

**DOCKETED**

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**on Draft Scoping Order for 2022 IEPR Update**

*Additional submitted attachment is included below.*

March 22, 2022

Siva Gunda  
Vice Chairperson  
California Energy Commission  
715 P Street  
Sacramento, California 95814  
Via email to: [docket@energy.ca.gov](mailto:docket@energy.ca.gov)

**Re: Docket Number 22–IEPR–01, 2022 Scoping Order; Comments on “Notice of Request for Public Comments on Draft Scoping Order for 2022 IEPR Update”**

Dear Vice Chair Gunda and All This May Concern,

On behalf of the SB 350 Disadvantaged Communities Advisory Group (“DACAG”)<sup>1</sup> we are pleased to provide these comments pursuant to Docket Number 22-IEPR-01, the 2022 Integrated Energy Policy Report Update, and specifically the 3/1/2022 document “Notice of Request for Public Comments on Draft Scoping Order for 2022 IEPR Update.”

We commend the California Energy Commission’s leadership to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices, which are used to develop recommendations for energy policies that conserve state resources, protect the environment, provide reliable energy, enhance the state’s economy, and protect public health and safety, and document these directions in the biennial Integrated Energy Policy Report (“IEPR”), and its alternate year updates.

**General Comments**

We agree with prior calls for the IEPR to be a “summary document,” with links and references to other materials as needed. To provide comprehensive data and analysis on record that can be referenced to avoid duplicative work, we recommend the CEC incorporate its order instituting informational proceedings (OIPs) and order instituting rulemakings (OIRs) in areas such as decarbonizing the gas system and distributed energy resources which will enable deep analyses that extend beyond an annual reporting period.

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<sup>1</sup> <https://www.energy.ca.gov/about/campaigns/equity-and-diversity/disadvantaged-communities-advisory-group>

To the list of California’s enacted policies aimed at climate resilient development referenced in the Scoping document, we suggest adding EO B-30-15<sup>2</sup> which includes deeply insightful language to center climate change and equity in these kinds of strategic plans, as stated in the sections below, and aligns with the International Panel on Climate Change (IPCC) definition of “climate resilient development” where all transitions, including clean energy transitions, pair climate mitigations (emission reductions) with adaptations:

“6. State agencies shall take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives.

7. State agencies’ planning and investment shall be guided by the following principles

- Priority should be given to actions that both build climate preparedness and reduce greenhouse gas emissions;
- Where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts;
- Actions should protect the state’s most vulnerable populations; and
- Natural infrastructure solutions should be prioritized.”

## **1. Establishing a Framework to Center Equity and Environmental Justice Throughout CEC Efforts**

Centering well-defined equity metrics and outcomes is crucial to bend the arc of justice by accelerating toward “climate resilient development.”<sup>3</sup> We support a mechanism to obtain robust input to better integrate equity, environmental, and climate justice goals.

- Highly recommend conducting a literature review of existing California, Tribal, and international energy and related (e.g., climate) equity metrics, indicators and outcomes, including but not limited to: <https://resilientca.org/> and <https://resilientca.org/topics/climate-equity/>.
- Highly recommend placing a timeline on this work to ensure the process reaches conclusion and to prevent the process from delaying project deployments.
- Suggest incorporating the International Panel on Climate Change (IPCC) climate justice principles of distributive justice, procedural justice, and recognition<sup>4</sup> interwoven with state, tribal, and regional equity and justice principles.

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<sup>2</sup> <https://www.ca.gov/archive/gov39/2015/04/29/news18938/index.html>

<sup>3</sup> [https://report.ipcc.ch/ar6wg2/pdf/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf), page 6: “This report labels the process of implementing mitigation and adaptation together in support of sustainable development for all as climate resilient development.”

<sup>4</sup> Ibid, page 5: “The term climate justice, while used in different ways in different contexts by different communities, generally includes three principles: distributive justice which refers to the allocation of burdens and benefits among individuals, nations and generations; procedural justice which refers to who decides and participates in decision-making; and recognition which entails basic respect and robust engagement with and fair consideration of diverse cultures and perspectives.”

