

DOCKETED	
Docket Number:	23-SB-100
Project Title:	SB 100 Joint Agency Report
TN #:	252194
Document Title:	Bay Area Municipal Transmission group (BAMx) Comments - on CEC SB 100 Workshop
Description:	N/A
Filer:	System
Organization:	Bay Area Municipal Transmission group (BAMx)
Submitter Role:	Public
Submission Date:	9/8/2023 2:14:49 PM
Docketed Date:	9/8/2023

Comment Received From: Bay Area Municipal Transmission group (BAMx)
Submitted On: 9/8/2023
Docket Number: 23-SB-100

BAMx Comments on CEC SB 100 Workshop

Additional submitted attachment is included below.

BAMx Comments on CEC SB 100 Workshop

The Bay Area Municipal Transmission group (BAMx)¹ appreciates the opportunity to comment on the CEC’s SB 100 Kickoff Workshop held on August 22, 2023. BAMx is supportive of the goal of 100% clean electricity and the CEC SB 100 Report process.

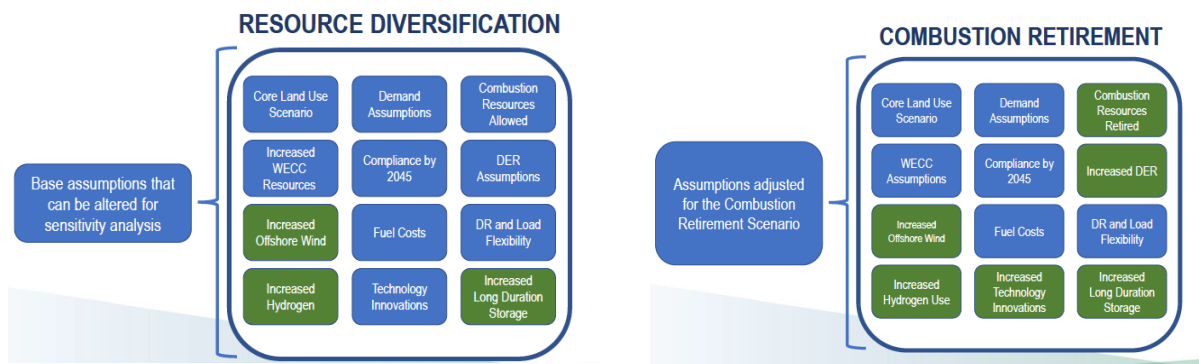
1. Input to the Reliability and Production Cost Modeling

What system data would be useful to include in the results?

The modeling should include all types of costs associated with resource procurement, including various resource types and transmission infrastructure needed to access them. The inclusion of transmission costs driven by each resource will promote a better comparison of the total cost for each resource. The separation of transmission costs from other resource costs (assuming a different recovery mechanism for those costs) would not allow for a least-cost resource selection process.

What types of future analysis or planning could these modeling results inform?

The cost of transmission needs to be accounted for based upon the transmission needs to integrate resource-build-driven transmission should be fully captured. That is the only effective way to compare the Resource Diversification and Combustion Retirement Pathways that include Increased Hydrogen, as shown in the Commission’s Pathway Concept below.



Source: CEC 2025 SB 100 Report Vision, SB 100 Kickoff Workshop, August 22, 2023.

BAMx also recognizes that the Commission will model eight (8) regions or zones in California in its SB 100 Pathway Analysis. For example, PG&E will be modeled as a single transmission area. There won’t be any transfers modeled within it. This can lead to an imprecise comparison of pathways. As a remedy, the CEC staff should investigate ways to improve the modeling by finding a way to consider local area constraints and transmission costs

¹ BAMx consists of City of Palo Alto Utilities and City of Santa Clara, Silicon Valley Power.

2. The use of clean firm power needs to be considered in the analysis.

BAMx supports the San Diego Gas and Electric’s (SDG&E) approach that NERC reliability standards, including Loss of Load Expectations (LOLE), must be met.² SDG&E selected using 100% clean hydrogen generation to provide the required electric reliability.

