California State Assembly

NATURAL RESOURCES

LUZ RIVAS
CHAIR

AGENDA

Monday, April 25, 2022
2:30 p.m. -- State Capitol, Room 447

BILLS HEARD IN FILE ORDER

** = Bills Proposed for Consent

1.	AB 2550	Arambula	State Air Resources Board: national ambient air quality standards: nonattainment districts.
2.	AB 2578	Cunningham	State Energy Resources Conservation and Development Commission: integrated energy policy report: carbon capture, utilization, and sequestration.
3.	AB 2141	Eduardo Garcia	Greenhouse Gas Reduction Fund: community projects: funding.
4.	AB 2387	Eduardo Garcia	Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022. (Urgency)
5.	AB 2587	Eduardo Garcia	Energy: firm renewable energy resources and firm zero-carbon resources: procurement.
6.	AB 2836	Eduardo Garcia	Carl Moyer Memorial Air Quality Standards Attainment Program: vehicle registration fees: California tire fee.
7.	AB 1676	Grayson	Pipeline safety: carbon dioxide.
8.	**AB 1935	Grayson	California Environmental Quality Act: redevelopment: Concord Naval Weapons Station.
9.	AB 2440	Irwin	Responsible Battery Recycling Act of 2022.
10.	AB 2278	Kalra	Natural resources: biodiversity and conservation report.
11.	AB 2944	Petrie-Norris	Greenhouse gases: carbon capture, utilization, and sequestration.
12.	AB 2302	Quirk	Hydrogen underground storage: study.
13.	AB 2563	Quirk	Air pollution: permits: mobile fueling on-demand tank vehicles.
14.	AB 2442	Robert Rivas	Climate change.
15.	AB 2656	Ting	Housing Accountability Act: disapprovals: California Environmental Quality Act.
16.	AB 2816	Ting	State Air Resources Board: zero-emission incentive programs: requirements.
17.	AB 2237	Friedman	Transportation planning: regional transportation improvement plan: sustainable communities strategies: climate goals.
18.	AB 2610	Friedman	Wildlife Conservation Board: ecologically sensitive vegetation management: wildfire risk reduction.

19.	AB 2667	Friedman	Integrated Distributed Energy Resources Fund.
20.	AB 2649	Cristina Garcia	Natural Carbon Sequestration and Resilience Act of 2022.
21.	AB 2140	Muratsuchi	Once-through cooling policy: powerplants.
22.	AB 2793	Muratsuchi	Greenhouse gases: market-based compliance mechanism.
23.	****AB 2287**	Stone	California Ocean Resources Stewardship Act of 2000.

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2550 (Arambula) – As Amended April 19, 2022

SUBJECT: State Air Resources Board: national ambient air quality standards: nonattainment districts

SUMMARY: Requires the Air Resources Board (ARB) to take specified interventions with regard to an air district in severe or extreme nonattainment for a National Ambient Air Quality Standard (NAAQS).

EXISTING LAW:

1) The federal Clean Air Act (CAA) and its implementing regulations set NAAQS for six criteria pollutants, designate air basins that do not achieve NAAQS as nonattainment, and require states with nonattainment areas to submit a State Implementation Plan (SIP) detailing how they will achieve compliance with NAAQS.

2) Establishes ARB as the air pollution control agency in California and requires the ARB, among other things, to control emissions from a wide array of mobile sources and coordinate with local air districts to control emissions from stationary sources in order to implement the CAA.

3) Requires, subject to the powers and duties of the ARB, air districts to adopt and enforce rules and regulations to achieve and maintain the state and federal air quality standards in all areas affected by emission sources under their jurisdiction, and to enforce all applicable provisions of state and federal law.

4) Requires air districts to develop attainment plans detailing how they will attain and maintain state air quality standards, and submit those plans to ARB.

5) Requires ARB to:

    a) Review the district attainment plans to determine whether the plans will achieve and maintain state air quality standards by the earliest practicable date.

    b) Review district rules, regulations and programs to determine whether they are sufficiently effective to achieve and maintain state air quality standards.

    c) Review district and other local enforcement practices to determine whether reasonable action is being taken to enforce their programs, rules, and regulations.

6) *Authorizes* ARB, if it finds that the program or the rules and regulations of a district will not likely achieve and maintain state air quality standards, to establish a program, or rules and regulations it deems necessary to enable the district to achieve and maintain such standards, which shall have the same force and effect as a district program, rule, or regulation and shall be enforced by the district.

7) *Authorizes* ARB, if it finds that a district is not taking reasonable action to enforce the statutory provisions, rules, and regulations relating to air quality in such a manner that will likely achieve and maintain state air quality standards, to exercise any of the powers of that district to achieve and maintain such standards.

THIS BILL *requires* ARB, with regard to an air district in severe or extreme nonattainment for a NAAQS that has not received a determination of attainment from the U.S. Environmental Protection Agency by the applicable attainment date, to do all of the following:

1) Coordinate with the district and community-based organizations, and conduct outreach to under-resourced communities, to identify gaps in the SIP and the district's attainment plan, rules, regulations, programs, and enforcement practices that impact the district's ability to attain and maintain that NAAQS.

2) Coordinate with the district to provide additional monitoring and enforcement capacity for stationary sources, including independently inspecting, or accompanying the district on inspections of, the largest stationary sources in the district.

3) Develop a program, rules or regulations that ARB deems necessary to enable the district to attain and maintain that NAAQS, which shall have the same force and effect as a district program, rule, or regulation and shall be enforced by the district.

4) Conduct at least one public hearing in the district regarding the district's attainment plan and solicit public comment on, all of the following:

    a) ARB's review of the district's attainment plan, rules, regulations, programs, and enforcement practices.

    b) Gaps identified in the SIP and the district's attainment plan, rules, regulations, programs, and enforcement practices that impact the district's ability to attain and maintain that NAAQS.

    c) Data regarding stationary sources in the district, including monitoring and enforcement of those sources, and ARB's plan to coordinate with the district to provide additional monitoring and enforcement capacity.

    d) The programs, rules, or regulations that ARB has developed and deems necessary to enable the district to attain and maintain that NAAQS.

    e) Any other data, analysis, evaluation, or information relevant to the district's ability to attain and maintain that NAAQS, including the impact of nonattainment on public health in the district and in the state.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

A recent study estimates air pollution was the cause of over 100,000 premature deaths in the U.S. in 2011. To reduce deaths and adverse health impacts resulting from poor air quality, both the U.S. EPA and ARB develop air quality standards for specific pollutants. There are 35 local air districts that fill this responsibility to achieve EPA and ARB air quality standards. Unfortunately, the San Joaquin Valley Air Basin has yet to attain standards set by the EPA in 1997, let alone more recent standards. Despite the clear and convincing need to reduce air pollution in order to protect the health and safety of Californians. To prevent continued harm to Californians, the state should make every effort to advance pollution monitoring and reduction strategies.

2) **Is more ARB intervention warranted, and will it help**? This bill requires ARB to take actions regarding coordination, assistance, outreach, monitoring, regulation, and enforcement in air districts that have fallen behind in achieving NAAQS – a common, and vexing, problem in California.

   Under current law, ARB reviews air district attainment plans, including regulations and enforcement, and ARB has authority to intervene in district regulation and enforcement. This bill requires ARB to intervene and establishes additional requirements that go above and beyond current law.

   To take San Joaquin Valley for example, the district might say its inability to achieve NAAQS in time is due in large part to air pollution sources it does not regulate, such as mobile sources, rail, aviation and sources outside the Valley. Whether the district can and should do more on its own, or through intervention from ARB, are good questions.

3) **Bill applies to San Joaquin Valley…and nine other air districts**. Whether or not the interventions in this bill are justified, the extreme and severe nonattainment designation appears to apply to 10 air districts:

   San Joaquin Valley APCD
   South Coast AQMD
   Sacramento Metropolitan AQMD
   Eastern Kern APCD
   Mojave Desert APCD
   Placer County APCD
   San Diego County APCD
   Ventura County APCD
   Yolo-Solano AQMD
   Feather River AQMD

   If the author intends the bill to apply only to San Joaquin Valley, amendments are needed to either change the nonattainment designation to one that applies only to San Joaquin Valley or make the bill a special statute and explicitly apply to San Joaquin Valley.

REGISTERED SUPPORT / OPPOSITION:

Support

Central Valley Air Quality Coalition (sponsor)
California Environmental Voters
Center for Climate Change and Health
Central California Environmental Justice Network
Coalition for Clean Air
Earthjustice
Little Manila Rising
Mi Familia Vota
National Parks Conservation Association
The Climate Center

Opposition

California Air Pollution Control Officers Association
San Joaquin Valley Air Pollution Control District

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2578 (Cunningham) – As Amended March 17, 2022

SUBJECT: State Energy Resources Conservation and Development Commission: integrated energy policy report: carbon capture, utilization, and sequestration

SUMMARY: This bill specifies that carbon capture, utilization, and sequestration (CCUS) technologies shall be included in the evaluation of the environmental performance of California's electric generation facilities in the biennial integrated energy policy report (IEPR) prepared by the California Energy Commission (CEC).

EXISTING LAW:

1) Requires the CEC to conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices and use these assessments and forecasts to develop and evaluate energy policies and programs that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety.

2) Requires the CEC to adopt the IEPR every two years, which must contain an overview of major energy trends and issues facing the state, including, but not limited to, supply, demand, pricing, reliability, efficiency, and impacts on public health and safety, the economy, resources, and the environment.

3) Requires CEC to conduct electricity and natural gas forecasting and assessment activities as part of the IEPR.

4) Requires, as part of the IEPR, the CEC to assess the current status of:

    a) The environmental performance of the electric generation facilities of the state, including:

        i) Generation facility efficiency;

        ii) Air emission pollution control technologies in use in operating plants; and,

        iii) The extent to which recent resource additions have, and expected resource additions are likely to, displace or reduce operation of existing facilities, including the environmental consequences of these changes.

    b) The geographic distribution of statewide environmental, efficiency, and socioeconomic benefits and drawbacks of existing generation facilities.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

> Carbon capture and sequestration (CCS) is the process of capturing carbon dioxide and storing it so that it is not emitted into the atmosphere. Successful CCS operations are able to capture over 90% of their emissions, yielding tremendous environmental and economic benefits.
>
> California has set ambitious climate goals to reduce GHG emissions and reach carbon neutrality. CCS will be a vital tool in reaching those goals. The implementation of CCS has been widely recognized by experts in the scientific community as being critical to a successful climate strategy. By embracing CCS technology in our statewide planning for energy, California will be able to move towards our climate goals with another tool. AB 2578 is the first step integrating CCS into our climate goals.

2) **Trillion dollar technology**. The economic incentive to develop and deploy CCUS technologies is sky high. Exxon Mobil estimated earlier this month that there will be a $4 trillion market for CCUS technologies by 2050. This is about 60% of the $6.5 trillion market for oil and gas predicted for the same year. Occidental Petroleum estimated in March that CCUS could become a $3-5 trillion global industry, generating as much in earnings for the company as oil and gas generate today.

   CCUS refers to technologies that remove carbon dioxide (CO_2) from large point sources, such as power plants or industrial facilities, and permanently store the CO_2 or use it for commercial purposes. CCUS can reduce emissions from chemical reactions and high-temperature processes that are difficult and expensive to decarbonize. The most widespread technologies involve chemical absorption of CO_2 into a solvent or the physical separation CO_2 from other gasses. In some limited cases, this captured CO_2 is used on-site in commercial applications such as water treatment or chemical production. The captured CO_2 can also be compressed and transported by pipeline, ship, rail, or truck to be used in off-site commercial applications, or injected into deep geological formations (including depleted oil and gas reservoirs or saline formations) which trap the CO_2 for long-term storage. Over 81% of the CO_2 captured to date has been used for oil extraction.

   According to the Intergovernmental Panel on Climate Change (IPCC), the net reduction of emissions to the atmosphere through CCUS depends on the fraction of CO_2 captured, the increased CO_2 production resulting from the loss in overall efficiency of power plants of industrial processed due to the additional energy required for the CCUS, transport and storage, any leakage that occurs during transport, and the fraction of CO_2 retained in storage long-term. CCUS technologies require energy to operate, and that increased energy use (approximately 15-25%), increases direct air emissions. Current industry estimates assume that CCUS captures about 85% of the CO_2 and a 3.5% rate of leakage from fossil gas production basins and infrastructure. This capture rate applies to each emission point in a facility; however, in facilities like refineries there are numerous emission points, and CCUS technologies would not be appropriate for all emission points.

   Questions remain about how effective CCUS technologies are in real world conditions,

especially given that there are few full-scale facilities in operation. Chevron's Gorgon Carbon Capture and Storage plant in Australia promised to capture 80% of Gorgon's gas field emissions over five years. However, as of July 2021, after two years in operation, the facility had captured only about half of the promised CO_2 (5 million metric tons, instead of 9.8 million metric tons). Chevron stated that more time than expected was needed to safely initiate the operation of the system.

A 2019 study by a Stanford researcher, *The Health and Climate Impacts of Carbon Capture and Direct Air Capture*, examined public data from a coal power plant with CCUS and a direct carbon capture plant. The study found that:

> Data from a coal with carbon capture and use (CCU) plant and a synthetic direct air carbon capture and use (SDACCU) plant are analyzed for the equipment's ability, alone, to reduce CO_2. In both plants, natural gas turbines power the equipment. A net of only 10.8% of the CCU plant's CO_2 -equivalent (CO_2e) emissions and 10.5% of the CO_2 removed from the air by the SDACCU plant are captured over 20 years, and only 20–31%, are captured over 100 years. The low net capture rates are due to uncaptured combustion emissions from natural gas used to power the equipment, uncaptured upstream emissions, and, in the case of CCU, uncaptured coal combustion emissions. Moreover, the CCU and SDACCU plants both increase air pollution and total social costs relative to no capture.

A 2020 study, *Explaining Successful and Failed Investments in U.S. Carbon Capture and Storage Using Empirical and Expert Assessments*, analyzed 39 CCUS projects in the United States and determined that more than 80% end in failure. The study goes on to evaluate attributes that explain project outcomes to identify how to improve prospects for CCUS investments.

In February of this year, the White House Council on Environmental Quality released new guidelines to federal agencies that are intended to ensure that the deployment of CCUS is done in a responsible manner that incorporates the input of communities and is environmentally sound, including cutting the cumulative pollution in nearby communities. The guidance includes actions that should be taken before the deployment of the technology, including:

- Evaluating the impacts of the proposed CCUS actions on potential host communities early in the planning process;
- Providing information about the effects, costs, and benefits of CCUS in advance of Tribal consultation and stakeholder engagement;
- Consulting Tribal Nations on potential CCUS impacts in a manner that strengthens nation-to-nation relationships;
- Avoiding the imposition of additional burdens on overburdened and underserved communities, including by evaluating direct, indirect, and cumulative effects and identifying and implementing appropriate mitigation and avoidance measures; and,
- Providing transparency and accountability to communities with respect to applicable mitigation measures designed to reduce environmental effects.

The IPCC states that "no single technology option will provide all of the emission reductions

needed to achieve stabilization, but a portfolio of mitigation measures will be needed." This portfolio may include CCUS when combined with other mitigation options, such as energy efficiency improvements, the switch to less carbon-intensive fuels, renewable energy sources, enhancement of biological sinks, and the reduction of non-CO_2 GHG emissions (i.e., methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrogen trifluoride).

3) **Integrated Energy Policy Report**. CEC forecasts all aspects of energy industry supply, production, transportation, delivery, distribution, demand, and pricing in the IEPR. CEC uses these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The IEPR is adopted every two years with updates every other year. The information generated from the IEPR's demand forecast also informs the integrated resource plan at the California Public Utilities Commission and the transmission planning process at the California Independent System Operator. In the 2021 IEPR, investigation of the feasibility and opportunity for CCUS was included as a recommendation in the context of building decarbonization, hydrogen facilities, and reducing GHG emissions from the industrial sector. However, these recommendations were not accompanied by discussions of implementation strategies for the different applications, projections of how much CO_2 may be offset, or other specific analyses.

4) **Suggested amendment**. The *committee may wish to amend the bill* to include CCUS as a separate category in the IEPR, rather than as a component of air emission pollution control technologies.

5) **Double referral**. This bill passed the Assembly Utilities and Energy Committee 12-0 on April 6th.

REGISTERED SUPPORT / OPPOSITION:

Support

AERA Energy LLC
California Business Roundtable
California Carbon Capture Coalition
California Manufacturers and Technology Association
California State Pipe Trades Council
Calpine Corporation
Chevron
Clean Energy Systems
Independent Energy Producers Association
Southern California Gas Company
State Building and Construction Trades Council
Western States Petroleum Association

Opposition

California Environmental Voters
Center on Race, Poverty & the Environment

Central California Environmental Justice Network
Central Valley Air Quality Coalition
Leadership Counsel for Justice and Accountability
Little Manila Rising

Analysis Prepared by: Elizabeth MacMillan / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2141 (Eduardo Garcia) – As Amended April 18, 2022

SUBJECT: Greenhouse Gas Reduction Fund: community projects: funding

SUMMARY: Continuously appropriates 20% of the annual proceeds of the Greenhouse Gas Reduction Fund (GGRF), up to $600 million, to the Air Resources Board (ARB) for allocation to air districts for the purpose of supporting community emissions reduction strategies in, and reimbursement for participation by, communities selected pursuant to AB 617 (Cristina Garcia), Chapter 136, Statutes of 2017.

EXISTING LAW:

1) AB 617 requires ARB to select locations around the state each year for preparation of community emissions reduction programs (CERPs) and requires an air district, within one year of ARB selection, to adopt a CERP to achieve emissions reductions.

2) AB 617 requires ARB to select the highest priority locations around the state to deploy community air monitoring systems (CAMS) in communities with high exposure burdens for toxic air contaminants and criteria pollutants, and requires an air district to deploy a CAMS within one year.

3) AB 617 requires ARB to provide grants to community-based organizations for technical assistance and to support participation in implementation of CERPs and CAMS.

4) Establishes the GGRF and requires all moneys, except for fines and penalties, collected by ARB from the auction or sale of allowances pursuant to a market-based compliance mechanism (i.e., the cap-and-trade program adopted by ARB under AB 32) to be deposited in the GGRF and available for appropriation by the Legislature.

5) Continuously appropriates portions of the GGRF as follows:

    a) 35% for specified transit, affordable housing, and sustainable communities programs.

    b) 25% to the High-Speed Rail Authority.

    c) 5%, up to $130 million, to the Safe and Affordable Drinking Water Fund, until 2030.

    d) $200 million to CALFIRE for healthy forest, fire prevention, and fuel reduction projects, until 2029.

6) Generally provides that no moneys in any fund that, by any statute other than a Budget Act, are continuously appropriated without regard to fiscal years may be encumbered unless the Legislature, by statute, specifies that the moneys in the fund are appropriated for encumbrance.

FISCAL EFFECT: Continuously appropriates 20%, up to $600 million, per year from the GGRF.

COMMENTS:

1) **Background**. Since 2017, AB 617 has received significant annual appropriations from the GGRF in the Budget Act:

   - $275 million in 2017-18 ($245 million for incentives, $20 million for implementation, $10 million for technical assistance).
   - $305 million in 2018-19 ($245 million for incentives, $50 million for implementation, $10 million for technical assistance).
   - $305 million in 2019-20 ($245 million for incentives, which was reduced to $209 by Department of Finance, $50 million for implementation, $10 million for technical assistance).
   - $320 million in 2021-22 ($260 million for incentives, $50 million for implementation, $10 million for technical assistance)

   As noted above, 65% plus $200 million of the net GGRF available for appropriation is continuously appropriated under current law. In the years since AB 617 passed, net GGRF revenues available for appropriation have fluctuated between approximately $2-3 billion, but may be as high as $4 billion for 2022-23.

   For example, if net GGRF revenues are $2 billion, 75% is continuously appropriated, and 25%, or $500 million, is available for other priorities under current law. Under this bill, an additional 20%, or $400 million, would be continuously appropriated for AB 617, leaving only 5%, or $100 million available for other priorities.

   If net GGRF revenues are $4 billion, 70% is continuously appropriated, and 30%, or $1.2 billion, is available for other priorities under current law. Under this bill, $600 million would be continuously appropriated for AB 617, leaving $600 million available for other priorities.

2) **Author's statement**:

   > There are many communities that still have not been able to participate in the Community Air Protection Program established in AB 617. Community participation in this program helps contribute to the reduction of greenhouse gas emissions throughout the state of California. This bill would establish a permanent funding mechanism for this air quality program.

