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Submitted electronically

June 23, 2022

Ms. Rajinder Sahota
California Air Resources Board
1001 I Street
Sacramento, CA 95812

Re: ***Northern California Power Agency Comments on Draft 2022 Scoping Plan Update***

Dear Ms. Sahota:

The Northern California Power Agency[1] (NCPA) offers these comments to the California Air Resources Board (CARB) on the Draft 2022 Scoping Plan Update (SPU) released on May 10, 2022. NCPA appreciates the opportunity to work with CARB staff and stakeholders on developing a Scoping Plan Update that sets the state on a successful path to carbon neutrality while ensuring that the electricity grid and supply needed to fuel that transition are safe and reliable, and that California residents and businesses have access to affordable electricity.[2]

Introduction

At the onset, NCPA reiterates that it and its member agencies are committed to doing their part to help California reach its climate, social justice, and clean energy goals, all while ensuring that their residents and businesses have safe, reliable, and affordable electricity.

The important role the electricity sector will play in meeting the state's goals has been underscored throughout the development of the SPU; NCPA's comments focus primarily on this critical issue. NCPA's member utilities provide essential electric service to residents and

1 NCPA is a nonprofit California joint powers agency established in 1968 to construct and operate renewable and low-emitting generating facilities and assist in meeting the wholesale energy needs of its 16 members: the Cities of Alameda, Biggs, Gridley, Healdsburg, Lodi, Lompoc, Palo Alto, Redding, Roseville, Santa Clara, Shasta Lake, and Ukiah, Plumas-Sierra Rural Electric Cooperative, Port of Oakland, San Francisco Bay Area Rapid Transit (BART), and Truckee Donner Public Utility District—collectively serving nearly 700,000 electric consumers in Central and Northern California.

2 NCPA is a joint sponsor of the Joint Utility Group (JUG) comments on the Draft 2022 Scoping Plan Update, , and supports the positions and concerns set forth therein. NCPA also endorses the comments of the California Municipal Utilities Association.

businesses across northern California, and are intimately familiar with risks, challenges, and opportunities facing the electricity sector as the state moves towards its decarbonization goals. As such, *NCPA further reiterates that the programs, measures, and policies set forth in the SPU that CARB endorses must make certain that social and environmental equity are paramount, recognize that electricity reliability is absolutely necessary, and assure that California consumers are able to afford this essential service.* The importance of electricity reliability and affordability have been flagged as priority issues by the state's energy principals, including CARB, noting on the first page of the Priority Actions Report that "[t]wo key priorities as the state works to meet the SB 100 goals are to maintain system reliability and to increase affordability."[3] NCPA and its members agencies are actively engaged with state and federal regulators across several venues on decarbonization efforts and strategies to help effectuate these goals. The SPU will be complimentary to these other proceedings, and also help frame new developments moving forward.

The 2022 Scoping Plan Update Must Ensure a Path to Decarbonization That Does Not Jeopardize the Reliability of the Electric Grid.

It is imperative that the SPU, as the foundation for the state's climate program, support a cost-effective and technologically feasible path forward. None of this will be possible without a safe and reliable power grid.

NCPA supports the state's objectives of decarbonizing the electric grid. The benefits of decarbonization will be felt across California, and particularly in those communities that have borne a greater share of the adverse impacts from reliance of fossil-based fuels. The transition, however, must be undertaken using a realistic timeframe that fully considers the near and mid-term impacts on consumers across the state.

Electric reliability is critical to the ability of the state to meet its GHG emission reduction objectives. This fundamental premise is recognized in the SPU, which notes that "a clean, affordable, and reliable electricity grid will serve as a backbone to support deep decarbonization across California's economy." (Draft SPU, p. 156) Put simply, California cannot meet its GHG reduction goals in the absence of a safe and reliable grid. NCPA supports the objectives of the state's clean energy goals. NCPA and its members continue to invest in low-GHG and renewable energy sources, including investigating new technologies that can reduce the GHG emissions of existing natural gas-fired electric generation facilities, and fully concurs with the SPU conclusion that clean energy options, such as hydrogen and renewable natural gas must remain options as we transition away from fossil fuels. (Draft SPU, pp. 156-157) However, the necessary transition cannot occur unless the electric grid is able to provide the energy necessary to fuel the cars, homes, and businesses that will be relying more heavily on the power grid in the future. It is NCPA's objective to work with CARB and

3 Report to the Governor on Priority SB 100 Actions to Accelerate the Transition to Carbon-Free Energy (Priority Actions Report), September 2021; p. 1.

stakeholders to produce a SPU that puts California on a trajectory to *successfully* meet the state's goals.

