwise lose local tax revenue for critical services. Given the accelerating rate of decarbonization targets and the imminent phaseout of the internal combustion engine under California climate policy, the Scoping Plan should outline a plan to:</p> <ol style="list-style-type: none"> 1. Collaborate with other state agencies to establish a robust safety net fund that will support fossil-fuel-dependent workers who will lose their livelihoods and communities whose essential services are at risk from a contracting tax base. <ol style="list-style-type: none"> a. An equitable transition for fossil fuel workers would include wage replacement, income and pension guarantees, healthcare benefits, and relocation and peer counseling for professional and personal support. It would provide access to education and training for existing and future jobs that are safe and healthy. b. Affected communities' city and county services, schools, and libraries should receive financial support to maintain or strengthen local budgets as the fossil fuel industry sunsets. These EJ communities should also be considered a priority for CARB equity investments. <p>(Relief Programs for Displaced Oil & Gas Workers. https://static1.squarespace.com/static/60b43a18079fdd42c6d01286/t/60bdc5bf6a007c14509e0887/1623049663256/LNS_Pollin+Fact+Sheets_Displaced+Worker_v2.pdf.)</p> <p>(A Program for Economic Recovery and Clean Energy Transition in California. https://static1.squarespace.com/static/60b43a18079fdd42c6d01286/t/60c18578a87f6318ff2a5a1a/1623295356282/Pollin+et+al--CA+Economic+Recovery--Clean+Energy+Transition---6-8-21.pdf.)</p> <ol style="list-style-type: none"> 2. Contribute climate data and modeling as well as projections of changes in transportation fuel production to establish a timetable in which to accumulate and deploy a robust statewide safety net fund for fossil fuel workers and communities. 3. Support urgent allocation of funding to a robust safety net for fossil fuel workers and communities. Sudden losses of refinery jobs in California and the historical pattern of fossil fuel companies declaring bankruptcy as a shield from closure and post-closure financial accountability at local facilities across the nation indicate that the state must act quickly. <p>(Rogers, N. Op-Ed: If our oil jobs are ending, we need safety nets and good replacement work. 2021, Oct. 3. LA Times. https://www.latimes.com/opinion/story/2021-10-23/oil-gas-jobs-clean-energy-california.)</p> <p>(Goldberg, T. Shutdown of Marathon's Martinez Refinery Prompts Calls for 'Just Transition' for Oil Workers. KQED. Aug. 3, 2020.</p>

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Fossil Fuel Industry and Transportation	
	<p>https://www.kqed.org/news/11831607/shutdown-of-marathons-martinez-refinery-prompts-calls-for-just-transition-for-oil-workers.)</p> <p>(Macey, J. and Jackson Salovaara, Bankruptcy as Bailout: Coal Company Insolvency and the Erosion of Federal Law," 71 Stanford Law Review 879 (2019); Sadasivam, N. How bankruptcy lets oil and gas companies evade cleanup rules, Grist, Jun 07, 2021.)</p>
F2B	<p>By 2024, in close collaboration with refinery workers and communities, CalEPA should lead the adoption of an interagency plan to manage the decline of California oil refinery production of gasoline, diesel, and other fossil fuels, as it reflects California's climate laws and zero emission transportation policies by 2045. With urgency, the 2022 Scoping Plan must call for an immediate, robust safety net fund for displaced fossil fuel workers and communities that will otherwise lose local tax revenue for critical services.</p> <p>(AB 32 requires California to cut 40% of GHGs by 2030; EO B-55-18 provides policy direction to reduce GHG emissions 80% at least by 2050, and EO N-79-20 ends the sales of internal combustion passenger vehicles by 2035 and sets 2045 zero emission transportation targets; the timeline also follows the October 2020 E3 Achieving Carbon Neutrality Report's Zero Carbon Energy assumption.)</p> <p>Commit to an interagency planning process to manage petroleum refinery decline</p> <ol style="list-style-type: none"> 1. Commit to developing a regulatory process, in collaboration with refinery operators and communities, to identify and set key milestones, timetables, and reporting mechanisms to manage the decline of refinery production. <ul style="list-style-type: none"> ● Consider the declining and minimum throughput of crude oil into refineries, fuel outputs, financial assurances, and additional measurements reflecting milestones for increased zero emission transportation in California and corresponding reductions in fossil transportation fuel demand. ● Model multiple potential refinery phasedown scenarios, projecting the slate of liquid fuel demand decline across refinery capacities statewide to assist worker-led and community-led decisionmaking. For each scenario, present total and disaggregated liquid fuels consumption over time with corresponding sustainable feedstock levels. ● Plan a corresponding phasedown of carbon-emitting refinery hydrogen operations. ● Measure and assess all phasedown milestones against cumulative GHG emissions. ● Develop health and safety guidance for the decommissioning, closure, and post-closure of refineries. 2. Develop guidance measures for local and regional permitting agencies that identify the expansion of refinery and associated fossil fuel infrastructure as inconsistent with state goals. 3. Develop health and safety guidance for the decommissioning, closure, and post-closure of refineries. <ul style="list-style-type: none"> ● Assess the cost of refinery land remediation obligations statewide and accordingly enhance financial assurance amounts and mechanisms to ensure cleanup at decommissioning. ● Assess the cost of increased climate risks to workers and communities, and accordingly establish or enhance financial assurance amounts and mechanisms to ensure financial accountability for petroleum companies.