3) **Maybe more funding, definitely less accountability**. It should be noted that the GGRF is neither permanent nor sustainable. Total allowance revenues fluctuate substantially with the price and volume of allowances auctioned, and may decline over time as the supply of allowances declines under the cap and trade program. This bill promises more total funding for AB 617, as long as total GGRF revenues available for appropriation are more than $1.5 billion. However, if GGRF revenues fall below $1.5 billion, this bill will provide less funding for AB 617 than recent annual appropriations.

   The bill turns the entire amount appropriated over to ARB to allocate to air districts, without saying specifically what it may be used for or how it will be divided. Whether technical

assistance or other funding to AB 617 communities increases or decreases will be up to ARB and the districts, without the normal mechanism for legislative oversight. This approach seems to stand at odds with the call from environmental justice advocates to increase transparency and accountability metrics for how AB 617 funds are spent.

A continuous appropriation surrenders the "power of the purse," which is fundamental to the system of checks and balances between the legislative and executive branches of government. Regardless of priority or need, continuous appropriations are always a bad move for the Legislature.

REGISTERED SUPPORT / OPPOSITION:

Support

South Coast Air Quality Management District (sponsor)
Bay Area Air Quality Management District

Opposition

None on file

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2387 (Eduardo Garcia) – As Amended March 21, 2022

SUBJECT: Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Bond Act of 2022

SUMMARY: Authorizes the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Act of 2022 (Climate Bond), a $7.4 billion general obligation bond to address the impacts of climate change, to be placed before voters on the November 8, 2022, general election ballot.

EXISTING LAW:

1) Requires, except under certain circumstances, a two-thirds vote of the Legislature and a majority vote of the people at an election, before the state may issue a general obligation bond. (California Constitution §1 et seq.)

2) Prescribes the state's responsibilities regarding the issuance and sale of general obligation bonds. (Government Code (GOV) §16720 et seq.)

3) Provides, pursuant to voter-approved Proposition 68, $4 billion through the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (SB 5, de León, Chapter 852, Statutes of 2017).

THIS BILL:

1) Makes legislative findings and declarations relative to the severity of climate change impacts to communities, the economy, and California's diverse natural resources and the need for action to address the risk posed by these impacts.

2) Defines various terms for purposes of the Climate Bond.

3) Provides that up to 5% of the funds allocated to a program may be used to cover the administrative costs of that program.

4) Requires the Department of Finance to audit the expenditure of bond funds pursuant to the Climate Bond and requires the Natural Resources Agency (NRA) to make specified information regarding expenditures pursuant to the Climate Bond publicly available on its internet website.

5) Requires at least 35% of the funds allocated by each chapter of the Climate Bond to provide meaningful and direct benefits to vulnerable populations, under-resourced communities, or disadvantaged communities. Requires at least 10% of the funds allocated by each chapter of the Climate Bond to provide direct and meaningful benefits to severely disadvantaged communities.

6) Permits state agencies administering grant programs pursuant to the Climate Bond to provide advance payments of up to 25% of a grant award.

7) Permits up to 10% of the funds available pursuant to each chapter of the Climate Bond to be used for technical assistance and capacity building. Specifies that this 10% cap may be exceeded for projects in disadvantaged communities, severely disadvantaged communities, under-resourced communities, or vulnerable populations.

8) Requires projects funded by the Climate Bond to demonstrate ongoing monitoring and scientific review. Up to 5% of project funds may be used for this purpose.

9) Prohibits any funds allocated by the Climate Bond from being used for mitigation requirements or compliance obligations imposed by law or for the design, construction, operation, mitigation, or maintenance of Delta conveyance facilities.

10) Requires state agencies administering grant programs pursuant to the Climate Bond to develop project solicitation and evaluation guidelines through a public process.

11) Provides that projects utilizing the services of the California Conservation Corps (CCC) or a certified community conservation corps shall be given preference for the award of grant funds pursuant to the Climate Bond.

12) Allocates $1.1 billion under Chapter 2, Wildfire Prevention, Climate Risk Reduction, and Protection Against Power Shutoffs, for the prevention and reduction in the risk of wildfires as follows:

    a) $300 million to the Office of Emergency Services (OES) for a prehazard mitigation grant program to prevent wildfires and reduce the risk of wildfires to communities by increasing community hardening;

    b) $150 million to the NRA's Regional Fire and Forest Capacity Program to increase regional capacity to prioritize, develop, and implement projects that improve forest health and fire resilience;

    c) $150 million to the Department of Forestry and Fire Protection (CAL FIRE) to support various long-term forest health projects;

    d) $150 million to the NRA for watershed improvement projects that include the use of prescribed fire and improve water supply or water quality;

    e) $50 million to the Sierra Nevada Conservancy for forest health and watershed improvement;

    f) $30 million to the Air Resources Board (ARB) to convert forest and other vegetation waste removed for wildfire mitigation to beneficial uses that maximize greenhouse gas (GHG) emission reductions;

    g) $70 million to the Department of Parks and Recreation (State Parks) and regional and local park agencies to plan for and implement projects to reduce the risks of fire and for the fire hardening of infrastructure for units of the state park system;

    h) $150 million to the NRA for block grants to city, county, district, and regional park and open space entities for projects that reduce the risk of fire, flood, or drought to safeguard

public lands and communities. Minimum awards for these block grants are $150,000 for cities and districts and $300,000 for counties and regional entities; and

i) $50 million to the CCC and certified community conservation corps for projects that mitigate unemployment and address critical infrastructure needs or that address natural disasters or other climate impacts to communities. Specifies that at least 60% of these funds shall go to certified community conservation corps.

13) Allocates $1.16 billion under Chapter 3, Protecting Coastal Lands, Bays, and Oceans from Sea Level Rise and Other Climate Risks, for the protection of coastal communities from sea level rise, restoration of coastal and ocean resources, mitigation of ocean acidification, and addressing the impacts of climate change along California's coast as follows:

a) $395 million to the State Coastal Conservancy (Coastal Conservancy) for projects to protect, restore, and increase the resilience of beaches, bays, coastal dunes, wetlands, coastal forests, and coastal watershed resources;

b) $300 million to the Coastal Conservancy for projects consistent with the San Francisco Bay Restoration Authority Act including projects to address sea level rise, flood management, and wetland restoration;

c) $100 million to the San Francisco Bay Program within the Coastal Conservancy;

d) $100 million to the Coastal Conservancy for competitive grants for demonstration and pilot projects that use natural infrastructure to protect critical infrastructure that is vulnerable to sea level rise and flooding;

e) $65 million to the Coastal Conservancy for grants to remove outdated or obsolete dams;

f) $30 million to the California Coastal Commission for grants for local adaptation planning and updating local coastal programs;

g) $20 million to the San Francisco Bay Conservation and Development Commission for coastal planning and projects within its jurisdiction;

h) $100 million for deposit into the California Ocean Protection Trust Fund for competitive grants awarded by the Ocean Protection Council to eliminate or reduce threats to coastal and ocean ecosystems, improve the management of fisheries, or foster sustainable fisheries; and

i) $50 million to State Parks to implement projects that reduce the risks of sea level rise for units of the state park system.

14) Allocates $ 2.075 billion under Chapter 4, Ensuring Safe Drinking Water, Drought Preparation, and Enhancing the State's Flood Protection, for the delivery of safe drinking water, drought preparation and response, and flood protection as follows:

a) $250 million to the Department of Water Resources (DWR) for projects that support implementation of the Sustainable Groundwater Management Act (SGMA). At least 65% of these funds shall be allocated to critically over-drafted basins;

b) $200 million for adopting integrated regional water management plans;

c) $400 million to the State Water Resources Control Board (State Water Board) for grants or loans to provide clean, safe, and reliable drinking water. At least $30 million of these funds shall be for developing and implementing regional or countywide drought contingency plans;

d) $100 million to the State Water Board for grants or loans for projects that prevent or reduce the contamination of drinking water supplies and improve access to wastewater infrastructure;

e) $100 million to the State Water Board for competitive grants or loans for projects that prevent, reduce, or treat the contamination of drinking water that serves as a source of a community's drinking water;

f) $450 million to NRA for the protection and restoration of rivers, lakes, and streams to improve climate resilience, water supplies, or water quality. When administering these funds, the NRA shall give preference to natural infrastructure projects, to the extent feasible. These funds shall be available as follows:

   i) For multiple benefit river and urban stream parkway projects;

   ii) Projects consistent with the Lake Tahoe Environmental Improvement Program;

   iii) At least $240 million for capital outlay projects that provide air quality, public health, and habitat benefits to the Salton Sea and surrounding communities. Of these funds, $30 million shall be available to the Salton Sea Authority and $2 million shall be for projects developed and prioritized using a participatory budgeting process;

   iv) At least $30 million for the Tijuana River Border Pollution Control Project;

   v) At least $25 million to the Santa Monica Mountains Conservancy for projects within the San Fernando Valley that enhance the Los Angeles River watershed and its tributaries;

   vi) At least $25 million to the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy for projects that protect or enhance the Los Angeles River watershed and its tributaries;

   vii) $15 million for projects that improve climate resilience pursuant to the Lower American River Parkway Conservancy Program; and,

   viii) $15 million to NRA for projects in the Clear Lake watershed that demonstrate a comprehensive approach to Clear Lake's management.

g) $15 million to the California Environmental Protection Agency (CalEPA) for purposes consistent with the New River Water Quality, Public Health, and River Parkway Development Program;

h) $200 million to the DWR for flood management projects that are components of multiple benefit flood management system improvements. Preference shall be given to natural infrastructure projects. A portion of these funds shall be available as follows:

   i) $50 million for multiple benefit projects in urban coastal watersheds; and,

   ii) $50 million for projects in the delta to improve existing levees.

i) $35 million to the Central Valley Flood Protection Board for further development of the State Plan of Flood Control;

j) $300 million to the State Water Board for grants or loans for water recycling projects. A 50% local cost share is required for projects receiving funds; and,

k) $25 million to DWR for the implementation of the Open and Transparent Water Data Act.

15) Allocates $940 million under Chapter 5, Protecting Fish, Wildlife, and Natural Areas from Climate Risks, to protect and restore natural lands to maintain biodiversity and ecosystem benefits as climate conditions change as follows:

a) $500 million to the Wildlife Conservation Board (WCB) for the protection and restoration of California's fish and wildlife resources in response to changing climate conditions. Funding shall not be used to offset environmental mitigation or compliance obligations;

b) $50 million to WCB for groundwater sustainability projects that provide habitat;

c) $50 million to the Department of Fish and Wildlife (DFW) to improve climate resilience of fish and wildlife on DFW lands or through a competitive grant process; and

d) $340 million to state conservancies for reducing the risks of climate change impacts on communities, fish and wildlife, and natural resources as follows:

   i) $10 million to the Baldwin Hills Conservancy;

   ii) $50 million to the Coastal Conservancy (at least $40 million to the Santa Ana River Conservancy Program);

   iii) $30 million to the California Tahoe Conservancy;

   iv) $20 million to the Coachella Valley Mountains Conservancy;

   v) $30 million to the Sacramento-San Joaquin Delta Conservancy;

   vi) $40 million to the San Diego River Conservancy;

   vii) $50 million to the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy; and,

   viii) $50 million to the Santa Monica Mountains Conservancy; and,

ix) $50 million to the Sierra Nevada Conservancy.

16) Allocates $320 million under Chapter 6, Protecting Farms, Ranches, and Working Lands from the Impacts of Climate Change, to protect California's agricultural resources and working lands from the impacts of climate change as follows:

a) $50 million to the Department of Food and Agriculture (CDFA) for grants to promote practices on farms and ranches that improve soil health or carbon sequestration, improve air or water quality, enhance groundwater recharge, or improve fish and wildlife habitat. 35% of these funds shall benefit farmers and ranchers in disadvantaged communities or severely disadvantaged communities and preference shall be given to socially disadvantaged farmers;

b) $40 million to CDFA to promote on-farm water use efficiency. 35% of these funds shall benefit farmers and ranchers in disadvantaged communities or severely disadvantaged communities and preference shall be given to socially disadvantaged farmers;

c) $40 million to CDFA for projects that promote the reduction of methane emissions from dairy and livestock operations. Preference shall be given to socially disadvantaged farmers;

d) $20 million to CDFA for projects and activities recommended by the Invasive Species Council of California;

e) $10 million to CDFA for improvements and enhancements to pollinator habitat;

f) $100 million to CDFA for grants that benefit small- and medium-sized farms and socially disadvantaged farmers and increase the sustainability of agricultural infrastructure and facilities;

g) $50 million to the Department of Conservation for the protection and restoration of farmland and rangeland. 35% of these funds shall benefit farmers and ranchers in disadvantaged communities or severely disadvantaged communities; and,

h) $10 million to WCB for recovering and sustaining monarch butterflies and other pollinator species.

17) Allocates $725 million under Chapter 7, Responding to Extreme Heat, to address extreme heat events through investments in parks, urban green infrastructure, and community forestry projects as follows:

a) $400 million to State Parks for the Statewide Park Program to create and expand parks in park-poor neighborhoods. Emphasis shall be placed on projects that reduce urban heat island effects or mitigate extreme heat events. Specifies that $50 million of these funds shall be available for local park creation and improvements grants in the Central Valley, Inland Empire, gateway, rural, and desert communities;

b) $100 million to the Resources Agency for urban greening projects that benefit vulnerable populations and mitigate extreme heat impacts;

c) $75 million to CAL FIRE for urban forestry projects that mitigate extreme heat impacts;

d) $50 million to the Department of Community Services and Development for low-income weatherization projects; and,

e) $100 million to the Strategic Growth Council (SGC) for projects that reduce the heat island effect and other extreme heat impacts from climate change.

18) Allocates $1.11 billion under Chapter 8, Strengthening California's Regional Climate Resilience, for improving each region's climate resilience as follows:

a) $850 million to the SGC for reduction in the risk of climate impacts to communities, including wildfire, sea level rise, flood, and extreme heat events. Funds shall be available to regional climate networks, at least 60% of which shall be allocated based on population. The remaining funds can augment grants to the extent a regional climate network's plan addresses specified priorities (e.g., protecting vulnerable populations);

b) $100 million to the SGC for the Transformative Climate Communities Program;

c) $50 million to the OES for competitive grants to create climate resilience centers to provide emergency response services during disruptions (e.g., public safety power shutoffs, extreme heat events, etc.) or emergency services during a disaster;

d) $50 million to OES and the SGC for the creation of community resilience centers that model integrated delivery of emergency response services during disruptions; and,

e) $60 million to the CDFA for grants to fairgrounds to enhance their ability to serve as multirole community, staging, and evacuations centers or deploy communications and broadband infrastructure during a disaster, emergency, or public safety power shutoff.

19) Provides that bonds authorized pursuant to the Climate Bond shall be prepared, executed, issued, sold, paid, and redeemed consistent with the General Obligation Bond Law (Government Code, Section 16720 et seq.) except provisions that require bond funds to only be used to fund or provide grants or loans for capital outlay projects.

20) Provides that the Climate Bond shall be submitted to voters for approval at the November 8, 2022, statewide general election.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

> The impacts of climate change to our state and our communities require us to act quickly. California needs to protect itself against future climate disasters and rebuild our workforce from an ongoing pandemic that has shown us what can happen when we aren't prepared for an emergency. [This bill] seeks to make California more climate resilient by investing in various adaptation activities throughout the state, ranging from wildfire risk reduction, to drought preparation, to protection against sea-level rise. Not only will this measure help create new jobs for Californians, it will create long-term green jobs that help the state reach its climate goals. We must invest in the infrastructure necessary to

protect our communities, our environment, and our economy from an evolving climate crisis.

2) **Making ends meet with bonds**. Bonds are a way the state can borrow money to pay for the planning, construction, and renovation of infrastructure projects such as bridges, dams, prisons, parks, schools, and office buildings. The state sells bonds to investors to receive "up-front" funding for these projects and then repays the investors, with interest, over a period of time. The state repays general obligation bonds using the state General Fund. Under the California Constitution, state general obligation bonds must be approved by voters.

   After selling bonds, the state makes annual payments until the bonds are paid off. The annual cost of repaying bonds depends primarily on the interest rate and the time period over which the bonds have to be repaid. The state often makes bond payments over a 30-year period. Between 2017-2021, the state has issued an average of $7.7 billion of general obligation bonds annually.

3) **Previous natural resource and water bonds**. Since the 2000, California voters have authorized the state to take on more than $19.6 billion in general obligation bond debt to fund various water, natural resource, and flood protection programs (out of more than $30 billion of all voter-authorized bonds). Administered by a number of state departments, agencies, boards, and conservancies, bond proceeds are expended on various capital outlay projects, and are also disbursed to federal, state, local, and non-profit entities in the form of grants, contracts, and loans.

   According to the state's Bond Accountability website, roughly $281 million from Proposition 68 (2018), $147 million from Proposition 1 (2014), $3.6 million from Proposition 84 (2006), and $34 million from Proposition 1E (2006) are uncommitted to a specific grantee or project at this time. If voters approved this bill, funding would not likely be appropriated and available until after July 2023. Bond funding is typically appropriated over multiple fiscal years.

   Treasurer Fiona Ma stated the Treasurer's October 2021 *Debt Affordability Report* that "persistent low interest rates have extended an opportunity for our state to access long-term capital at extremely attractive borrowing costs to finance capital projects needed to support the state's missions."

4) **Bond indebtedness**. The State Treasure's office's (STO) Public Finance Division (PFD) manages the state's debt portfolio, overseeing the issuance of debt, and monitors and services the state's outstanding debt. According to PFD, the state has $69.2 billion of total general obligation bonds outstanding as of April 1, 2022, and $30 billion of general obligation authorized but not yet borrowed/issued as of April 1, 2022. Most of these bonds are expected to be sold in the coming years as additional projects need funding. According to the STO, as of June 30, 2021, the state had more than $104 billion in outstanding general obligation bond debt. The most recent reported ratio of General Fund-supported debt service to General Fund revenues was 4.32% in 2020-21. The STO estimated this ratio will be 4.53% in 2021-22.

5) **Need for natural resource and water funding**. To support the state's climate goals, 30x30 nature conservation goals, and general environmental protection mandates, significant funding is needed to invest in current and future programs across NRA, CalEPA, and CDFA.

In light of those goals, the Governor's proposed budget for Fiscal Year 2022-23 includes:

- $11.2 billion ($8.8 billion General Fund, $1.8 billion special funds, $610.8 million bond funds) for the NRA and its 27 departments, boards, commissions and conservancies.

- $6 billion ($1.2 billion General Fund, $4.4 billion special funds, $372 million federal funds, and $14.5 million bond funds) for programs at CalEPA.

- $22.5 billion one-time from various fund sources over five years to advance the state's Climate and Opportunity Budget and provide equitable climate solutions to prepare and protect communities.

The funding proposed in this bond measure would be in addition to the funding approved by the Legislature for the State Budget. While the bonds could be sold in future years, as needed, the author may wish to consider what the Legislature approves in the final budget to ascertain whether the funding the amounts in the bill need to be adjusted.

6) **Double referral**. This bill was heard in the Assembly Water, Parks and Wildlife Committee on April 5th, where it was approved by a vote 11–2.

7) **Urgency**. As an urgency statute, AB 2387 must be approved by 2/3 vote of each house of the Legislature.

8) **Related legislation**.

AB 1500 (E. Garcia & Mullin, 2021) proposed the Safe Drinking Water, Wildfire Prevention, Drought Preparation, Flood Protection, Extreme Heat Mitigation, and Workforce Development Act of 2022, a $6.95 billion general obligation issuance of bonds to address the impacts of climate change, and would have placed the Act on the June 7, 2022, Primary Election ballot. This bill was held in the Assembly Rules Committee.

AB 3256 (E. Garcia, Bloom, Bonta, Friedman, Cristina Garcia, Mullin, Reyes, Wood, 2020) proposed the Wildfire Prevention, Safe Drinking Water, Climate Resilience, Drought Preparation and Flood Protection Bond Act of 2020, subject to voter approval in the November 3, 2020, statewide general election for $6.98 billion general obligation bonds. This bill was held in the Assembly Rules Committee.

SB 45 (Allen, 2020) proposed the Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2020, subject to voter approval in the November 3, 2020, statewide general election for $5.51 billion general obligation bonds. This bill was never referred to an Assembly policy committee due to COVID.

REGISTERED SUPPORT / OPPOSITION:

Support

California Academy of Sciences
California Association of Professional Scientists
California Desert Land Conservancy Dba Mojave Desert Land Trust; the

California Municipal Utilities Association
California Native Plant Society
California Urban Forests Council
California Waterfowl Association
California Workforce Association
Coachella Valley Conservation Commission
Defenders of Wildlife
Paradise Irrigation District
Sonoma Land Trust

Opposition

State Building & Construction Trades Council of California

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2587 (Eduardo Garcia) – As Amended April 18, 2022

SUBJECT: Energy: firm renewable energy resources and firm zero-carbon resources: procurement

SUMMARY: Adds consideration of "firm renewable energy resources" to a California Energy Commission (CEC) assessment of "firm zero-carbon resources," and requires the Public Utilities Commission (PUC) to open a proceeding related to the procurement of these resources based on the findings of the CEC assessment

EXISTING LAW:

1) Requires utilities and other retail sellers of electricity to procure 60% of their retail electricity sales from eligible renewable energy resources by 2030 and thereafter, including interim targets of 33% by 2020, 44% by 2024, and 52% by 2027.