Concerns regarding the reliability of the electric grid cannot be overstated. The state has already acknowledged the issues it will face in meeting the peak power needs of consumers in August and September of this year. Further, as reported by the CEC, supply chain constraints and parts availability are likely to present challenges for maintaining grid reliability in 2023, as long lead times for the delivery of utility-scale solar panels and transformers that will be critical to maintaining a reliable grid are greatly delayed or unavailable indefinitely.

The state is working on addressing these issues, but it is not clear about the extent to which these activities will move California away from pathways that are intended to reach aggressive 2035 and 2045 clean energy goals. California is considering the creation of a Strategic Electricity Reliability Reserve, a $5.2 billion program intended to mitigate reliability impacts during the peak periods of the summer. In contrast to statewide objectives to eliminate the use of natural gas for power generation, CEC Vice Chair Gunda noted that "it's very fair to say a large portion of the 5,000 MW of strategic reserve will be gas."[4] California's reliance on utility-scale storage, while looking to extend the availability of intermittent resources like solar and wind, breaks down in practice when extreme weather events are widespread or lasts for multiple days. And finally, in direct contradiction to the state's policy to move away from the use of nuclear power, California Governor Newsom is actively seeking options to extend the life of the Diablo Canyon Nuclear Power Plant, rather than move forward with the facility's decommissioning.

At the energy agencies, the CPUC and CEC are working on proceedings focusing on policies that promote reducing GHG emissions, but those outcomes are not going to provide operational solutions in the near term, and arguably not within the time frame needed to meet an accelerated 2035 decarbonization target. For example, the expected successes from the development of the Lithium Valley near the Salton Sea are still years away and not necessarily in line with the trajectory the state has related to the deployment of electric vehicles on the scale called for.[5] In the near-term, the CEC Summer Reliability Workshop has identified areas that will make 2023 power needs problematic.[6] In oral comments on June 9, California Independent System Operator (CAISO) President and CEO Mainzer said California is facing an estimated 1,700 MW capacity shortfall compared to meeting industry reliability standards; simultaneous extreme events, like regional heatwaves and large wildfires, could increase that

4 https://www.utilitydive.com/news/not-backsliding-on-clean-energy-officials-say-californias-proposed-5-gw/625323/

5 Even without the added impact to the electric grid from the Advanced Clean Fleets mandate that is currently under development at CARB, but not fully assessed in the context of its impact on the electric grid.

6 During the Workshop, the CEC's Energy Assessment Division noted the following: continue to foresee a need for significant contingency resources at net peak in September, new resources initially included in earlier analysis have been revised downward due to delays, and the state is forecasting even greater reductions in generation brought about by impacts from the ongoing drought. Staff Presentation - 2022 Summer Stack Analysis, May 20, 2022.

number to 5,000 MW. All of this is noted not to say that achieving the State's decarbonization goals cannot be done, but to point out the very real challenges that must be addressed and to ensure that the SPU acknowledges those challenges and allows enough time to realistically work through them.

Throughout the SPU proceeding, CARB staff and industry have acknowledged the critical role electric utilities will play in the state's transition to carbon neutrality. However, the Draft SPU does not adequately or comprehensively lay out a strategy that would ensure success without compromising reliability and affordability. While acknowledging the importance of reliability, the Draft SPU lacks an analysis of how each alternative will impact the electric grid, or ensure electricity reliability during all hours of the day. It is important to note that the findings of the Joint Agencies in the first SB 100 Report specifically called for a reliability assessment.[7] None of the scenarios, including the "no combustion" alternative, include an assessment of the impact that it would have on the *reliability* of the electric grid. The legislature has recognized the importance of reliability, and SB 100 specifically requires "an evaluation identifying the potential benefits and impacts on system and local reliability associated with achieving" the SB 100 policy goals.[8] That further assessment has yet to be completed. Until it is done, and until the state has the information necessary to make an informed decision about the impacts of any clean energy action plans, the reliance on the initial SB 100 Report is misplaced. CARB cannot use that report as a basis for the SPU.