Preliminary Draft of EJAC Scoping Plan Recommendations
March 10, 2022

Fossil Fuel Industry and Transportation	
	<ul style="list-style-type: none"> • Evaluate health benefits in communities surrounding refineries and regional benefits toward achieving state and federal Clean Air Act standards. <p>Recommendation A should be pursued in conjunction with Recommendation B.</p>
F3	Oil Extraction
F3A	End oil drilling in California by 2035. This phaseout should start as soon as possible and include protections for workers and tax-base replacement for county and local governments. A just transition needs to be developed for workers in the petroleum industry, to minimize/prevent job loss and ensure tax dollars continue to support the communities.
F3B	Setting a phaseout date is unnecessary because of existing market conditions. The policy to prioritize is the establishment of an equitable transition for fossil fuel workers and communities.
F4	Carbon Capture and Storage (CCS)
F4.1	<p>Do not consider any engineered carbon removal for fossil fuel infrastructure in the 2022 Scoping Plan.</p> <ol style="list-style-type: none"> a. Revisit the LCFS CCS Protocol to clarify the application of rigorous eligibility and application review criteria specific to different types of fossil fuel infrastructure. Currently, the protocol lacks adequate assessment criteria to evaluate the addition of carbon capture technology to different types of CCS capture facilities, as defined in the LCFS CCS Protocol Section A.2(19). Despite inclusion in the system boundary under Section B.1, the substantive Sections B.2 (Quantification of Geologic Sequestration of CO₂ Emissions Reductions), and the entirety of Section C (Permanence Requirements for Sequestration), there must be no question which provisions apply to what types of capture facilities themselves, not only injection and sequestration sites. b. Additionally, the permissibility of weak financial assurance instruments in Section C.7 (Financial Responsibility) is unsupportable. c. Revisit regulations governing the Refinery Investment Credit program, title 17, CCR, section 95489(e), which currently fails to consider the range of risks necessary to protect refinery communities; additionally, amend the regulations to reflect initial assessments and findings from the first examples of CCS projects on fossil fuel infrastructure across the globe. d. Do not authorize LCFS credits for CCS infrastructure in EJ communities that would increase net criteria pollution; knowingly incentivizing projects that would increase net criteria pollutant emissions as described in section 95489(e)(1)(c), perpetuates and worsens a long legacy of environmental racism.
F4.2	Ban the use of captured CO₂ for use in enhanced oil recovery (EOR). Currently, 14 CCUS projects are operating in the United States. Thirteen of them (93%) are made profitable by using the captured CO ₂ for EOR. “Recovered” oil and natural gas from EOR will then be burned and release additional CO ₂ into the atmosphere. Using CCUS-CO ₂ for EOR will only increase, not decrease, California’s overall GHG emissions and extend the life of highly polluting facilities.
F4.3	Evaluate industry projections and promises of reduced GHG emissions with a thorough GHG life cycle analysis, conducted by a panel of independent experts. Industry claims typically exaggerate or misrepresent actual GHG reductions from CCS, which generally are designed to capture carbon from a portion of a facility’s emission sources, and only partially at that. For example, CCS on refining facilities have seemingly only been placed on their hydrogen plants, with a wide range of daily capture efficiencies and without even addressing carbon combustion emissions. A report by Global Witness documents that while the CCS on a Shell hydrogen plant in Alberta, Canada, prevented

