



October 22, 2021

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California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

*Submitted online*

**Subject: American Clean Power – California Comments on 2022 Scoping Plan Update - Scenario Inputs Technical Workshop.**

Dear Ms. Sahota,

American Clean Power-California (“ACP-California”) appreciates the opportunity to participate in the Scoping Plan process and respectfully provides these comments on the 2022 Scoping Plan Update – Scenario Inputs Technical Workshop. The American Clean Power Association (“ACP”) is the voice of developers from across the clean power sector that are providing utility-scale clean capacity and transmission while creating jobs, spurring massive investment in the American economy, and driving high tech innovation across the United States. ACP’s mission is to transform the U.S. power grid to a low-cost, reliable, and renewable power system. ACP-California is the state project of the national organization and shares this mission with an eye toward California’s market and policy venues. On behalf of our coalition of developers, owners, and operators of utility-scale solar, storage, land-based wind, offshore wind, and transmission, we applaud you and the ARB staff for your leadership in tackling climate change through a robust and transparent process that is inclusive of all stakeholders.

ACP-California seeks to drive clean energy deployment at the state level. Stronger demand signals and pathways to market contribute to long-term market certainty and unlock meaningful investments in California. Renewable energy has played a key role in California’s greenhouse gas reduction strategy over the past decade, and clean power advancements will continue to power the



economy into the future. Through that lens, ACP-California respectfully submits the following comments on the ARB Scoping Plan for 2022:

1. The ARB should work closely with the California Energy Commission (“CEC”) California Public Utilities Commission (“CPUC”), and California Independent Systems Operator (“CAISO”) to ensure its modeled scenarios are appropriately reflected in forthcoming integrated resources planning for California.
2. The ARB should account for the lead time for planning and development activities associated with accelerating the GHG targets.
3. Renewable resource diversity is a key contributor to any least-cost pathway to carbon neutrality. Offshore wind and other innovative applications of renewable energy generation hold significant promise in its ability to drive longer-term greenhouse gas reductions. We suggest the ARB use up-to-date modeling assumptions and avoid any modelling inputs that cap offshore wind or other resource capacity additions.

## **DISCUSSION**

### **1. The Scoping Plan Is a Critical State Policy That Guides the CPUC and CEC’s IRP Proceedings.**

The Scoping Plan sets the foundation for policies at every level for California, especially programs under the CPUC purview. In particular, the modeling inputs and range of scenarios the ARB employs in developing the Scoping Plan will inform the CPUC’s forthcoming Integrated Resource Planning proceeding (“IRP”). The IRP, in turn, is the key driver of capacity expansion planning, including resource planning and transmission planning, which has a real impact on the pace and scale of clean energy deployment.

The CPUC is currently planning towards a 38 MMT planning target as it completes the 2019-2021 IRP cycle. This “Preferred System Plan” (“PSP”) is scheduled for adoption at the end of 2021. It



may further refine procurement policies and inform longer-term transmission planning activities in the future and will set the pace and scale of development necessary to meet a 38 MMT target. Given the lengthy nature of the IRP and Transmission Planning Process, we encourage the ARB to work closely with the CPUC and CEC early in these processes to ensure that their current planning efforts are fully consistent with whichever scenario the ARB ultimately adopts in the final Scoping Plan. All four of the Alternatives would accelerate the GHG target for the entire electricity sector. As a result, a PSP that plans for a 38 MMT target will fall significantly short of the ARB's modeling for all four Alternatives. However, the CAISO is already studying a policy-driven sensitivity of the 30 MMT scenario in its 2021-2022 Transmission Planning Process.

The ARB should work closely with the CPUC and CAISO to ensure that the IRP modeling and associated procurement directives can be updated early in the 2022-24 IRP cycle such that the CAISO, load-serving entities, and developers can properly plan to a 2030 target while there is still time for development activities. By contrast, if the CPUC does not adopt updated planning requirements for its share of the 23 or 30 MMT target until the end of the 2022-2024 IRP cycle, it will be unlikely the State will achieve the adopted MMT target.

## **2. Resource Diversity is a Critical Component of a Least-Cost Pathway to Carbon Neutrality.**

According to the SB 100 Report:

Resource portfolio diversity, both technological and geographical, generally lowers total resource costs. Nearly all out-of-state or offshore wind resources are selected when made available, and even a modest amount of load flexibility can reduce battery storage requirements, decrease gas capacity and lower total costs. If zero-carbon firm technologies can reach a cost of about \$60/megawatt-hour (MWh), they could reduce system costs by an estimated \$2 billion annually in 2045.<sup>1</sup>

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<sup>1</sup> Final Joint Agency SB 100 Report, p. 16, available at: <https://www.energy.ca.gov/publications/2021/2021-sb-100-joint-agency-report-achieving-100-percent-clean-electricity>.



The ARB should account for the value of resource diversity by accounting for the development timelines for a more diverse portfolio and the timing of when new capacity can be available to meet the updated GHG targets. We urge the ARB, joint energy agencies, and the CAISO to continue to explore opportunities to facilitate implementation of California’s greenhouse gas reduction strategy and 100% clean energy requirement in coordination with other western states.