- Suggest incorporating the **DACAG “Equity Framework,”** particularly the definition of Disadvantaged Communities, to include:
  - CalEnviroScreen, as defined [latest version] by Cal EPA,
  - Tribal Lands,
  - Census tracts with area median household income/state median income, less than 80%, and
  - Households with median household income less than 80% of Area Median Income (AMI)
- Suggest **incorporating the DACAG-recommended “Energy Equity Indicators”** (please see: <https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpucwebsite/content/utilitiesindustries/energy/energyprograms/infrastructure/dc/item-5-energy-equity-indicators-dacag-recommended-changes.pdf>).
- Suggest comparing existing equity metrics with proposed metrics and describing use cases in which each may be applied, specifically identifying the gaps which the proposed metrics aim to fill.
- Suggest centering no-combustion strategies to achieve real pollution reductions that improve equitable health outcomes. Deep reductions in GHG emissions can improve air quality through the simultaneous reduction in emissions of health-damaging air pollutants such as particulate matter (PM), nitrogen oxides (NO<sub>x</sub>), and volatile organic compounds (VOCs). California’s low-carbon energy future would reduce air pollution mortality by ~55% by mid-century. These health benefits accrue at the local level, bringing immediate air quality benefits to vulnerable populations. In [California’s Fourth Climate Change Assessment Statewide Summary Report](#) please see box on p. 71 dedicated to “Public Health Benefits of Deep GHG Emissions Reductions in California.” This box provides more detail as to the Zapata et al. (2018) study from which the estimate of a 55% reduction in mortality from meeting 2050 goals is drawn and other studies that contextualize the importance of air quality issues in California and related implications of deep reductions in GHG emissions. “The public health savings of deep GHG emission reductions in California in isolation or in combination with global action are comparable to the potential cost of GHG reductions (Roland-Holst et al., 2018; Zapata et al., 2018). This holds even without consideration of other benefits of deep GHG reductions, such as lower overall climate risks from higher temperatures and sea-level rise.” Also please see p. 84 of the statewide report on “Improved Accounting of Co-Benefits”: “California has placed a priority on implementing adaptation solutions that also support reducing GHG emissions. Several studies show that climate actions can result in a range of additional benefits (e.g., Zapata et al., 2018 for public health). Developing more robust tools and techniques to quantify and account for the multiple benefits of climate actions can be helpful to address a range of future concerns,

including climate justice issues. A “multiple-benefit” approach can provide opportunities for funding of climate-related projects and actions from multiple sources. This can also apply to marine and coastal ecosystems, as additional research is needed to understand where carbon storage and ocean acidification amelioration potential may be greatest within the variety of physical environments along California’s coast. A guide to some methods for accounting for co-benefits has been assembled by the California Air Resources Board.”

- Equity in rural / remote / Tribal areas of California depends on bridging the “deployment divide,” increasing access to and familiarity with equipment and strategies to electrify, decarbonize, and become more resilient. Highly recommend equity metrics include:
  - A survey of the distribution channels and availability of preferred electrified building systems and equipment, including residential and commercial scale electric heat pump-based HVAC systems, residential-scale battery storage systems including multiple technologies, e.g., lithium iron phosphate and other battery types, electric cooking systems, and electric hot water heating systems.
  - A survey of contractor, installer, warranty and repair technician ecosystems related to preferred electrified building systems and equipment.
  - Access to enabling infrastructure, e.g. broadband.
- Suggest institutionalizing regional biennial climate science symposium events, where the regions together cover the entire state. Equity rests in part on accurate, updated data. Past regional climate science learning sessions have been effective, particularly in rural / remote / Tribal areas where capacity to access the latest information is often severely limited. Please see model here:  
[https://northcoastresourcepartnership.org/site/assets/uploads/2018/11/NorthCoastClimateScienceSymposium\\_Agenda\\_v2.pdf](https://northcoastresourcepartnership.org/site/assets/uploads/2018/11/NorthCoastClimateScienceSymposium_Agenda_v2.pdf)
- Support the statewide ambition of the IEPR and for initial four (4) regions approach, and at the same time incorporate an engagement strategy with connectivity to other regions, or at least a strategy to interweave regions.
- Highly recommend detailed analysis and inclusion of the California Air Resources Board (CARB) scoping plan (AB 197) with particular focus on 1) emphasis on prioritizing direct emission and pollution reductions at the source, which requires coordination between CARB and the CEC and 2) considering social costs and non-energy and other harms (e.g., human health impacts, healthcare costs, negative health trends and outcomes).

## **2. Creating a California Planning Library**

Disadvantaged Communities (DACs) lack sufficient capacity in climate and energy science and data. We stress the importance of the CEC’s role in collecting and analyzing data and serving as the state’s data repository as a pillar of planning and decision-making heavily relied upon by DACs who cannot afford to support this kind of research and data collection. We support the

activities of the CEC within the IEPR 2022 Update to consolidate, integrate, and enhance analytical products into a California Planning Library, and urge that these data and resources be shared in an easily searchable and accessible format, with periodic regional symposia (see below) to transfer knowledge on data and tools, enabling a broad range of stakeholders with varied backgrounds to access and download needed information.

