Date of Hearing: April 2, 2025

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Cottie Petrie-Norris, Chair AB 1191 (Tangipa) – As Introduced February 21, 2025

SUBJECT: California Renewables Portfolio Standard Program: hydroelectric generation

SUMMARY: Includes hydroelectric generation resources greater than 30 megawatts (MWs), i.e., "large hydro," as eligible renewable resources in California's Renewables Portfolio Standard (RPS). Deletes current allowances to RPS eligibility for specified, legacy large hydro or upgraded small hydro resources.

EXISTING LAW:

- 1) Establishes the California RPS Program which requires investor-owned utilities (IOUs), publicly owned utilities (POUs), community choice aggregators (CCAs), and energy service providers (ESPs) to increase purchases of renewable energy such that they each procure a minimum quantity of electricity products from eligible renewable energy resources, as defined, so that the total kilowatt hours (kWh) of those products sold to their retail end-use customers achieves 25% of retail sales by December 31, 2016, 33% by December 31, 2020, 44% by December 31, 2024, 52% by December 31, 2027, and 60% by December 31, 2030. (Public Utilities Code §§ 399.11, 399.13, 399.15, 399.30)
- 2) Establishes the policy that all of the state's retail electricity be supplied with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100% clean energy. Sets interim targets of 90% mix of RPS-eligible and zero-carbon resources by December 31, 2035 and 95% by December 31, 2040. Requires the California Public Utilities Commission (CPUC), in consultation with the California Energy Commission (CEC), California Air Resources Board (CARB), and all California balancing authorities, to issue a joint report to the Legislature by January 1, 2021, and every four years thereafter, reviewing and evaluating the 100% clean energy policy. (Public Utilities Code § 454.53)
- 3) Defines a "renewable electrical generation facility" as one that, among other requirements, uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts (MW) or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, and any additions or enhancements to the facility using that technology. (Public Resources Code § 25741)
- 4) Defines eligible renewable energy resources to include small hydroelectric generation facilities of 30 MW or less and conduit hydroelectric facilities. (Public Utilities Code § 399.12)
- 5) Permits small hydroelectric generation facilities that undertake efficiency improvements after January 1, 2008, that cause generating capacity to exceed 30 MWs to keep their RPS eligibility. It requires multiple conditions to be met including ensuring no adverse impacts to streams and streamflow, and permits the entire generating capacity of the facility to be RPS eligible. (Public Utilities Code § 399.12.5)

- 6) Authorizes the governing board of a POU to adopt a cost limitation optional compliance to satisfy their RPS requirements. Requires the limitation to be set at a level that prevents disproportionate rate impacts. (Public Utilities Code § 399.30 (d)(B))
- 7) Authorizes POUs that receive 67% or more of their electricity from large hydro that they own and operate to only meet their RPS compliance for "electricity demands unsatisfied by its hydroelectric generation in any given year." (Public Utilities Code § 399.30(j))
- 8) Reduces a POUs obligation to procure renewable resources for the subsequent year, if the POU receives more than 40% of its retail sales from large hydroelectric generation under specified circumstances. (Public Utilities Code § 399.30(k))
- 9) Establishes the Private Energy Producers Act to promote the rapid development of new electric energy sources. Specifically defines "conventional power sources" as nuclear, fossil fuel combustion, or hydropower greater than 30 MWs, and limits program eligibility to facilities other than the conventional power sources. This Act predates the RPS. (Public Utilities Code §§ 2801-2829)

BACKGROUND:

California's Resource Mix – According to the CEC, in 2023 total generation for California was 281,141 gigawatt-hours (GWh). Approximately 58% was due to zero-carbon generation (nuclear, hydroelectric, and renewables); while almost 12% was due solely to large hydro generation, as shown in Table 1 below. ¹

