

Date of Hearing: June 22, 2022

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

SB 1158 (Becker) – As Amended May 19, 2022

SENATE VOTE: 30-9

SUBJECT: Retail electricity suppliers: emissions of greenhouse gases

SUMMARY: Requires every retail supplier of electricity to annually report hourly greenhouse gas (GHG) emissions data, as specified, to the California Energy Commission (CEC).

Specifically, **this bill:**

- 1) Requires, beginning January 1, 2028, every retail supplier to annually report specified information to the CEC, including an analysis of the retail supplier's sources of electricity for each hour of the previous year and the GHG emissions associated with those sources of electricity, as specified.
- 2) Requires, on or before July 1, 2024, the CEC to adopt rules, through an open process, subject to public comment, and adopted by a vote of the CEC, to implement these reporting requirements. Requires the CEC to align the methodology of these reporting requirements with that used to evaluate the GHG emissions of retail suppliers' integrated resource plans and the LSEs' mandatory reporting of GHG emissions to the California Air Resources Board (CARB), as specified.
- 3) Requires the CEC to annually publish on its internet website an aggregated summary of the data reported by each retail supplier. Requires generation facilities, energy storage facilities, and buyers of centrally procured electricity from specified sources to timely provide each retail supplier with the retail supplier's hourly share of electricity and the greenhouse gas emissions associated with that electricity, as specified.
- 4) Requires the California Public Utilities Commission (CPUC) and a governing board of a local publicly owned electric utility to review the GHG emissions associated with each LSE's and local publicly owned electric utility's reporting of annual GHG emissions to the CEC. The CPUC and local governing board may assess whether those GHG emissions demonstrate adequate progress toward achieving the retail supplier's GHG emissions targets, as specified. Requires the CPUC to provide its findings to the governing board of each community choice aggregator.
- 5) Requires the CPUC to calculate and publish on its internet website, in a new or as part of an existing report, the percentage of each LSE's local and system resource adequacy requirements from the previous calendar year that was met with capacity from eligible renewable energy resources or other zero-carbon resources, as specified.

EXISTING LAW:

- 1) Establishes and vests the California Public Utilities Commission (CPUC) with regulatory authority over public utilities. (Article XII of the California Constitution)

- 2) Requires every entity that offers an electricity product for sale to retail consumers in California to disclose its electricity sources and the associated intensity of GHG emissions for the previous calendar year. Requires a retail supplier to disclose its electricity sources as a percentage of annual sales that is derived from specified sources of energy, including eligible renewable energy resources. (Public Utilities Code §§ 398.1-398.5)
- 3) Requires the CPUC, in consultation with the California Independent System Operator (CAISO), to establish resource adequacy (RA) requirements for all load-serving entities (LSEs), including electrical corporations, electric service providers (ESPs), and community choice aggregators (CCAs), in accordance with specified objectives. (Public Utilities Code § 380)
- 4) Requires each local publicly owned electric utility serving end-use customers to prudently plan for and procure resources that are adequate to meet its planning reserve margin and peak demand and operating reserves, sufficient to provide reliable electric service to its customers. (Public Utilities Code §9620)
- 5) Requires the CPUC to adopt a process for each LSE to file an integrated resource plan (IRP) and a schedule for periodic updates to the plan to ensure that the LSE meets, among other things, the state's GHGs reduction targets and the requirement to procure at least 60 percent of its electricity from eligible renewable energy resources by December 31, 2030. (Public Utilities Code § 454.52)
- 6) Requires the governing board of a local publicly owned electric utility with an annual electrical demand exceeding 700 gigawatt hours (GWh) to adopt an IRP and a process for updating the plan at least once every five years to ensure that the local publicly owned electric utility meets, among other things, the state's GHGs reduction targets and the requirement to procure at least 60 percent of its electricity from eligible renewable resources by December 31, 2030. (Public Utilities Code § 9621)
- 7) Requires the reduction of statewide emissions of GHGs 40 percent below 1990 levels by 2030. This is known as the Global Warming Solutions Act of 2006. (Health and Safety Code § 38500 et seq.)
- 8) Requires CARB to develop regulations to require the annual reporting and verification of GHG emissions. As part of this mandatory reporting, requires all retail sellers of electricity to account for GHGs from all electricity consumed in the state, including transmission and distribution line losses from electricity generated within the state or imported from outside the state. (Health and Safety Code § 38530)

FISCAL EFFECT: According to the Senate Appropriations Committee, this bill would incur ongoing costs of \$681,000 at the CPUC and ongoing costs of about \$150,000 annually for the CEC.