2) Establishes a policy that eligible renewable energy resources and zero-carbon electric generating facilities will supply all electricity procured to serve California customers by December 31, 2045, and directs the PUC, CEC, and the Air Resources Board (ARB) to incorporate this policy into all relevant planning and programs. Requires the PUC, in consultation with the CEC, ARB, and all California balancing authorities, to issue a joint report to the Legislature by January 1, 2021, reviewing and evaluating the 100% clean energy policy (SB 100 Report).

3) Requires the PUC to identify a diverse and balanced portfolio of resources needed to ensure a reliable electricity supply that provides optimal integration of renewable energy in a cost-effective manner. Requires the portfolio to rely upon zero carbon-emitting resources to the maximum extent reasonable and be designed to achieve any statewide greenhouse gas (GHG) emissions limit established pursuant to the California Global Warming Solutions Act of 2006 or any successor legislation.

4) Requires the CEC to adopt the Integrated Energy Policy Report (IEPR) every two years, which must contain an overview of major energy trends and issues facing the state, including, but not limited to, supply, demand, pricing, reliability, efficiency, and impacts on public health and safety, the economy, resources, and the environment.

5) Requires the CEC to submit an assessment to the Legislature by December 31, 2023, of firm zero-carbon resources that support a clean, reliable, and resilient electrical grid and will help achieve the goal of ensuring renewable energy and zero-carbon resources supply 100% of all retail sales of electricity to California customers by December 31, 2045.

6) Defines "firm zero-carbon resources" as electrical resources that can individually, or in combination, deliver zero-carbon electricity with high availability for the expected duration of multiday extreme or atypical weather events, including periods of low renewable energy generation, and facilitate integration of eligible renewable energy resources into the electrical grid and the transition to a zero-carbon electrical grid.

7) Defines "eligible renewable energy resource" as an electrical generating 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, subject to multiple conditions.

THIS BILL:

1) Adds firm renewable energy resources to the types of resources included in CEC's assessment of firm resources that support a clean, reliable, and resilient electrical grids. Specifies that energy storage evaluated is "long-duration and multiday."

2) Requires CEC to timely incorporate firm renewable energy resources into the IEPR.

3) Requires the PUC to include the findings and recommendations related to the availability and need for procurement of firm renewable energy resources and firm zero-carbon resources made in CEC's assessment in the Integrated Resource Planning (IRP) process.

4) Requires the PUC proceeding to take place no later than six months from the time the CEC assessment is presented to the Legislature.

5) As part of the inclusion of the findings and recommendations, requires CEC to consider whether to adopt additional programs, measures, and requirements to increase the procurement and deployment of firm renewable energy resources and firm zero-carbon resources during the years, including, but not limited to, 2026-2040.

6) As part of the inclusion of the findings and recommendations, requires CEC to consider emerging technologies, with an emphasis on technologies that have the potential to significantly improve reliability during periods of low renewable energy production and extreme weather events, lower long-term system costs, and reduce land-use impacts.

7) Makes a number of findings and declarations related to the need for firm resources.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. Firm electricity resources can deliver electricity at any time, for as long as needed, and may include anything from fossil fuel plants to biomass, geothermal, hydroelectric, and nuclear energy. These firm resources can supply electricity even when variable resources – such as solar and wind – are offline (such as at night or on cloudy days). Much of the firm power currently in use in California is from natural gas. With California moving towards a 100% clean energy future, and on the eve of closing its last remaining nuclear plant at Diablo Canyon, other sources of firm power are likely necessary to maintain system reliability.

   Recent studies have highlighted the need for clean firm power to contribute to this future. The studies suggest clean firm power can provide reliability benefits at long-term cost savings over an all-variable renewable portfolio. However, the studies raise concerns that California is not adequately preparing these resources for future procurement, as these

resources have long-lead times to development and are often more expensive than variable renewables (solar and wind).

Since 2015, with the passage of SB 350 (De León), Chapter 547, Statutes of 2015, California regulators have worked to identify a diverse mix of resources to achieve our clean energy goals. SB 350 requires the PUC to adopt a process for each load-serving entity (LSE) to file an IRP starting in 2017 and for each publicly-owned utility (POU) to file an IRP by January 1, 2019. The goal of the IRP is to reduce the cost of achieving GHG emission reductions by looking broadly at system needs, rather than at individual LSEs or resource types, in order to identify generation that reduces GHGs, improves reliability, and reduces overall cost.

The IRP operates on a 2-year planning cycle, and forecasts system need 10 years into the future. The most recent IRP analysis identified almost 20 gigawatts (GW) of new resources needed by 2031, arising from a mix of geothermal, land-based wind, solar, battery storage, and long-duration storage resources. The PUC also conducts sensitivity analyses for the IRP for emerging resources whose pricing data and availability are not robust enough for inclusion as a main resource, but whose sensitivity analysis can provide more insight into how the technology may contribute to the overall portfolio. Recent IRP sensitivities have examined offshore wind and hydrogen.

While the IRP focuses on what energy mix is best suited to meet our GHG and reliability goals 10 years into the future, the Joint Agency SB 100 Report looks at a planning horizon 24 years out, to determine how best to implement the 100%-clean-electricity-by-2045 policy enacted under SB 100 (De León), Chapter 312, Statutes of 2018. The first SB 100 report was finalized in March 2021, and included analyses of many pathways to achieve the state's 2045 clean energy goal, including a core scenario which selected offshore wind resources and long-duration storage, as well as study scenarios examining "zero-carbon firm resources." The SB 100 Report will be updated every four years, with future work focused on system reliability, among other considerations.

Alongside the IRP and SB 100 Report, which focus on potential mid- and long-term procurement needs for the electricity system, the CEC prepares the IEPR to forecast all aspects of energy industry supply, production, transportation, delivery, distribution, demand, and pricing. The CEC is then required to use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. The CEC adopts an IEPR every two years with updates every other year.

SB 423 (Stern), Chapter 243, Statutes of 2021, requires the CEC to submit an assessment to the Legislature of firm zero-carbon resources that support a clean, reliable, and resilient electrical grid in California. This bill revises the assessment to include firm renewable energy resources and incorporate firm renewable energy resources into the IEPR. This bill additionally requires the PUC to include the findings and recommendations related to the availability and need for procurement of firm renewable energy resources and firm zero-carbon resources made in CEC's assessment in the IRP process.

2) **Author's statement**:

California has made significant strides towards a clean energy future, but more work is ahead as we face the threat of climate change. The SB 100 joint agencies report highlighted the need for more substantial investments in new and existing technologies, and included scenarios with up to 15 GW of firm renewable energy and zero carbon resources. This report also underscores the importance of these resources that can significantly reduce energy resource needs, costs, and emissions associated with meeting SB 100 goals. Other reports have also found that increasing a diverse portfolio of firm renewable and zero carbon resources will reduce overall system costs by as much as two-thirds compared to scenarios without them. AB 2587 encourages the continued operation and development of new firm renewable energy and zero carbon resources that are known to add reliability and diversity to our electrical grid while also providing co-benefits to the environment and economies of some of our state's most disadvantaged communities.

3) **Double referral**: This bill passed the Assembly Utilities and Energy Committee by a vote of 13-0 on April 6.

REGISTERED SUPPORT / OPPOSITION:

Support

Bioenergy Association of California
Bloom Energy
California Biomass Energy Alliance
California Energy Storage Alliance
Fervo Energy
Form Energy
Independent Energy Producers Association
Microgrid Resources Coalition
Ollin Strategies
True North Renewable Energy
Yosemite Clean Energy

Opposition

None on file.

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2836 (Eduardo Garcia) – As Amended March 30, 2022

SUBJECT: Carl Moyer Memorial Air Quality Standards Attainment Program: vehicle registration fees: California tire fee

SUMMARY: Extends the various fees that support the Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program) for nine years, until January 1, 2033.

EXISTING LAW:

1) AB 1571 (Villaraigosa), Chapter 923, Statutes of 1999, established the Moyer Program, administered by ARB and local air districts, to fund the incremental cost of cleaner-than-required vehicles, engines, and equipment. The primary objective of the program is to achieve air quality emission reductions that would not otherwise occur through regulations or other legal mandates. The Moyer Program is funded by vehicle registration surcharges adopted by local air districts in nonattainment areas.

2) AB 923 (Firebaugh), Chapter 707, Statutes of 2004, expanded the Moyer Program to cover additional pollutants and engines, impose a $1 fee on tire sales to fund the Moyer Program and CalRecycle, and establish air quality improvement programs through local air districts.

3) AB 8 (Perea), Chapter 401, Statutes of 2013, extended the "temporary" fees and surcharges that support the Moyer Program until January 1, 2024, including:

    a) $0.75 from the retail fee on new tires to the Air Pollution Control Fund for the Moyer Program and other air emission reduction efforts.

    b) $2 surcharge for local air districts on vehicle registrations to fund emission reduction programs, including the Moyer Program.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. The Moyer Program provides monetary grants to private companies and public agencies to clean up their heavy-duty engines beyond that required by law through retrofitting, repowering or replacing their engines with newer and cleaner ones. These grants are issued locally by air districts. Moyer's primary objective is to obtain cost-effective and surplus emission reductions to be credited toward California's obligations in the State Implementation Plan (SIP) – California's road map for attaining health-based national ambient air quality standards. Covered pollutants include oxides of nitrogen (NOx), reactive organic gases (ROG), and particulate matter (PM). Moyer is implemented as a partnership between ARB and California's 35 air districts. ARB works collaboratively with the air districts and other stakeholders to set guidelines and ensure the program reduces pollution and provides cleaner air for Californians.

The Moyer Program was established more than 24 years ago and since then nearly $1.2 billion has been awarded for projects to replace various types of engines that are estimated to reduce emissions by 198,417 tons of NOx and ROGs and 7,343 tons of PM.

This bill extends various fees that fund Moyer which are set to expire at the end of 2023. These fees include a surcharge on motor vehicle registration fees and a new tire purchase fee. This bill makes no programmatic changes to Carl Moyer nor to the waste tire program.

2) **Author's statement**:

The Moyer Program provides an opportunity for the state to incentivize the purchase of cleaner-than-required engines, equipment, and emission reduction technologies through grants. Extending the Moyer Program to 2033 is necessary in order to continue improving our air quality throughout the state.

3) **Double referral**. This bill passed the Transportation Committee by a vote of 12-0 on April 18.

REGISTERED SUPPORT / OPPOSITION:

Support

Bay Area Air Quality Management District (co-sponsor)
California Air Pollution Control Officers Association (co-sponsor)
San Joaquin Valley Air Pollution Control District (co-sponsor)
South Coast Air Quality Management District (co-sponsor)
Almond Alliance of California
American Lung Association in California
Center for Climate Change & Health
Central California Asthma Collaborative
Physicians for Social Responsibility - San Francisco Bay Area Chapter
Public Health Institute
Regional Asthma Management and Prevention (RAMP)
Sierra Club
UPS
Western States Trucking Association

Opposition

None on file.

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 1676 (Grayson) – As Amended April 18, 2022

SUBJECT: Pipeline safety: carbon dioxide

SUMMARY: Adds carbon dioxide (CO_2), compressed to a supercritical state, to the substances included in the Elder California Pipeline Safety Act of 1981 (Elder Act), giving the Office of the State Fire Marshall (OSFM) exclusive jurisdiction to regulate intrastate pipeline transportation of CO_2 under the existing provisions of the Elder Act, which currently applies to petroleum and other hazardous liquids.

EXISTING LAW:

1) Pursuant to the Elder Act:

   a) Grants the OSFM exclusive safety, regulatory, and enforcement authority over intrastate hazardous liquid pipelines. (Government Code § 51010)

   b) Defines "pipeline" for the purposes of the Elder Act as every intrastate pipeline used for the transportation of hazardous liquid substances or highly volatile liquid substances; and does not include an interstate pipeline subject to federal regulations, a pipeline that transports hazardous substances in a gaseous state, and other specified exclusions. (Government Code § 51010.5)

   c) Requires OSFM to adopt hazardous liquid pipeline safety regulations in compliance with the federal law relating to hazardous liquid pipeline safety, including, but not limited to, compliance orders, penalties, and inspection and maintenance provisions. (Government Code § 51011)

   d) Requires each pipeline operator to file with OSFM an inspection, maintenance, improvement, or replacement assessment for older pipelines built before January 1, 1960 and any pipeline installed on or after January 1, 1960, for which regular internal inspections cannot be conducted, or which shows diminished integrity due to corrosion or inadequate cathodic protection. (GO §51012.4)

   e) Requires every newly constructed pipeline, existing pipeline, or part of a pipeline system that has been relocated or replaced, and every pipeline that transports a hazardous liquid substance or highly volatile liquid substance, to be tested in accordance with federal regulations and every pipeline more than 10 years of age and not provided with effective cathodic protection to be hydrostatically tested every three years, except for those on the OSFM's list of higher risk pipelines, which shall be hydrostatically tested annually. (Government Code § 51013.5)

   f) Defines "hydrostatic testing" as the application of internal pressure above the normal or maximum operating pressure to a segment of pipeline, under no-flow conditions for a fixed period of time, utilizing a liquid test medium. (GO §51010.5 (c))

g) Requires every operator of an intrastate pipeline to maintain each valve and check valve necessary for safe pipeline operations, and requires OSFM to promulgate regulations for maintaining, testing, and inspecting these valves. (Government Code § 51015.4)

h) Authorizes OSFM to assess and collect from every pipeline operator an annual administrative fee. (Government Code § 51019)

2) Pursuant to federal law:

a) Grants the United States Secretary of Transportation the regulatory and enforcement authority over gas and hazardous liquid pipelines, including CO_2 pipelines. (49 United States Code § 60102)

b) Prohibits the Secretary of Transportation from prescribing or enforcing safety standards and practices for an intrastate pipeline or intrastate pipeline facility to the extent that the safety standards and practices are regulated by a state authority, except as provided. (49 United States Code § 60105)

c) Defines "carbon dioxide," for the purposes of the United States Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations, as a fluid consisting of more than 90% carbon dioxide molecules compressed to a supercritical state. (49 Code of Federal Regulations § 195.2)

d) Defines "hazardous liquid" as petroleum, petroleum products, anhydrous ammonia, and ethanol or other non-petroleum fuel, including biofuel, which is flammable, toxic, or would be harmful to the environment if released in significant quantities. (49 Code of Federal Regulations § 195.2)

e) Defines "highly volatile liquid" as a hazardous liquid which will form a vapor cloud when released to the atmosphere and which has a vapor pressure exceeding 276 kPa (40 psia) at 37.8 °C (100 °F).

THIS BILL adds CO_2 to the substances included in the Elder Act, giving the OSFM exclusive jurisdiction to regulate intrastate pipeline transportation of CO_2 under the existing provisions of the Elder Act, which were enacted in the 1980s to regulate pipeline transportation of hazardous liquids such as oil, gasoline, and other liquid fuels. The bill also specifically exempts natural gas and propane pipeline facilities regulated by the Public Utilities Commission (PUC) from the Elder Act.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. There are a number of CO_2 sources. An abundant source is from underground reservoirs where CO_2 under pressure occurs naturally. It can also be produced commercially in natural gas plants, ammonia plants, and recovered from power plant stack gas with carbon capture technology.

At normal temperatures and atmospheric pressure, CO_2 is an odorless and colorless gas, not flammable, and denser than air. It will not combust, but it can be fatal to humans if enclosed

due to the potential for suffocation. CO_2 may exist either as a solid or gas depending on temperature and pressure. Dry ice for refrigeration is a common use of CO_2 in solid form. When pressurized to extremely high pressures (1,200 pounds per square inch gauge (psig)), CO_2 enters a supercritical state. Supercritical CO_2 is a fluid state where CO_2 is held at or above its critical temperature and critical pressure, where its properties are midway between a gas and a liquid.

PHMSA regulations define CO_2 as a fluid consisting of more than 90% CO_2 molecules compressed to a supercritical state. The remaining 10% may be comprised of gases such as water, nitrogen, oxygen, methane, or other impurities. Federal standards set CO_2 impurity limits for transportation pipelines.

Pipeline transportation of CO_2 in the supercritical state is more practical than transportation in the gaseous state. As a dense vapor in the supercritical state, CO_2 can be transported more economically and efficiently using smaller pipelines and pumps because greater volumes of fluid may be transported. Most CO_2 is transported in the supercritical state in steel pipelines kept at 2,200 psig.

Unsurprisingly, the beverage market is the largest segment of CO_2 use; however, the beverage market requires food grade CO_2 with a much higher purity rating than required in industrial or pipeline applications. CO_2 has been used for many years to aid in the production of crude oil. Because of its high degree of solubility in crude oil and abundance, CO_2 is a popular extraction tool in enhanced oil recovery (EOR) projects. In EOR, the CO_2 mixes with crude oil making the oil more mobile and easier to extract. Supercritical CO_2 has also grown in popularity as a solvent in the chemical industry, where it can replace more toxic, volatile organic compounds.

PHMSA has exclusive federal authority over interstate pipeline facilities. An interstate pipeline is defined as a pipeline that is used in the transportation of hazardous liquid or carbon dioxide in interstate or foreign commerce. Typically, these lines cross state borders or begin in federal waters. As of 2015, there were 1,188 miles of interstate pipeline in California.

OSFM regulates intrastate hazardous liquid pipelines pursuant to the Elder Act. Whereas the PUC regulates intrastate gas pipelines (both natural gas and liquid petroleum gas, or propane). An intrastate pipeline is defined as a pipeline that is located entirely within state borders, including offshore state waters. OSFM may regulate portions of interstate hazardous liquid pipelines located within the state, if there is an agreement between PHMSA and OSFM. OSFM is only allowed to enter into an agreement with PHMSA if it is given all regulatory and enforcement authority of the pipelines subject to the agreement. As of 2015, there were 4,500 miles of intrastate pipeline in California, although that number was predicted to grow. The vast majority of pipelines in California carry petroleum-based hazardous liquids. According to OSFM, there are no pending nor proposed plans for new CO_2 pipelines in the state. California statute currently does not specify OSFM authority over CO_2 pipelines.

CO_2 is not currently defined as a hazardous substance under PHMSA regulations. As noted above, the most dangerous hazard of CO_2 is asphyxiation. Because CO_2 is denser than air, it may pool in enclosed spaces or fail to disburse when released in areas without strong air

circulation. The most deadly incident involving CO_2 occurred in 1986 in Lake Nyos, Cameroon which is one of only three lakes in the world known to be naturally saturated with CO_2. An eruption of dissolved CO_2 in the lake suddenly released an estimated 1.6 million tons of CO_2 into the air, killing 1,700 people and 3,500 livestock. However, industrial CO_2 accidents may also occur, such as a 2008 leak at a fire extinguishing installation in Germany, which led to the hospitalization of 19 people. More recently, a CO_2 pipeline accident occurred in Satartia, Mississippi in February 2020, when a pipeline that was part of a network used for EOR ruptured, causing the evacuation of local residents and the hospitalization of 46 people.

2) **Author's statement**:

> To tackle the impending climate crisis and drastically reduce GHG emissions, it is essential that the state create a regulatory framework to facilitate the capture, storage, and transportation of carbon. Without decisive and swift action, California will be unable to meet its ambitious GHG emission reduction goals. AB 1676 authorizes the State Fire Marshall to oversee and regulate pipelines that carry captured carbon. This simple clarification will support the effective deployment of Carbon Capture, Utilization, and Sequestration (CCUS) technology, drastically reducing the state's carbon emissions to help California meet its climate goals.

3) **Cut and paste**. The Elder Act was written in the 1980s to address petroleum pipelines. It has been updated over the years in the wake of petroleum pipeline accidents to add safety requirements based on issues unique to petroleum pipelines, most recently following the 2015 Refugio spill in Santa Barbara County. However, the original Act, as well as the updates, are geared towards petroleum infrastructure and characteristics, as well as lessons learned from petroleum pipeline accidents.

   This bill grafts CO_2 into the Elder Act without making any other substantive changes. The bill appears to simply add "carbon dioxide" wherever the Elder Act refers to hazardous liquid. In some cases, this doesn't make sense or may be inappropriate. For example, the bill exempts offshore CO_2 pipelines in federal waters and flow lines. These existing exemptions are based on petroleum production infrastructure and don't make sense for supercritical CO_2. The bill also exempts CO_2 pipelines on onshore production, refining, and manufacturing facilities, which again is based on petroleum infrastructure and may be inappropriate given the characteristics of supercritical CO_2 and likelihood that a pipeline rupture may have impacts well beyond the boundaries of the production, refining, or manufacturing facility where the pipeline is located.

