Office of Senate Floor Analyses
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THIRD READING

Bill No: SB 1350
Author: McNerney (D), et al.
Amended: 5/18/26
Vote: 21

SENATE ENERGY, U. & C. COMMITTEE: 15-0, 4/13/26
AYES: Allen, Ochoa Bogh, Archuleta, Arreguín, Caballero, Dahle, Gonzalez, Grove, Hurtado, McNerney, Reyes, Richardson, Stern, Strickland, Wahab
NO VOTE RECORDED: Becker, Rubio

SENATE ENVIRONMENTAL QUALITY COMMITTEE: 7-0, 4/22/26
AYES: Blakespear, Valladares, Allen, Dahle, Gonzalez, Hurtado, Menjivar

SENATE APPROPRIATIONS COMMITTEE: 5-0, 5/14/26
AYES: Cervantes, Cabaldon, Grayson, Richardson, Wahab
NO VOTE RECORDED: Seyarto, Dahle

SUBJECT: Energy: renewable electrical generation facilities: definition

SOURCE: Green Hydrogen Coalition

DIGEST: This bill specifies that turbines using hydrogen can be considered a renewable electrical generation facility for the purpose of the Renewables Portfolio Standard (RPS) if the turbine facility meets specified criteria.

ANALYSIS:

Existing law:

1) Defines a "renewable electrical generation facility" as a facility that 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. To meet the definition of a renewable electrical

generation facility, the facility must be in state, have its first point of connection to the transmission network of a balancing authority area primarily located within the state, or has its first point of interconnection to the transmission network outside the state, within the Western Electricity Coordinating Council (WECC) and meets certain specified requirements. (Public Resources Code §25741)

2) Defines an "eligible renewable energy resource" as an electrical generating facility that meets the definition of a "renewable electrical generation facility" in the Public Resources Code, subject to specified conditions. (Public Resources Code §399.12)

3) Establishes the RPS program and establishes a goal of procuring at least 60% of total retail sales of electricity from renewable energy resources by December 31, 2030, with specified benchmarks up to that date. Existing law requires the California Public Utilities Commission (CPUC) to oversee electrical corporations' compliance with renewable energy procurement mandates and requires the California Energy Commission (CEC) to oversee electric publicly owned utility (POU) renewable energy procurement compliance. (Public Utilities Code §399.11 et. seq.)

4) Defines a renewable energy credit (REC) and requires the CEC to design and implement an accounting system to verify electric utilities' compliance with the RPS, to ensure that electricity generated by an eligible renewable energy resource is counted only once for the purpose of meeting the RPS, to certify RECs produced by eligible renewable energy resources, and to verify retail product claims. (Public Utilities Code §399.25)

5) Defines "green electrolytic hydrogen" as hydrogen gas produced through electrolysis and does not include hydrogen gas manufactured using steam reforming or any other conversion technology that produces hydrogen from a fossil fuel feedstock. (Public Utilities Code §400.2)

6) Requires the CPUC, CEC and California Air Resources Board (CARB) to consider green electrolytic hydrogen an eligible form of energy storage and consider its potential uses. (Public Utilities Code §400.3)

7) Requires CARB to evaluate market barriers to accelerate the use of green hydrogen, potential beneficial uses of hydrogen, and an estimate of greenhouse gas (GHG) emissions reductions that can be achieved through deploying green

hydrogen in various settings. Existing law requires CARB's evaluation to include an analysis of life-cycle GHG emissions from various forms of hydrogen, including green hydrogen. (Health and Safety Code §38561.8)

8) Requires the CEC to administer a program to provide financial incentives to hydrogen projects that produce, process, deliver, store, or use hydrogen. Existing law specifies that hydrogen projects are only eligible for these incentives if the hydrogen is derived from water using RPS-eligible energy resources, or hydrogen derived from RPS-eligible energy resources. Existing law specifies that the CEC may only provide these financial incentives to projects that help reduce sector-wide emissions, as determined by the CEC. (Public Resources Code §25664–25664.1)

