June 23, 2022

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

**Re: California Municipal Utilities Association's Comments on the Draft Scoping Plan Update**

Clerk of the Board,

The California Municipal Utilities Association (CMUA) appreciates the opportunity to submit these comments on the California Air Resources Board's (CARB) Draft 2022 Scoping Plan Update (Draft SPU), released on May 10, 2022.

CMUA is a statewide organization of non-profit, local public agencies that provide essential public services, including electricity, water, and wastewater services to California consumers. In total, CMUA members provide approximately 25 percent of the electric load in California and deliver water to approximately 70 percent of Californians. CMUA members are committed to, and have a strong track record of, providing safe, reliable, affordable, and sustainable electric, water, and wastewater services.

CMUA welcomes the opportunity to partner with CARB to develop feasible, cost-effective, efficient, and sustainable approaches to achieve the state's greenhouse gas (GHG) reduction goals while protecting electric system reliability and electricity affordability, ensuring that essential public services can be delivered and maintained, and maintaining the economic opportunities provided in California. To that end, CMUA offers the following comments on the Draft SPU.

**Electric Sector Reliability and Affordability Are Critical to the State's Climate Policy Success**

Safe and reliable electricity is essential to all aspects of Californians' lives, including employment, education, and healthcare. Increasing demands on the electric grid and costs to strengthen and expand the system have placed upward pressure on electric rates, resulting in

what the California Public Utilities Commission has deemed an affordability crisis.[1] Grid reliability and stability will be critical to continued growth of the economy and well-being of all Californians. Electricity reliability will also be an important factor in ongoing public support for California's decarbonization goals. As highlighted throughout the development of the Draft SPU, electrification is a key strategy for decarbonizing the state's economy. All four alternatives addressed in the Draft SPU include significant increases in electricity demand as multiple sectors of the economy decarbonize by electrifying buildings, transportation, and industrial processes and reducing reliance on fossil fuels. The success of this strategy will depend on maintaining essential public services, including reliable and affordable electric, water, and waste water services, and continuing to foster job and economic opportunities throughout the state.

The SPU Must Include an Assessment of Electric Grid Reliability: If Californians cannot depend on electricity as a safe, reliable source of power, there could be significant consequences for customer acceptance of electrification as well as for the growing number of California homes and businesses that already rely entirely on electricity for their power needs. Additionally, as California looks to transition its medium- and heavy-duty vehicle fleets to zero-emission, the reliability of the state's electric grid becomes even more crucial. The Draft SPU references the collaboration and ongoing work between CARB and other entities, including the California Independent System Operator, California Public Utilities Commission, and California Energy Commission. That collaboration plays a prominent role in "strategies for achieving success," (see p. 163), including building off the work that has already been done in furtherance of Senate Bill (SB) 350 and SB 100. The Draft SPU specifically notes that ensuring reliability of a decarbonized grid is a critical need for the state, (*see* p. 224.) and acknowledges the necessity of exploring options for meeting reliability needs. However, the Draft SPU does not include a reliability assessment for any of the studied scenarios, including the proposed scenario, nor does the Draft SPU acknowledge that reliability assessments have not yet been completed for the SB 100 resources portfolios that underpin each of the four carbon neutrality alternatives. While hydroelectric generation is a valuable source of clean generation, in the face of the ongoing draught in the west, a reliability assessment is further warranted. Without addressing reliability risks, the SPU cannot serve its primary function as a comprehensive, statewide roadmap to

[1] See California Public Utilities Commission, *En Banc* on Electric and Natural Gas Costs and Rates. (https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability).

meeting our decarbonization goals. CMUA recommends that the final SPU include a robust grid reliability assessment or, at minimum, include a discussion on the need for this assessment and for potential adjustments based on its outcome.

Californians must be able to afford their energy bills in a decarbonized economy. The long-term viability and success of the state's clean energy policies must not result in rate and reliability impacts that disincentivize the accelerated electrification of other sectors like building and transportation. Like ensuring reliability, affordability of electricity must be a priority element of the SPU. The Legislative Analyst's Office (LAO) has warned that "High electric rates discourage adoption of some technologies — such as electric vehicles and electric appliances — that could be used to substantially reduce statewide GHGs."[2] The LAO report also concluded that policies that result in increased cost burden on electricity consumers could stifle California's electrification and clean energy goals. An implementable path to carbon neutrality must recognize and mitigate any adverse impacts on electricity affordability and electric grid reliability; to do so, the SPU must include a comprehensive assessment of how the proposed scenario impacts both.

**CMUA Supports the 2045 Carbon Neutrality Timeline**

CMUA appreciates that the Draft SPU's proposed scenario would establish a 2045 timeline for achieving carbon neutrality statewide. This would set the state on a path to its ambitious carbon neutrality goal that balances aggressive action with achievability. As the draft SPU notes, the 2045 timeline is more feasible than alternate, accelerated timelines because it provides more time to develop and deploy clean technologies and fuels (pp. 51-52).