   CO_2 safety regulations may need to be tailored to the unique characteristics of CO_2 and may need to be more stringent than petroleum pipelines, at least while the industry builds knowledge and experience. Section 5 of this bill would require CO_2 pipelines to have the same frequencies for hydrostatic testing as petroleum pipelines. The frequencies in statute are based on the failure history of petroleum pipelines, which is not relevant to CO_2 pipelines. Also, regulations of CO_2 pipelines may need to address other issues not addressed in the Elder Act, such as standards for impurities and added odorants.

4) **Supercritical CO_2 may present unique technical issues and risks that the Elder Act and current pipeline safety regulations were not designed to address**. A recent report commissioned by the Pipeline Safety Trust (https://pstrust.org/carbon-dioxide-pipelines) found that existing federal regulations do not allow for the safe transportation of CO_2 via pipelines and called on the U.S. Department of Transportation and PHMSA to update its regulations of CO_2 pipelines as quickly as possible. The report's recommendations:

   a) PHMSA needs to update the definition of CO_2 in the regulations: Federal regulations need to be modified to assure federal standards apply to all CO_2 transmission pipelines, including all supercritical, gas, and liquid CO_2 transmission pipelines.

   b) PHMSA needs to identify the potential impact areas for CO_2 pipeline ruptures: The unique, and potentially very large impact areas for CO_2 pipeline ruptures need to be developed, defined, and promulgated into pipeline regulations. These areas are likely to be substantially larger than for hydrocarbon pipelines of similar diameter. Once we know how to determine the potential impact areas, that information must be used to inform regulations on routing and siting, emergency response requirements, and more.

   c) Specific CO_2 pipeline federal regulations should not be based solely on industry recommended practices: Changes in the CO_2 pipeline safety regulation are needed and should be prescribed to avoid misinterpretation or misuse. Recent efforts by many in the industry to rely on more performance-based standards, even those incorporated by reference, have proven ineffective.

   d) PHMSA needs to specifically identify how to incorporate fracture propagation protection on CO_2 transmission pipelines: Regulations should specifically prescribe pipeline design methods to prevent and arrest CO_2 fracture propagation.

   e) PHMSA needs to mandate the use of odorant injection into CO_2 transmission pipelines: Given the inability to detect or observe a CO_2 pipeline release, it is time to require the use of odorant injection in such pipelines to assist the public, first responders, and pipeline operator employees in identifying dangerous releases.

   f) PHMSA needs to require CO_2 pipeline operators to update their procedural manuals related to local emergency response coordination: The major differences and unique properties of CO_2 compared to hydrocarbons require that pipeline operators improve the sections of their federally mandated operation, maintenance, and emergencies procedural manuals for emergency response to CO_2 pipeline ruptures.

   g) PHMSA needs to establish regulations setting specific maximum contaminant impurities for CO_2 pipelines: PHMSA needs to prescribe the maximum concentration of water, hydrogen sulfide, and other impurities allowed in CO_2 pipelines.

   h) PHMSA needs to strengthen federal regulations for conversion of existing pipelines to CO_2 pipeline service: The general guidance of PHMSA's 2014 advisory bulletin is not adequate for mitigating the risks posed by conversion of existing hydrocarbon pipelines

to CO_2 pipelines. PHMSA needs to issue regulations appropriate to the serious risks that could result from repurposing a pipeline for CO_2 service.

5) **Double referral**. This bill passed the Utilities and Energy Committee by a vote of 12-0 on April 6.

REGISTERED SUPPORT / OPPOSITION:

Support

California Carbon Capture Coalition
Independent Energy Producers Association

Opposition

California Environmental Voters (unless amended)
Center on Race, Poverty & the Environment
Central California Environmental Justice Network
Central Valley Air Quality Coalition
Leadership Counsel for Justice & Accountability
Little Manila Rising
Physicians for Social Responsibility - Los Angeles

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 1935 (Grayson) – As Amended April 19, 2022

SUBJECT: California Environmental Quality Act: redevelopment: Concord Naval Weapons Station

SUMMARY: Establishes special procedures under the California Environmental Quality Act (CEQA) for concurrent preparation of the administrative record, public hearings, and mediation for the "Concord Base Reuse Project" (the adoption of a specific plan for proposed redevelopment on the site of the former Concord Naval Weapons Station).

EXISTING LAW:

1) CEQA requires lead agencies with the principal responsibility for carrying out or approving a proposed project to prepare a negative declaration, mitigated negative declaration, or environmental impact report (EIR) for this action, unless the project is exempt from CEQA (CEQA includes various statutory exemptions, as well as categorical exemptions in the CEQA guidelines).

2) Exempts from CEQA any residential development project, including any subdivision, or any zoning change that is undertaken to implement and is consistent with a specific plan for which an EIR has been certified after January 1, 1980, unless substantial changes or new information require the preparation of a supplemental EIR for the specific plan, in which case the exemption applies once the supplemental EIR is certified.

3) Authorizes judicial review of CEQA actions taken by public agencies, following the agency's decision to carry out or approve the project. Challenges alleging improper determination that a project may have a significant effect on the environment, or alleging an EIR doesn't comply with CEQA, must be filed in the superior court within 30 days of filing of the notice of approval. The courts are required to give CEQA actions preference over all other civil actions.

4) Establishes that a record of proceeding includes, but is not limited to, all application materials, staff reports, transcripts or minutes of public proceedings, notices, written comments, and written correspondence prepared by or submitted to the public agency regarding the proposed project.

5) Establishes a procedure for the preparation, certification, and lodging of the record of proceedings. Specifically:

    a) Requires the plaintiff to file a request that the respondent public agency prepare the record of proceedings, and serve this request, together with the complaint or petition, personally upon the public agency within 10 days of the date the action or proceeding was filed.

b) Requires the respondent public agency to prepare and certify the record of proceedings not later than 60 days from the date that plaintiff served the request; lodge a copy of the certified record with the court; and serve on the parties a notice that the record of proceedings has been certified and lodged with the court.

c) Authorizes the plaintiff to elect to prepare the record subject to certification by the respondent public agency, or the parties may agree to an alternative method of preparing the record of proceedings, within the time limits specified in the law.

d) Requires the parties to pay any reasonable costs or fees imposed for the preparation of the record of proceedings in conformance with any law or rule of court.

e) Authorizes the plaintiff to move the court for sanctions, and the court to grant the plaintiff's motion for sanctions, if the public agency fails to prepare and certify the record within the time limits specified in the law.

6) Authorizes an alternative procedure for concurrent preparation of the record of proceedings, where a lead agency, upon a project applicant's request, prepares the record of proceedings concurrently with the administrative process.

a) Requires all documents and other materials placed in the record of proceedings to be posted on a Web site maintained by the lead agency.

b) Requires the lead agency to make publicly available, in electronic format, the draft environmental document, and associated documents, for the project.

c) Requires the lead agency to make any comment publicly available electronically within five days of its receipt.

d) Requires the lead agency to certify the record of proceedings within 30 days after filing notice of determination or approval.

e) Requires certain environmental review documents to include a notice, as specified, stating that the document is subject to this section.

f) Requires the applicant to pay for the lead agency's cost of concurrently preparing and certifying the record of proceedings.

THIS BILL:

1) Requires the preparation and certification of the record of proceedings for the Concord Base Reuse Project to be performed in the following manner:

a) The lead agency for the project shall prepare the record of proceedings concurrently with the administrative process, with the applicant paying the agency's costs.

b) All documents and other materials placed in the record of proceedings shall be posted on, and be downloadable from, an internet website maintained by the lead agency commencing with the date of the release of the draft EIR.

c) The lead agency shall make available to the public in a readily accessible electronic format the draft EIR and all other documents submitted to, or relied on by, the lead agency in the preparation of the draft EIR.

d) A document prepared by the lead agency after the date of the release of the draft EIR that is a part of the record of the proceedings shall be made available to the public in a readily accessible electronic format within five business days after the document is released or received by the lead agency.

e) The lead agency shall encourage written comments on the project to be submitted in a readily accessible electronic format, and shall make any comment available to the public in a readily accessible electronic format within five days of its receipt.

f) Within seven business days after the receipt of any comment that is not in an electronic format, the lead agency shall convert that comment into a readily accessible electronic format and make it available to the public in that format.

g) Notwithstanding paragraphs (b) to (f), inclusive, documents submitted to or relied on by the lead agency that were not prepared specifically for the project and are copyright protected are not required to be made readily accessible in an electronic format. For those copyright-protected documents, the lead agency shall make an index of these documents available in an electronic format no later than the date of the release of the draft EIR, or within five business days if the document is received or relied on by the lead agency after the release of the draft EIR. The index shall specify the libraries or lead agency offices in which hardcopies of the copyrighted materials are available for public review.

h) The lead agency shall certify the final record of proceedings within five days after the filing of the notice of determination for the project.

2) Requires the lead agency to:

a) Conduct an informational workshop within 10 days after the release of the draft EIR to inform the public of the key analyses and conclusions of the draft EIR.

b) Hold a public hearing within 10 days before the close of the public comment period to receive testimony on the draft EIR. A transcript of the hearing shall be included as an appendix to the final EIR.

3) Authorizes a commenter on the draft EIR to submit to the lead agency a written request for nonbinding mediation within five days following the close of the public comment period.

a) Requires the lead agency to participate in nonbinding mediation with all commenters who submitted timely comments on the draft EIR and who requested the mediation.

b) Requires mediation to end no later than 35 days after the close of the public comment period.

c) Requires a request for mediation to identify all areas of dispute raised in the comment submitted by the commenter that are to be mediated.

d) Requires the lead agency to select one or more mediators who shall be retired judges or recognized experts with at least five years' experience in land use and environmental law or science, or mediation.

e) Requires the applicant to bear the costs of mediation.

f) Requires a mediation session to be conducted on each area of dispute with the parties requesting mediation on that area of dispute.

g) Requires the lead agency to adopt, as a condition of approval, any measures agreed upon by the lead agency and any commenter who requested mediation.

h) Prohibits a commenter who agrees to a measure in mediation from raising the issue addressed by that measure as a basis for an action or proceeding challenging the lead agency's decision to certify the EIR or to grant one or more initial project approvals.

4) Provides that the lead agency need not consider written comments submitted after the close of the public comment period, unless those comments address any of the following:

a) New issues raised in the response to comments by the lead agency.

b) New information released by the public agency subsequent to the release of the draft EIR.

c) Changes made to the project after the close of the public comment period.

d) Proposed conditions for approval, mitigation measures, or proposed findings, or a proposed reporting or monitoring program, if the lead agency releases those documents subsequent to the release of the draft EIR.

e) New information that was not reasonably known and could not have been reasonably known during the public comment period.

5) Requires the lead agency to file the notice of determination for the project within five days after the last initial project approval.

6) Requires the lead agency, within five days after the filing of the notice of determination, to certify the record of proceedings for the approval or determination and provide an electronic copy of the record of proceedings to a party that has submitted a written request for a copy. Authorizes the lead agency to charge and collect a reasonable fee from a party requesting a copy of the record of proceedings, which shall not exceed the reasonable cost of reproducing that copy.

7) Requires the lead agency, within 10 days after being served with a complaint or a petition for a writ of mandate, to lodge a copy of the certified record of proceedings with the superior court.

8) Requires any dispute over the content of the record of proceedings to be resolved by the superior court. Unless the superior court directs otherwise, requires a party disputing the content of the record of proceedings to file a motion to augment the record of proceedings at the time it files its initial brief.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. CEQA provides a process for evaluating the environmental effects of applicable projects undertaken or approved by public agencies. If a project is not exempt from CEQA, an initial study is prepared to determine whether the project may have a significant effect on the environment. If the initial study shows that there would not be a significant effect on the environment, the lead agency must prepare a negative declaration. If the initial study shows that the project may have a significant effect on the environment, the lead agency must prepare an EIR.

   An EIR must accurately describe the proposed project, identify and analyze each significant environmental impact expected to result from the proposed project, identify mitigation measures to reduce those impacts to the extent feasible, and evaluate a range of reasonable alternatives to the proposed project. If mitigation measures are required or incorporated into a project, the agency must adopt a reporting or monitoring program to ensure compliance with those measures.

   Generally, CEQA actions taken by public agencies can be challenged in superior court once the agency approves or determines to carry out the project. CEQA appeals are subject to unusually short statutes of limitations. Under current law, court challenges of CEQA decisions generally must be filed within 30-35 days, depending on the type of decision. The courts are required to give CEQA actions preference over all other civil actions. However, the schedules for briefing, hearing, and decision are less definite. The petitioner must request a hearing within 90 days of filing the petition and, generally, briefing must be completed within 90 days of the request for hearing. There is no deadline specified for the court to render a decision.

   In 2011, AB 900 and SB 292 established expedited judicial review procedures for a limited number of projects. For AB 900, it was large-scale projects meeting extraordinary environmental standards and providing significant jobs and investment. For SB 292, it was a proposed downtown Los Angeles football stadium and convention center project achieving specified traffic and air quality mitigations. As part of their expedited judicial review procedures, these bills required the lead agency to prepare and certify the record of proceedings concurrently with the administrative process and required the applicant to pay for it. It was commonly agreed that this would expedite preparation of the record for trial.

   Since 2011, several additional bills have provided similar project-specific concurrent preparation procedures. In addition, in 2016, SB 122 established an optional concurrent

preparation procedure for any CEQA project, subject to the lead agency agreeing, and the applicant paying the agency's costs.

2) **Author's statement**:

AB 1935 will streamline CEQA review for the Concord Naval Weapons Station Reuse Project (CNWS Project). The CNWS Project will help meet the needs of the growing East Bay, in the form of up to 12,270 affordable and market-rate housing units, open space and parks, and a new four-year campus district to help more Californian students receive the quality education opportunities they deserve.

AB 1935 does not exempt the project from CEQA or the requirement to complete and EIR, but it will help provide certainty to the people and city of Concord, while protecting the environment and facilitating the progression of the project by providing expedited CEQA review.

REGISTERED SUPPORT / OPPOSITION:

Support

San Francisco Bay Area Planning and Urban Research Association (SPUR) (prior version)

Opposition

None on file.

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2440 (Irwin) – As Amended March 28, 2022

SUBJECT: Responsible Battery Recycling Act of 2022

SUMMARY: Establishes the Responsible Battery Recycling Act of 2022 (Act), which establishes a stewardship program for the collection and recycling of covered batteries and covered battery-embedded products (covered products).

EXISTING LAW:

1) Establishes the Integrated Waste Management Act and provides the Department of Resources Recover and Recycling (CalRecycle) with the responsibility for overseeing the management of solid waste in California.

2) Creates the Hazardous Waste Control Law and provides the Department of Toxic Substances Control (DTSC) with responsibility for overseeing the management of hazardous waste in California.

3) Enacts the Rechargeable Battery Recycling Act of 2006, which requires every retailer to have a system in place, on or before July 1, 2006, for the acceptance and collection of used rechargeable batteries for reuse, recycling, or proper disposal.

4) Enacts the Electronic Waste Recycling Act of 2003 (EWRA), which established a program for consumers to return, recycle, and ensure the safe and environmentally-sound disposal of video display devices, such as televisions and computer monitors that are hazardous wastes when discarded.

5) Enacts the Cell Phone Recycling Act 2004, which requires all retailers of cell phones to have in place a system for the collection, reuse, and recycling of cell phones and requires DTSC to provide information on cell phone recycling.

THIS BILL:

1) Defines terms used in the bill, including:

    a) "Covered battery" as a device consisting of one or more electrically connected electrochemical cells designed to receive, store, and deliver electric energy. Includes an intact, unbroken battery from which the electrolyte has been removed and battery packs or sets of batteries that are connected or encapsulated within a casing to form a complete unit. Excludes from this definition:

        i) A primary battery weighing over two kilograms;
        ii) A rechargeable battery weighing over five kilograms and having a Watt-hour rating of more than 300 Watt-hours;
        iii) A lead-acid battery;
        iv) A battery contained in a motor vehicle, as specified; and,

v) A fuel cell electrical generating facility.

b) "Covered battery-embedded product" as a product containing a battery or battery pack that is not designed to be removed from the product by the consumer. Excludes from this definition:

i) A medical device;
ii) A covered electronic device, as defined by the EWRA; and,
iii) An energy storage system, as specified.

c) "Distributor" as a company that has a contractual relationship with one or more producers to market and sell covered products to retailers.

d) "Importer" as:

i) A person qualifying as an importer of record, as specified, for a covered product sold into the state that was manufactured outside of the United States; and,
ii) A person importing a covered product sold into the state that was manufacture or assembled by a company outside the state.

e) "Producer" as the person who manufactures the covered product and who sells, offers for sale, or distributes them in the state. If there is no person who is the procurer of a covered product, the producer is the person who imports the covered product into the state. If there is no person who is the producer who imports the covered products into the state, the producer is the person who sells the covered products in or into the state.

f) "Rechargeable battery" as a battery that contains one or more voltaic or galvanic cells, electrically connected to produce electric energy, and that is designed to be recharged. Rechargeable battery does not include a battery that contains electrolytes as a free liquid or that employs lead-acid technology, except as specified.

g) "Recycling efficiency rate" means the ratio of the weight of covered products recycled by a producer or stewardship organization to the weight of covered products received by the producer or stewardship organization.

h) "Retailer" as a person who sells covered products to a person through any means.

i) "Stewardship organization" as an organization exempt from taxation under Section 501 (c)(3) of the federal Internal Revenue Code of 1986 that is established by a group of producers in accordance with the bill to develop and implement a stewardship program.

j) "Stewardship plan" as a plan developed by a stewardship organization or producer for the collection, transportation, recycling, and the safe and proper management of covered products.

k) "Stewardship program" as a program established by a producer or stewardship organization for the free and convenient collection, transportation, recycling, and the safe and proper management of covered products pursuant to a stewardship plan approved by CalRecycle.

2) Requires CalRecycle, on or before January 1, 2025 and in consultation with DTSC, to adopt regulations to implement the bill.

3) Requires producers, no later than 90 days after the effective date of the bill, to provide CalRecycle with a list of covered products that the producer sells or offers for sale in the state. Requires producers or a stewardship organization to update the list on or before January 15 of each year or upon request.

4) Authorizes producers to form one or more stewardship organizations to develop and implement the covered product recycling program established by the bill, and requires producers to comply with the Act's requirements individually or through a stewardship organization.

5) Prohibits a producer from selling, distributing, offering for sale, or importing a covered product in or into the state unless the producer is in compliance with the Act.

6) Establishes a process for persons who are nor producers to request exemptions from CalRecycle.

7) Within six months of the effective date of the regulations adopted by CalRecycle, requires a producer or stewardship organization to develop and submit a stewardship plan for the collection, transportation, recycling, and the safe and proper management of covered batteries or for covered battery-embedded products in the state in an economically efficient and practical manner.

8) Requires the stewardship plan to include specified standards and elements, including:

    a) Provide for a free and convenient collection system for covered products in each county of the state, including drop off, as specified;
    b) An explanation of the producer's or stewardship organization's plan to meet the recycling efficiency rate established by CalRecycle;
    c) The establishment and administration of a means for fully funding the stewardship program, as specified, in a manner that equitably distributes the costs among member producers;
    d) A description of the process by which covered products will be processed and recycled, as specified;
    e) Strategies to serve areas that face unique challenges associated with proper waste management and a comprehensive statewide education and outreach program;
    f) Develop strategies to implement proper labeling to ensure proper collection and recycling;
    g) A contingency plan in the event that the stewardship plan expires, is disapproved, or is revoked.

9) Requires stewardship plans to be reviewed by the stewardship organization every five years, and revised if necessary, subject to approval by CalRecycle.

10) On or before January 1, 2025, requires CalRecycle to establish an advisory body for covered product stewardship that includes, but is not limited to, representatives from local government, recyclers, retailers, the household hazardous waste industry, nongovernmental organizations, environmental organizations, community-based justice and public health

organizations, and the solid waste industry. Requires producers or stewardship organizations to consult with the advisory body when establishing or updating a stewardship plan. Requires producers or stewardship organizations to include the recommendations of the advisory body into stewardship plans, to the extent feasible.

11) Requires producers or stewardship organizations to submit the proposed stewardship plan to DTSC for review at least 90 days before submitting the plan to CalRecycle. Requires that a producer or stewardship organization to submit the determinations made by DTSC when submitting the stewardship plan to CalRecycle.

12) Requires producers and stewardship organizations to have an approved plan by December 31, 2025, and requires that the stewardship plan be fully implemented within 270 days of approval.