This bill expands the definition of a "renewable electrical generation facility" for the purpose of the RPS to include a turbine that meets all of the following criteria:

a) The hydrogen used in the turbine is solely derived from a non-fossil-based feedstock or through the electrolysis of water using electricity generated from another renewable electrical generation facility.

b) Electricity used to derive the hydrogen used by the turbine is not also counted toward an RPS compliance obligation or claimed as renewable generation for any other state program.

c) The facility's turbine has the capacity to use a fuel for which hydrogen comprises a sufficient amount of the fuel blend to achieve a measurable reduction in GHG emissions. The CEC may set a threshold blend of hydrogen that a facility must use to be eligible for the RPS; however, this threshold may not be set below 20% by volume of the blend.

d) The facility's operator submits information on the hydrogen production process, as specified by the CEC. For electrolytic hydrogen production, the operator shall demonstrate hourly matching of a facility's consumption with renewable energy generation starting January 1, 2030.

e) The manufacturing of the hydrogen used by the turbine does not result in resource shuffling, as determined by the CEC based on regional impacts of hydrogen production on zero carbon generation, local air pollution, and fossil fuel generation.

f) The manufacturing of the hydrogen used by the turbine does not use unbundled renewable energy credits (RECs).

g) The facility's use of hydrogen results in a net decrease of air pollutants and GHG emissions, as specified.

Background

Effective decarbonization using hydrogen depends on a number of factors. Certain sectors are increasingly advocating for the use of hydrogen as a fuel to displace more fossil-intense fuels; however, the ability to achieve emissions reductions and effectively decarbonize certain processes by using hydrogen depends on a variety of factors, including the feedstocks and processes used to make hydrogen and the amount of hydrogen displacing fossil fuel. Currently over 90% of the hydrogen used in the United States is produced from fossil fuels – specifically, through steam methane reforming (SMR). Even electrolytic hydrogen has the potential to increase emissions from the power sector by relying on electricity produced from fossil fuel to make the hydrogen through electrolysis of water. Hydrogen is also a smaller, less energy dense molecule than the methane compounds in natural gas. As a result, turbines using a blend of natural gas and hydrogen may need to burn more fuel to produce the same amount of combustion power as traditional natural gas turbines. At low blends of hydrogen and natural gas, this need for more fuel can increase a facility's use of natural gas despite using a blend with hydrogen. Hydrogen blends also require much higher blends of hydrogen to meaningfully achieve emissions reductions. Research from the National Renewable Energy Laboratory (NREL) indicates that blends of 20% hydrogen and natural gas can only achieve up to a 6 to 7% reduction in GHG emissions. Turbines for electrical power generation may also need to use solely natural gas to facilitate "cold" starts and stops for turbines that are not consistently running, which can lower the anticipated emissions savings from using hydrogen blends in these turbines.

Which electric generation facilities are using hydrogen? Hydrogen's capacity to embrittle and weaken certain metals has limited the extent to which existing energy infrastructure can be used to store, process, transport, and combust hydrogen. As a result, few existing facilities can manage fuel blends with a high percentage of hydrogen without extensive facility upgrades. Despite the challenges and expenses associated with retrofitting or repowering natural gas facilities to use hydrogen, several utilities have already started the process of making this transition. The Lodi Energy Center (a Northern California Power Agency facility) and the Scattergood Generating Station (a Los Angeles Department of Water and Power facility) are

both in the process of converting their natural gas facilities to turbines that can run on a blend of natural gas and hydrogen.

One step forward, two steps back: the status of clean hydrogen incentives. While California has taken steps to encourage the in-state development of clean hydrogen resources, the Trump Administration has taken actions to curtail or eliminate federal support for those efforts. Both California's hydrogen hub program and potential recipients of federal tax credits have been impacted by hydrogen incentive cuts by the Trump Administration.

Status of the Hydrogen Hub Program. In 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA), which included $8 billion to the federal Department of Energy (DOE) to establish regional clean hydrogen hubs across the nation. In 2022, the Legislature passed AB 157 (Committee on Budget, Chapter 570, Statutes of 2022), which authorized GO-Biz to take steps to prepare and submit an application to receive funding from the regional clean hydrogen hubs program. This legislation led to the establishment of California's clean hydrogen hub administrator, known as the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES). In October 2025, the Trump Administration cut the federal funding for California's hydrogen hub program. As a result, the Governor paused the development of ARCHES in November 2025. In February 2026, California and 12 other states filed suit against the Trump Administration in response to the federal government's $1.2 billion termination of California's ARCHES grant.