Of the Alternatives Assessed, the Staff Preferred Alternative Presents the Most Feasible Timeline for a Successful Transition to Decarbonization.

The timeframe for reaching the state's decarbonization target must not compromise or jeopardize the reliability of the electric grid.

Of the alternatives discussed in the SPU, Alternative 3 is the most feasible option for the electricity sector, as it embraces and better accounts for the unknowns and uncertainties of achieving decarbonization while ensuring electricity reliability than either of the alternatives that would push for decarbonization by 2035. Our sense of urgency should not, and indeed cannot, cause us to embark on a course of action that may ultimately jeopardize not only our economic growth and the goals we are trying to achieve, but the very health, safety, and well-being of Californians.

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7 See, for example, 2021 Report: "Further analysis is needed to evaluate topics such as reliability and land use and better reflect equity, workforce, and additional planning and implementation considerations," (p. 6); "Initial analysis demonstrates that SB 100 is technically achievable, though additional analysis is needed to evaluate reliability and other factors more comprehensively" (p. 16); "Further analysis is necessary to determine reliability of the portfolios, better capture the impact and value of resources that are either not represented or not well valued in the current modeling framework." (p. 17); "Additional modeling is needed to evaluate whether the projected portfolios meet system reliability requirements. Projected portfolios can be adjusted as needed in an iterative process to ensure reliability requirements are met and inform the state's long-term system planning." (p. 19).

8 Public Utilities Code § 454.53(d)(2)(B).

Extensive buildout will require time and resources, making a 2035 target infeasible, even unlikely.

The SPU notes the extent of new resources that will be needed to meet even the 2045 decarbonization target. (Draft SPU, p. 161) Major investments across the state will be needed to upgrade the power grid at both the transmission and distribution level. These investments will come with a high up-front cost. And even in the absence of potential (and likely) impacts due to material shortages and supply-chain constraints, it would be a challenge to complete all necessary upgrades to prepare utilities for full decarbonization within the 2045 timeline; accelerating that to 2035 would not be feasible.

Even accounting for the benefits of decarbonization in the future, the immediate cost of the substantial new investments will have a profound impact on electricity rates, and electricity ratepayers. From a public power perspective, public policy must ensure that all dollars spent on infrastructure are done with the purpose of maximizing value to the California consumer. That means not restricting the technologies that can be utilized, allowing for investments in existing resources and infrastructure that can be used to facilitate the transition in the most reliable and cost-effective manner, and adopting a timeline for meeting the goal that is feasible, workable, and attainable.

In its comments on the Initial Modeling Results Workshop, NCPA observed that the electricity sector analysis did not adequately address reliability of the electric grid, or the implications associated with zero combustion alternatives.[9] It does not appear that the Draft SPU includes any further analyses to address this shortcoming. In particular, nothing in the record demonstrates that the 2035 timeline proposed in Alternatives 1 and 2 would not disrupt electricity supply. The feasibility of attaining an accelerated decarbonization target is further exacerbated by the exclusion of all available technologies, the failure to account for the extensive build-out that will be necessary and the known challenges with siting and permitting generation facilities and ancillary infrastructure, as well as the more nascent limitations imposed by supply-chain disruptions and shortages. Firm, clean, dispatchable resources, which requires the necessary land and infrastructure, will be necessary to meet the decarbonization goals. Unfortunately, development of these necessary resources and associated infrastructure requires complex studies and permitting.

Compounding concerns about the feasibility of moving more aggressively is the fact that existing challenges have been exacerbated by the lack of sufficient materials, parts, and labor. The SPU only makes fleeting mention of supply chain challenges, but in reality, constraints in receiving the necessary parts and components for complex electrical infrastructure is already delaying planned buildouts. On the other hand, focusing on a 2045 timeframe will allow the electric utilities to more realistically plan and implement the critical infrastructure and resource upgrades that will be necessary for the statewide transformation.

