

June 14, 2022

Liane M. Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: 128 California Academics Respond to California Air Resources Board 2022 Scoping Plan

Dear Honorable Governor Gavin Newsom and the California Air Resources Board,

We write to you as representatives of the academic and scientific community in California urging you to make updates to the 2022 Draft Scoping Plan that reflect the latest science and rapidly deteriorating climate reality. Not only is 2045 too late for carbon neutrality, the strategies recommended in the Scoping Plan are inadequate and unjust.

To maintain a livable planet and prevent further unthinkable suffering, the United Nations has made clear that policymakers around the world have a matter of months left to mobilize on a plan to dramatically wind down fossil fuel use, rapidly deploy renewable energy, and electrify end uses. With California's outsized influence in global climate policy, the state will either be a guiding light for the world in response to this urgent call to action or serve as a key barrier. If the state adopts the Scoping Plan as is, it will be the latter.

Instead of leading on direct emission reductions, the draft Plan makes no changes to the emission reduction targets adopted in 2017, and does not heed Governor Newsom's call to accelerate targets. The Air Resources Board is [proposing to cut emissions](#) 40% by 2030 and less than 80% by 2045. This puts California behind states like New York and Washington, the Biden administration's own target of reducing emissions by 50% by 2030, and other nations like the United Kingdom and the European Union.

The Scoping Plan could put California on an immediate path to reducing fossil fuel pollution, particularly in frontline communities, which would have the added benefit of improving health outcomes and creating economic opportunities where they are most needed. Instead, the Scoping Plan pushes a risky strategy that trades immediate emissions reductions for a reliance on unproven technology to be utilized in the future. This path risks locking in polluting infrastructure by relying far too heavily on carbon capture, utilization and sequestration (CCUS), and direct air capture (DAC). For example, the plan unrealistically projects California will use 100 million metric tons (MMT) of direct air capture in 2045. Globally, only [0.01 MMT](#) of direct air capture is happening today.

CCUS, promoted by the oil and gas industry, has been disproven over decades of use, with recent studies showing that [80% have ended in failure](#) and [most of the carbon](#) that was captured was used to produce more climate-polluting fossil fuels. DAC is nascent, costly and

unproven at scale. Relying on these technologies, rather than moving forward with known solutions, is foolhardy and dangerous, and it is frontline communities who will pay the price.

We cannot afford to gamble on our future. As academics and data experts, we're dismayed to see a plan that is so light on details and contains a [significant math error](#). Additionally, CARB vastly underestimates the social cost of carbon, instead of using [\\$50 per ton of pollution emitted](#), and by doing so, depreciates the costs climate change will have on our healthcare, food and economic systems.

An issue as devastating and urgent as the climate crisis demands sophisticated and determined analysis to pair together cost-effective, ambitious strategies that would result in feasible yet aggressive action. This plan does not meet that threshold.

It is vital that CARB listen to scientists, energy experts and community members above the fossil fuel industry.

Per the United Nations Intergovernmental Panel on Climate Change latest reports, California should be working to [triple the deployment of renewable](#) energy generation, prohibit permitting any [new fossil fuel infrastructure](#), and phase out existing fossil fuel infrastructure by electrifying transportation, buildings and other sectors.

There is still time for CARB and Governor Newsom to deliver a bold climate blueprint that centers equity and public health and focuses on a no-regrets approach of renewable energy investment. Thank you for your consideration of these important changes for California communities and our climate.

Sincerely,

Nikit Abhyankar, PhD, Senior Scientist, University of California, Berkeley and Lawrence Berkeley National Laboratory

Paul Adler, PhD, Professor, University of Southern California

Paul Almeida, PhD, MA, Faculty, University of California, Merced

Sean Anderson, PhD, Professor & Chair of Environmental Science & Resource Management Department, California State University Channel Islands

Bill Anthes, PhD, Professor, Pitzer College

Juanita Aristizabal, PhD, Associate Professor, Pitzer College

Ozlem Ayduk, Ph.D., Professor, UC Berkeley

Roger Bales, PhD, MS, Professor, University of California, Merced

Cameron Barrows, PhD, Research Ecologist, Emeritus, University of California Riverside

Anna Barth, PhD, Post-Doc, University of California, Berkeley

Sindhuja Bhakthavatsalam, PhD, Associate Professor, California State University, Northridge