Status of the 45v Tax Credit. In addition to funding provided under the IIJA, President Biden also signed the Inflation Reduction Act (IRA). The IRA provides a number of production tax credits for certain types of clean energy and manufacturing acceleration projects. The IRA tasked the federal Treasury Department with developing a federal tax credit to incentivize the production of clean hydrogen, otherwise known as the 45v production tax credit. The tax credit is structured to provide up to a $3 tax credit per kilogram of hydrogen produced, with the higher credits granted to lower-carbon-intensive hydrogen. The 45v tax credit has the potential to shape the growth of the hydrogen industry. In 2025, federal statute (H.R. 1/*One Big Beautiful Bill Act*) made changes to the IRA's federal tax credits to limit eligibility for these credits. These changes cut the number of facilities that could qualify for the 45v tax credit by shortening the deadline by which facilities must be under construction to qualify for the credits. The Trump Administration also enacted changes to production tax credits for renewable energy, including solar generation, limiting eligibility to those projects under

construction by July 2026. These shortened deadlines particularly impact those hydrogen production facilities seeking to use these tax incentives to help support facilities that only use renewable energy to produce electrolytic hydrogen. California is home to at least two existing plants that may qualify for these credits if they can meet the new federal tax credit deadlines.

The "three pillars" of clean hydrogen development. The development of the 45v tax credit elevated a debate about the extent to which hydrogen producers are capable of complying with certain clean hydrogen requirements, including requirements to prevent the shifting of emissions to the electricity sector. As part of the development of the 45v tax credit, the federal Treasury Department released a draft proposal for the tax credit, which included setting requirements for hydrogen to meet a set of principles known as the "three pillars." These principles are intended to ensure that hydrogen production supports decarbonization and does not result in an increase in emissions. The three pillars include the following requirements:

- Additionality/Incrementality: the hydrogen must be produced from new units of renewable electric generation to prevent hydrogen from diverting clean energy resources away from the grid.
- Deliverability: the hydrogen must be regionally deliverable to ensure that the hydrogen is not being produced from dirty resources that cannot be verified or from far away resources that are never able to reach the facility.
- Hourly Matching: the hydrogen's production must match a clean power supply on an hourly basis to ensure that hydrogen production does not increase demand for fossil fuel generation.

This bill specifies that a turbine may only be eligible for designation as a renewable energy facility in the RPS if the facility and the hydrogen used by the turbine meet certain conditions. These conditions include the use of RPS eligible electricity to manufacture hydrogen created through electrolysis of water and non-fossil feedstock for non-electrolytic hydrogen production. This bill also prohibits resource shuffling and use of unbundled RECs for the production of hydrogen used in a turbine seeking RPS eligibility. These limitations ensure that the hydrogen used in a turbine seeking RPS eligibility must be manufactured using cleaner production processes than those generally used for hydrogen derived from SMR. In the event that a turbine uses electrolytic hydrogen, this bill requires the turbine operator to demonstrate to the CEC that the hydrogen used by the turbine is made with electricity matched on an hourly basis with renewable electricity generation, starting in 2030.

This bill also requires a turbine to use a fuel blend of at least 20% hydrogen to obtain RPS eligibility. Blends of hydrogen and natural gas can vary from very low blends comprised almost entirely of natural gas and very high blends of hydrogen with very little natural gas. Since GHG emissions reductions from a powerplant using hydrogen blends can only be achieved when those blends contain a larger percentage of hydrogen, powerplants using low blends of hydrogen with natural gas may not meaningfully reduce emissions from those facilities through the use of hydrogen. To the extent that facilities using these low blends of hydrogen obtain renewable energy credits, they may be obtaining credits for power that fails to reduce emissions from the power sector and continues to primarily use fossil fuel. At a 20% blend of hydrogen and natural gas, a turbine may achieve between 6% and 10% reductions in carbon dioxide emissions. To achieve deeper reductions, a higher blend would be necessary. This bill allows the CEC to set a higher blend needed to ensure that the RPS meaningfully reduces GHG emissions from the power sector.