Table 1: 2023 Total System Electric Generation²

Fuel Type	In state Generation (GWh)	% in state	Total Imports (GWh)	Total Energy Mix (GWh)	% of Total Mix
Coal	257	0.12	4,724	4,981	1.77
Natural Gas	94,192	43.68	8,582	102,774	36.56
Oil	36	0.02	0	36	0.01
Other (Waste Heat / Petroleum Coke)	206	0.10	0	206	0.07
Unspecified	-		10,373	10,373	3.69
Biomass	5,037	2.34	753	5,790	2.06
Geothermal	10,999	5.10	2,569	13,567	4.83
Large Hydro	27,066	12.55	5,821	32,886	11.70
Nuclear	17,714	8.22	8,558	26,272	9.34

 $generation \#: \sim : text = In \% \ 202023\% \ 2C\% \ 20 \ total \% \ 20 \ generation \% \ 20 \ for, percent \% \ 20 \ in \% \ 202022.\% \ 20 \ California's \% \ 20 \ wide$

¹ CEC "2023 Total System Electric Generation;" website; accessed 03.25.2025; https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation#:~:text=In%202023%2C%20total%20generation%20for percent%20in%202022 %20California's%20

² Reproduced from Citation #1

Small Hydro	4,853	2.25	135	4,988	1.77
Solar	41,344	19.17	6,525	47,869	17.03
Wind	13,920	6.46	17,479	31,399	11.17
Total Zero					
Carbon	120,933	56.09	41,840	162,771	57.90
California Total	215,623			281,141	

California's Transition to 100% Clean Electricity – SB 100 (De León, Chapter 312, Statutes of 2018) established the state policy that renewable and zero-carbon resources should supply 100% of retail sales and electricity procured in the state by 2045.³ This policy was recently updated under SB 1020 (Laird, Chapter 361, Statutes of 2022) which accelerated the requirement on state agencies to 100% by 2035, and established interim targets of 90% by 2035 and 95% by 2040 for all other entities. California has made progress in decarbonizing its energy sector, almost 58% of the state's electricity mix arising from zero-carbon resources, as shown in Table 1. Solar energy has been the dominant source of California's renewable energy resources. This growth is largely attributed by the cheaper prices of solar photovoltaics in recent years and California's abundant solar capacity. However, as solar generation increases in California, the mismatch between when energy is generated and when it is needed poses challenges for grid stability and operation. As a result, California's retail electric providers often need to purchase electricity to serve both RPS and reliability compliance (capacity) obligations.

RPS and Large Hydroelectric Generation – California's RPS program, and other energy programs predating RPS,⁴ have distinguished between smaller and larger hydroelectric facilities as those that are either at or below (small) or over (large) 30 MW – enough electricity to power nearly 30,000 households.⁵ These distinctions have reflected state policy concerning natural river habitats which discourage more damming of rivers, as well as to encourage the development of new, alternative renewable energy projects. Curiously, RPS eligibility is tied to the scale of the generating station (30 MWs) and not the water capacity of the dam; these two dam features do not always scale together. For instance, the Monticello Dam built in 1957 in Napa County, has a reservoir (Lake Berryessa) with a capacity of approximately 1.6 million acre feet; ⁶ this is the seventh-largest man-made lake in California. Its hydroelectric plant, built in the 1980s, is 11.5 MWs.⁷

The recent passage of SB 100 (De León, Chapter 312, Statutes of 2018) and SB 1020 (Laird, 2022), as noted above, expands statewide clean energy planning beyond the RPS, to now include 100% of "zero-carbon resources" by 2045. Though undefined in statute, the expectation is that existing large hydroelectric facilities would count towards the 40% of "zero-carbon resources" that would be needed after the 60% RPS compliance target is met in 2030. For many POUs, especially irrigation districts and municipal utilities in Northern California, and Pacific Gas &

³ Public Utilities Code §454.53

⁴ The Private Energy Producers Act, Public Utilities Code §§ 2801-2829

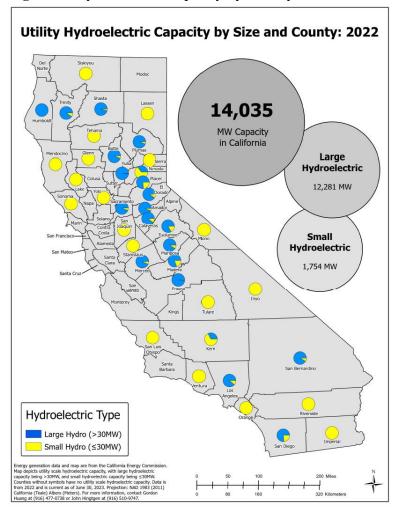
⁵ National Renewable Energy Laboratory, "Small Hydropower Systems;" July 2001; DOE/GO-102001-1173; https://www.nrel.gov/docs/fy01osti/29065.pdf