BACKGROUND:

SB 100 (De León, Chapter 312, Statutes of 2018) – SB 100 established the 100 Percent Clean Energy Act of 2017 which increases the Renewables Portfolio Standard (RPS) requirement to 60

percent by 2030, 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 percent clean energy. SB 100 also required CARB, CEC, and CPUC to issue a joint report by January 1, 2021, and at least every four years, that describes technologies, forecasts, affordability, and system and local reliability. The report is required to include an evaluation of costs and benefits to customer rate impacts, as well as, barriers to achieving the SB 100 policy. The first SB 100 Joint Agency report was released in 2021.

Renewable Portfolio Standard (RPS) – California's ambitious RPS program is jointly implemented and administered by the CPUC and the CEC. The RPS program requires the state's energy LSEs, including investor-owned utilities (IOUs), CCAs, ESPs and publicly owned utilities (POUs) to procure 60 percent of their total electricity retail sales from eligible renewable energy resources by 2030, and a mix of RPS-eligible and zero-carbon resources by December 31, 2045, for a total of 100 percent clean energy. The RPS requires milestones on the path to 2030, including interim goals of 25 percent by 2016, 33 percent by 2020, 44 percent by 2024, and 52 percent by 2027. The state is well on its way to achieving its existing RPS targets. Most POUs are on track to meet their 2020 goals and working towards their 2030 goals. The state's three largest electric utilities have met current procurement goals and anticipate exceeding future procurement goals, with each having procured over 40 percent eligible renewable energy resources.

Integrated Resources Plan (IRP) – As required in SB 350 (De León, Chapter 547, Statutes of 2015), the IRP process requires the CPUC to identify a portfolio of resources for electricity procurement that provides optimal integration of renewable energy in a cost-effective manner, and minimize impacts on ratepayer's bills. The identification of this portfolio is intended to guide LSEs' IRPs, which help ensure that utilities meet GHG reduction targets for the electricity sector. As part of the IRP planning cycle, the CPUC adopts a reference system plan, which identifies the energy procurements needed to help the LSEs meet specific GHG reduction goals. In the most recent IRP decision (D.22-02-004) adopted in February of this year, the CPUC adopted a 38 million metric ton (MMT) 2030 electric sector GHG planning target for the 2021 Preferred System Plan (PSP) portfolio. The PSP portfolio includes approximately 25,500 megawatts (MW) (nameplate capacity) of new supply-side renewables, and 15,000 MW of new storage and demand response resources, by 2032, in addition to existing resources. The PSP portfolio includes long-lead time resources, including out-of-state renewables and offshore wind—two resource types the CPUC will continue evaluating moving forward. The PSP orders procurement of two storage resources that were identified by the CAISO as alternatives to transmission upgrades in the previous TPP cycle.

Clean System Power calculator – CPUC staff developed a Clean System Power (CSP) calculator tool for use in estimating GHG and criteria pollutant emissions of energy portfolios. The CSP calculator tool for LSEs to use in estimating the GHG and criteria pollutant emissions of their portfolios. Importantly, the calculator is not intended to be used as an after-the-fact compliance tool, but rather to provide LSEs a simple and uniform way of estimating the emissions associated with their IRP portfolios. The core function of the CSP tool is to assign GHG and criteria air pollutant emissions associated with the CAISO system's dispatchable thermal generation and unspecified imports ("system power") to LSEs based on how each LSE plans to rely on CAISO system power to meet its load on an hourly basis. The tool also calculates GHG and criteria air pollutant emissions from other electric generation sources that can be attributed to an LSE's energy resource portfolio. The CSP methodology enables the CPUC to address three critical

needs in the IRP process: (1) to evaluate the expected 2030 GHG emissions associated with individual LSE plans and energy resource portfolios on a fair and consistent basis; (2) to compare each LSE's expected 2030 GHG emissions against its CPUC-assigned benchmark; and (3) to compare expected 2030 LSE GHG and criteria air pollutant emissions in aggregate against the Reference System Plan to meet the 2030 GHG planning target for the electric sector, at least cost. To aid planning, the CSP tool also provides GHG and criteria air pollutant emissions estimates for years before 2030.

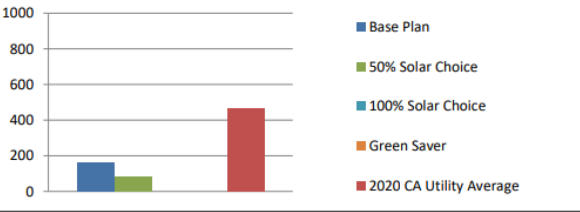
CARB GHG Mandatory Reporting Requirements – Reporting of GHG emissions by major sources is required by the California Global Warming Solutions Act of 2006 (AB 32). The Regulation for the Mandatory Reporting of GHG Emissions (MRR) is applicable to electricity generators, industrial facilities, fuel suppliers, and electricity importers. A summary of reported GHG emissions data reported under MRR are made public each year, and the data used by the Cap-and-Trade Program and included in the state's GHG Inventory.