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Fossil Fuel Industry and Transportation	
	<p>5 million metric tons of CO₂ from escaping into the atmosphere at the plant since 2015, it released a further 7.5 million metric tons of GHGs over the same period.</p> <p>(Howarth, RW, Jacobson, MZ. How green is blue hydrogen? <i>Energy Sci Eng.</i> 2021; 9: 1676– 1687. https://doi.org/10.1002/ese3.956.)</p> <p>(Meredith, S. 2022. “Shell’s massive carbon capture facility in Canada emits far more than it captures, study says.” CNBC. https://www.cnbc.com/2022/01/24/shell-ccs-facility-in-canada-emits-more-than-it-captures-study-says.htm.)</p> <p>(Zegart, Dan. 2021. “The Gassing of Satartia.” HuffPost. https://www.huffpost.com/entry/gassing-satartia-mississippi-co2-pipeline_n_60ddea9fe4b0ddef8b0ddc8f.)</p>
F4.4	<p>Always prioritize direct emissions reductions over CCS. The recently published Sixth Assessment Report by the United Nations’ Intergovernmental Panel on Climate Change states that the most effective way to address the climate crisis is to keep fossil fuels in the ground and to rapidly phase out the extraction, transport, refining, and burning of fossil fuels.</p> <p>(IPCC. August 2021. <i>AR6 Climate Change 2021: The Physical Science Basis</i>. https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/.)</p>
F4.5	<p>Prioritize ecologically based solutions to naturally sequester carbon by restoring soil and ecosystem health through practices such as afforestation, reforestation, soil carbon management, and biochar. Ecological solutions should be prioritized first, prior to and instead of CCS, CCUS, bioenergy CCS (BECCS), and direct air capture (DAC). Ecologically based carbon sequestration strategies—such as incentivizing regenerative agriculture and Indigenous reatriation and food sovereignty projects—should not be used as offsets in carbon trading schemes.</p>
F4.6	<p>Ensure that permitting of CCS projects is conditional upon completion of a rigorous health impact analysis that includes workers, communities, and their environments to evaluate the potential health impacts of using CCS, CCUS, DAC, or BECCS, by public health experts including the Office of Environmental Health Hazard Assessment (OEHHA) and the California Department of Public Health (CDPH). Regions like the San Joaquin Valley and the Delta should be treated with special consideration.</p>
F4.7	<p>Include worst-case scenarios in any modeling of engineered carbon removal. This includes an analysis of the health and human harm risk posed by:</p> <ol style="list-style-type: none"> a. Ruptures of CO₂ pipelines (e.g., the CO₂ pipeline explosion in Satartia, Mississippi in 2020 that resulted in the emergency room hospitalization of 49 people). b. Man camps for the construction of CO₂ pipelines, which increase rates of Missing and Murdered Indigenous Women (MMIW). c. Risk of inducing seismic activity (earthquakes) from geologic injection of CO₂. d. Poisoning of groundwater or destruction of aquatic ecosystems. <p>(See EJ Letter re: CCUS to CARB for other impacts and concerns with Engineered Carbon Removal https://www.arb.ca.gov/lists/com-attach/26-sp22-co2-removal-ws-AXFTJgNwVCpXPQJj.pdf)</p>
F4.8	<p>ECR (Engineered Carbon Removal), as an unproven, expensive technology, should be eligible for government assistance only after proven sequestration and reduction strategies have been fully exhausted. According to the United Nations’ IPCC AR6 WRG1 Scientific Report 2021 report, “Technologies to achieve direct large-scale anthropogenic removals of non-CO₂ GHGs are speculative at present.”</p> <p>(IPCC. August 2021. <i>AR6 Climate Change 2021: The Physical Science Basis</i>.)</p>

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Fossil Fuel Industry and Transportation	
F4.9	<p>Make any publicly funded ECR strategy conditional on the free, prior and informed consent (FPIC) of locally impacted Environmental Justice communities, in accordance with the United Nations' Declaration on the Rights of Indigenous Peoples.</p> <p>(<u>United Nations Declaration on the rights of Indigenous Peoples. 2008. https://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf.</u>)</p>
F4.10	EJAC has recommended that CCUS not be pursued, but if it is used, ensure that it is a public utility, with oversight from the public. EJAC expects further discussion on this recommendation to flesh out the details.