**3. The Scoping Plan Should Account for the Development Timelines for new Generation and Transmission.**

In the ARB’s proposed PATHWAYS scenario modeling assumptions presented at the September 30, 2021 workshop, all of the Alternatives present ambitious goals that would accelerate existing planning targets. Acceleration of the IRP GHG targets, as noted by the energy agencies in the March 2021 SB 100 joint agency report to the Legislature would necessitate additional resources and require a pace of development that is much more aggressive.<sup>2</sup>

ACP-California recommends that the ARB recognize the importance of establishing clear timelines to meet the call-to-action to build new generation and associated transmission infrastructure. With the implementation of stringent timelines, California’s load-serving entities must begin the planning process for development and procuring transmission immediately. We understand that the methods to meet the proposed goals include many moving parts and will occur on an unprecedented scale. The desire to meet the Scoping Plan’s net-zero carbon future is widely shared; it is equally critical that the ARB also account for the pace and scale of development needed to meet these unprecedented milestones. The ARB should favor providing a sufficient runway for resources that may require a longer planning horizon to plan, permit, develop and construct, such as offshore wind, long-duration storage, and new transmission.

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<sup>2</sup> SB 100 Joint Agency Report: Charting a Path to a 100% Clean Energy Future, pp. 75-76, available at: <https://www.energy.ca.gov/sb100>.



By explicitly recognizing the development timeline for clean energy generation and infrastructure, the Scoping Plan will help facilitate the observations in the SB 100 Report concerning technology diversity.

**4. The Scoping Plan Should Rely on the Most Up-to-Date Cost and Capacity Factor Information for New Generation Capacity.**

The ARB modeling effort should acknowledge the value of high capacity-factor wind in meeting California’s long-term climate policies. Offshore wind, for example, could offer \$70-\$80/MWh in average avoided costs to the grid in the 2030 timeframe.<sup>3</sup> These cost savings are in part due to the favorable hourly generation profile that complements California’s solar resources. With Pacific winds generally blowing 24 hours a day and peaking between 6:00-9:00pm, offshore wind will be a reliable contributor to the State’s capacity needs, especially during critical net-peak periods.<sup>4</sup>

In light of these benefits, we encourage the ARB to give particular attention to how it models offshore wind under its various scenarios. It will be important to use the most up-to-date cost and capacity factor information for the multiple offshore wind development areas off the California coast. The ARB should ensure it relies on the National Renewable Energy Laboratory’s 2020 update, *The Cost of Floating Offshore Wind Energy in California Between 2019 and 2032*, which incorporates improved information on wind speed, wake losses, plant size, turbine growth trajectory, port and interconnection assumptions, and capital expenditure learning curve.<sup>5</sup> There is significant developer interest in California offshore wind; the Biden Administration recently committed to near-term leasing timelines for multiple wind energy areas to accommodate 4.6 GW over the next ten years, and the CAISO is studying how best to optimize transmission capacity to deliver offshore wind to California’s load centers.

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<sup>3</sup> UC Berkeley Labor Center, *California Offshore Wind: Workforce Impacts and Grid Integration* (September 2019).

<sup>4</sup> USC Schwarzenegger Institute for State and Global Policy, *California’s Offshore Wind Electricity Opportunity* (August 2021).

<sup>5</sup> National Renewable Energy Laboratory. *The Cost of Floating Offshore Wind Energy in California Between 2019 and 2032*, available at: <https://www.nrel.gov/docs/fy21osti/77384.pdf>.



We also encourage the ARB to avoid any arbitrary caps on renewables or transmission in the modeling. The SB 100 report indicates that California will need to build at least 48 gigawatts of new renewable energy and energy storage developments by 2030, and at least 145 gigawatts of new renewable energy and storage by 2045. While the precise share of various resource deployments will depend on future market conditions and policies, the modeling should avail itself to the benefits of a diverse portfolio.

**5. Adoption of Aggressive GHG Targets Will Create Economic Benefits in Terms of Jobs and New Investments in Clean Power.**

ACP-California appreciates the ARB’s significant and robust efforts to fully evaluate the economic costs and benefits associated with each of the scenarios in the PATHWAYS model. As noted in the Final SB 100 Report, “implementation of SB 100 creates a significant opportunity to support California companies, benefit local economies, and create family-sustaining jobs while optimizing climate outcomes.”<sup>6</sup>

The utility-scale renewable energy industry currently powers 7.9 million homes in California, and has avoided 23,743,000 metric tons of CO<sub>2</sub> emissions, while creating a clean energy workforce of 103,300. California clean power companies have invested \$55 billion in capital in California, and \$331 million total in property, state, and local taxes in 2021. Additionally, clean power projects provide extra income to California farmers, ranchers, and other private landowners; in 2021, these drought-proof land lease payments totaled \$98.2 million.<sup>7</sup>

There are already more than 415,000 Americans across all 50 states that proudly make up the wind, solar, and energy storage workforce. These careers are some of the fastest growing occupations in the country – wind technicians are the country’s #1 fastest growing role, and solar installers are #3. Clean

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<sup>6</sup> *Id.* at p. 22.

<sup>7</sup>American Clean Power. State Fact Sheet: California, available at: [https://cleanpower.org/wp-content/uploads/2021/08/California\\_clean\\_energy\\_factsheet.pdf](https://cleanpower.org/wp-content/uploads/2021/08/California_clean_energy_factsheet.pdf).



energy workers make 30% more than the national median wage, ensuring that they have access to good paying jobs that support them and their families. The clean energy workforce is highly unionized, with union coverage rates just above 10% compared to the average national private-sector union coverage rate of 7.2%.<sup>8</sup> ACP-California looks forward to working with the ARB, CEC, CPUC, and CAISO to unlock additional investments and grow the clean energy workforce with innovation and advancement of clean capacity to decarbonize California's economy.

ACP-California appreciates the opportunity to provide these comments on this important policy.

Respectfully submitted,

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/s/

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<sup>8</sup> *Id.*