⁶ U.S. Bureau of Reclamation, "Berryessa Facts" January 28, 2014; https://web.archive.org/web/20140422141850/http://www.usbr.gov/mp/berryessa/facts.html ⁷ *Ibid*.

Electric (PG&E) Company, much of this 40% obligation will likely be served by legacy hydro generation resources already in these utilities' portfolios.

Where is all the Hydro? – As shown below in Figure 1,8 hydroelectric facilities exist in nearly every county of the state, with the exception of counties along the Central Coast and some in Northern California. Many of these large hydro facilities were built during the federal dambuilding boom almost a century ago,9 and the California-specific boom in the 1950s-1960s as water and flood management. 10

Figure 1: Hydroelectric Capacity by County, 2022⁶



As shown in both Table 1 and Figure 1, the amount of large hydro in the state greatly eclipses the amount of small hydro, at 11.7% and 1.7% of the state's energy, respectively. 11 Many utilities also contract for out-of-state hydro, largely from large dams in the Pacific Northwest. 12

FISCAL EFFECT: Unknown. This bill is keyed fiscal and will be referred to the Assembly Committee on Appropriations for its review.

CONSUMER COST IMPACTS:

Unclear and likely mixed. This bill will lower (or eradicate) future RPS obligations of some electric utilities, resulting in lower procurement costs and potential – but not guaranteed – lower bills for those utility customers. These same utilities may stand to make money, due to selling of excess Renewable Energy Credits (RECs), thus further lowering their costs. The cost impacts of this bill

⁸ CEC dataset; updated July 7, 2023; https://cecgis-

caenergy.opendata.arcgis.com/documents/8d0dc02feee048038a9bad3fd6e8487c/explore

⁹ Lee, Gabriel. "Overview: The Big Dam Era." *Energy History Online*. Yale University. 2023. https://energyhistory.yale.edu/the-big-dam-era/.

¹⁰ UC Berkeley, "Number of California dams built per decade;"

https://www.cnr.berkeley.edu/departments/espm/env-hist/projects/calif_dams/ca_dams_per_decade.htm ¹¹ Note differences in values between Figure 1 and Table 1 of total in state hydro MW are likely due to Figure 1 being utility-specific; i.e., not reporting hydro resources owned by the U.S. Bureau of Reclamation or the California Department of Water Resources, which are not utilities but do own significant hydro capacity in the state.

¹² U.S. Energy Information Administration, "California was the largest net electricity importer of any state in 2019;" December 7, 2020; https://www.eia.gov/todayinenergy/detail.php?id=46156

for utilities lacking large hydroelectric generation resources is less clear, as discussed below.

COMMENTS:

- 1) Author's Statement. According to the author, "By broadening eligibility in the Renewables Portfolio Standard, AB 1191 helps to stabilize our grid and cuts reliance on expensive alternatives This bill ensures affordable, sustainable power, advancing California's 100% clean energy goal by 2045 while keeping electricity costs down for Californians."
- 2) *Purpose of the RPS*. The California RPS program began with a mandate to all retail sellers to provide 20% RPS-eligible generation by the end of 2017.¹³ The initial RPS statute sought to establish a *market* for renewables, by financially incentivizing long term contracting of these (otherwise expensive) resources. This mandate sought market stimulation, creation of a local economy, and a modicum of environmental benefits. Policies to directly address the impacts of climate change came after the first RPS bills. It was not until 2011 that the RPS program incorporated greenhouse gas (GHG) reduction into its purpose.¹⁴ Thus, the resource-specific qualification, or the "who's-in-versus-who's-out" nature of the RPS, has long been a point of division.