13) Requires retailers with five or more locations in the state to make all locations available as collection sites for covered products smaller than an unspecified weight.

14) Requires producers and stewardship organizations to submit a proposed stewardship program budget with the stewardship plan for the subsequent five years. Requires the budget to include:

    a) Anticipated revenues and costs of implementing the stewardship program, including administrative expenses for CalRecycle and DTSC;
    b) A recommended funding level sufficient to cover the budgeted costs and to operate the stewardship program in a prudent and responsible manner over a multiyear period; and,
    c) Any additional information that CalRecycle deems necessary.

15) Establishes the Covered Battery and Covered Battery-Embedded Product Recycling Fund (Fund), to be funded by the reimbursement provided by producers and stewardship organizations and to be used by CalRecycle and DTSC to implement and enforce the bill's requirements.

16) Requires producers and stewardship organizations to arrange for an independent audit annually, and requires CalRecycle to annually review the audit for compliance. Authorizes CalRecycle to conduct an audit, as necessary.

17) Requires producers and stewardship organizations to prepare and submit to CalRecycle an annual report including specified information about the covered products collected and recycled and related information. Requires CalRecycle to approve, disapprove, or conditionally approve the report.

18) Requires CalRecycle to begin reporting a list of producers that are in compliance with the bill, and the reported brands of the covered products for each producer, by July 1, 2027 and annually thereafter.

19) Requires retailers and distributors to monitor the CalRecycle website to determine if covered products are in compliance with the bill. Prohibits the sale, distribution, and importation of covered products that are not in compliance.

20) Authorizes CalRecycle to impose administrative penalties up to $10,000 per day on producers, stewardship organizations, manufacturers, distributors, retailers, importers, recyclers, or collection sites for violations of the bill. For knowing or intentional violations, authorizes penalties up to $50,000 per day.

21) Authorizes CalRecycle to revoke a stewardship plan, require resubmittal of a plan, or remove a producer from the list of compliant producers if it determines that the producer or stewardship organization has not met a material requirement of the program.

22) Repeals the Rechargeable Battery Recycling Act of 2006 and the Cell Phone Recycling Act 2004 on January 1, 2027.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

> Many Californians don't realize that all batteries are hazardous waste; and that throwing batteries, and products embedded with batteries, in curbside waste bins poses a threat to recycling facilities and human life. With more of our everyday items running off of batteries, it is imperative that we take swift action to stamp out the risk of devastating fires at our waste facilities and safely allow recovery of the valuable minerals inside batteries. AB 2440 will establish a comprehensive program to address this crisis and protect our communities from battery fires.

2) **Universal waste**. Universal wastes are hazardous wastes that are widely generated by households and businesses. Universal wastes include televisions, computers, batteries, fluorescent lamps, and mercury thermostats, among others.

   The hazardous waste regulations identify seven categories of hazardous wastes that can be managed as universal wastes. California's Universal Waste Rule allows individuals and businesses to transport, handle, and recycle universal wastes in a manner that differs from the requirements for most hazardous wastes. The more relaxed requirements for managing universal wastes were adopted to ensure that they are managed safely and are not disposed of with solid waste. The universal waste requirements are also less complex and easier to comply with, thereby increasing compliance.

3) **Batteries and battery-embedded products**. State law prohibits the disposal of batteries in the trash or household recycling collection bins that are intended for non-hazardous solid waste and/or recyclable materials. Many types of batteries, regardless of size, exhibit hazardous characteristics and are considered hazardous waste when they are discarded. These include single use alkaline and lithium-ion batteries and rechargeable lithium metal, nickel cadmium, and nickel metal hydride batteries of various sizes (AAA, AA, C, D, button cell, 9-Volt, and small sealed lead-acid batteries). These batteries would be "covered batteries" under this bill.

   Many products are sold with embedded batteries, often lithium-ion batteries, including portable electronics like laptops, smart phones, digital cameras, game consoles, children's

toys, and cordless power tools. A multitude of products that light up, from greeting cards to children's shoes to throw pillows, contain embedded batteries. Many of these products would be "covered battery-embedded products" under the bill if the battery is not designed to be removed from the product by the consumer.

When batteries end up in the trash or a recycling bin, operators of solid waste facilities, including transfer stations, municipal landfills, materials recovery facilities, and recycling facilities, who discover batteries in the waste or recyclable materials are required to remove and manage the batteries separately. The facility that removes the batteries from the municipal solid waste stream or recyclable materials becomes the generator of the hazardous waste batteries and must comply with hazardous waste management regulations. Facilities that do not properly manage hazardous waste may be subject to regulatory enforcement and may be liable for monetary penalties. However, it is impossible for operators to locate every battery that enters the waste stream. Sorting through solid waste and recyclables to remove batteries poses a risk to the facility and the safety of facility workers.

Depending on the type of battery and applicable management requirements, batteries are required be sent to a facility permitted to accept hazardous waste batteries, universal wastes, or spent lead acid batteries. Only facilities that are appropriately regulated can accept hazardous waste batteries. Even though it is illegal to dispose of batteries in the solid waste stream, current collection efforts are not succeeding.

4) **Battery fires**. Some batteries, particularly lithium ion, are extremely flammable and can combust or explode if they are damaged. When these batteries enter the waste stream, they are likely to be damaged during normal solid waste handling activities. When that happens, the batteries can ignite, causing fires in solid waste vehicles and facilities and posing a risk to the health and safety of solid waste workers and the public. While determining the exact cause of solid waste facility fires is extremely difficult, it appears that fires have become more frequent as embedded lithium-ion batteries have become more common. One materials recovery facility located in Richmond experienced six fires over just two years in 2020 and 2021. Another facility in San Carlos experienced 10 or more fires almost every year since 2017; a stark contrast to 2013, when the facility experienced two fires. The suspected causes for these fires included a drone containing a lithium ion battery, a lawnmower battery, a Prius battery, a lithium ion battery pack, and a cell phone. When a battery ignites in a solid waste facility, it is surrounded by flammable materials, allowing the fire to grow quickly. Even with advanced fire suppression equipment, fires shut down operations, impact workers, and affect the air quality of nearby residents. The increasing frequency of fires has also impacted solid waste operators' ability to find insurance. Insurance premiums and deductibles rise dramatically after a fire, if the facility can find insurance at all. At the San Carlos facility, insurance premiums increased from $180,000 per year to $1.5 million, and the facility's deductible rose exponentially, from $5,000 to $1.5 million. The costs associated with the fires caused by batteries are passed on to ratepayers.

5) **California Rechargeable Battery Recycling Act**. Most portable electronic devices use rechargeable batteries, and millions of rechargeable batteries are sold in California each year. In 2005, to help promote proper disposal of rechargeable batteries by the public, the Legislature enacted the California Rechargeable Recycling Act, AB 1125 (Pavley, Chapter 572, Statutes of 2005), which requires retailers to have a mechanism to accept rechargeable batteries from consumers for recycling. Retailers who have less than one million dollars in

gross sales annually are not subject to the law's requirements. Rechargeable batteries that are contained in, or packaged with, a battery-operated device are not subject to this law.

To track how effective this program is, the law requires DTSC to survey battery handling and/or recycling facilities and post the estimated amount of each type of rechargeable batteries returned for recycling in California during the previous calendar year. DTSC receives data voluntarily submitted by major California battery recyclers to estimate how many rechargeable batteries, by type (e.g., nickel-cadmium, nickel metal hydride, etc.), are collected in each calendar year.

According to DTSC's website, the following are approximate quantities of rechargeable batteries collected for recycling in California in 2020: 408,823 pounds of lithium ion batteries; 252,969 pounds of nickel cadmium batteries; 77,766 pounds of nickel metal hydride batteries; and, 4,810,578 pounds of small sealed lead acid batteries. While exact data on battery recycling is difficult to obtain, n average the amount of each battery type collected is trending downward.

6) **Product stewardship**. Product stewardship, also known as extended producer responsibility, is a strategy for shared responsibility for end-of-life product management on the producers, and all entities involved in the product chain, instead of the general public. Product stewardship encourages product design changes that minimize a negative impact on human health and the environment at every stage of the product's lifecycle. This allows the costs of treatment and disposal to be incorporated into the total cost of a product. It places primary responsibility on the producer, or brand owner, who makes design and marketing decisions. It also creates a setting for markets to emerge that truly reflect the environmental impacts of a product, and to which producers and consumers respond. CalRecycle has developed a product stewardship framework and checklists to guide statutory proposals that would allow CalRecycle and other stakeholders to implement product stewardship programs.

   There are several statewide product stewardship programs in California, all of which are overseen by CalRecycle. They include carpet, paint, mattresses, and home-generated pharmaceutical and sharps waste.

7) **This bill**. AB 2440 establishes a product stewardship program for covered products in order to improve the collection and recycling of these batteries in hopes of keeping them out of the solid waste stream. Proper collection and management of covered products will reduce the number of fires at solid waste handling operations, which will protect the health and safety of solid waste facility employees and the public and reduce air emissions associated with solid waste facility fires, and ensure that the collected covered products are managed in accordance with hazardous waste laws and regulations.

   This bill includes many of the critical elements of an effective product stewardship program. As with other stewardship bills, the author should continue to work with this committee, CalRecycle, and stakeholders to ensure that the program created by the bill is effective and enforceable.

   This bill does not specify the minimum number of collection sites per capita or the maximum battery size retail locations must take back. According to the author, these amounts are being negotiated with stakeholders and will be determined as negotiations continue.

Additionally, the timelines for stewardship plan submittal to DTSC and CalRecycle, and for DTSC and CalRecycle approval, appear to overlap and may need to be revised. The author should work with the departments and stakeholders to revise the timelines, if necessary.

8) **Suggested amendments**. The *committee may wish to make the following amendments to the bill:*

   a) Remove the requirement that CalRecycle must grant an exemption to a person who is not a producer. CalRecycle routinely works with interested parties to determine their roles and responsibilities under its various product stewardship programs. A process to exempt individuals that are not producers is unnecessary and adds unnecessary complexity and cost.

   b) Clarify that the stewardship plan must include plans to meet a minimum recycling efficiency rate for each battery chemistry, as established by CalRecycle.

   c) Clarify that collection sites must comply with all applicable laws, regulations, and rules to be included in the program.

   d) Authorize a producer or stewardship organization to suspend or terminate a collection site that does not comply with all applicable laws and regulations, and make a related technical and clarifying change to this provision.

   e) Require that all handling, collection, transport, and recycling of covered products comply with all applicable state and federal regulations.

   f) Clarify that retailers must begin complying with the sales prohibition, as specified, when CalRecycle approves a stewardship plan.

   g) Remove the blanket penalty exemption for any producer or stewardship organization that can demonstrate that it received false or misleading information from a member of the stewardship organization or other party.

   h) Make related technical and clarifying changes.

9) **Related legislation**. SB 1215 (Newman) is substantially similar to this bill and is awaiting hearing in the Senate Appropriations Committee.

10) **Double referral**. This bill was passed the Assembly Environmental Safety and Toxic Materials Committee 7-1 on April 5th.

REGISTERED SUPPORT / OPPOSITION:

Support

Active San Gabriel Valley
California Product Stewardship Council (CO-SPONSOR)
California Resource Recovery Association
California State Association of Counties
California Waste Haulers Council

Californians Against Waste (CO-SPONSOR)
Central Contra Costa Sanitary District
City of Colton
City of Lake Elsinore
City of Roseville
City of Thousand Oaks
City of San Jose
Clean Water Action
CR&R, Inc.
Delta Diablo
Environmental Working Group
League of California Cities
Los Angeles County Sanitation Districts
Marin Household Hazardous Waste Facility
Monterey Regional Waste Management District
Napa Recycling & Waste Services
RecycleSmart
Republic Services - Western Region
Republic Services, Inc.
Resource Recovery Coalition of California
RethinkWaste (CO-SPONSOR)
Rural County Representatives of California
Santa Clara County Recycling and Waste Reduction Commission
Sea Hugger
Stopwaste
Urban Counties of California
Waste Management
Western Placer Waste Management Authority
Zero Waste Company
Zero Waste Sonoma

Opposition

Association of Home Appliance Manufacturers
California Retailers Association
Consumer Technology Association
National Electrical Manufacturers Association
Toy Industry Association

Analysis Prepared by: Elizabeth MacMillan / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2278 (Kalra) – As Amended March 24, 2022

SUBJECT: Natural resources: biodiversity and conservation report

SUMMARY: Requires the Secretary of the California Natural Resources Agency (NRA) to prepare and submit, on or before January 1, 2024, and annually thereafter, a report to the Legislature on the progress toward achieving the directives established by Executive Order No. N-82-20, relating to, among other things, biodiversity and conservation.

EXISTING LAW, pursuant to Executive Order No. N-82-20, directs NRA to combat the biodiversity and climate crisis by, among other things, establishing the California Biodiversity Collaborative and conserving at least 30% of the state's lands and coastal waters by 2030.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

> Taking the necessary steps to build a pathway to meet the statewide 30 by 30 conservation goal is the first of many steps. Building a partnership between the legislature and agency is key to ensuring these goals are accomplished in order to preserve our lands and waters. Establishing a plan to protect 30 percent of our lands, waters, and oceans over the next decade will be crucial to addressing climate change, protecting our wildlife and their habitats, preserving natural resources around our rural and coastal communities, and improving equitable outdoor access for all Californians.
>
> With AB 2278, we will create a tool that will provide us with regulatory updates on the status and progress of 30 by 30 to establish transparency and accountability for this measure. I am optimistic that by working together, we can reach these goals for the health and wellbeing of our communities, so setting clear goals in safeguarding them is important.

2) **Ecological protection.** Within the United States, about a football field worth of natural area is converted to human development every 30 seconds. Globally, human activity has altered three-quarters of the Earth's lands. Hundreds of scientists have warned that this rapid loss of natural space is resulting in a mass extinction, exacerbated by climate change.

   As NRA eloquently puts it, California's ecosystems form the bedrock of the state's wellbeing and prosperity. Many of these ecosystems—which are vitally important to the state's water supply, agriculture, wildlife, and economy—are in dire health.

   Many of California's natural systems have been damaged or destroyed. The Central California Coast alone has suffered a 92% loss of its tidal wetlands, including ecologically priceless estuaries. An estimated 7 million acres of vernal pools existed at the time of

Spanish contact; less than 13% remain today. Climate change and habitat loss are also threatening our biological diversity and driving catastrophic wildfires, historic drought, flooding, extreme heat, coastal erosion, and sea level rise. Not surprisingly, the same forces that threaten plant and animal species also threaten human lives and livelihoods.

The state needs to build resilience by reconnecting watersheds to the ocean and rivers to floodplains, restoring wetlands, protecting critical habitats, and more. NRA is prioritizing restoration projects that do all of these things, while also promoting multiple benefits such as flood control, wildlife habitat, and climate adaptation.

3) **Climate impacts on our environment**. The Legislative Analyst's Office April 2022 report, *Climate Change Impacts Across California Crosscutting Issues,* found that increasing temperatures and severe weather events threaten state's fish and wildlife, ecosystems, and native plants, and that some of these impacts already are evident. For example, an estimated 172 million trees have died in California's forests since 2010 due to multiple years of low moisture and drought conditions, high temperatures, and resulting bark beetle infestations. These dead trees provided fuel for and likely exacerbated the severe wildfires that have occurred over the past decade, which subsequently negatively impacted those forest habitats and the wildlife they contained.

   Warmer temperatures and less water runoff during dry years also impair conditions for fish, aquatic wildlife, and migratory birds that depend on the state's rivers, streams, and wetlands. Significant declines—or potential permanent extinctions—of the state's native fish species represent not just a loss of public trust natural resources, but also impair the state's fishing industry and economy, as well as dispossess some of California's Native American communities of essential elements of their tribal culture.

4) **30x30.** The 30x30 initiative is a global movement; scientists say protecting at least 30% of the world's oceans and lands by 2030 (and 50% by 2050) is necessary to prevent mass extinctions and ecological collapse.

   President Biden issued Executive Order14008 in January 2021 to address the domestic action on climate change; Section 216 of that order includes 30x30 goals by requiring the Secretary of the Interior to submit a report to achieve the goal of conserving at least 30% of our lands and waters by 2030.

   In October 2020, Governor Newsom signed his Nature Based Solutions Executive Order N-82-20, elevating the role of natural and working lands in the fight against climate change and advancing biodiversity conservation as an administration priority. As part of this Executive Order, California is committed to the goal of conserving 30% of our lands and coastal waters by 2030.

   NRA released a draft strategy for achieving 30x30 goals in December 2021 for public comment through February 15, 2022. The draft report describes the key objectives and core commitments that are a part of California's 30x30 conservation framework; defines conservation for the purpose of California's 30x30 initiative and establishes a current baseline of conserved areas; outlines strategic actions necessary to achieve 30x30; and, introduces CA Nature, a suite of publicly available applications to identify conservation opportunities and track our collective progress.

5) **This bill** would require NRA to prepare and submit, on or before January 1, 2024, and annually thereafter, a report to the Legislature on the progress toward achieving the directives established by Executive Order No. N-82-20, relating to, among other things, biodiversity and conservation.

REGISTERED SUPPORT / OPPOSITION:

Support

Audubon California (sponsor)

Opposition

None on file.

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2944 (Petrie-Norris) – As Amended April 18, 2022

SUBJECT: Greenhouse gases: carbon capture, utilization, and sequestration

SUMMARY: Requires the Air Resources Board (ARB) to include an evaluation of how carbon capture, utilization, and sequestration (CCUS) technologies are contributing to the state's greenhouse gas (GHG) emission reduction goals in an annual report to the Legislature.

EXISTING LAW:

1) Requires ARB, pursuant to California Global Warming Solutions Act of 2006 [AB 32 (Núñez), Chapter 488, Statutes of 2006], to adopt a statewide GHG emissions limit equivalent to 1990 levels by 2020 and to use market-based mechanisms (cap-and-trade) to achieve compliance with these regulations.

2) Requires ARB to prepare and approve a scoping plan, on or before January 1, 2009, and at least once every five years thereafter, for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs.

3) Requires ARB to adopt regulations to require the reporting and verification of statewide GHG emissions and to monitor and enforce compliance with AB 32.

4) Requires ARB to make available on its website the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to ARB under AB 32 in a manner that illustrates the changes in emissions levels over time.

5) Requires ARB to annually present an informational report at a hearing of the Joint Legislative Committee on Climate Change Policies on the reported emissions of GHGs, criteria pollutants, and toxic air contaminants from all sectors covered by the scoping plan.

THIS BILL:

1) Beginning January 1, 2023 and annually thereafter, requires ARB, as part of its annual report to the Joint Legislative Committee on Climate Change Policies, to include an evaluation of how CCUS technologies are contributing to the state's efforts to achieve the goals of AB 32 and EO B-55-18.

2) Requires the evaluation to identify details of each CCUS project, including:

   a) Location;
   b) Technology;
   c) Carbon capture rate;
   d) Energy source;
   e) Energy use;

f) Air pollution;
g) Employment; and,
h) Cost-effectiveness relative to existing GHG emissions reduction measures.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

> AB 2944 requires the Air Resources Board to evaluate how carbon capture, utilization, and sequestration technologies are contributing to the state's efforts to reduce greenhouse gas emissions. This information will be valuable in informing our future decisions about how these technologies can be deployed as a part of our strategy to combat climate change.

2) **Trillion dollar technology**. The economic incentive to develop and deploy CCUS technologies is sky high. Exxon Mobil estimated earlier this month that there will be a $4 trillion market for CCUS technologies by 2050. This is about 60% of the $6.5 trillion market for oil and gas predicted for the same year. Occidental Petroleum estimated in March that CCUS could become a $3-5 trillion global industry, generating as much in earnings for the company as oil and gas generate today.

CCUS refers to technologies that remove carbon dioxide (CO_2) from large point sources, such as power plants or industrial facilities, and permanently store the CO_2 or use it for commercial purposes. CCUS can reduce emissions from chemical reactions and high-temperature processes that are difficult and expensive to decarbonize. The most widespread technologies involve chemical absorption of CO_2 into a solvent or the physical separation CO_2 from other gasses. In some limited cases, this captured CO_2 is used on-site in commercial applications such as water treatment or chemical production. The captured CO_2 can also be compressed and transported by pipeline, ship, rail, or truck to be used in off-site commercial applications, or injected into deep geological formations (including depleted oil and gas reservoirs or saline formations) which trap the CO_2 for long-term storage. More than 81% of the CO_2 captured to date has been used for oil extraction.