9 NCPA Comments on 2022 Scoping Plan Update; Initial Modeling Results Workshop, April 4, 2022.

There are myriad factors to be evaluated and considered when determining the ultimate path forward. In all instances, however, building and transportation electrification, as well as a transition to electrification of the industrial sector, are key components of the state's strategy. That increased electrification comes with a significant new demand on the electric grid, both in terms of developing additional renewable and low-emissions generation resources, as well as developing the considerable infrastructure necessary to support those resources.

The SPU Must Recognize and Address Electricity and Gas Rate Impacts.

Electricity and natural gas customers must not be forced to shoulder the full cost of decarbonization in their utility rates.

The SPU must include a more in-depth analysis of how the costs of developing and expanding the renewable grid will impact electricity rates, as well as natural gas rates for those customers that cannot electrify. California's decarbonization and clean-energy goals hinge on widespread transition to electricity across the economy. Along with attaining important environmental and social justice benefits, the transition means higher electricity prices. This comes at a time when the CPUC has identified an "affordability crisis"[10] and is working on ways to address the ever-increasing cost of electricity. The SPU must continue this discussion, and must keep affordability of electricity at the fore. The SPU must identify a path forward that ensures that California's ratepayers are not solely on the hook for achieving the state's goals. As NCPA has noted in previous comments, the provision of 24/7 electricity at affordable prices is not just a luxury, but a basic human necessity. It is imperative that the impacts on electricity customers be accounted for as part of the final SPU recommendations.

NCPA is heartened by the administration's commitment in the May budget revision to fund critical electricity infrastructure to increase the state's energy system reliability. NCPA is also supportive of CARB's recommendation that the agency seek alternative funding for the massive buildout that is needed. However, even with these potential funding sources, Californians will still be subject to significant upward pressure in energy costs.[11]

Uncertainties and Inherent Risks are Not Adequately Assessed in the Draft SPU.

The wide range of uncertainty regarding the impacts on electricity reliability, availability of technologies, and energy rate impacts, coupled with the challenges of meeting dual energy reliability and social justice objectives, make it difficult to fully endorse any of the alternatives assessed.

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10 CPUC 2022 Affordability En Banc opening statements by Commissioner Houck at approximately minute 4:16 https://www.adminmonitor.com/ca/cpuc/en_banc/20220228/

11 In its most recent transmission assessment, CAISO has identified a $30 billion transmission system buildout to support California's carbon neutrality goals. While considerable, that amount does not reflect the actual cost to buildout the entire system, since the cost of local transmission and distribution upgrades are not included in the CAISO estimate. http://www.caiso.com/InitiativeDocuments/Draft20-YearTransmissionOutlook.pdf

The Scoping Plan sets forth a roadmap and not specific programs measures or mandates. However, in that role it is intended to guide state agencies, policy makers, and local governments when making decisions about policies, measures, and regulations that will move the state towards carbon neutrality. As such, the considerable uncertainties identified in the Draft SPU should not be easily dismissed. NCPA has serious concerns that the feasibility analysis regarding the state's ability to meet its electricity infrastructure buildout goals, for example, are overly optimistic in several respects, including the total costs of the resources, the potential for nascent technologies to be workable at the rate proposed, the timing and pace of new resource and ancillary infrastructure build-out, and the ultimate impact on energy rates. Further, the final SPU must acknowledge the real-world challenges meeting these objectives face, including a severely restricted supply chain, the lack of necessary materials/parts, and a tight labor market. The latter is related to both the availability of the workforce, as well as the necessary training and education needed to ensure the state's workforce is able to support the transition to a decarbonized economy.