In the past 23 years since the original RPS mandate was adopted, not only has the retail landscape of renewable energy changed dramatically, but so has the conversation to urge action to address climate change and electric affordability. As noted above, the Legislature has modified the goals and details of the RPS program several times since the original enactment. The most recent major change occurred by SB 100 (De León, Chapter 312, Statutes of 2018), which set a new obligation of 60% of retail sales from RPS-eligible generation by 2030; a deadline now only 5 years away. SB 100 also offered an opportunity to think slightly beyond the RPS, by contemplating future resource procurement for the remaining 40% that was not solely from RPS-eligible resources.

3) *Progress in Meeting the RPS – IOUs and CCAs.* As shown in Table 2 below, and in contrast with previous compliance periods, the three large IOUs no longer forecast having excess RPS procurement for the next three years. This change is primarily due to portfolio optimization efforts, some increasing load due to transportation electrification, and the impact of mandated procurement to meet other requirements. ¹⁵ IOUs expecting shortfalls may choose to meet compliance requirements through additional procurement or by applying excess RECs banked from procurement in prior years. Not all IOUs are facing the same degree of shortfall, however, and some may still choose to further optimize their portfolio through sales of renewable electricity and associated RECs.

¹³ SB 1078 (Sher, Chapter 516, Statutes of 2002)

¹⁴ SB X1-2 (Simitian, Chapter 1, Statutes of 2011)

¹⁵ such as those added by SB 1020 (Laird, Chapter 361, Statues of 2022) and the Integrated Resource Planning (IRP) proceeding's mid-term reliability procurement orders.

Table 2: Retail Seller Compliance in Meeting RPS targets

Selected Retail Sellers	% RPS Procurement in 2023 (RPS Obligation: 44% by	% Gross RPS Procurement Forecasted to 2027 ¹⁶	
Pacific Gas & Electric	2024)	(RPS Obligation: 52% by 2027)	
(PG&E) ¹⁷	41 %	47%	
Southern California Edison (SCE) ¹⁷	41 %	(aggregated; excluding impact of banked RECs – see footnote	
San Diego Gas & Electric (SDG&E) ¹⁷	48 %	16)	
Marin Clean Energy ¹⁸	68 %	69%	
Sonoma Clean Power ¹⁸	54 %	(aggregated; excluding impact	
Clean Power Alliance ¹⁸	73 %	of banked RECs – see footnote 16)	

Given that the IOUs have historically had significant excess RPS procurement to apply in later years, they did not conduct annual RPS procurement solicitations from 2016 to 2022. ¹⁹ In 2023, both SCE and PG&E held solicitations, but neither resulted in any contracts. ²⁰

4) *Progress in Meeting the RPS – POUs*. For POUs, the most recently verified RPS compliance is for the 2017-2020 period. The statutory requirement for that period is 33% by the end of 2020. As noted in Table 3 below, many POUs did not meet the statutory RPS obligation through gross procurement, ¹⁶ but rather alternative compliance paths.

Table 3: POU Compliance in Meeting RPS targets

Selected POUs	% RPS Procurement in 2020 (RPS Obligation: 33% by 2020)	Noted Exemptions
Merced Irrigation District ²¹	17 %	*large hydro exemption ²² *cost limitation

¹⁶ Gross RPS percentages reflect physical deliveries only – does not include the usage of banked RECs. Many entities report exceeding state mandates through 2027 if allowable usage of banked RECs is counted.

¹⁷ Pg. 11, Table 1; CPUC; 2024 California Renewables Portfolio Standard Annual Report; November 2024; https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2024/2024-rps-annual-report-to-the-legislature.pdf

¹⁸ Pg. 17, Table 5; CPUC; *2024 California Renewables Portfolio Standard Annual Report*; November 2024; https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2024/2024-rps-annual-report-to-the-legislature.pdf

¹⁹ Pg. 12, *Ibid*.

²⁰ All three IOUs have procured for IRP mid-term reliability requirements during this time period, however, including for some RPS-eligible resources.