Cap and Trade	
	<p>As CARB creates a 20-year climate blueprint to cut California's GHG emissions to 80 percent below 1990 levels by 2050, we need CARB to step up to put California on a path toward a full, multi-agency coordinated phaseout of fossil fuels, especially in sectors like oil refining where we've seen emissions increase over the course of the cap-and-trade program. By prioritizing agency rules and regulations to achieve direct emissions reductions through policy signals that move California towards a full coordinated phaseout of fossil fuels, CARB will be able to reduce reliance on market-based mechanisms such as cap-and-trade to achieve the state's emissions reduction target.</p> <p>In order for the EJAC to make substantive recommendations in this area, CARB needs to conduct and provide the EJAC with a thorough analysis of the cap needed to meet 2030 goals. This is a necessary step to provide certainty that cap-and-trade will lead us toward actual emissions reductions, and is especially necessary given the sheer number of banked allowances. There is concern that none of the 2022 Scoping Plan scenarios address the level of the emissions cap needed to meet the 2030 goal.</p> <p>CARB must simultaneously close loopholes in cap-and-trade that further prevent direct emissions reductions in EJ communities. Reforms in program design could include the following:</p>
C1	<p>Eliminating offsets and free allowances. Policies like offsets and free allowances give cheap and free opportunities to avoid reducing what is coming out of smokestacks.</p> <ul style="list-style-type: none"> ● Free allowances. The process of allocating free allowances is based on old data and assumptions about allowance prices. If free allowances are not eliminated, CARB should commit to evaluate the emissions impacts of offsets and free allowances in EJ communities and further assess the extent to which free allowances contribute to leakage. ● Offsets. If this recommendation is not accepted and offsets are used, they must offset the emissions in the area where the emissions occur and within the state. In addition to California emissions, CARB should consider activities that can reduce pollution coming from across the Mexican border. CARB should not allow emissions reductions from deforestation and forest degradation (REDD) international offsets.
C2	<p>Implementing IEMAC's recommendations for market design and program reform. The IEMAC report makes several market-based suggestions that would address loopholes, including reducing the supply of new allowances, raising the allowance price floor, conditioning offset availability on auction price (if offsets are not eliminated), and retiring allowances to account for shortcomings in offsets.</p>

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Cap and Trade	
	(CalEPA. 2022. 2021 Annual Report of the Independent Emissions Market Advisory Committee. https://calepa.ca.gov/2021-iemac-annual-report/.)
C3	Establishing no trading zones in EJ communities. Facilities in air pollution hotspots should be restricted from using allowances to demonstrate compliance. Instead they should be subject to regulations requiring direct emissions reductions equivalent to the declining caps applicable to the overall program (e.g., 3% per year). This would protect the most impacted communities from excessive exposure to co-pollutants.
C4	Increase data transparency and data-sharing between CARB and local air districts. GHG and co-pollutant data collection and reporting must be standardized across agencies. Annual data on facility- and company-specific allowance allocations and trading patterns must be collected and publicly released. CARB should conduct further analysis and evaluation on industrial sectors such as refineries to determine whether facility- and industry-specific emissions increases are the result of the state’s overreliance on cap-and-trade and specific strategies to prevent and reduce those emissions (especially in EJ communities).

Overarching	
<i>“CARB should” is implied at the start of every recommendation.</i>	
Major Goals and Actions	
O1	Do not allow CCUS to be as a direct emissions reduction strategy.
O2	Do not incentivize CCUS.
O3	Target reductions on the dirtiest polluters.
O4	Allow the EJAC to influence the resources and research conducted to ensure it is driven by the needs of Environmental Justice communities and informed by their experiences, and that EJ communities participate in the research. The research should include direct involvement and leadership of the most-affected communities.
O5	Do not rely on biased science.
O6	Be innovative in exploring alternative options.
O7	Ground-truth the Scoping Plan—the reality is on the ground.
O8	Consider establishing a special district to implement a California carbon bank that is publicly managed.
O9	Include direct emissions reduction strategies, sector-by-sector policies, and associated equitable implementation recommendations as outlined in the February 25, 2022 letter from environmental justice organizations to CARB and the EJAC titled “Environmental Justice Recommendations and Framework for CARB Scoping Plan.” (https://ww2.arb.ca.gov/sites/default/files/2022-02/Letter%20to%20EJAC%20re%20framework%20%26%20substance%20for%20SP%20reccs%20to%20CARB%20-%202022_25_22.pdf)
O10	Eliminate fossil fuels.
O11	Promote education.
O12	Do no harm and reduce the harm that already has been done.
Transparency and Access	
O13	Share diagrams and specifications of CCUS monitoring.
O14	Provide global examples of CCUS projects, successful or not.
O15	Disclose how CARB is measuring the success of CCUS projects.
O16	Share CARB’s perspective on high road jobs.
O17	Share any evaluation of direct air capture in California.