- Highly recommend including GHG and carbon lifecycle analyses (CLA) decision-making data and tools, identifying CLA tools needed for regional project and investment design and decision-making.
- Support including the analytical products contemplated in the draft Scope:
  - Energy demand forecasts and scenarios, including:
    - Updated end-user electricity, gas, and transportation fuel demand forecasts to 2035.
    - Energy demand scenarios to assess long-term (to 2050) decarbonization policy impacts on electricity and gas demand.
  - Reliability assessments.
  - Land-use screening assessments.
- Suggest the following additional analytical resources:
  - For greater affordability, continuity of service, and more equitable direct accessibility to taxpayer-funded and government-collected solar and weather data, develop public products that provide data for distributed energy resource control systems for greater optimization and coordination with the distribution and transmission grids.
  - Easy access to available capacity on the transmission and distribution grids for clean energy and storage projects, such as Pacific Gas and Electric’s PV RAM and other tools. Please see: [https://www.pge.com/en\\_US/for-our-business-partners/distribution-resource-planning/distribution-resource-planning-data-portal.page?ctx=large-business](https://www.pge.com/en_US/for-our-business-partners/distribution-resource-planning/distribution-resource-planning-data-portal.page?ctx=large-business); crucially, planners need access that enables a ‘first pass feasibility’ estimation and which is not behind a cumbersome login portal.
  - Add Gas and Affordability OIRs, OIIPs and other proceedings to the IEPR as links and references.
- Suggest deep coordination with climate analytical products, including but not limited to: <https://cal-adapt.org/>, <https://climateassessment.ca.gov/>, <https://acp.copernicus.org/articles/18/4817/2018/>

### 3. Addressing Emerging Topics

- *Role for hydrogen in California’s clean energy future.*

While the DACAG agrees with the theoretical benefits of hydrogen as a potentially favorable climate resilient source of energy, we strongly recommend the following:

- Ensure full GHG lifecycle accounting is factored into hydrogen strategies, project by project and site by site. Hydrogen refined from fossil sources should not be invested in or allowed from a regulatory framework. Hydrogen production which has a high parasitic electrical load could negate its climate benefits, and if a project fails to be a neutral or net sequestering energy source it should not be invested in.
  - Assess the potential health-damaging air and water pollutant emissions associated with hydrogen production manufacturing and use, such as NO<sub>x</sub> emissions in the case of proposed hydrogen combustion.
  - Consider additional factors such as safety of hydrogen storage and transport and lifecycle materials inputs and end-of-life considerations for hydrogen pathways, including but not limited to materials used in fuel cells.
  - Ensure the full marketability of hydrogen is considered prior to investment, i.e., end uses and costs. Despite almost two decades of development (e.g., the hydrogen highway), production and use of hydrogen has initially proven expensive compared to alternatives (e.g., batteries) in all but larger industrial and commercial settings (e.g., shipping, large trucking applications).
- *Evolving regional energy markets*
    - Offshore wind energy has the potential to shift ~25% of California's electrical generation, and be a catalyst for new energy resilience in communities along the coast that due to sea level rise are relocating or reorganizing their electric power plants and transmission and distribution infrastructure. This resource can also reduce reliance on the transmission lines associated with recent fires and Public Safety Power Shutoffs across California.
      - Highly recommend research and analysis to provide coastal communities with regional data to guide electrical power system transitions including moving electrical infrastructure out of sea level rise zones, and how distributed storage may be combined with additional regional generation via offshore wind and other clean resources.
    - In rural / remote areas, there are often electric sub-station interconnection points (e.g., old mill sites, industrial sites) that are not in use or under-utilized but which could be repurposed for battery storage arrays with or without distributed clean generation. Distributed battery storage arrays in rural areas could serve as resource adequacy and/or basis for front-of-the-meter microgrids that energize at a feeder / substation level.



- Highly recommend regional research to list feasible locations (public and private) where distributed battery storage arrays could be located, and include any maximum power nameplate limits based on feeder capacities.
- Recommend regional research to better understand costs of sectionalization / segmentation devices, controls, switchgear, substation upgrades to create more island-able electrical grid segments that can be kept energized in Public Safety Power Shutoff events, or to provide greater reliability in nuisance or other outage events.
  - Research should include combination with measures to reduce risk from overhead lines (e.g., undergrounding vegetation management, and others)
- Recommend adding **industrial electrification** as an emerging topic because of its unique electrification scope and associated clean energy strategies.
- Recommend adding **fuel switching** as an emerging topic due to the ongoing innovation in this sector, and the need to focus on equitable investment, access, policy, and deployment strategies for disadvantaged communities.

We thank the California Energy Commission for its crucial work in the IEPR. We look forward to consistent engagement through subcommittee and presentations at DACAG meetings and discussing how these recommendations are incorporated into the IEPR 2022 Update. Please contact the DACAG for any questions or for more information.

Sincerely,

The California Senate Bill 350 Disadvantaged Communities Advisory Group (DACAG)