²¹ CEC Final Report, RPS Verification Results, Merced Irrigation District CP3 2017-2020; January 2024; file:///C:/Users/shybutla/Downloads/TN254130_20240125T154820_Merced%20Irrigation%20District%20%20Final%20RPS%20Verification%20Results%20Report%20for%20Comp.pdf

²² 20 CCR section 3204 (b)(6) of the RPS POU Regulations; The qualifying hydroelectric generation had the effect of reducing Merced Irrigation District's 2017 soft target from 137,150 RECs to 16,828 RECs and the total Compliance Period 3 target from 615,028 RECs to 494,706 RECs.

		optional compliance
		measure
Modesto Irrigation District ²³	30 %	
Turlock Irrigation District ²⁴	30 %	
Sacramento Municipal Utilities District ²⁵	28 %	

The low POU percentages in Table 3 are by design. The RPS provides POUs additional compliance options, including: 1) allowing those with a large hydroelectric facility representing more than 40% of the utility's portfolio to count that generation towards satisfying their RPS obligation, and 2) a cost limitation optional compliance pathway if their ratepayers are disproportionately affected by the RPS. As shown in Table 3, Merced Irrigation District elected to exercise the cost limitation optional compliance during the last reported compliance period. This optional compliance was utilized by five other POUs, including: Biggs, Redding, Victorville, Moreno Valley, and Cerritos. ²⁶ Per CEC requirements, as long as the POU's governing board adopts its own rules for the cost limitation by no later than the last day of the three year RPS compliance period and the utility follows its own self-imposed cost limitation rule, the CEC would deem that in compliance with RPS. The level of discretion and deference afforded to POUs to utilize this optional compliance mechanism allows a POU to adopt a rule that even just \$1 of additional cost to comply with the RPS is a disproportionate impact to their ratepayers. As long as the utility followed its rules and they were adopted by the utility prior to the end of the compliance period, then the CEC would deem this approach to be in compliance with the RPS under existing statutory requirements.

5) *Purpose and Impact of Bill.* Hydropower is a zero-carbon resource that, depending on weather conditions, can provide significant flexibility to grid operations.²⁷ This bill seeks to amend the RPS program to allow all hydroelectric resources, regardless of size, age, or location, to be eligible resources and receive associated RECs.²⁸ The author characterizes this as an affordability measure. The bill's supporters – multiple Central Valley water and irrigation districts – note that the practical impact of the bill would be to render the remaining RPS compliance targets as met. A coalition of renewable developers writing in opposition agree, noting "adding large hydro to the RPS ...would flood the market with

²³ CEC Final Report, RPS Verification Results, Modesto Irrigation District CP3 2017-2020; August 2024; file:///C:/Users/shybutla/Downloads/TN258600_20240820T162738_Modesto%20Irrigation%20District%20-%20Final%20RPS%20Verification%20Results%20Report%20for%20Com%20(1).pdf

²⁴ CEC Final Report, RPS Verification Results, Turlock Irrigation District CP3 2017-2020; August 2024; file:///C:/Users/shybutla/Downloads/TN258591_20240820T162754_Turlock%20Irrigation%20District%20-%20Final%20RPS%20Verification%20Results%20Report%20for%20Com.pdf

²⁵ CEC Final Report, RPS Verification Results, SMUD CP3 2017-2020; January 2024; file:///C:/Users/shybutla/Downloads/TN254133_20240125T154825_Sacramento%20Municipal%20Utility%20District%20-%20Final%20RPS%20Verification%20Results%20Repo.pdf

 $^{^{26}\} https://www.energy.ca.gov/programs-and-topics/programs/renewables-portfolio-standard/renewables-portfolio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-folio-standard-fo$

²⁷ Department of Energy, "Benefits of Hydropower;" https://www.energy.gov/eere/water/benefits-hydropower ²⁸ Locational constraints of the RPS program would still apply; i.e., Renewable generation facilities may be located anywhere within the WECC region and sell energy and /or RECs to a California retail seller of electricity to meet its RPS obligation, provided the facility meets all RPS-eligibility criteria established by the CEC. However, after 2020 less than 10% of RECs could be associated with Category 3, meaning no physical delivery of energy, just the REC itself was exchanged.

cheap compliance credits... [and] immediately discourage the development of new renewable resources and the thousands of jobs they support."²⁹ This RPS eligibility would not just extend to the existing 12.2 gigawatts (GWs) of existing, in-state large hydro owned and operated by the utilities, but also to any out-of-state large hydro sold into California's market, as well as large hydro owned and operated by federal agencies and the Department of Water Resources.