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Overarching	
<i>“CARB should” is implied at the start of every recommendation.</i>	
O18	Provide a list of projects.
O19	Share the Scoping Plan CEQA drafts before they are final.
O20	Develop a dashboard that enables the public to access the data and research used by CARB for decisionmaking.
	Analysis
O21	Address whether CCUS drops any gross polluters below a regulatory threshold and their responsibility to pay for their emissions.
O22	Discuss geological exploration and whether every avenue was explored.
O23	Consider the long-term effects of CCUS.
O24	Share alternatives to CCUS given the risks. It’s hard to believe that CCUS is the best option.
O25	Conduct a literature review of research that has been done on CCUS and input the results of that research into future research.
	New Data Sources
O26	Include remote sensors at the plug of CCUS projects under the Delta.
	Investment
O27	Provide greater transparency as to how CARB is achieving racial and environmental justice and budgeting for the ongoing needs of the EJAC.
O28	Consider cooperatives and other business models for public to be able to own the infrastructure we are investing in.
O29	Ensure that the Scoping Plan process focuses on investments that can create positive change in communities that bear a disproportionate burden of environmental impacts.
O30	Identify the communities that are most neglected and develop guidelines to ensure that investments and programs match the communities where they are the most needed before any funding is released.
O31	Triage the communities that are most neglected.
	Enforcement
O32	Enforcement needs to be added in the recommendations. This will be detailed further in the next set of recommendations.

Manufacturing	
<i>“CARB should” is implied at the start of every recommendation.</i>	
	Major Goal
M1	Share a menu of reduction strategies.
M2	Oppose carbon sequestration.
M3	Go beyond the status quo, especially where the science to support that exists.
M4	Place a value on options in terms of the solution they provide, not spewing more carbon into the atmosphere.
M5	Don’t consider climate reducing policies that increase pollution in EJ communities.
M6	Ensure a just transition for workers. Transitioning refineries, for example when internal combustion engine is phased out, will require years of permitting; that process has to begin now.
M7	Meet climate goals as justly as possible but also in a way that minimizes the damage to our economy. We need to ensure economies will survive through the end of fossil fuels; workers need to maintain their livelihoods and the tax flow needs to continue to support local economies.

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Manufacturing	
M8	Start transitioning to alternatives now, including just transitions.
M9	Accelerate the closing of carbon credits. When credits close, they will have to pay a tax or a fee.
M10	Seek the maximum feasible technologically that is achievable.
M11	Target reductions on the dirtiest polluters.
M12	Implement incremental industrial electrification to reach 100% clean energy sources (such as high industry electrification via renewables and direct hydrogen combustion via dedicated clean hydrogen pipelines) by 2045.
M13	Do not use biomass or renewable natural gas (RNG)-based hydrogen.
M14	Ensure any switched fuels and new technologies/materials used do not increase local air pollution on disproportionately burdened communities.
M15	Apply the best available control technologies to reduce pollution in the interim until 100% zero-emissions facilities are achieved.
M16	Start transitions in disadvantaged communities first.
M17	Prioritize eliminating emissions before allowing CCS.
M18	Establish a permitting process for CCS (see F4.6 for details).
M19	Ensure that manufacturing infrastructure addresses historical inequities.
M20	Acknowledge union jobs.
Transparency and Access	
M21	State CARB's position on carbon neutrality for manufacturing, electricity generation, and concrete.
M22	Make a statement about prioritizing (via innovation, investments, etc.) reductions of materials/process emissions versus energy source emissions, depending on which is the greatest contributor of emissions in any particular industry.
M23	Provide key information about demand trends for different products produced by various manufacturers, as well as technology substitutions.
M24	Discuss integration of short-lived climate pollutants (SLCP) and hydrofluorocarbon (HFC) manufacturing.
M25	Discuss the overlaps between sectors (manufacturing, SLCP, fuels, energy, NWL, etc.).
M26	Develop a publicly accessible clearinghouse of technology options and their technology readiness levels, to help stakeholders identify viable options.
Analysis	
M27	Factor innovative technologies, such as regenerative heat with electricity, into the modeling.
M28	Analyze how the Scoping Plan has affected the manufacturing sector and report on that analysis.
Education	
M29	Promote education about pesticides, including the application and identification of petrochemicals used in pesticides, including in those manufactured outside of California but purchased for use in California.
Investment	
M30	Channel investments into research and development, pilot programs, etc. to reduce the maximum levels of emissions directly from both materials used and from the manufacturing process.
M31	Invest in education and infrastructure development in disadvantaged and rural communities (including Border communities) to enable them to access high road jobs, rather than assuming those jobs are only available in Silicon Valley. Ensure jobs are mutually beneficial, not extractive.