According to the Intergovernmental Panel on Climate Change (IPCC), the net reduction of emissions to the atmosphere through CCUS depends on the fraction of CO_2 captured, the increased CO_2 production resulting from the loss in overall efficiency of power plants of industrial processed due to the additional energy required for the CCUS, transport and storage, any leakage that occurs during transport, and the fraction of CO_2 retained in storage long-term. CCUS technologies require energy to operate, and that increased energy use (approximately 15-25%) increases direct air emissions. Current industry estimates assume that CCUS captures about 85% of the CO_2 and a 3.5% rate of leakage from fossil gas production basins and infrastructure. This capture rate applies to each emission point in a facility; however, in facilities like refineries there are numerous emission points, and CCUS technologies would not be appropriate for all emission points.

Questions remain about how effective CCUS technologies are in real world conditions, especially given that there are few full-scale facilities in operation. Chevron's Gorgon

Carbon Capture and Storage plant in Australia promised to capture 80% of Gorgon's gas field emissions over five years. However, as of July 2021, after two years in operation, the facility had captured only about half of the promised CO_2 (5 million metric tons, instead of 9.8 million metric tons). Chevron stated that more time than expected was needed to safely initiate the operation of the system.

A 2019 study by a Stanford researcher, *The Health and Climate Impacts of Carbon Capture and Direct Air Capture*, examined public data from a coal power plant with CCUS and a direct carbon capture plant. The study found that:

> Data from a coal with carbon capture and use (CCU) plant and a synthetic direct air carbon capture and use (SDACCU) plant are analyzed for the equipment's ability, alone, to reduce CO_2. In both plants, natural gas turbines power the equipment. A net of only 10.8% of the CCU plant's CO_2 -equivalent (CO_2e) emissions and 10.5% of the CO_2 removed from the air by the SDACCU plant are captured over 20 years, and only 20–31%, are captured over 100 years. The low net capture rates are due to uncaptured combustion emissions from natural gas used to power the equipment, uncaptured upstream emissions, and, in the case of CCU, uncaptured coal combustion emissions. Moreover, the CCU and SDACCU plants both increase air pollution and total social costs relative to no capture.

A 2020 study, *Explaining Successful and Failed Investments in U.S. Carbon Capture and Storage Using Empirical and Expert Assessments*, analyzed 39 CCUS projects in the United States and determined that more than 80% end in failure. The study goes on to evaluate attributes that explain project outcomes to identify how to improve prospects for CCUS investments.

In February of this year, the White House Council on Environmental Quality released new guidelines to federal agencies that are intended to ensure that the deployment of CCUS is done in a responsible manner that incorporates the input of communities and is environmentally sound, including cutting the cumulative pollution in nearby communities. The guidance includes actions that should be taken before the deployment of the technology, including:

- Evaluating the impacts of the proposed CCUS actions on potential host communities early in the planning process;
- Providing information about the effects, costs, and benefits of CCUS in advance of Tribal consultation and stakeholder engagement;
- Consulting Tribal Nations on potential CCUS impacts in a manner that strengthens nation-to-nation relationships;
- Avoiding the imposition of additional burdens on overburdened and underserved communities, including by evaluating direct, indirect, and cumulative effects and identifying and implementing appropriate mitigation and avoidance measures; and,
- Providing transparency and accountability to communities with respect to applicable mitigation measures designed to reduce environmental effects.

The IPCC states that "no single technology option will provide all of the emission reductions needed to achieve stabilization, but a portfolio of mitigation measures will be needed." This

portfolio may include CCUS when combined with other mitigation options, such as energy efficiency improvements, the switch to less carbon-intensive fuels, renewable energy sources, enhancement of biological sinks, and the reduction of non-CO_2 GHG emissions (i.e., methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrogen trifluoride).

3) **This bill**. This bill seeks to have ARB evaluate how CCUS technologies may fit into the state's GHG reduction goals. It requires the evaluation to include specified details, including the location of the technology, the type of technology used, the carbon capture rate (i.e., the actual percentage of CO_2 captured at the facility), the energy source used, the operating efficiency of the CCUS technology (i.e., how often the CCUS technology is operational), air pollution generated, employment impacts, and the cost-effectiveness of the CCUS technology.

4) **Proprietary information**. The author has requested that the bill be amended to specify that confidential and proprietary information is protected in the evaluation. ARB currently handles information designated as confidential by a submitting party in accordance with Title 17, California Code of Regulations, Sections 91000 to 19022, and the California Public Records Act. These provisions protect trade secrets and other materials exempt from disclosure. Government Code section 6254.7 defines trade secrets for purposes of air emissions data, and further states that air pollution emission data are always public records. The *committee may wish to amend the bill* to specify that any entity submitting data to ARB pursuant to the bill may designate specified materials as confidential, subject to ARB's procedures relating to confidential information pursuant to the California Public Records Act and Title 17.

REGISTERED SUPPORT / OPPOSITION:

Support

California Carbon Capture Coalition

Opposition

Central Valley Air Quality Coalition

Analysis Prepared by: Elizabeth MacMillan / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2302 (Quirk) – As Amended April 4, 2022

SUBJECT: Hydrogen underground storage: study

SUMMARY: Requests the California Council on Science and Technology (CCST) to complete a study analyzing the role of hydrogen storage and hydrogen infrastructure in the state's long-term greenhouse gas (GHG) reduction strategies.

EXISTING LAW:

1) Requires the California Energy Commission (CEC) and the California Public Utilities Commission (CPUC) to, where feasible, authorize procurement of resources to provide grid reliability services that minimize reliance on system power and fossil fuel resources. Requires the CEC and CPUC, where feasible, cost-effective, and consistent with other state policy objectives, to increase the use of large- and small-scale energy storage with a variety of technologies, including green electrolytic hydrogen, targeted energy efficiency, demand response, eligible renewable energy resources, or other renewable and nonrenewable technologies with zero o lowest feasible GHG emissions, criteria pollutants, and toxic air contaminants onsite to protect system reliability.

2) 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.

3) Requires the CPUC, Air Resources Board (ARB), and CEC to consider green electrolytic hydrogen an eligible form of energy storage, and the potential uses for the technology.

4) Requests CCTS report on up-to-date information on all operating underground natural gas storage fields in California, including:

    a) The risks the facilities pose to health, safety, environment, and infrastructure;
    b) Whether California needs underground gas storage for energy reliability; and,
    c) How implementation of the state's climate policies change the future need for gas storage.

THIS BILL:

1) Requests the CCST, in consultation with the CEC, to undertake, and within 12 months of entering into a contract, complete a study analyzing the role of hydrogen underground storage facilities and hydrogen infrastructure in the state's long-term GHG reduction strategies. Requires the study to include an analysis of pure hydrogen and blends of hydrogen and natural gas in all considered scenarios.

2) Requires the study to include, but not be limited to:

a) A review of ongoing and nascent efforts to quantify demand for hydrogen resulting from the inclusion of hydrogen as a fuel in electrical grid use cases, the transportation sector, fuel switching in existing natural gas use cases, and all other relevant applications in order to reach the state's long-term GHG reduction goals;

b) An analysis of the financial viability and cost-effectiveness of using pipeline injection, onsite electrical generation, hydrogen underground storage, and other relevant hydrogen technologies that can be leveraged to meet the forecasted demand, and the impact of using existing infrastructure when possible;

c) Identification of suitable locations for financially viable and cost-effective hydrogen technologies, considering proximity to the electrical grid infrastructure, environmental quality, and public health;

d) An analysis of existing regulations, codes, and standards that govern hydrogen underground storage;

e) An analysis of the costs and risks associated with repurposing existing facilities into sites suitable for hydrogen underground storage;

f) An analysis of costs and risks associated with geologic hydrogen underground storage, including underground hard rock storage;

g) Identification of suitable locations for hydrogen underground storage in the state considering proximity to electrical grid infrastructure, environmental quality, and public health, and including other factors if appropriate; and,

h) Policy recommendations for how to safely, affordably, and effectively create hydrogen underground storage that meets forecasted demand.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

> In 2018, California enacted Senate Bill 100 [(De León), Chapter 312, Statutes of 2018], which set a policy requiring that renewable and zero-carbon energy resources supply 100 percent of electric retail sales to customers by 2045. One of the biggest challenges of instituting a low-carbon or carbon-free electricity sector has been effectively integrating variable resources like wind and solar into the electrical grid, while maintaining resiliency. Large-scale hydrogen storage will be required as California transitions to a carbon neutral and clean energy economy.
>
> While large-volume underground hydrogen storage has been demonstrated safe and effective, further research is needed to assess California's specific areas of opportunity for hydrogen storage within existing underground natural gas and depleted oil reservoirs. The ubiquitous nature of hydrogen as a decarbonization tool, while presenting numerous benefits, also presents certain challenges in terms of optimization and efficiency. Specifically, hydrogen's potential for delivering

truly decarbonized economies will depend on identifying the most suitable storage method for each application. Each storage site has unique features, and as such, best practices for evaluating the safety of hydrogen storage is required including accident and hazard analysis, management of safety-critical actions, as well as determining how hydrogen will interact with specific underground microbes are needed to ensure future viability.

2) **California Council on Science and Technology**. CCST was established in 1988 and modeled after the U.S. National Academies. CCST convenes experts from California's academic and research institutions to provide objective advice and analysis in response to requests from the governor, Legislature, and other state entities on policy issues relating to science and technology. CCST is operated as a 501(c)(3) nonprofit governed by a Board of Directors; its core funding is provided by the following institutions: University of California; California State University; California Community Colleges; California Institute of Technology; Stanford University; NASA Ames Research Center; NASA Jet Propulsion Laboratory; Lawrence Berkeley National Laboratory; Lawrence Livermore National Laboratory; Sandia National Laboratories; and, SLAC National Accelerator Laboratory.

   CCST's mission is carried out via two primary programs: science advice and the Science Policy Fellows. CCST delivers policy-relevant science information via briefings, workshops, and peer-reviewed reports. CCST also recruits, trains, and places PhD scientists and engineers in a year-long fellowship in California state government. The CCST Science Policy Fellows Program is funded by a statewide network of philanthropists and foundations, as well as support from the state budget.

3) **CCST reports**. CCST works with their academic and research institution partners and other experts to develop assessments of the available information around a specified topic. CCST gathers information through meetings with experts, reviews of scientific literature, submission of information by outside parties, and investigations by the author team and/or CCST staff. These commissioned reports then undergo independent external peer review. For example CCST completed a report on underground natural gas storage in 2018 titled, *Long-Term Viability of Underground Natural Gas Storage in California: An Independent Review of Scientific and Technical Information.* CCST selected Jens T. Birkholzer, PhD and Jane C.S. Long, PhD to co-chair a 12-member report steering committee, which oversaw 21 report authors with expertise in the subject areas covered by the report. Each chapter of the report was subject to a peer review process. CCST reports are publicly available on the CCST website.

4) **Hydrogen**. Hydrogen is the lightest element and can be combusted with pure oxygen to produce only energy and water. It typically exists in a gaseous state, though it can be cooled and compressed into a liquid. Hydrogen can be used in power generation, transportation, and industrial applications, either through electricity generation in fuel cells or through combustion in place of fossil fuels. It can also be stored for long periods. Displacing fossil fuels with hydrogen may reduce GHG emissions. Because it can be stored, hydrogen ay also support electric grid reliability.

   Hydrogen is referred to using different colors that indicate how the hydrogen is produced. Green hydrogen refers to hydrogen produced through water electrolysis using clean electricity from surplus renewable energy sources, such as solar or wind; this process does

not emit carbon dioxide (CO_2). Blue hydrogen is produced using steam reforming using fossil fuels (usually natural gas) and steam, which produces hydrogen and CO_2; the CO_2 is captured and stored. Grey hydrogen, the most common form of production, uses the same steam reforming process as blue hydrogen, but does not capture the CO_2 generated. Black and brown hydrogen is produced from coal through gasification; this process generates CO_2 and carbon monoxide, making this the most polluting hydrogen production process. Pink, red, and purple hydrogen are generated using nuclear energy using various processes. White hydrogen is naturally-occurring hydrogen that already exists in underground deposits. Turquoise and yellow hydrogen were recently added to the hydrogen color wheel, representing hydrogen generated using methane pyrolysis and electrolysis using solar, respectively.

In addition to the potential air and GHG emissions associated with hydrogen generation, there are challenges associated with hydrogen storage and use, including future storage sites, the potential to leverage existing infrastructure, and safety and environmental risks associated with its storage, transport, and usage.

5) **Suggested amendment**. While this bill covers a wide range of issues, it does not include the air and climate impacts of hydrogen production and storage. This information is critical to make informed decisions about hydrogen storage policy. The *committee may wish to amend the bill* to require the study to include an analysis of GHG emission, criteria pollutant, and toxic air contaminant impacts, including the emissions associated with obtaining and converting hydrogen feedstocks.

   Should this bill move forward, the author may wish to work with CCST to narrow the scope of the bill. Currently, the bill requests a study that very broadly covers nearly every aspect of hydrogen use, which may limit the depth of the study. The bill may result in more useful and detailed information if its focus is narrowed.

6) **Double referral**. This bill passed the Assembly Utilities and Energy Committee 12-0 on March 30th.

REGISTERED SUPPORT / OPPOSITION:

Support

California State Pipe Trades Council

Opposition

None on file.

Analysis Prepared by: Elizabeth MacMillan / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2563 (Quirk) – As Amended April 18, 2022

SUBJECT: Air pollution: permits: mobile fueling on-demand tank vehicles

SUMMARY: Requires each air district to establish a permit program, as specified, or adopt an exemption, for mobile fueling on-demand (MFOD) tank vehicle operations, based on standards established by the Air Resources Board (ARB).

EXISTING LAW:

1) Establishes ARB as the air pollution control agency in California and requires the ARB, among other things, to control emissions from a wide array of mobile sources and coordinate with local air districts to control emissions from stationary sources.

2) Requires, subject to the powers and duties of the ARB, air districts to adopt and enforce rules and regulations to achieve and maintain the state and federal air quality standards in all areas affected by emission sources under their jurisdiction, and to enforce all applicable provisions of state and federal law.

3) Authorizes air districts to establish, by regulation, a permit system that requires that before any person builds, erects, alters, replaces, operates, or uses any article, machine, equipment, or other contrivance which may cause the issuance of air contaminants, the person obtain a permit to do so from the air pollution control officer of the district.

4) Generally prohibits a person, except as specified, from discharging air contaminants or other material that cause injury, detriment, nuisance, or annoyance or endanger the comfort, repose, health or safety to any considerable number of persons, or to the public, or that cause, or have a tendency to cause, injury or damage to a business or property.

5) Authorizes the governing board or the hearing board of an air district, after notice and a hearing, to issue an order for abatement whenever it finds that any person is constructing or operating any article, machine, equipment, or other contrivance without a required permit, or is in violation of any order, rule, or regulation prohibiting or limiting the discharge of air contaminants into the air.

6) Requires every air district to establish, by regulation, a program to provide for the expedited review of permits in order to reduce unnecessary delay in the issuance of those permits and to protect the public health and the environment.

7) Prohibits a person from installing or maintaining a stationary gasoline tank larger than 250 gallons that is not equipped for loading in one of several different ways that limit vapor release, with certain exceptions, or unless the tank is equipped with equally efficient apparatus which has been approved by the air district.

8) Requires ARB to adopt test procedures to determine the compliance of vapor recovery systems of cargo tanks on tank vehicles used to transport gasoline. Requires ARB to certify

the cargo tank vapor recovery system upon a determination that the system meets requirements and charge a reasonable fee for certification. Authorizes ARB to test the vapor recovery system of a cargo tank vehicle used to transport gasoline.

9) Requires ARB to adopt procedures for determining the compliance of any system designed for the control of gasoline vapor emissions during gasoline marketing operations, including storage and transfer operations, with performance standards that are reasonable and necessary to achieve or maintain any applicable ambient air quality standard. Prohibits an air district from implementing any stricter procedures or performance standards until at least two systems meeting the stricter performance standards have been certified by ARB.

10) Requires every service station, with certain exceptions, to provide, upon request, refueling service to a disabled driver of a vehicle that displays a disabled person's plate or placard, or a disabled veteran's plate, issued by the Department of Motor Vehicles.

THIS BILL:

1) Defines "mobile fueling on-demand tank vehicle" as a tank truck or trailer that is equipped with an onboard cargo tank system designed to load, transport, and transfer gasoline directly from the onboard cargo tank into a motor vehicle fuel tank and emits less than 10 tons per year of any single pollutant and less than 20 tons per year of all pollutants.

2) Requires each air district to establish a permit program for MFOD tank vehicle operations located in its jurisdiction that requires those operations to adhere to the strictest emission control standards established by the state for the loading, storage, and transfer of gasoline from those vehicles. Requires a MFOD permit program to consist of all of the following:

    a) A consistent permitting process for a source that would otherwise require more than one permit that provides that the operation will be permitted on a single-facility or single-project basis as a single-volume source, provides a single point of contact for the permit applicant, and allows an operation to be reviewed and permitted on a single, consolidated schedule.

    b) An expedited permit review and fee schedule, based upon the types and amount of pollution emitted from operations, requiring a district to classify MFOD operations as minor, moderate, and major sources of air pollution, and establish a schedule that sets forth specific deadlines, based on each classification, for an air pollution control officer to notify a permit applicant in writing of the approval or disapproval of a permit application.

    c) Applicability determination standards for new source review that shall be made equivalent to the level determined by ARB to be the best available control technology for a MFOD tank vehicle gasoline dispensing system in California.

    d) Consistent definitions of modification, major modification, routine maintenance or repair, and replacement.

    e) Calculation methodology, thresholds, and other procedures of new source review that reflect the best performance procedures achieved in practice by commercially available MFOD tank vehicle gasoline dispensing system technologies certified by ARB.

f) Procedures of new source review, including:

i) Definitions and requirements applied under new source review regulations.

ii) Requirements to obtain new source review or other permits to construct or operate prior to commencement of construction or operation.

g) A fee schedule based upon reasonable costs necessary to administer enforcement for the total throughput of operations in the district.

3) Requires a district to distinguish between retail and nonretail MFOD vehicle operations.

4) Provides that the bill does not apply to:

a) A tank vehicle that is used primarily for the fueling of implements of agriculture or husbandry.

b) A district that has already instituted, by regulation, a permitting process for retail MFOD tank vehicle operations located in its jurisdiction before January 1, 2023, and that requires those operations to adhere to the strictest emission control standards established by the state through the application of a commercially available emission limitation or control technique that has been certified by ARB and achieved in practice for the loading, storage, and transfer of gasoline from those vehicles.

c) A district that has explicitly exempted retail MFOD tank vehicle operations, including mobile refueling or any other vehicle-to-vehicle refueling, from applicable rules or regulations of the district.

5) Provides that the bill does not prohibit a district from applying a standard established pursuant to the bill in a manner that accounts for local and regional air quality needs and requirement established within each district.

6) Includes extensive findings regarding MFOD services.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. California's 35 air districts are responsible for regional air quality planning, monitoring, and stationary source and facility permitting. The districts administer air quality improvement grant programs and partner with ARB in efforts to ensure that California meets state and federal air quality goals.

Mobile fueling uses a vehicle equipped with a gasoline cargo tank that dispense gasoline at various locations. Gasoline is loaded into the mobile fueler at either the bulk terminal or at a stationary gasoline dispensing facility. Mobile fueling has existed for decades and been more commonly used for large fleets that accept bulk deliveries of thousands of gallons of diesel fuel.

More recently companies have been making this option available for individual deliveries to personal vehicles at a person’s home or place of employment. A 2019 article states, “Booster

has emerged as the market leader. The four-year-old company delivers millions of gallons per month in 20 cities, using its purple-branded trucks to fill up tanks on corporate campuses. Fortune 500 giants such as eBay, HPE, and Cisco use Booster to provide a fueling perk for employees. Health clubs and retail centers are also customers." Since mobile fuelers can move to various locations, mobile fueling operations present unique challenges that are different than stationary gasoline dispensing facilities, including knowing the location of dispensing activities and verifying compliance.

Under current law, air districts inspect gasoline dispensing facilities, or gas stations. Gasoline contains volatile organic compounds (VOCs) and hazardous air pollutants such as benzene, toluene, ethylbenzene, and xylene. VOCs, along with oxides of nitrogen (NO_x) emitted from the combustion of fuels, react in the atmosphere to form ground-level ozone, which is a federal and state regulated pollutant. Breathing ozone can trigger a variety of health problems, particularly for children, the elderly, and people of all ages who have lung diseases such as asthma. Ground level ozone can also have harmful effects on sensitive vegetation and crops. To combat these harmful effects, gas stations utilize Phase II vapor recovery systems; nozzles which reduce refueling-related emissions even in the absence of onboard refueling vapor recovery (ORVR) technology on the vehicle itself. ORVR is standard technology for vehicles that are model year 2000 and newer.