A joint study by a team affiliated with the Environmental Defense Fund- Stanford University, Princeton University, Energy & Environmental Economics, the Clean Air Task Force, UC San Diego, and The Brookings Institution incorporated many uncertainties highlighting California’s need for clean firm power.³ BAMx endorses the effort by these entities as critical in helping the Commission prepare the draft SB100 report. CEC Staff should incorporate those studies in the draft report and explain, if any, how their modeling may deviate from the assumptions in the above-mentioned joint study. The table below shows how the use of clean firm power can reduce transmission requirements, land use, and other project development, resulting in savings for California’s ratepayers.

Issue	With Clean Firm Power	Without Clean Firm Power
Costs for generation and transmission <i>California transmission and distribution costs are currently about 9 cents/kWh</i>	~9 cents/kWh	~15 cents/kWh
Solar and Wind Capacity <i>Entire US electric generating capacity is about 1,100 GW</i>	25–200 GW	470 GW
New Storage* <i>Largest battery facility now being built is 0.3 GW/1.2 GWh CA expects to have 2 GW battery capacity in 2021</i>	New short-term battery capacity 20–100 GW	160 GW
	New energy storage 100–800 GWh	1,000 GWh
Land Use <i>CA land area is about 164,000 sq miles</i>	625–2,500 square miles	6,250 square miles
Transmission <i>CA currently has about 15 million MW-miles of transmission</i>	2–3 million MW-miles	~9 million MW miles

*Energy storage beyond existing pumped hydro

Table 1. Summary of issues related to the need for clean firm power.

² SDGE - 08/22/23 - SB 100 Kickoff Workshop Presentation

³ See

<https://www.edf.org/sites/default/files/documents/SB100%20clean%20firm%20power%20report%20plus%20SI.pdf>

BAMx endorses green hydrogen development as a pathway to provide clean firm power. California Air Resources Board's (CARB) presentation clearly supported green hydrogen development as an important part of the SB 100 goals.⁴ The CARB SB 1075 Joint Agency Workshop⁵ on hydrogen will continue the understanding/assessment of this vital resource.

Green hydrogen, among other advantages, can allow the use of existing facilities and infrastructure to meet the state's goals. Several projects are examples of entities moving in this direction. Los Angeles Department of Water and Power (LADWP) has documented the need for roughly 2,600 MW of clean, dispatchable, local capacity by 2045.⁶ Green hydrogen is planned to be a fuel for this effort. LADWP is moving forward on its Scattergood Generating Station Units 1 and 2 Green Hydrogen-Ready Modernization Project. Another example is the Intermountain Power Project Renewed project (IPP Renewed). This project leverages the retirement of an existing coal-fired power plant and associated infrastructure to create a dispatchable, long-term, clean resource. The project includes the production and long-term storage of green hydrogen and upgrading existing transmission to California. Scattergood and IPP Renewed projects plan to transition to 100% green hydrogen firing by 2045. The Northern California Power Agency (NCPA) is also nearing completion of a project to use green hydrogen as a fuel at its Lodi Energy Center combustion turbine power.⁷

Each project demonstrates the opportunity to use existing infrastructure, including transmission lines and pathways, to provide clean dispatchable resources necessary to meet the AB 100 goal of 100 clean energy in 2045.

⁴ 2022 Scoping Plan: California's Proposed Strategy for Achieving Carbon Neutrality, California Air Resources Board, SB 100 Kickoff Workshop August 22, 2023

⁵ <https://ww2.arb.ca.gov/sites/default/files/2023-09/sb-1075-workshop-090523-agenda.pdf>

⁶ LADWP Plans For Achieving Sb100 Goals, Jay L. Lim, Manager of Resource Planning, August 22, 2023

⁷ <http://www.ncpa.com/wp-content/uploads/2021/10/NCPAs-Green-Hydrogen-Future-Position-Paper.pdf>