The scale of this is quite significant. As shown in Table 1 above, nearly 12% of California's 2023 resource mix was made up of large hydro. The statutory RPS obligation in 2024 was 44%, just 16% shy of the 60% by 2030 final RPS target. At a systems-level, injecting 12% of newly-eligible large hydro would have a chilling impact on the existing RPS procurement market.

6) An Uncertain Path to Affordability. According to the CPUC, in 2023, the IOUs' average cost of RPS-eligible energy was 10.0 ¢/kWh and the average cost of non-RPS energy was 8.3 ¢/kWh. Using this metric, IOUs' renewable energy procurement likely added a premium of 1.7 ¢/kWh on average for the renewable energy procured to meet their RPS requirements.³⁰ One might speculate that if RPS compliance could instead be met with existing, large hydro resources these RPS premiums might be reduced or eliminated, leading to the lower costs the author is seeking from this measure. However, this "RPS-premium" is not universal. SDG&E, the CCAs, and even the ESPs saw lower RPS procurement costs relative to non-RPS procurement costs in 2023.³¹ Most renewable contracts signed today are much cheaper than a decade ago; however, it is unclear to this committee how the cost of these cheaper renewables would compare to existing large hydro. At minimum, the sudden inclusion of over 26,000 GWhs of newly-eligible large hydro into the RPS market would likely give RPS-resource buyers more options, potentially driving down compliance costs.

For POUs, relief from RPS procurement requirements may be achieved without this bill, through the cost limitation optional mechanism. As noted above, that mechanism affords POUs significant deference in determining their RPS compliance is too cost burdensome and permitting waiving of their compliance requirements. Existing law also affords optional compliance pathways for certain legacy large hydro facilities owned by the POUs. This suggests it is not the relief from buying RPS resources, but the selling of excess large hydro RECs which may benefit the POUs most.

Utilities have an additional opportunity to drive down costs under this measure by selling their excess hydroelectricity, given that most of these assets are utility-owned and fully depreciated. The state's RPS works by setting up a marketplace where renewable power plants gain RECs for producing renewable energy. The state runs a marketplace where RECs can be bought and sold, and requires electricity providers to meet a certain percentage standard by turning in enough RECs as compared to their total electricity generation. However, not every utility has large hydro in its portfolio; so not every customer stands to benefit for selling excess large hydro. Moreover, resources only have

²⁹ Jackson, A., et al, March 26, 2025 AB 1191 Opposition Letter to Chair Petrie-Norris.

³⁰ Pg. 20, CPUC, 2024 Padilla Report; May 2024; https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2024/2024-padilla-reportvfinal.pdf

³¹ Pg. 25-29, 2024 Padilla Report; Ibid.

value when they're generating, and for hydro that requires wet weather. The continued drought cycles in California can greatly impact hydro productivity, and may lead to hydro imports from the Pacific Northwest and Canada growing more competitive and garnering higher prices. As a result, any "cost-savings" may only be present for a subset of utilities.

7) Winners and Losers. In fact, PG&E stands to benefit significantly from this measure, as it owns over 62 powerhouses located on watersheds in the Sierra Nevada, Cascade, and Coastal mountain ranges, totaling approximately 3.8 GWs. 32 The likely immediate impact would be a halting of PG&E's RPS procurement solicitations, as was the case in 2016-2022 before the CPUC ordered the IOUs to sell their excess procurement. In aggregate, the IOUs sold approximately 25,000 GWhs of RPS energy from 2020-2023, and plan to sell additional RPS energy in 2024 and 2025 from authorized REC sales and approved optimization efforts. 33 This bill would likely expand the volume of those offerings. The actual customer impact of these sales is unknown to the committee.