CEC Power Source Disclosure program – The Power Source Disclosure (PSD) program was established by SB 1305 (Sher, Chapter 796, Statutes of 1997) in an effort to provide retail electricity consumers “accurate, reliable, and simple to understand information on the sources of energy that are used to provide electric services.” In 2016, the CEC adopted modifications to the regulations to incorporate statutory changes to program rules and reporting requirements as required by statute. AB 1110 (Ting, Chapter 656, Statutes of 2016) further modified the PSD Program and Power Content Label by requiring retail suppliers to disclose the GHG emissions intensity (the rate of emissions per unit of electricity) associated with each electricity portfolio beginning in 2020 for the 2019 reporting year. AB 1110 also required the CEC, among other things, to determine a format for disclosing unbundled renewable energy credits (RECs) as a percentage of annual retail sales.

The PSD program provides consumers a detailed view into the sources of electricity purchased by their retail suppliers to power their homes and businesses. This information is provided through annual Power Content Labels, which resemble nutrition labels, with a breakdown of energy resources such as solar photovoltaic and thermal-electric, wind, geothermal, nuclear, large hydroelectric, and natural gas. For comparison, the labels include a summary of California's energy resource mix, which is called total system power. Retail electricity suppliers report their electricity purchases and retail sales to the CEC annually. The reports are used to create the labels for each product offered the prior year.

Of particular interest for this bill is the adjustment for net specified procurements. When calculating annual GHG emissions for the Power Content Label, if the LSE procured more electricity than it needed to serve retail sales, then its fossil fuel resources are reduced to account for the difference between net specified procurements and retail sales of an electricity portfolio. All natural gas resources are proportionally reduced first, then coal and other fossil fuels as needed. There will always be an adjustment between net specified procurement and retail sales because retail sales does not include line-losses to transmission and distribution wires nor does it include electricity consumed by the utility itself. ~~(carbon capture anyone?)~~ The amount of this adjustment is not included in the Power Content Label itself, but rather in an annual report that is submitted only to the Docket Log and filed as a confidential document.

Below is an example of Pacific Gas and Electric's (PG&E's) 2020 Power Content Label.

2020 POWER CONTENT LABEL										
Pacific Gas and Electric Company										
www.pge.com/billinserts										
Greenhouse Gas Emissions Intensity (lbs CO ₂ e/MWh)					Energy Resources	Base Plan	50% Solar Choice	100% Solar Choice	Green Saver	2020 CA Power Mix
Base Plan	50% Solar Choice	100% Solar Choice	Green Saver	2020 CA Utility Average	Eligible Renewable ¹	30.6%	65.3%	100.0%	100.0%	33.1%
160	80	0	0	466	Biomass & Biowaste	2.6%	1.3%	0.0%	0.0%	2.5%
					Geothermal	2.6%	1.3%	0.0%	0.0%	4.9%
					Eligible Hydroelectric	1.2%	0.6%	0.0%	0.0%	1.4%
					Solar	15.9%	57.9%	100.0%	100.0%	13.2%
					Wind	8.3%	4.2%	0.0%	0.0%	11.1%
					Coal	0.0%	0.0%	0.0%	0.0%	2.7%
					Large Hydroelectric	10.1%	5.1%	0.0%	0.0%	12.2%
					Natural Gas	16.4%	8.2%	0.0%	0.0%	37.1%
					Nuclear	42.8%	21.4%	0.0%	0.0%	9.3%
					Other	0.0%	0.0%	0.0%	0.0%	0.2%
					Unspecified Power ²	0.0%	0.0%	0.0%	0.0%	5.4%
					TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%
Percentage of Retail Sales Covered by Retired Unbundled RECs ³ :						2%	0%	0%	0%	

¹The eligible renewable percentage above does not reflect RPS compliance, which is determined using a different methodology.

²Unspecified power is electricity that has been purchased through open market transactions and is not traceable to a specific generation source.

³Renewable energy credits (RECs) are tracking instruments issued for renewable generation. Unbundled renewable energy credits (RECs) represent renewable generation that was not delivered to serve retail sales. Unbundled RECs are not reflected in the power mix or GHG emissions intensities above.

COMMENTS:

- 1) *Author's Statement.* According to the author, "SB 1158 is about measuring outcomes against targets. We've set greenhouse gas targets for all of our electricity suppliers for 2030 and later years but we have nothing in place to measure how well they are doing against those targets. How can we possibly expect that to work? This bill fixes that gap. It directs the CEC to establish rules for electricity suppliers to analyze their sources of electricity and report on the associated greenhouse gas emissions so that we can measure progress and hold everyone accountable to doing their fair share to reduce emissions.