Preliminary Draft of EJAC Scoping Plan Recommendations

March 10, 2022

Public Health and Social Costs	
<i>“CARB should” is implied at the start of every recommendation.</i>	
Major Goals and Actions	
P1	Promote public health high road jobs.
P2	Work with Cal/OSHA to address the worker health and safety concerns of high road jobs.
P3	Ensure the Scoping Plan incorporates strategies to reduce use of GHG producing pesticides.
P4	Never rely on any GHG reducing policies that increase pollution in EJ communities.
P5	Seek the maximum feasible and achievable technology and identify zero emission technologies that would prevent the need for mitigation technologies.
P6	Design and implement the scoping plan to maximize emission reductions, health benefits, increased equity, and good paying union jobs that support families, as it transforms the energy infrastructure to achieve climate goals.
P7	Design and implement the scoping plan to ensure that emissions are reduced first and fastest in disadvantaged communities.
P8	Design and implement the scoping plan to avoid creating new types of harmful industries such as combustion of wastes or CCS.
P9	Direct the same level of effort given to reducing emissions at ports to the emissions on the U.S./Mexico border.
Transparency and Access	
P10	Provide access to the main database with the most localized data available.
P11	Improve accessibility for criteria pollutant and air toxics emissions data, and add finer scale criteria pollutant and air toxics emissions data for the oil and gas sector.
P12	Provide both qualitative and quantitative health and cost data on health impacts.
P13	Provide a publicly accessible online tool for the data sources used for the health impact analysis.
P14	Increase the transparency in offset entity information by clearly linking specific carbon offset projects with specific polluting entities.
P15	Share analyses done from previous Scoping Plans that advance Environmental Justice regarding the fuel industry, in addition to phasing out fossil fuel production by 2035.
P16	Share publicly the available research of CARB research staff involved with the Scoping Plan.
P17	Detail how Border emissions are calculated, counted, and integrated into the Scoping Plan.
P18	Ensure transparency for the EJAC and the public for: data resources, monitoring and assessment activities by CARB and its permittees, monitoring and modeling approaches, assessment methods and results, and specific data products or results.
Analysis	
P19	Account for emissions from California’s wildfires in the Scoping Plan.
P20	If CARB relies on CCUS, it must demonstrate the safety and impact on local air pollution of CCUS projects.
P21	Design localized health impacts into the Scoping Plan modeling.
P22	Have a third party conduct a racial equity impact analysis of the Scoping Plan before it is approved by the Board. See, for example, the Racial Equity Impact Assessment and Implementation Guide for the Oakland 2030 Equitable Climate Action Plan, developed by Environmental / Justice Solutions: https://cao-94612.s3.amazonaws.com/documents/FINAL_Complete_EF-Racial-Equity-Impact-Assessment_7.3.2020_v2.pdf .
P23	Have a third party conduct a health impact analysis, including a full life cycle assessment of CCS, and identify what it would look like if CARB relies on carbon capture and storage (CCS) in