In order to ensure that the SPU lays out the best possible path to successfully achieving the state's climate objectives, the risks associated with doing so must be identified and defined. The state can – and must – move forward with policies and measures that address energy equity and the health risks faced by communities that have been disproportionately impacted by energy policies in the past. The risks to those communities of taking no action must be addressed. But the SPU must also define the risks to the electric grid of moving too quickly and compromising reliability. The risk of exacerbating the energy affordability crisis must also be defined and factored into the analysis. NCPA believes that the state, and the SPU itself, can create a course of action that identifies and defines each of these risks in an adequate manner, but urges policy makers to recognize the time needed to do so. Achieving decarbonization by 2045 will be extremely challenging, but is potentially feasible. Accelerating the target to anything earlier, given the uncertainties and risks involved, is not only infeasible, but dangerous. As CARB Board Member Sperling identified, it is going to be hugely difficult, disruptive, and expensive to reach the state's carbon neutrality goals by 2035 (*See* March 24, 2022 Board Meeting comments). The costs and risks of doing nothing are high. However, the cost and risks of moving forward without accounting for the affordability of electricity and ensuring a reliable electric grid to fuel the state's economy and keep it citizens safe, will be even higher.

The Natural Gas Infrastructure and the Electricity/Gas Correlation.

Increased statewide electrification and natural gas infrastructure decommissioning must be assessed in concert.

Just as electricity and natural gas rates will be interlinked in the transition to greater statewide electrification, so too are the impacts on the availability and reliability of those resources. The SPU must acknowledge the existing role, future need, and emerging potential

of the state's natural gas infrastructure. While natural gas throughput is expected to decrease, the ongoing need for the system will remain past 2035. The system will be needed for those end use customers that are hard or impossible to decarbonize in the near future, and planning the best course of action for decarbonizing the infrastructure itself will take some time. Having recognized this challenge in the 2021 Integrated Energy Policy Report,[12] the CEC recently opened a new proceeding to address critical technical and policy issues related to decarbonizing the state's gas system.[13] The SPU should not preclude a transition that enables the use of the system for blended hydrogen, and lower GHG resources. Public policy should not get in the way of creative solutions like the use of blended hydrogen, and the SPU must recognize the need to keep options such as these available when considering the future of the natural gas system. Decarbonizing the natural gas system is not simple; the deliberations must take into account potential future uses for the system, the continued need for natural gas for some customers, and the current rate structure that results in those remaining customers paying more and more for that natural gas. The SPU does not include a full analysis of these implications, or a clear recognition of these interactions.

Collaboration with State Energy Agencies Should Inform the SPU.

The SPU must put forth alternatives that take into account the balance between electrification and full decarbonization, and recognize the detailed work being undertaken at the State's energy agencies.

Key pieces of the climate change agenda are being addressed by the state's key energy agencies. The Draft SPU references these policies and collaboration with other state agencies, including the energy agencies such as the CPUC and CEC, as well as the CAISO. However, many of the analyses and objectives set forth in the SPU fail to recognize the work that has already been defined by these agencies. Instead, the SPU presents decarbonization as a *fait accompli* with an end goal already articulated in the absence of the empirical data and analysis needed to ensure that the transition is, in fact, feasible.

The State's energy agencies are currently looking at the complex issues and interactions between decarbonization and economy-wide electrification. The CPUC's proceeding has been ongoing for two years.[14] During that time, the agency and stakeholders have grappled with these complex issues, with the most pressing elements regarding the interaction between decarbonization and electrification, still unresolved. The CEC has opened a new docket for the express purpose of gaining more information on this, and is specifically focused on gas system decarbonization. The agency opened this new, multi-year proceeding to assess the myriad and complex elements at play, recognizing that the amount and type of information needed to make

12 2021 IEPR, Vol. III

13 22-OII-02, In the Matter of: Decarbonizing the Gas System

14 CPUC Rulemaking 20-01-007.

this assessment cannot be obtained without an extended review process. NCPA urges CARB to ensure that the SPU fully considers the targeted work being done by these agencies. Rather than prejudge the outcome of those proceedings or mandate an end that may not be supportable after a complete assessment of information being compiled, the SPU should recognize these uncertainties and allow the detailed, data gathering proceedings to dictate the outcome, instead.

An Accelerated Timeline for Decarbonization Comes with Significant Risks to California.