What resources would be RPS-eligible under this bill? This bill adds facilities that power turbines that use hydrogen at certain blends to the list of RPS-eligible facilities. Existing statutes do not currently list hydrogen as an RPS-eligible fuel. The CEC sets specific requirements on each type of RPS-eligible resource in the RPS guidebook. The RPS guidebook only allows a facility using hydrogen to qualify as an RPS-eligible resource when that facility uses fuel cells or linear generators to convert hydrogen gas to electricity under certain circumstances. The RPS guidebook states:

> A facility converting hydrogen gas to electricity in a fuel cell or linear generator may qualify for RPS certification if the hydrogen was derived from a non-fossil-based fuel or feedstock through a process powered using an RPS-eligible renewable energy resource. The electricity generated by a facility using this type of hydrogen gas is eligible for the RPS only if the electricity that was used to derive the hydrogen is not also counted toward an RPS compliance obligation or claimed for any other program as renewable generation. The applicant must submit information on the hydrogen production process as part of the application.

Expanding RPS eligibility may not be the most appropriate mechanism to support hydrogen development. This bill would expand the list of RPS-eligible facilities to include facilities that power turbines using hydrogen that meets certain conditions. This bill is partly aimed at providing incentives to the power sector to re-power

natural gas facilities with hydrogen and provide a market for clean hydrogen in California. However, it is not clear that hydrogen eligibility in RPS is needed to ensure that utilities meet state-mandated renewable procurement targets. Few utilities have indicated that they will not meet near-term RPS goals and some utilities are significantly ahead of schedule. Some utilities have indicated that zero-carbon and reliability procurement targets may pose a greater challenge than RPS procurement.

While procurement progress fluctuates year-to-year, the most recent complete RPS compliance cycle shows that all three of the large investor-owned utilities (IOUs) are on-target or ahead of schedule to meet RPS procurement goals. Most of the hydrogen powerplant conversion projects underway in the state are assets of local electric POUs. Unlike the IOUs, POUs can use alternate compliance mechanisms to modify their RPS obligations in the event that procurements to meet RPS targets are too costly or infeasible. Of the 43 POUs in the state, six POUs successfully used an alternate compliance measure. In all six cases, these POUs cited cost limitation rules as the measure used. One additional POU attempted to use cost limitation as an optional compliance measure without meeting CEC guidelines for using such a measure. None of the utilities that currently own electricity generating plants transitioning to hydrogen are included in the list of POUs that used an optional compliance measure in the most recently completed round of RPS verifications (Cycle 3). While the list of POUs using cost limitations as optional compliance measures is expected to modestly increase once the 4th cycle of verifications is completed by the end of 2026, POUs have indicated that cost concerns largely stem from delays in interconnections for existing projects, construction and supply chain disruptions, and other challenges associated with costs for sourcing resources. To the extent that hydrogen facilities provide affordable resources, new RPS-eligible resources may better help these utilities meet their targets; however, if these new resources are too expensive, POUs may continue to rely on cost limitation measures.

Related/Prior Legislation

SB 993 (Becker) of 2024, would have required the CPUC, after making certain findings, to establish a tariff to encourage new, grid-responsive electricity consumption exclusively for electrolytic hydrogen production and electrifying industrial heat processes. The bill was held by the Senate Appropriations Committee.

SB 1018 (Becker) of 2024, would have exempted sellers of wind and solar generation from the definition of an “electrical corporation” if that generation is transmitted over private lines for electrolytic hydrogen production or industrial heat processes. The bill was held by the Assembly Appropriations Committee.

SB 1420 (Caballero, Chapter 608, Statutes of 2024) expanded the types of facilities eligible for opt-in permitting administered by the CEC to include hydrogen production facilities that do not use fossil fuel feedstocks and also receive funding from certain state and federal programs. The bill also limited the opt-in permitting eligibility of projects that combust biomass.