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Public Health and Social Costs	
	the Scoping Plan. CARB should compare the health impacts of CCS to direct emissions reduction strategies.
P24	CARB and CDPH should have a third party conduct a health impact assessment of CCS as soon as possible, and before May 2022. Present it to the EJAC and the Board, and ensure that the data are accessible and understandable to all stakeholders, as is done with CalEnviroScreen. In 2010 a HIA of the Cap and Trade program was funded by CARB ⁶
New Data and Partners	
P25	Implement a statewide data standard for all emission sources that would collect more granular, community-level data for mobile and stationary sources.
P26	By the end of 2023, have the CDPH Office of Health Equity create a data sharing partnership with clinics and other health providers in disadvantaged communities to get more granular health data for use in a more robust health impact analyses. Ensure the funding level supports a robust process.
P27	Incorporate into the scoping plan a long-term partnership with the EJAC that would assure the following: <ul style="list-style-type: none"> • EJAC review of an annual agenda of proposed activities by CARB, supported by quarterly updates • Meaningful EJAC review of directions for research funded or conducted by CARB or its partners or funding recipients, as well as specific research topics and proposals • A collaborative process for CARB technical staff and leadership to engage with EJAC and communities on specific projects and activities
P28	Develop data sources and metrics to track progress under the Scoping Plan and related actions to achieve projected results using a collaborative approach, supported by an online dashboard and including ground truthing.
P29	Incorporate community knowledge and data sources from EJ communities to inform Scoping Plan work with the EJAC to develop Participatory Action Research projects in the development and evaluation of Scoping plan measures
Ongoing Assessment and Evaluation	
P30	Work with the EJAC to develop methods to evaluate the effectiveness of measures in the Scoping Plan, and have a third-party evaluator conduct the evaluation.
P31	Create environmental and health equity metrics tracking and benchmarks for EJ communities, disaggregated by race/ethnicity.
P32	Work with OEHHA, and in consultation with the EJAC, to develop and adapt methods that can be used to conduct health impact assessments of topics of concern to the EJ community (including costs and equity). Complete a health impact assessment before the next Scoping Plan process begins to provide a baseline for the EJAC at the beginning of the Scoping Plan process. Repeat these assessments before the update of every Scoping Plan as an ongoing assessment of public health.
P33	Share how the health impact analysis will be used to evaluate Scoping Plan measures, and consult with the EJAC to improve the methodology.
P34	Provide all available data used to characterize conditions and for assessments, to ensure transparency, including full life cycle analyses. Incorporate principles of life cycle analyses to consider the full impacts of key elements of the plan and policies. Provide the data and results of such analyses.

⁶ https://ww2.arb.ca.gov/sites/default/files/2020-08/cdph_hia.pdf

Preliminary Draft of EJAC Scoping Plan Recommendations March 10, 2022

Public Health and Social Costs	
	Education
P35	Promote education about pesticides, including the application and identification of petrochemicals used in pesticides, including those in pesticides manufactured outside of California but purchased for use in California.
Natural and Working Lands	
<i>“CARB should” is implied at the start of every recommendation.</i>	
	Major Goal or Action
N1	Look at the offshore capacity of healthy aquatic systems instead of just terrestrial systems.
N2	Include an ambitious pesticide reduction target to (1) reduce the use of synthetic pesticides by 50% by 2030 and (2) reduce the use of hazardous pesticides by 75% by 2030, starting with organophosphates, fumigants, paraquat, and neonicotinoids. Include an evaluation of climate emissions from pesticide manufacturing, transport, disposal, and application.
N3	Adopt organic farming in all Scoping Plan scenarios. Include an ambitious pesticide reduction target to (1) reduce the use of synthetic pesticides by 50% by 2030 and (2) reduce the use of hazardous pesticides by 75% by 2030, starting with organophosphates, fumigants, paraquat, and neonicotinoids. Restructure scenarios to model progressive percentage increases in the adoption of all proposed agricultural management strategies.
N4	Share the improvements the previous EJAC asked for. From the 2008 EJAC Recommendations: “Recommendation to Protect Farmland: The Committee recommends that ARB encourage land use planning and development that protects farmland. ARB should also encourage organic and other sustainable farming practices that reduce greenhouse gas emissions from fertilizers and pesticides.”
N5	Seek nontraditional technical input.
	Transparency and Access
N6	Respond to how environmental justice communities support the creation and development of more natural land development.
N7	Describe commonalities and differences of the Scoping Plan with the state’s 30 x 30 goals.
	New Data and Partners
N8	Work with relevant water and policy agencies to find co-benefits. For example, do not incentivize the expansion of dairies due to negative water impacts.
	Health Analysis
N9	Evaluate public health and equity outcomes for all agricultural management strategies. In addition to carbon, model methane and nitrous oxide emissions from agriculture. Model the full life cycle GHG and public health impacts of fumigant pesticides.
N10	Include a negative carbon subregion as a goal.