Asa Bradman, PhD, Professor, University of California, Merced

Elizabeth Braker, PhD, Professor of Biology, Occidental College

Clair Brown, PhD, Professor, University of California, Berkeley

Silvia Bunge, PhD, Professor, University of California Berkeley

Laura Burrus, PhD, Professor and Chair of Biology, San Francisco State University

Liz Chamberlin, Ph.D., Ecologist

Pete Chandransu, Ph.D, Assistant Professor of Biology, Scripps College

Mike Chavez, PhD, Assistant Professor, Riverside City College

Christopher Clark, PhD, Associate Professor, University of California, Riverside

Martha H Conklin, Ph.D. Professor, University of California, Merced

Jon Conway, PhD, Senior Researcher, Romero Institute

Jacqueline Crawley, PhD, Professor Emeritus, University of California Davis

Teri Crisp, PhD, MS, Continuing Lecturer, University of California, Berkeley

Lara Cushing, PhD, MPH, Assistant Professor, University of California, Los Angeles

Jordan Daniels, PhD, Lecturer, Pomona College

Geoffrey Dilly, PhD, Associate Professor of Biology, California State University - Channel Islands

Paul Faulstich, PhD, Professor of Environmental Analysis, Pitzer College

Daniel Fernandez, PhD, Professor, California State University, Monterey Bay

David Fronk, PhD, Postdoctoral Researcher, University of California, Riverside

Russell Galipeau, MS, Lecturer, California State University Channel Islands

Sarah Gilman, Ph. D., Associated Professor Biology, Scripps College

Robert Girling, PhD, Professor Emeritus & Legislative Director, Sonoma State University

Daniel Gluesenkamp, PhD, Executive Director, California Institute for Biodiversity

Marta Gonzalez, PhD, MS, Associate Professor, University of California, Berkeley

Ted Grantham, PhD, Professor, University of California, Berkeley

Kevin Berg Grell, PhD, Professor, Pitzer College

Marilyn Grell-Brisk, PhD, Adjunct Assistant Professor, Pitzer College

Edwin Grosholz, PhD, Professor, University of California, Davis

Catherine Gudis, PhD, Associate Professor of History, University of California, Riverside

Tim Gutierrez, PhD, Associate Professor, Riverside City College

Leah Gulyas, BS, PhD Candidate, University of California, Berkeley

David Haake, MD, Health Sciences Clinical Professor, University of California Los Angeles

Thomas Harmon, PhD, Professor and Director, University of California Merced

Richard C. Haskell, PhD, Professor, Harvey Mudd College

Daniel J. Hicks, PhD, Assistant Professor, University of California Merced

Wilson Horner, PhD Candidate, University of California, Berkeley

Mark Huising, PhD, Professor, University of California, Davis

Marcia Ishii, PhD, Senior Scientist, Pesticide Action Network North America

Sunni Ivey, PhD

Richard Ivry, PhD, University of California, Berkeley

Samantha Iyer, PhD, Assistant Professor, Fordham University

Jaime Jahncke, PhD

Kiran Jain, J.D., Lecturer, University of California, Berkeley

Lisa Jenkins, MS, Special Ed teacher, University of Oregon

Christopher M Jones, Ph.D, Director, CoolClimate Network, University of California, Berkeley

Zayn Kassam, PhD, Professor, Pomona College

Carly D. Kenkel, PhD, Assistant Professor, University of Southern California

Dan Klooster, PhD, Professor of Environmental Studies, University of Redlands

Jonathan Knight, PhD, Lecturer, San Francisco State University

Liz Koslov, PhD, Professor, University of California, Los Angeles

Zachary Lamb, PhD, MArch, Assistant Professor, University of California, Berkeley

Sue Y. Lee, PhD, Prof Emerita, California Polytechnic State University Humboldt

Peggy G. Lemaux, Ph.D., Professor of Cooperative Extension, University of California, Berkeley

Greg Levine, PhD, Professor, Department Chair, University of California, Berkeley

Alyssia Maria Lilio, PhD, Criminalist, University of Ca San Diego

Gretchen LeBuhn, PhD, Professor, San Francisco State University

Fred Lipschultz, Phd, MA, Senior Scientist, Universities Space Research Association

Mark J Llorente, PhD, Data Scientist and Material Scientist, University of California San Diego