In 2018, Booster Fuels approached SCAQMD and applied for a research and development permit for five retail mobile fuelers. These mobile fueling units were unable to be permitted under existing local rules because they are not equipped with an ARB-certified Phase II vapor recovery system. On February 19, 2021, Booster Fuels received final certification of their model with ARB Executive Order (EO) VR-601-A14. This certification does not include Phase II vapor recovery equipment and limits operation to only fueling ORVR-equipped motor vehicles.

ARB recently raised concerns about ORVR not being adequate to eliminate the need for additional regulation by air districts. In its transmittal letter for the EO certifying Booster Fuels Mobile Fueling On-Demand Tank Vehicle Gasoline Dispensing System for ORVR Vehicles, ARB states, "Unlike gas stations where potential health risks can be more readily ascertained due to their nature as stationary sources, Booster's mobile operation would require submission of additional information where requested by the district to ascertain potential risks. Therefore, it is important for the District to know the location of each operating mobile fueling on-demand tank vehicle. Booster Fuels may be asked to facilitate and accommodate ARB and District's inspections of Booster's operations at any location where Booster operates, to ensure compliance with ARB's EO and District requirements."

Mobile fueling presents unique challenges relative to stationary gasoline dispensing facilities because the fueling location is not fixed and there is no specific day and time that fueling is occurring at each location. Adding to the complexity of regulating mobile fueling is the need for verification that motor vehicles fueled must be equipped with ORVR for mobile fuelers that are dispensing with a CARB certified non-vapor recovery components. In the past, SCAQMD staff has expended significant resources verifying ORVR status, determining the amount of fuel transferred into a mobile fueler is representative of the amount of the fuel dispensed, and surveilling to insure that mobile fuelers are not splash loading.

2) **Author's statement**:

Current regulations on the transport and transfer of vehicle fuel were originally designed for traditional gas stations and could not have predicted the unique characteristics of the retail mobile fueling industry as it is today. Because mobile fueling involves the transport and transfer of emissive and flammable fuel, it is important that air quality districts oversee mobile fueling providers to ensure the industry's compliance with ambient air quality standards. AB 2563 establishes local permit programs to ensure mobile fueling activity attains high ambient air quality standards and allows compliant mobile fuelers to cross jurisdictions. It will also acknowledge the mobile nature of the emerging industry by initiating consistent fees, vehicle maintenance requirements, and formulas that are used to calculate air quality attainment by each air district.

3) **The purpose of the bill seems to be to force, and tie, the hands of air districts**. This bill requires each air district to either adopt a MFOD permit program or adopt an exemption. If a district adopts a permitting program, the district must rely on ARB-certified MFOD equipment, which seems to be intended to prevent a district from requiring a Phase II nozzle.

   The bill presumes that ARB's standards reflect the strictest emission control requirement achieved in practice, when that may not be the case. Going forward, the structure of the bill will rely on ARB keeping pace with new emissions control technology. Otherwise, the bill may force a district to apply outdated standards.

4) **It's not just about ambient air quality standards**. The findings and operative provisions of the bill focus on ambient air quality standards, and never mention toxic air contaminants. The bill should clearly address the need to control emissions of benzene and other air toxics.

5) **Double referral**. This bill passed the Transportation Committee by a vote of 9-1 on April 4.

REGISTERED SUPPORT / OPPOSITION:

Support

Booster Fuels
Breathe California
California Fire Chiefs Association
California Foundation for Independent Living Centers
Fire Districts Association of California
National Multiple Sclerosis Society
United Spinal Association

Opposition

Bay Area Air Quality Management District
California Air Pollution Control Officers Association
Sierra Club

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2442 (Robert Rivas) – As Amended April 5, 2022

SUBJECT: Climate change

SUMMARY: Adds "climate change" to the definition of disaster in the California Disaster Assistance Act (CDAA); makes the use of natural infrastructure to mitigate climate change disasters reimbursable under the CDAA; and, requires local agencies to incorporate measures designed to reduce greenhouse gas (GHG) emissions in the next update of their General Plan.

EXISTING LAW:

1) Pursuant to the Planning and Zoning Law:

    a) Requires the legislative body of a city or county to adopt a comprehensive general plan that includes various elements, including a safety element. Requires the safety element to be revised at a specified time period, or as necessary to address climate adaptation and resiliency strategies applicable to the city or county.

    b) Requires the safety element to include, among other things, a set of adaptation and resilience goals, policies, and objectives based on specified information for the protection of the community, and a set of feasible implementation measures designed to carry out those goals, policies, and objectives.

2) Pursuant to the CDAA:

    a) Requires the Director of the Governor's Office of Emergency Services (Cal OES) to provide financial assistance to local agencies for their personnel costs, equipment costs, and the cost of supplies and materials used during disaster response activities, incurred as a result of a state of emergency proclaimed by the Governor.

    b) Requires the director to authorize the replacement of a damaged or destroyed facility, whenever a local agency and the director determine that the general public and state interest will be better served by replacing a damaged or destroyed facility with a facility that will more adequately serve the present and future public needs than would be accomplished merely by repairing or restoring the damaged or destroyed facility. Facility includes any public facilities owned by a local agency, such as any flood control, sewage treatment and collection, water supply and distribution, watershed development, or airport facility; any non-federal aid street, road, or highway; any public building, structure, or system, including those used for education, recreational, or cultural purposes; or any park.

    c) Authorizes the director to implement mitigation measures when the director determines that the measures are cost effective and substantially reduce the risk of future damage, hardship, loss, or suffering in any area where a state of emergency has been proclaimed by the Governor.

3) Pursuant to the Global Warming Solutions Act of 2006, requires the Air Resources Board (ARB) to adopt a statewide GHG emissions limit equivalent to 1990 levels by 2020 and to adopt rules and regulations to achieve maximum technologically feasible and cost-effective GHG emission reductions.

4) Establishes the Integrated Climate Adaptation and Resiliency Program (ICARP) through the Office of Planning and Research (OPR) to coordinate regional and local adaptation efforts with state climate adaptation strategies. Requires ICARP to include:

    a) Working with and coordinating local and regional adaptation efforts, including developing tools and guidance, promoting and coordinating state agency support, and informing state-led programs, planning processes, grant programs, and guidelines development through regular coordination among state agencies, the Climate Action Team, and the Strategic Growth Council.

    b) Establishes an advisory council, with a range of experience, to support OPR by providing scientific and technical support and to facilitate coordination among state, regional, and local agency efforts to adapt to the impacts of climate change.

    c) Requires OPR to coordinate with appropriate state, regional, and local agencies to establish a clearinghouse of climate adaptation information, as specified, to guide decision makers when planning and implementing climate adaptation projects.

THIS BILL:

1) Redefines "disaster" under CDAA to include climate change.

2) Authorizes, for climate change and disasters related to climate, mitigation measures to include, but not be limited to, measures that reduce emissions of GHGs, the preservation of open space, improved forest management and wildfire risk reduction measures, and other investments in natural infrastructure, as the term "natural infrastructure."

3) Requires a local jurisdiction, when revising its local hazard mitigation plan or its safety element, to additionally include:

    a) A set of feasible measures designed to reduce emissions of GHGs resulting in climate change; and,
    b) A set of measures designed to use natural features and ecosystem processes in or near identified at-risk areas threatened by the impacts attributable to climate change.

4) Provides no reimbursement is required by this bill pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

Current law is inconsistent as to whether climate change is a hazard in and of itself, or whether it is merely a "hazard modifier" that increases the risks associated with existing hazards like storms or floods. Assembly Bill 2442 will clarify that climate change is itself a hazard as well as a hazard modifier, which will enable better integration of climate mitigation and adaptation planning at the state and local levels as well as open up new sources of state and federal funding for climate resilience.

2) **California Disaster Assistance Act.** The CDAA authorizes the director of Cal OES to administer a disaster assistance program that provides financial assistance from the state for costs incurred by local governments as a result of a disaster event. Funding for the repair, restoration, or replacement of public real property damaged or destroyed by a disaster is made available when the director concurs with a local emergency proclamation requesting state disaster assistance.

   When there is a federal declaration, the Federal Emergency Management Agency (FEMA) pays 75%, and the state may pay up to 75% of the remaining 25% of eligible costs for any state-declared emergency (18.75%of the total). For some statutorily specified disasters, the state may pay up to 100% of the non-federal eligible disaster mitigation costs. Existing law prohibits the state share for any eligible project from exceeding 75% of state eligible costs unless the local agency has adopted a local hazard mitigation plan as part of the safety element of its general plan.

   AB 2442 expands the categories of disasters that are eligible for reimbursement under the CDAA to include climate change. This bill also expands the types of activities eligible for reimbursement under the CDAA to include nature-based mitigation measures designed to lessen the impact of disasters. These two provisions expand the planning activities local agencies must include in their hazard mitigation plans. Local agencies will need to update their hazard mitigation plans to reflect the new requirements added by this bill to be reimbursed for more than 75% of eligible costs.

3) **Local climate planning**. The relevant sections of Cal OES's regulations define "Hazard Mitigation" as "any cost effective measure which will reduce the potential for damage to a facility from a disaster event." (Title 19 California Code of Regulations (CCR) § 2900(n)) They also define "disaster" as "a fire, flood, storm, tidal wave, earthquake, terrorism, epidemic, or other similar public calamity that the Governor determines presents a threat to public safety." (CCR § 2900(g)) The term "hazard" is undefined. California's 2018 State Hazard Mitigation Plan defines "hazard" as "an event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural losses, damage to the environment, interruption of business, or other types of harm or loss."

   Therefore, the term "hazard," with respect to climate change, is not consistently defined. In some instances, climate change could be interpreted as a hazard, and in other cases the interpretation is narrower, characterizing climate change as a hazard modifier or additional risk factor. Under California hazard law, certain activities, including hazard mitigation activities that are cost effective and substantially reduce the risk of future loss are eligible for reimbursement under the CDAA. It is not clear if climate mitigation activities would be eligible as hazard mitigation activities.

   The Nature Conservancy explains:

AB 2442 will clarify that climate change is itself a hazard as well as a hazard modifier, which will enable better integration of climate mitigation and adaptation planning at the state and local levels.

The lack of clarity in current law has caused confusion among state and local government officials tasked with hazard mitigation planning. For example, several counties (including San Francisco and Santa Cruz) have identified climate change as a standalone hazard in their most recent Local Hazard Mitigation Plans, while the rest treat it as a hazard modifier.

The result is inconsistent approaches to climate mitigation and adaptation planning across the state, which can lead to state and local government agencies missing opportunities to integrate climate mitigation and adaptation planning, maximize benefits, and access new funding sources to fund climate resiliency.

4) **Nature-based solutions**. Natural lands are a critical resource to build resilience to the impacts of climate change. In October 2020, Governor Newsom called for accelerated use of nature-based solutions to deliver on California's climate change goals through Executive Order N-82-20. Nature-based solutions include measures that protect open space, restore ecosystem health, and provide greater resilience to wildfire. These solutions are important strategies for addressing climate impacts through adaptation or mitigation. For example, restoration of floodplains and marshes can provide protection against the impacts of sea level rise and/or flooding due to changes in rain patterns.

   AB 2442 will help incentivize nature-based solutions that both mitigate climate change and help local jurisdictions adapt to its impacts.

5) **Double Referral.** This bill passed the Assembly Local Government Committee 6-2 on April 20th.

REGISTERED SUPPORT / OPPOSITION:

Support

California Native Plant Society
Defenders of Wildlife
The Nature Conservancy (sponsor)

Opposition

None on file.

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2656 (Ting) – As Amended April 18, 2022

SUBJECT: Housing Accountability Act: disapprovals: California Environmental Quality Act

SUMMARY: Adds two actions under the California Environmental Quality Act (CEQA) review process – denying an exemption and requiring further environmental study – to the definition of "disapproval" of a housing development project under the Housing Accountability Act (HAA), creating a private right of action under the HAA to sue a lead agency over these CEQA actions and seek a court order to comply with the HAA, including requiring the local agency to approve the project.

EXISTING LAW:

1) CEQA requires lead agencies with the principal responsibility for carrying out or approving a proposed project to prepare a negative declaration, mitigated negative declaration, or environmental impact report (EIR) for this action, unless the project is exempt from CEQA. CEQA includes several statutory exemptions, as well as categorical exemptions in the CEQA guidelines, for housing projects.

2) Authorizes judicial review of CEQA actions taken by public agencies, following the agency's decision to carry out or approve the project. Challenges alleging improper determination that a project may have a significant effect on the environment, or alleging an EIR doesn't comply with CEQA, must be filed in the Superior Court within 30 days of filing of the notice of approval. Challenges alleging that a public agency has improperly determined that a project is not subject to CEQA must be filed within 35 days of the filing of the notice of exemption, or within 180 days of the agency's approval of the project if no notice is filed. The courts are required to give CEQA actions preference over all other civil actions.

3) Establishes the HAA, which provides the following:

    a) That a local government must not disapprove or render infeasible a housing development project that includes 20 percent of its units for lower income households or all of its units for moderate-income households unless it makes written findings, supported by a preponderance of the evidence in the record, that specified conditions are met.

    b) That a local government must not disapprove or reduce the proposed density of a housing development project that does not meet affordability criteria, but complies with applicable, objective general plan, zoning, and subdivision standards in effect at the time that the application was deemed complete, unless it makes specified written findings.

    c) That disapproval of a housing development project includes any instance in which a local agency does either of the following:

i) Votes on a proposed housing development project application and the application is disapproved, including any required land use approvals or entitlements necessary for the issuance of a building permit; or

ii) Fails to comply with the time periods specified in the Permit Streamlining Act (PSA).

d) Authorizes the applicant, a person who would be eligible to apply for residency in the housing development project or emergency shelter, or a housing organization to bring an action to enforce this section; and if the court finds the local agency in violation of the HAA, a judge may order compliance with the HAA, including requiring the local agency to approve the project.

e) Provides that a petition to enforce the HAA must be filed within 90 days from the later of (1) the effective date of a decision of the local agency imposing conditions on, disapproving, or any other final action on a housing development project or (2) the expiration of the time periods under the PSA.

f) Requires a court to award reasonable attorney's fees and costs of suit to the plaintiff or petitioner, except under extraordinary circumstances in which the court finds that awarding fees would not further the purposes of the HAA.

g) Permits the Department of Housing and Community Development (HCD) to enforce the HAA, including that they may refer violations of the HAA to the Attorney General.

h) Provides that nothing in the HAA shall be construed to relieve the local agency from complying with CEQA.

4) Establishes the PSA, which, among other things, establishes time limits within which state and local government agencies must either approve or disapprove permits.

THIS BILL adds the following actions by a local agency to the HAA definition of "disapprove the housing development project":

1) Deny an exemption from CEQA for which the project is eligible, with the determination based on the record before the local agency.

2) Require further environmental study to adopt a negative declaration or addendum, or to certify an EIR, for the project, notwithstanding a legally sufficient basis in the record before the local agency to adopt a negative declaration or addendum or to certify an EIR without further study.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

The Legislature first passed the HAA in 1982 to limit the ability of local agencies to deny qualifying housing projects from being built in their jurisdiction. Over the past several

years, the Legislature has strengthened the HAA and, in response, some cities resorted to far-fetched arguments to deny valid CEQA clearances to projects the HAA protects. For example, agencies have used redundant environmental review to indefinitely delay projects or to pressure developers into agreeing to a reduction in density. AB 2656 clarifies that the wrongful denial or withholding of a CEQA clearance to which a housing development is legally entitled to, violates the HAA.

The HAA provides remedy for project delays by declaring violations of the Permit Streamlining Act (PSA) to be violations of the HAA. However, the PSA "clock" does not start to run until a city completes its CEQA review. Consequently, the PSA/HAA cannot be enforced and cities may indefinitely delay issuing a valid CEQA clearance to which the project is legally entitled.

In November 2021, HCD sent a letter to the city and county of San Francisco about projects on Stevenson Street and O' Farrell Street arguing that wrongfully denying CEQA clearance is a violation of the HAA. The projects were both affordable housing developments approved by the Planning Commission. However, despite going through legally sufficient environmental study, the Board of Supervisors required the projects to complete further environmental review based on vague concerns without instructions for actionable remedies. Legal experts argue that this an open question of law that needs to be resolved.

2) **Should an interim CEQA action be equated to project denial**? Housing projects are eligible for a variety of statutory and categorical exemptions under CEQA. However, whether a particular project meets the conditions to be approved via exemption depends on the details of the project and the exemption claimed. Housing projects are often eligible for multiple exemptions, so one exemption could be "denied," and another exemption approved. Or a project could fail to get an exemption it is otherwise eligible for due to cumulative impacts or another exception in the CEQA Guidelines. Regardless, the decision regarding eligibility of a project for exemption is often made by agency planning staff at the beginning of the administrative process. In other cases, no exemption is claimed or used, and instead the project is approved via negative declaration or more thorough review, including the possibility of requiring further environmental study. None of these actions during the CEQA review process is the same as the agency's final action to deny the project made, for example, by a vote of the legislative body.

   While proponents of this bill may claim that denial of an exemption or requiring further environmental study are tantamount to project denial, these are subjective and interim decisions, and not equivalent to a council vote or other final decision on a project. This bill allows a lawsuit based on an interim decision, before the record is complete, before administrative remedies are exhausted, and before the project has been approved or denied.

3) **Drafting issues**. The bill in internally inconsistent in two respects. First, if the result of a lawsuit based on a CEQA decision is a court order to approve the project before CEQA review is complete, then the result relieves the local agency from complying with CEQA, an outcome expressly prohibited by the HAA, as well as a violation of CEQA. Under current law, the HAA is harmonized with CEQA. This bill sets up an obvious conflict with CEQA.

Second, the 90-day statute of limitations under the HAA is tied to final action on the project, so a lawsuit based on an interim CEQA decision, prior to final action on the project, would appear to be invalid.

The bill's finding purport that its amendments to the HAA is a clarification of existing law, which is not correct. The denial of a CEQA clearance is not encompassed in the HAA's existing definition of disapproval. If it was, the bill wouldn't be necessary.

4) **Double referral**. This bill passed the Housing and Community Development Committee by a vote of 8-0 on April 20.

REGISTERED SUPPORT / OPPOSITION:

Support

San Francisco Bay Area Planning and Urban Research Association (SPUR) (sponsor)
Abundant Housing LA
Bay Area Council
California Building Industry Association
California Hispanic Chamber of Commerce
California Housing Consortium
California Housing Partnership Corporation
California YIMBY
CivicWell
East Bay YIMBY
Grow the Richmond
Habitat for Humanity California
Housing Action Coalition
Mountain View YIMBY
Northern Neighbors
People for Housing - Orange County
San Francisco YIMBY
San Luis Obispo YIMBY
Sand Hill Property Company
Santa Cruz YIMBY
SV@Home Action Fund
The Two Hundred
Urban Environmentalists
YIMBY Action

Opposition

State Building and Construction Trades Council of California

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2816 (Ting) – As Amended April 6, 2022

SUBJECT: State Air Resources Board: zero-emission incentive programs: requirements.

SUMMARY: Requires the Air Resources Board (ARB) to determine zero emission vehicle (ZEV) incentive amounts based on the average annual gallons of gasoline or diesel that the applicant's vehicle consumed.

EXISTING LAW:

1) Establishes ARB as the air pollution control agency in California and requires ARB, among other things, to control emissions from a wide array of mobile sources and coordinate with local air districts to control emissions from stationary sources in order to implement the Federal Clean Air Act.

2) Requires ARB, pursuant to California Global Warming Solutions Act of 2006 [AB 32 (Núñez), Chapter 488, Statutes of 2006], to adopt a statewide GHG emissions limit equivalent to 1990 levels by 2020 and to use market-based mechanisms (cap-and-trade) to achieve compliance with these regulations.

3) Establishes, pursuant to the Clean Energy and Pollution Reduction Act of 2015, clean energy, clean air, and greenhouse gas (GHG) reduction goals, including reducing greenhouse gases (GHG) to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

4) Establishes the Charge Ahead California Initiative pursuant to SB 1275 (de León), Chapter 530, Statutes of 2014, that, among other things, includes the goal of placing at least one million ZEV and near-zero emission vehicles (NZEV) into service by January 1, 2023, and increasing access to these vehicles for disadvantaged, low-income, and moderate income communities and consumers.

5) Establishes the Air Quality Improvement Program (AQIP), administered by ARB in consultation with local air districts, to fund programs that reduce criteria air pollutants, improve air quality, and provide research for alternative fuels and vehicles, vessels, and equipment technologies.

6) Establishes the Clean Cars 4 All Program (CC4A) to be administered by ARB to focus on achieving reductions in the emissions of GHG, improvements in air quality, and benefits to low-income state residents through the replacement of high-polluter motor vehicles with cleaner and more efficient motor vehicles or a mobility option. Requires ARB to set specific, measurable goals for the replacement of passenger vehicles and light- and medium-duty trucks that are high polluters.