Allowing sufficient time to develop and deploy key technologies is crucial for enabling the electric sector to continue providing the reliable, affordable electricity needed to power the state's economy. It is important to assure that California is able to deploy proven clean energy and clean transportation technologies. As noted in the Draft SPU, fossil gas power plants currently provide about 75 percent of the flexible capacity for grid reliability (p. 162), which will need to be replaced with firm, dispatchable zero-carbon resources moving forward. The Draft

[2] Legislative Analyst's Office, January 6, 2020. *Assessing California's Climate Policies – Electricity Generation*. (https://lao.ca.gov/Publications/Report/4131)

SPU appropriately recognizes that energy storage and the combustion of renewable hydrogen can, among other resources, help fill that reliability role (p. 163).[3] However, the emerging long duration storage technologies and firm, dispatchable zero-carbon resources that will be needed to support grid reliability are still nascent, and additional research and development is needed – for example, to demonstrate renewable hydrogen in combustion turbines. Setting a 2045 target allows time for these technologies to mature and for their costs to come down. The availability of these technologies can also help reduce the need to significantly overbuild solar and commercially available shorter-duration batteries, at significant cost to the state, to meet future energy demand.

The 2045 carbon neutrality timeframe provides the necessary lead time statewide to resolve supply chain issues, scale up production for the same labor and materials that will be needed to support the transformation of multiple sectors statewide, and to plan, permit, and construct new transmission lines needed to connect renewable and zero-carbon resources with urban load centers.

While CMUA supports 2045 as the most feasible of the timelines assessed to achieve economywide carbon neutrality, CMUA cautions that there are still multiple barriers that must be addressed to protect reliable, affordable electricity service statewide. Notably, the Draft SPU does not include grid or local electric system reliability assessments, nor does it analyze the potential impacts of the proposed scenario on electricity affordability. Given the pivotal role of electricity in the Draft SPU, failure to protect grid reliability or mitigate impacts to energy affordability could seriously jeopardize the achievement of the state's decarbonization goals. CMUA urges CARB and its partner agencies to address these issues forthwith, and incorporate these analyses in a revised SPU, so that they may be part of the first steps to implementing the final SPU.

Finally, CMUA observes that nothing in the 2045 timeframe precludes the state from reaching carbon neutrality sooner, should it be feasible to do so. Indeed, several POUs may achieve 100 percent clean energy earlier than 2045 and some have already embarked on

[3] The draft SPU also appropriately recognizes grid operators cannot turn to solar to fulfill the shifting net peak.

aggressive paths to decarbonize their power supply.[4] Yet the state's electric utilities, and particularly the POUs, vary widely in terms of resources, geography, customer base, and demographics. Each will face different challenges in supporting widespread electrification of end-uses, and the POUs will address those challenges ways that provide the greatest overall benefit to their impacted communities. For some, like several of CMUA's members, that means pursuing accelerated targets, and for others, it may take longer. Because the feasibility of meeting an accelerated decarbonization goal is something that must be addressed from a statewide perspective, the 2045 target provides the necessary timeframe for California's diverse communities, and the utilities that serve them, overcome these barriers.

**CARB's Modeling Results Raise Additional Questions**

CMUA's member utilities support California's decarbonization goals and as set forth above, several have adopted even more aggressive timelines and carbon reduction targets than those mandated by the state. At the same time, each CMUA member recognizes that in achieving our climate objectives, we cannot sacrifice reliability or affordability, nor can our decarbonization efforts erode economic vitality or leave some communities stranded. Preserving and enhancing the economic vitality of every community is paramount to our collective success.

The Draft SPU recognizes that under all four scenarios modeled by the Rhodium Group, the growth of the California economy is expected to slow, and in some cases, job losses are forecast to completely eliminate anticipated gains.[5] While CMUA appreciates the Rhodium Group's thorough analysis, more detailed information concerning these impacts should be released. This information is necessary for a transparent assessment of the scenarios, including the proposed scenario. It is also necessary to allow stakeholders to better assess and prepare for potential impacts to their regions, industries, employees, and families.

To that end, CMUA respectfully requests that CARB release more granular data regarding the outcome of modeling performed by the Rhodium Group on economic impacts and

[4] See, e.g., *LA100: The Los Angeles 100% Renewable Energy Study*, https://www.nrel.gov/analysis/los-angeles-100-percent-renewable-study.html; Sacramento Municipal Utility District, *2030 Zero Carbon Plan*, https://www.smud.org/-/media/Documents/Corporate/Environmental-Leadership/ZeroCarbon/2030-Zero-Carbon-Plan-Technical-Report.ashx.

[5] E. Wimberger, Rhodium Group, Initial Economic Modeling of California's Scoping Plan: Macroeconomic impacts across the four Scoping Plan scenarios, https://ww2.arb.ca.gov/sites/default/files/2022-04/SP22-Initial-AQ-Health-Econ-Results-ws-RHG_0.pdf (April 20, 2022).

job losses. As soon as practicable and before any potential modifications to the proposed scenario are entertained, CMUA requests that CARB release modeling results that are responsive to each of the following:

1. What are the estimated annual costs to build new resources, including the "off-grid" resources assumed for engineered carbon removal and hydrogen production, and to upgrade the grid in the proposed scenario for each year? How are these modeled costs distributed? How are they reflected regionally and by utility?

2. For each scenario, what types and numbers of jobs (by salary, industry, and position, to the extent possible) will be lost (or gained) each year, between now and 2045?

3. For each scenario, provide the total number of jobs losses (or gains) annually by geographic regions or counties within.

CMUA appreciates that this information is extensive, but it is also germane to better understand the proposed scenario. Understanding potential impacts at the local level is critically important to all stakeholders, including the publicly owned utilities. CMUA members are community-based and community-owned organizations that serve diverse households, businesses, and geographic regions throughout the state. The opportunity to review more granular projections will better equip utilities, as well as with other stakeholders and policymakers, to address the challenges that lie ahead.

**Conclusion**

CMUA appreciates the opportunity to comment on the draft Scoping Plan Update.

Respectfully submitted,

/s/

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