This bill requires an analysis approach of what actually happened that is consistent with the planning process. It is very important to use this hourly analysis approach if we want to know what is really happening because the results can be very different from traditional reporting, which has looked at electricity supplies only on an annual basis. One electricity supplier found that their reported emissions were 15x higher when analyzed more accurately, as this bill will require, rather than using the traditional annual accounting approach. This bill is not creating any new targets and is not requiring anyone to change their procurement plans. It is only establishing a fair and accurate way to measure how everyone is doing against existing targets so that we'll have transparency and accountability."

- 2) *Hourly vs Annual.* Proponents of this bill support the proposed hourly reporting of GHG emissions. Many of the current reporting requirements use an annual accounting methodology which proponents of this bill argue is insufficient as it does not consider the mismatch between hourly deliveries from supplies procured by retail suppliers and the hourly customer load they serve. Proponents take particular issue with the annual methodology's failure to capture reliance on unspecified power by retail suppliers during many hours of the year (much of which is primarily produced by fossil fuel generation).
- 3) *Retail Sales vs Loss-Adjusted Load.* The measurement defined in this bill, loss-adjusted load, corrects for transmission and distribution line-losses. Essentially, this measurement publicizes what is currently buried in confidential portions of the Power Source

Disclosure docket. Currently, the amount of electricity procured that is not sold is counted *against* a utility's fossil fuel usage. By using loss-adjusted load instead of retail sales, the calculations required by the bill include all of the energy that a utility puts into the grid with no hidden offsets.

- 4) *Administrative Burden.* Opponents of this bill take issue with the complexity and prescriptive requirements of this bill. They argue that the granular data will not lead to greater GHG emissions reductions for difficult-to-serve time periods. As the California Municipal Utility Association notes: "the key challenge to addressing emissions...is developing cost-effective, dispatchable, and reliable clean energy technologies that today do not exist at scale." They state that they already track and report GHG emissions and a new program to annually report hourly GHG emissions would be "a burdensome requirement, distracting from the core mission of providing clean, affordable, and reliable energy."

- 5) *Related Legislation.*

SB 1020 (Laird, et al, 2022) among its many provisions, establishes interim targets to achieve the SB 100 policy of 100 percent renewable energy and zero-carbon resources by 2045. Status – *set for hearing* in the Assembly Committee on Utilities & Energy for June 22nd, 2022.

SB 881 (Min, 2022) requires the CPUC to require each energy LSE to undertake sufficient procurement to achieve a diverse, balanced, and reliable statewide portfolio and realize specified electricity sector GHG emissions reductions. Status – held in the Senate Committee on Appropriations.

SB 1432 (Hueso, 2022) makes clarifying changes to the RA statute, including requiring a report of each LSE's compliance status and ensure the associated GHG emissions attributes of backstop procurement are equitably allocated. Status – *set for hearing* in the Assembly Committee on Utilities & Energy for June 29th, 2022.

- 6) *Prior Legislation.*

SB 67 (Becker, 2021) would have established requirements for the percentage of retail load, as defined, that must be supplied by eligible clean energy resources, as defined and would have required the CPUC to establish for each retail seller, and the CEC for each POU, clean energy procurement requirements. Status – Died, Senate Energy, Utilities, and Communications Committee

SB 100 (De León) established the 100 Percent Clean Energy Act of 2017 which increases the RPS requirement from 50 percent by 2030 to 60 percent, and created 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 percent clean energy. Status: Chapter 312, Statutes of 2018.

AB 1110 (Ting) required every retail supplier of electricity in California annually to report to its customers the GHG emissions intensity of the supplier's electricity sources. Status: Chapter 656, Statutes of 2016

AB 162 (Ruskin) modified and streamlined power source disclosure reporting requirements for POUs and other electricity providers. Status: Chapter 313, Statutes of 2009.

SB 1305 (Sher) first required retail suppliers to disclose their power sources. Status: Chapter 796, Statutes of 1997

- 7) *Double Referral*. This bill is double-referred; upon passage in this Committee, this bill will be referred to the Assembly Committee on Natural Resources.

REGISTERED SUPPORT / OPPOSITION:**Support**

350 Conejo / San Fernando Valley
350 Humboldt: Grass Roots Climate Action
350 Silicon Valley
Acterra
California Efficiency + Demand Management Council
California Energy Storage Alliance
California Environmental Voters (formerly Clcv)
Calpirg
Ceja Action
City of Half Moon Bay
Clean Air Task Force
Coalition of California Utility Employees
Environment California
Menlo Spark
Peninsula Clean Energy
Silicon Valley Youth Climate Action
The Climate Center
The Utility Reform Network (TURN)

Support if Amended

San Diego Gas & Electric

Opposition

California Municipal Utilities Association
Southern California Public Power Authority (SCPPA)

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