Ann Lopez, PhD, Executive Director, Center for Farmworker Families,

Karina Maher, MD

Topher McDougal, PhD (MIT), Associate Professor of Economic Development, University of San Diego

Char Miller, PhD, W.M. Keck Professor of Environmental Analysis and History, Pomona College

Roberta Millstein, PhD, Professor Emerit, University of California, Davis

Rachel Morello-Frosch, PhD, MPH, Professor, UC Berkeley School of Public Health

Archie S. Mossman, PhD, Prof Emeritus, California Polytechnic State University Humboldt

Tricia Morgan, MA, Managing Director, Community Engagement Center, Pitzer College

John Olson, PhD, Assistant Professor, California State University Monterey Bay

Manuel Pastor, PhD, Director, Equity Research Institute, University of Southern California

Dr. Susan Penner, DrPH, MPA, University of San Francisco (retired)

Simon Penny, MA, Professor, University of California Irvine

Susan Phillips, PhD, Director, Robert Redford Conservancy; Professor of Environmental Analysis, Pitzer College

Eric Post, PhD, Professor of Climate Change Ecology, University of California, Davis

Paul Prescott, PhD, MA, Professor, University of California, Merced

Karthick Ramakrishnan, PhD, Professor of Public Policy, University of California, Riverside

Bruce Rannala, PhD, Professor of Evolution and Ecology, University of California Davis

Nicholas John Ratto, PharmD, Doctor of Pharmacy, First Databank - Electronic Drug Information

Ellen Reese, PhD, Professor of Sociology & Chair of Labor Studies, University of California Riverside

Margaret Reeves, PhD, Senior Scientist, Pesticide Action Network

Paul Reginato, PhD, Independent Fellow, Innovative Genomics Institute, UC Berkeley

David Reznick, PhD, Distinguished Professor, University of California, Riverside

Eric Rignot, PhD, Donald Bren Professor of Earth System Science, University of California, Irvine

Valerie Rountree, PhD, Assistant Professor, University of Redlands

Alissa Sasayama, PhD

Dvera I. Saxton, PhD, Researcher, Environmental & Health Anthropologist

Candace Seu, PhD

Susan C. Seymour, Ph.D., Jean M. Pitzer Professor Emerita of Anthropology, Pitzer College

Frank Shaughnessy, PhD, Professor, Emeritus, Cal Poly Humboldt

Dave Shukla, Operations, Long Beach Alliance for Clean Energy

Dana Simmons, PhD, Associate Professor, University of California Riverside

Ryan G. Sinclair, PhD, MPH, Associate Professor, Loma Linda University

Tanja Srebotnjak, PhD, Director, Zilkha Center for Environmental Initiatives, Williams College

Leah Stokes, PhD, MPA, MA, Associate Professor of Political Science, University of California - Santa Barbara

Amber Stubler, PhD, Assistant Professor, Occidental College

Andrea Swei, PhD, COP26 observer, Associate Professor, San Francisco State University

Ruti Talmor, PhD, Associate Professor, Pitzer College

Ashley J Thomas, PhD, Postdoctoral Fellow, Massachusetts Institute of Technology

Diane Thomson, PhD, Professor of Biology and Environmental Science, Scripps College

Fernanda Valdovinos, PhD, Associate Professor, University of California, Davis

Evangelos Vossos, MS, Program Manager, Lawrence Berkeley National Lab

Julia Walsh, MD MSc, Professor (Retired), University of California, Berkeley

Eleanor Wang, Student, University of California, Berkeley

Cora Went, PhD, Physics, California Institute of Technology

Jason Wexler, PhD, VP of Thermal Engineering, Gradient

Stephen M. Wheeler, Ph.D., Professor, University of California, Davis

Dwight Whitaker, PhD, Professor of Physics, Pomona College

Heather Williams, PhD, Professor of Politics; Coordinator, Program in Environmental Analysis, Pomona College

Urmi Willoughby, PhD, Assistant Professor of Environmental History, Pitzer College

Barton Wise, MD, MSc, Professor/Professor in Residence, University of California, Davis

Amy Woodson-Boulton, PhD, MA, Professor, Loyola Marymount University

Jun Wu, PhD, Professor, University of California, Irvine

Christopher Yeh, PhD Candidate, MS, California Institute of Technology

Elana Zilberg, PhD, Associate Professor, University of California San Diego

Greg Zilliac, M.S., Research Scientist, NASA Ames Research Center