The unprecedented buildout necessary to achieve decarbonization will require extensive new facilities.

NCPA is concerned that consideration of an accelerated decarbonization target does not reflect a feasible pathway to success without severely compromising electricity reliability and adding significant cost burdens. The state cannot meet its environmental justice goals without a reliable electric grid. Ensuring the health and well-being of California's residence is paramount. And creating a decarbonization pathway that helps to rectify past injustices and alleviate the adverse impacts on the most impacted communities is an essential part of the state's plan. NCPA shares those goals and objectives, but in order to mitigate the adverse impacts on electricity reliability and affordability, the selected alternative cannot be stated such that the ends justify the means.

The analysis of feasibility and weighing of risks associated with a 2035 target are simply not sustainable. The Draft SPU's own analysis shows that for the when looking at resource capacity to meet the SB 100 retail sales target, energy efficiency moderates only some of the need for additional electricity generation. That amount is quickly surpassed by growing electricity demand of about 50 percent by 2035 to nearly 80 percent by 2045 from increased population and electrification of other sectors compared to today. What this means is that the "estimated resource build needed to meet this level of demand amounts to approximately 90 GW of solar and 40 GW of battery storage by 2045. To reach the 2045 target, the state will need to more than triple its current level of in-state renewable and zero-carbon power capacity. *Annual build rates for the Proposed Scenario will need to increase over 150 percent and over 500 percent for solar and battery storage, respectively, compared to historic maximum rates*." (Draft SPU, p. 161, emphasis added) These are not minor undertakings, nor are they inexpensive. And these numbers do not include capacity associated with hydrogen production, which was modeled off-grid, or any additional load to implement CO2 removal through CCS or direct air capture. (Id.) The SPU goes to note that "this transformation will drive investments in a large fleet of generation and storage resources but will also require significant transmission to accommodate these new capacity additions." (Draft SPU, p. 162) The risk of moving too quickly is compounded by the added cost burden on energy consumers. This includes electricity consumers that will be paying for the transformation through electricity rates, as well as natural gas customers that are unable to fully transition and thus will be left paying a larger share of the total system costs.

Natural and Working Lands Also Impacts the Reliability of the Power Grid.

The state's natural and working lands must be protected from wildfires that adversely impact air quality, damage property and historic state resources, and compromise the reliability of the electricity grid.

NCPA appreciates that the Draft SPU includes modeling and quantification of the GHG emissions and carbon sequestration in natural and working lands (NWL). As noted in the SPU, NWL are an essential part of California life and the economy. It can also serve as a carbon sink with the proper management and investment. Conversely, failure to aggressively address NWL management practices will result in exacerbating the emissions associated with wildfires. There are also direct impacts on the ability of the state's utilities to provide electricity. The state's extensive network of energy transmission and distribution lines traverse across the forests and shrublands that are vulnerable to wildfires. Damage to the lines results in electricity outages well beyond the fire-impacted area, compromising energy reliability.

NWL Alternative 4 provides the greatest opportunity for reducing wildfire risk and establishing the state's NWL as carbon sinks. The SPU should incorporate NWL Alt. 4 into the final plan, and focus NWL measures and programs on areas that are most vulnerable to wildfire risk, and that provide the greatest total benefits to those areas. Doing so will reduce the risk of power loss due to infrastructure damage. This targeted focus will also provide increased health benefits and reduce economic damage from wildfires. To do so, the we must more aggressively pursue forest management practices. The long-term benefits of this significant shift in funding and focus will result in a sustained – and sustainable – carbon sink, increased electricity reliability, and statewide health and economic benefits.

Conclusion

The 2022 SPU will be an important tool to guide the state, its legislators, regulatory agencies, businesses, and residents towards achieving a cleaner electric grid. In doing so, we must be sure that the Scoping Plan appropriately balances the policy objectives with the operational realities of reaching these climate targets. Please contact the undersigned or Scott Tomashefsky at 916-781-4291 or scott.tomashefsky@ncpa.com if you have any questions regarding these comments.

Sincerely,

LAW OFFICES OF SUSIE BERLIN
Attorneys for the **Northern California Power Agency**