The same is likely true for many POUs with significant volumes of large hydro in their portfolios, such as the supporters of this measure. However, all of these utilities – IOUs and POUs alike – will still need to procure enough RPS-eligible and zero-carbon resources to meet their 90%-by-2035 SB 100 compliance, even if this bill were to pass. Such an obligation is just 10 years away. For the POUs, if all their large hydro is considered RPS-eligible, the optional RPS-compliance pathways – as Merced exercised in 2020, shown in Table 3 – may no longer be available; and the large hydro that they could use to meet their 90% SB 100 obligation would instead be used for current RPS-compliance. This may inadvertently increase costs in the long-term. Given the varied portfolios, procurement strategies, and compliance exemptions available to the IOUs, POUs, CCAs, and ESPs subject to the RPS, the impact of this legislation will likely be unique depending on the entity. However, for the current RPS-eligible energy developers – solar, wind, biomass, geothermal, etc. – this bill is likely to significantly impact their businesses.

8) Related Legislation.

AB 59 (Aguiar-Curry, 2025) makes permanent the authority of Reclamation District No. 108 (RD 108) to generate and sell hydroelectric power. Status: Assembly Floor – Third Reading.

AB 1095 (Papan, 2025) includes "waste heat energy" used for serving data center energy demand as an eligible resource under the RPS. Status: Referred to the Assembly Committees on Utilities and Energy and Natural Resources.

9) Prior Legislation.

SB 1020 (Laird) establishes interim targets for the statewide 100% clean energy policy that all of the state's retail electricity be supplied with a mix of RPS-eligible and zero-

³² CPUC Decision 24-05-004, *Decision Denying Application*, A.22-09-018, May 10, 2024; http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M531/K375/531375060.PDF

³³ Pg. 28, 2024 California Renewables Portfolio Standard Annual Report; November 2024; https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2024/2024-rps-annual-report-to-the-legislature.pdf

carbon resources by December 31, 2045. Sets interim targets of 90% mix of RPS-eligible and zero-carbon resources by December 31, 2035 and 95% by December 31, 2040. Additionally requires state agencies to accelerate their 100% clean energy policy goal by 10 years. Status: Chapter 361, Statutes of 2022.

AB 1941 (Gallagher, 2020) would revise the definition of an RPS-eligible resource to include all hydroelectric generating facilities in operation as of January 1, 2021, and nuclear facilities, among other program revisions. Status: Died – Assembly Committee on Utilities and Energy.

ACA 17 (Gray, 2019) state the intent that hydroelectric generation be treated as the most environmentally protective and carbon-neutral electrical energy resource, and requires state programs to include hydroelectric generation. Status: Assembly – Died at Desk.

SB 386 (Caballero, 2019) limits the RPS obligations for Turlock and Modesto Districts to the electricity demands that are unsatisfied by the Don Pedro Hydroelectric (DPH) Project, and in exchange requires the districts to procure energy storage, as specified. Status: Died – Senate Committee on Energy, Utilities, and Communications.

AB 2809 (Patterson, 2018) largely similar to this bill; requires large hydroelectric facilities greater than 30MW to be eligible resources in the Renewables Portfolio Standard. Status: Died – Assembly Committee on Utilities and Energy.

SB 100 (De León) established the 100 Percent Clean Energy Act of 2017 which increases the RPS requirement from 50% by 2030 to 60%, and creates the policy of planning to meet all of the state's retail electricity supply with a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100% clean energy. Status: Chapter 312, Statutes of 2018.

SB 591 (Cannella) limits the Merced Irrigation District's RPS obligation to the electricity demands that are unsatisfied by the New Exchequer Dam. Status: Chapter 520, Statutes of 2013.

10) *Double Referral.* This bill is double-referred. Should it pass out of this committee, it will be referred to the Assembly Committee on Natural Resources for its review.

REGISTERED SUPPORT / OPPOSITION:

Support

Kings River Conservation District Kings River Water Association Modesto Irrigation District Turlock Irrigation District

Oppose

American Clean Power- California California Biomass Energy Alliance California Energy Storage Alliance California State Association of Electrical Workers California Wind Energy Association Coalition of California Utility Employees Independent Energy Producers Association Large-scale Solar Association Sierra Club The Utility Reform Network (TURN)

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