SB 663 (Archuleta) of 2023, would have defined renewable hydrogen and added renewable hydrogen as a renewable energy resource under the RPS. The bill would also have established criteria for renewable hydrogen acquired from a dedicated or on-site pipeline to meet RPS standards. The bill died in the Senate.

AB 1550 (Bennett) of 2023, would have established a clean fuel requirement for all hydrogen produced or used in California for electrical generation or vehicle refueling, starting on January 1, 2045. The bill’s clean fuel standard would have required all hydrogen to be "renewable hydrogen of biological origin" or "renewable hydrogen of nonbiological origin," as specified. The bill would have added renewable hydrogen of biological origin and renewable hydrogen of nonbiological origin to the list of RPS-eligible resources. The bill died in the Assembly.

SB 1075 (Skinner, Chapter 363, Statutes of 2022) required CARB and the CEC to analyze options for using hydrogen as part of decarbonization strategies.

AB 157 (Committee on Budget, Chapter 570, Statutes of 2022) authorized GO-Biz to take steps to prepare and submit an application to receive funding from the regional clean hydrogen hubs program or to otherwise participate in the regional clean hydrogen hubs program. The bill also established a definition of clean hydrogen.

AB 209 (Committee on Budget, Chapter 251, Statutes of 2022) among other provisions, establishes a hydrogen funding program at the CEC to support projects that produce, process, deliver, store, or use hydrogen.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: Yes

According to the Senate Appropriations Committee, ongoing costs, potentially in the hundreds of thousands of dollars annually (Energy Resources Program Account [ERPA]), for the California Energy Commission (CEC) to provide project technical analysis, develop program guidelines, perform process creation and facility eligibility determinations in the RPS program, and undertake reporting, data collection and analysis from energy data of facilities using eligible renewable fuels, among other things.

SUPPORT: (Verified 5/14/26)

Green Hydrogen Coalition (Source)
Air Products and Chemicals, Inc.
Burbank Water and Power
California Hydrogen Business Council
Capstone Green Energy
City of Vernon
Element Resources
Geokiln Energy Innovation, Inc.
Northern California Power Agency
Pacific Gas and Electric Company
PTS Advance
RNG Coalition
San Diego Gas and Electric Company
Sierra Energy
Southern California Gas Company
Southern California Public Power Authority
State Building & Construction Trades Council of California
Sustain SoCal
Western Propane Gas Association

OPPOSITION: (Verified 5/14/26)

California Environmental Justice Alliance Action
Earthjustice
Environmental Protection Information Center
Natural Resources Defense council
Sierra Club California
The Utility Reform Network
Union of Concerned Scientists
An Individual

ARGUMENTS IN SUPPORT: According to the author:

> California has committed to reaching 100% clean energy by 2045. Clean hydrogen made from renewable sources, is a clean and safe fuel source that can be used to transition some of our existing energy infrastructure into clean energy infrastructure – reducing costs of the energy transition for ratepayers, helping better integrate renewables, and providing good union jobs in the process. SB 1350 will help California meet its clean energy goals by allowing power plants to get Renewables Portfolio Standard credit while using green hydrogen to power their turbines – as they currently do when they use biogas, and as fuel cells do when they use hydrogen. This will stimulate investment in clean hydrogen projects in California that will decarbonize both the power system and transportation system.

ARGUMENTS IN OPPOSITION: In opposition, a coalition of environmental organizations, including the Sierra Club, states:

> The Legislature created the RPS to transform California's power system away from fossil-fueled power plants and toward clean resources. This transition is necessary for the state to attain both climate goals and health-based air quality standards. SB 1350 threatens to disrupt this transition by providing a new incentive for fossil-fueled power plants. SB 1350 threatens to prolong the life of combustion power plants, despite the health toll of these facilities. Combustion turbines emit nitrogen oxides (NOx) regardless of whether they burn hydrogen or methane, which contributes to respiratory ailments and cardiovascular disease. There is a risk that transitioning a power plant to run on hydrogen will increase NOx emissions because hydrogen burns at a higher flame temperature than methane.

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