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**NCPA Comments on SB 100 Technical Workshop**

*Additional submitted attachment is included below.*

## BEFORE THE CALIFORNIA ENERGY COMMISSION

**In the matter of:  
SB 100 Joint Agency Report: Charting a  
Path to a 100% Clean Energy Future**

**Docket No. 19-SB-100**

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### **NORTHERN CALIFORNIA POWER AGENCY COMMENTS ON SENATE BILL 100 TECHNOLOGIES AND SCENARIOS WORKSHOP**

The Northern California Power Agency<sup>1</sup> (NCPA) offers the following comments to the California Energy Commission (CEC), California Public Utilities Commission (CPUC), and California Air Resources Board (CARB) (collectively, the “Joint Agencies”) on the November 18, 2019 Technical Workshop.

NCPA<sup>2</sup> appreciates the opportunity to provide this feedback to the Joint Agencies regarding the November 18 Workshop. The Workshop provided stakeholders a chance to hear from a wide range of technology advocates and interests regarding a number of renewable, zero-carbon, and enabling technologies. Not all of the technologies discussed during the workshop presentations, however, are at the same level of commercial readiness or cost-effectiveness for utilization to meet the state’s SB 100 goals. While NCPA urges the Joint Agencies to continue exploring different options, the state should avoid picking “winners and losers,” and should continue to encourage the development of a panoply of technologies that can provide reliable and cost-effective options to meet the state’s renewable energy and zero-carbon targets. In these comments, NCPA highlights just two points:

- First, of the options presented, the Joint Agencies should utilize the RPS+ Resource Scenario for determining eligible renewable and zero-carbon resources; and
- Second, the Modeling Assumptions should continue to be framed by a range of existing studies that recognize that the pathway to 2045 and achievement of the state’s goals should not preclude all natural gas resources.

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<sup>1</sup> NCPA’s members are 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, these publicly-owned utilities, rural electric cooperative, port authority, public transit district, and public utility district provide reliable and affordable electricity to approximately 700,000 electric customers in central and northern California.

<sup>2</sup> NCPA and its member agencies prioritize the provision of clean, reliable, and affordable electricity for their residential, commercial, and industrial customer-owners; NCPA’s 775-megawatt portfolio of power plants is approximately 50% greenhouse gas emission-free. For more information about NCPA, please refer to NCPA’s November 12, 2019 comments; <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=19-SB-100>.

## **RPS+ Resource Scenario Should be Used for Determining Eligible Renewable and Zero-Carbon Resource**

During the November 18 Workshop, staff presented two different options for determining eligible electricity resources under SB 100. NCPA urges the Joint Agencies to pursue the RPS+ Resource Scenario option that would include all existing RPS-eligible resources, as well as large hydroelectric generation resources, nuclear generation, and natural gas generation with full carbon-capture and sequestration (CCS). As the staff presentation notes, this option aligns with the current RPS-program resource types, but also recognizes the zero-carbon and renewable nature of large hydroelectric resources. This option allows the state to continue to pursue zero-carbon resources and technologies without prematurely excluding all natural gas combustion. By endorsing and using the RPS+ Resource Scenario, the Joint Agencies would explicitly recognize the zero-carbon nature of large hydroelectric generation and that hydroelectric generation is a carbon-free resource. As NCPA has previously noted, “large hydroelectric generation is a cost-effective, controllable zero-GHG emitting and renewable resource that can be turned on and off to offset the intermittent nature of resources like solar and wind.” (NCPA comments, p. 3) The ability of large hydroelectric generation to change its electricity generation output in response to variability in demand and generation from intermittent renewable resources, while emitting zero carbon, is important in maintaining a reliable supply of electricity to California’s residents and businesses. Indeed, the ability to use large hydroelectric generation in this manner is going to become increasingly vital as more electric generation comes from these intermittent renewable resources. Likewise, the fact that the RPS+ Resource Scenario would only allow natural gas CCS aligns with existing policies that prohibit new investments in coal resources, but also encourages greater development of CCS technologies that can be used to offset the use of natural gas-fired generation when it is necessary to complement zero-carbon resources.

While on its surface the No-Combustion Resource Scenario may appear to align with the state’s SB 100 goals, it is actually contrary to a number of the stated key considerations that the Joint Agencies have emphasized at each of the scoping workshops, and again at the onset of the technical workshop. Namely, this option would be more likely to jeopardize reliability, would not provide for diversity and flexibility of resources, and may not be affordable. As the presentations during the *Renewable, Zero-Carbon, and Enabling Technologies* panels confirmed, not all of the nascent options are commercially available and viable at this time. The Joint Agencies must chart a path to 2045 that recognizes not only the state’s long-term goals, but also the *current* practical, financial, and technologically feasible limitations of the emerging technologies. As such, the Joint Agencies should confirm the use of the RPS+ Resource Scenario for defining eligible electricity resources under SB 100.

## **Modeling Assumptions Should Continue to Be Framed by a Range of Existing Studies**

One fact that was underscored during the presentations on the *Existing Directional Studies* is the need to explore a range of variables. The SB 100 goal to have renewable energy resources and zero-carbon resources supplying 100% of all retail sales of electricity to California end-use customers by the end of 2045 will not be achieved in a vacuum. That is to say that the state’s broader climate goals and policies directly impact this objective, particularly through electrification of the transportation, building, and industrial sectors. This transition to greater electrification will naturally place a greater demand on electricity generation and increase the

importance of ensuring the reliability of that electricity generation. As noted during the workshop, in order to align and meet these important policy goals, the state will be required to model options that include some natural gas in the portfolio. As noted during the workshop, based on existing studies, this is necessary to avoid overbuilding renewable resources or over-reliance on storage or other technologies that could compromise reliability (*See* Arne Olson, E3, pp. 10-11). The analysis must recognize that even with aggressive actions and decreases in the use of natural gas, some natural gas-fired generation (and infrastructure) must be retained to ensure reliability (*See* Jason Ortego, CPUC, p. 10), and those determinants must be incorporated into the overall assessment.

The quantitative analysis for SB 100 must not only assess how to meet the state's targets, but also assess the costs, benefits, and impacts of doing so. The impacts on resource diversity and flexibility, affordability, and reliability are going to be important elements of the assessment and must be incorporated into the modeling assumptions. NCPA appreciates that the Joint Agencies are leveraging existing modeling being done at the CPUC and CEC, and additional modeling and assessments being done by the POU's as part of their integrated resource planning processes, as well, and encourages the Joint Agencies to continue to do so in their assessment and modeling of SB 100. NCPA urges the Joint Agencies to focus on these interrelated topics in future workshops, and to hold those workshops in the near future so that stakeholder input and consideration of these issue can be used to inform the final quantitative and qualitative analysis.

Please do not hesitate to contact the undersigned or Scott Tomashefsky at 916-781-4291 or [scott.tomashefsky@ncpa.com](mailto:scott.tomashefsky@ncpa.com) with any questions.

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Respectfully submitted,



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