7) Establishes the Clean Vehicle Rebate Project (CVRP) established as a part of the Air Quality Improvement Program.

8) Establishes the Clean Vehicle Assistance Program (CVAP) established as a part of the Air Quality Improvement Program.

THIS BILL:

1) Provides that the provisions of this bill apply to ZEV incentive programs that receive funding from, or are administered by, ARB, as applicable, including, but not limited to, all of the following:

   a) The Clean Cars 4 All Program;
   b) The Clean Vehicle Rebate Project; and,
   c) The Clean Vehicle Assistance Program.

2) Requires, on or before January 1, 2024, ARB to develop a tool to calculate the average annual gallons of gasoline or diesel that a particular vehicle has used. Requires the tool to calculate the average annual gallons of gasoline or diesel that a particular vehicle has used by using both of the following:

   a) Publicly available data on the miles per gallon rating of the make, model, and year of the vehicle; and,
   b) The odometer reading at the time the applicant registered the vehicle, and the current odometer reading.

3) Requires ARB to make the tool publicly available on its website to enable potential applicants of a ZEV incentive program to estimate the incentive amount they will receive under the particular program.

4) Requires ARB to ensure that beginning January 1, 2024, incentives awarded under a ZEV incentive program are awarded based on the average annual gallons of gasoline or diesel that the applicant's vehicle consumed, as determined using the tool. Requires ARB to set the amount of the incentive at a level that maximizes the displacement of gasoline or diesel and the reduction of criteria pollutants per dollar spent.

5) Requires ARB, to maximize the equity benefits of an incentive provided under a ZEV incentive program, to ensure that additional per gallon incentive payments are provided to an applicant of a ZEV incentive program if the applicant is low or moderate income.

6) Authorizes ARB to require that the applicant sell or otherwise surrender the internal combustion engine vehicle on which the incentive payment is based.

7) Requires, notwithstanding any other law, the maximum amount of an incentive provided under a ZEV incentive program to be established by ARB.

8) Caps an incentive provided under a ZEV incentive program at an unspecified number of dollars per gallon of gasoline or diesel consumed.

9) Requires ARB, on or before January 1, 2024, to develop and implement a strategy for doing both of the following:

    a) Identifying the drivers who use the most gasoline or diesel and are low income or moderate income; and,
    b) Expediting the replacement of gasoline- or diesel-powered vehicles of drivers identified with ZEVs.

10) Requires ARB to report to the Legislature no later than January 1, 2024, and biennially thereafter, all of the following information:

    a) The actual gasoline or diesel emissions reduced per dollar spent on ZEV incentives under programs;
    b) The impacts of ZEV incentive spending in terms of quantifiable emissions reductions and transportation savings among low- to middle-income individuals; and,
    c) The changes in annual gasoline and diesel use at local levels by census tract or ZIP Code.

11) Requires the report to be submitted to the Legislature to be submitted in compliance with Section 9795 of the Government Code.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

    California has a variety of incentive programs aimed at getting more drivers into zero electric vehicles (ZEVs), but we are still seeing slow adoption of ZEVs among the biggest gasoline users. To reduce GHG efficiently and equitably, the state must invest its incentive dollars to maximize gasoline reduction, especially among lower-income consumers. AB 2816 requires the California Air Resources Board to redesign ZEV incentive programs to award incentive payments based on the applicant's past average annual gallons of gasoline consumed and based on their income.

2) **Zero Emission Vehicles**. A zero emission vehicle, or ZEV, is an umbrella term for hydrogen fuel cell electric vehicles, battery electric vehicles (EVs), and plug-in hybrid electric vehicles (PHEVs). California has some of the most ambitious GHG reduction goals in the nation, which include goals to reduce petroleum use in California up to 50% from 2015 levels by 2030, phase out passenger combustion-engine cars by 2035, and reduce GHG emissions 40% below 1990 levels by 2030. The transportation sector represents about 40% of California's total GHG emissions portfolio, so replacing traditional gas-powered cars with ZEVs is a significant part of California's effort to reduce climate emissions.

    Governor Newsom's ZEV Executive Order N-79-20 set the following ZEV targets for California: 100% of in-state sales of new passenger cars and light-duty trucks will be zero emission by 2035; 100% zero-emission medium and heavy-duty vehicles in the state by

2045, where feasible, and by 2035 for drayage trucks; and, 100% zero-emission off-road vehicles and equipment operations by 2035, where feasible.

In support of those goals, Governor Newsom's proposed budget for Fiscal Year (FY) 2022-23 includes $6.1 billion for new zero-emission transportation investments over four years to increase access to clean transportation, reduce air pollution, and support disadvantaged and low-income communities, including tribal communities. Of these investments, $4.2 billion will go to ARB and the California Energy Commission to more than double the funding targeted for heavy duty zero-emission technology advancement, to expand investments in passenger vehicle incentives and infrastructure, and, ultimately, to amplify the key priorities identified in the 2021 Budget Act.

3) **ZEV rebate programs**. CC4A is an existing program that focuses on providing incentives up to $9,500 per vehicle through California Climate Investments to help lower-income California drivers scrap their older, high-polluting cars and replace them with zero- or near-zero emission replacements. As of February 2021, more than 10,000 scrapped old, dirty cars had been replaced with ZEVs under this program. These incentive funds can be stacked with incentive dollars from the statewide CVRP so that a low-income participant can receive up to $14,000 for a new battery-electric vehicle. The average vehicle retired is about 22 years old with an estimated fuel economy of 21.5 miles per gallon. The average replacement vehicle has a fuel economy of 80 miles per gallon equivalent. According to ARB's CC4A annual report for FY 2020/2021, "even with the past year's global economic and health crisis, demand for all air quality management district car incentives remained strong. This indicates a continued high level of interest and demand for these incentives among the priority populations."

   The CVRP offers rebates up to $7,000 on a first-come, first-served basis to offset the cost of ZEVs. Rebates are available to California residents that meet income requirements and purchase or lease an eligible vehicle. To-date, more than 30,000 low-income consumers have been assisted under CVRP.

   The CVAP supports lower-income consumers' access loans to purchase or lease ZEVs, including up to $5,000 down payment assistance, special financing, and free vehicle charger and installation opportunities.

   Through the support of these incentive programs, as of February 25, 2022, more than one million plug-in electric cars, pickup trucks, sport utility vehicles and motorcycles have been sold in California. The data also show that California, with only 10% of the nation's cars, now accounts for more than 40% of all ZEVs in the country.

   Many studies demonstrate that the CVRP program has encouraged more ZEV purchases than there otherwise would have been in California without the state rebate. In fact, a recent study shows that more than 50% of ZEV purchasers would not have purchased a ZEV without a rebate.

   ARB's incentive amounts for these programs are set through an extensive public process that occurs annually through the development of ARB's funding plan. They are also informed by statute, climate and air quality goals, funding availability, and need projections. Changing the incentive metric for these programs could frustrate the ongoing success of their ZEV incentive dispersal.

The Bay Area Air Quality Management District expressed the concern that:

> AB 2816 proposes to upend [current programs] by creating a variable incentive for the Clean Cars 4 All Program, the Clean Vehicle Rebate Project, and the Clean Vehicle Assistance Program using a tool associated with a DMV database that estimates annual fuel usage of the prospective household, and then estimates the incentive an eligible household could receive. This makes the Clean Cars 4 All Program more difficult to administer in that there is no certainty on the incentive available for any previously eligible household, making it challenging to do effective outreach, to enlist car dealerships, and to provide loan assistance for the remaining cost of the vehicle. In addition, the estimated incentive could end up being far lower than incentives currently provided under the program.

The author should strongly consider working with ARB to ensure there is no disruption to the existing programs.

4) **Gas displacement.** Gasoline is the most used transportation fuel in California, with 97% of all gas being consumed by light-duty cars, pickup trucks, and SUVs. In 2015, 15.1 billion gallons of gasoline were sold.

   This bill would require, on or before January 1, 2024, ARB to develop a tool to calculate the average annual gallons of gasoline or diesel that a particular vehicle has used. The tool is required to calculate the average annual gallons of gasoline or diesel that a particular vehicle has used based on:

   a) Publicly available data on the miles per gallon that a particular make and model of a vehicle uses; and,
   b) The odometer reading at the time the applicant purchased the vehicle or the time the vehicle was transferred to the applicant and the current odometer reading.

   It also requires ARB to ensure that, beginning January 1, 2024, incentives awarded under a ZEV incentive program are awarded based on the average annual gallons of gasoline or diesel that the applicant's vehicle consumed, as determined using the tool.

   The bill will need to identify fraud-prevention mechanisms that prevent drivers from cheating the system by inputting false data, or including a verification system to ensure accurate data is provided for the commensurate ZEV incentive amount.

   Though the Assembly Transportation Committee noted in its analyses that this bill could prove administratively burdensome, this Committee may wish to amend the bill to address fraud prevention by requiring drivers to submit the Vehicle Identification Number (VIN) for the gas- or diesel-powered car, and to odometer reading under penalty of perjury into the ARB calculator tool.

5) **Affordability**. Calculating an incentive based on the amount of gas or diesel that would be replaced creates concerns around equity.

   As drafted, the bill doesn't take into account affordability. A person who can afford an SUV or 12-cylinder car, like a Corvette, will earn a larger incentive because of the car's low gas mileage, to whereas a 4-cylinder car, like a Honda civic, will earn a lower valued incentive

because that car has a greater gas mileage. Additionally, a driver, regardless of the type of car, who can afford gas, may have accrued more vehicle miles traveled because, driving up the odometer reading and earning a greater incentive. Both scenarios put low-income drivers at a disadvantage and create incentives to benefit a population of consumers who are less likely to need an incentive to purchase a ZEV.

According to Coltura, the sponsor of the bill, the lower fuel economy cars and the cars being driven a lot of miles are the target cars to replace since they will reap greater GHG reductions if removed from the road, which will also provide environmental benefits (cleaner air) to all Californians. Coltura also explains that their research shows that on the whole, wealthier people tend to drive less than lower income drivers. Lower income drivers often have to drive longer distances in older, less efficient vehicles either because they can't afford to live near where they work, or because they drive for their work. Many lower income drivers are in the top bracket for gasoline consumption, spending 25% or more of their household income on vehicle fuel.

But it's also worth mentioning that the pandemic has also dramatically changed how much people drive – as people are forced to return to work in-person, this new tool may undercount the gasoline savings (and therefore provide less incentive) of switching to a ZEV, since their odometer readings are not representative of what their gasoline use will be as things return to normal.

6) **Goal to phase out fossil fuel burning cars.** As the COVID-19 pandemic forced everyone to stay home, it provided the opportunity for Californians to experience how clean the air could be with fewer combustion-engine cars on the roads.

   In 2020, Governor Newsom issued Executive Order (N-79-20) for the state to end new sales of internal combustion passenger vehicles by 2035.

   This bill is, in theory, is in furtherance of that state goal. However, the bill does not require the applicant to sell or surrender the gas-powered car that is being replaced, unlike the current CC4A Program that requires the car to be scrapped. To truly replace internal combustion engines, this bill should require the retirement of the cars for which the ZEV incentive is being provided. Sec. 43881 of the bill states that the provisions of this bill shall apply to the existing ZEV incentive programs, which could override the requirement to scrap an old car in one of those existing programs. To avoid confusion with the existing program requirements, the author should strongly consider either clarifying that combustion engine cars should be retired, or delete the authorizing provision altogether.

7) **Incentive cap**. The bill would cap the incentive amount provided per gallon of gas or diesel consumed. The cap will need to take into account the amount of state funding currently available and slated to be available ongoing; the value of the ZEV the incentive will be applied; and, perhaps, the economic theory or modeling on how to influence consumer behavior. Consumer theory is an economic study of how people decide to spend their money based on their individual preferences and budget constraints and shows how individuals make choices, subject to how much income they have available to spend and the prices of goods and services.

8) **We all get by with a little help from our friends**. If knowledge is power, then information is vital. When consumers are informed, they are better equipped and more apt to respond with changes in behavior. When consumers are informed writ large, they have purchasing power that can compel manufacturers and retailers to respond to their demands.

   Having a calculator on ARB's website for determining a car's gas consumption and potential ZEV incentive value could be very useful to consumers – especially if they know about it.

   The author may wish to work with car dealers and other relevant stakeholders to develop public outreach, advertising, and public education to inform consumers about the tool and the incentives.

9) **Committee amendments**. The Committee may wish to amend the bill to:

   a) Include definitions for "low income" and "medium income;" and,

   b) Require incentive recipients to provide the VIN and odometer reading under penalty of perjury.

10) **Double referral**. This bill was heard in the Assembly Transportation Committee on April 18, where it was approved 12-2.

11) **Related legislation**.

   AB 745 (Gipson, 2021) would have required ARB to provide vouchers for the purchase of ZEVs to persons of low income living in disadvantaged communities to replace vehicles that have failed a smog check inspection as part of CC4A. This bill was held in the Assembly Appropriations Committee.

   AB 1046 (Ting, 2019) would have required ARB to develop a plan to provide for funding of the CVRP. This bill was held in the Senate Appropriations Committee.

   AB 40 (Ting, 2018) would have declared the policy of the state to place at least 5,000,000 ZEVs on state roads by 2030 and 10,000,000 ZEVs on state roads by 2035. The bill also would require ARB to limit vehicle eligibility for the CVRP only those vehicles manufactured by companies that have entered into a specified agreement that has been adopted by ARB. This bill was held in the Assembly Transportation Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

350 Conejo
350 Marin
350 Silicon Valley
Acterra
Benisol, LLC
Breathe California
California Interfaith Power & Light
Carbon Free Mountain View
Carbon Free Silicon Valley

Charge Across Town
Clean Coaliton
Coltura (sponsor)
Congas
Electrify Now
Fossil Free Mid Peninsula
Green Latinos
Menlo Spark
Project Green Home
Silicon Valley Youth Climate Action
Sustainable Mill Valley
The Climate Center
Zev 2030

Opposition

Bay Area Air Quality Management District

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2237 (Friedman) – As Amended April 18, 2022

SUBJECT: Transportation planning: regional transportation improvement plan: sustainable communities strategies: climate goals

SUMMARY: Conditions state and local transportation funding on a project's consistency with the applicable Sustainable Communities Strategy (SCS) and state climate goals, as defined.

EXISTING LAW:

1) Requires each transportation planning agency to prepare and adopt a regional transportation plan (RTP) directed at achieving a coordinated and balanced regional transportation system, including, but not limited to, mass transportation, highway, railroad, maritime, bicycle, pedestrian, goods movement, and aviation facilities and services.

2) Requires a RTP be action-oriented and pragmatic, considering both the short-term and long-term future, present clear, concise policy guidance to local and state officials, and consider and incorporate, as appropriate, the transportation plans of cities, counties, districts, private organizations, and state and federal agencies.

3) Requires each metropolitan planning organizations (MPO) to prepare a SCS, which must: identify the general location of uses, residential densities, and building intensities within the region; identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth; identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region; identify a transportation network to service the transportation needs of the region; gather and consider the best practically available scientific information regarding resource areas and farmland in the region; consider the state housing goals specified; set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas (GHG) emissions reduction targets approved by the Air Resources Board (ARB).

4) Requires a regional transportation planning agency to submit a five-year regional transportation improvement program (RTIP) to the California Transportation Commission (CTC) on or before December 15 of each odd-numbered year, updated every two years, and include regional transportation improvement projects and programs proposed to be funded, in whole or in part, in the state transportation improvement program. Major projects in the RTIP must include current costs updated as of November 1 of the year of submittal and escalated to the appropriate year, and be listed by relative priority, taking into account need, delivery milestone dates, and the availability of funding.

THIS BILL:

1) Requires each RTIP submitted to the CTC by a regional agency or county commission to include projects and programs that are consistent with its most recently prepared SCS and the state's climate goals, as defined.

2) Requires each regional agency or county commission to rank all transportation projects and prioritize projects based on their adherence to its most recently adopted SCS and the state's climate goals. Requires ranked projects to accelerate SCS implementation and not induce vehicle miles traveled (VMT). Each regional agency or county commission shall fund and implement projects in the order of prioritization.

3) Requires each regional agency or county commission to submit its prioritized list to ARB and the CTC, according to the same timeline as the applicable SCS.

4) Requires ARB, in consultation with the CTC, to determine whether each project is consistent with the most recently adopted SCS and the state's climate goals.

5) Requires each regional agency or county commission to submit a report on local transportation tax measures to the CTC on or before March 30, 2023, including all of the following information:

    a) The text of the local measure.

    b) A description of whether the local measure aligns with the most recently adopted SCS and the state's climate goals.

    c) A description of the transportation projects funded by the local measure.

    d) A timeline of the transportation projects, including when they were passed and when they will expire.

6) Requires the CTC, in consultation with ARB, to conduct an analysis and propose recommendations to align local tax measures with the state's climate goals.

7) Requires projects funded by local tax measures to be included in regional transportation plans and adhere to the most recently adopted applicable SCS and the state's climate goals.

8) Requires regional agencies or county commissions that approve projects that adhere to their most recently adopted SCS and the state's climate goals to receive additional funds from surplus state transportation funds and federal funds, upon appropriation by the Legislature.

9) Prohibits a regional agency or county commission from funding a project or program determined to be inconsistent with its most recently adopted SCS or the state's climate goals by ARB.

10) Requires the Strategic Growth Council, in consultation with ARB, the Department of Housing and Community Development, and the Transportation Agency, to convene a task

force to review the roles and responsibilities of metropolitan planning organizations and define "sustainable community."

11) Defines "state's climate goals" as the goals expressed in any of the following:

a) Climate Action Plan for Transportation Infrastructure prepared by the Transportation Agency, including the guiding principles in the final draft as adopted by the Transportation Agency and endorsed by the CTC in July 2021.

b) State and federal air quality standards set by the federal Clean Air Act, including all state ambient air quality standards and national ambient air quality standards in all areas of the state.

c) Senate Bill 375 (Chapter 728 of the Statutes of 2008).

d) Senate Bill 32 (Chapter 249 of the Statutes of 2016).

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. MPOs are federally-mandated regional transportation agencies responsible for programming transportation investments in California's urban areas. SB 375 (Steinberg) requires that each MPO develop, in conjunction with its periodically updated RTP, a SCS, which is a projected "development pattern ... [that, when] integrated with the transportation network, and other transportation measures and policies," and is designed to achieve specific per capita GHG reduction targets set by ARB for automobiles and light trucks over the duration of the RTP/SCS.

SB 375 further requires that RTP/SCSs be consistent with local government land use plans for accommodating housing at all income levels, required under the state's Regional Housing Needs Assessment (RHNA) process.

MPOs provide a planning interface for transportation programs and investments initiated by multiple sources. MPOs coordinate, in their periodically updated long-range (20+ year) RTP and associated shorter-range transportation investment plans (TIP), multiple projects funded by federal, state, and local agencies. MPOs must make their long-range RTPs consistent with their short-range (four-year) TIPs, and with local eight-year RHNA plans.

The main incentive to ensure local compliance with RTP/SCS land use strategies, and achieve GHG reduction, is some streamlining of environmental review required under the California Environmental Quality Act (CEQA) for development projects deemed to be consistent with RTP/SCS goals. A survey conducted in 2016 by the Governor's Office of Planning and Research (OPR) found that less than 5% of responding localities had made use of the primary CEQA streamlining provision in SB 375, called a Sustainable Communities Environmental Assessment.

Despite the intent of SCSs to reduce GHG production, the changes in local planning and project delivery have been mainly incremental, for a myriad of reasons.

Recent studies have begun to identify the disconnect between MPO authority, land use, and achieving the state's GHG emission reduction goals. In a report to the Legislature in 2018, ARB concluded that "California is not on track to meet GHG reductions expected under SB 375," with a particularly worrisome trend being an observed rise in VMT and associated GHGs from cars and light trucks starting after 2013.

The Strategic Growth Council's report required by AB 285 (Friedman), Chapter 605, Statutes of 2019, includes a series of white papers prepared by UC Institute for Transportation Studies (ITS). "MPO Planning and Implementation of State Policy Goals," includes an analysis of the most-recent adopted RTP/SCSs, which indicates that most MPO plans allocate more funds toward roadways than transit, but most allocate more roadway funding toward maintenance and operations than new facilities.

One key conclusion causing SCS misalignment, stated at the local and state level, is that MPOs cannot mandate local land use policy changes, and they have only limited discretion for initiating transportation projects, most of which are controlled by other levels of government, with the MPO role being to coordinate and prioritize project spending within regions.

Another similar study of transportation funding streams in California concluded that decision-making "happens at multiple, often uncoordinated levels, without requirement that those dollars are spent to align with AB 32 or SB 375 implementation." MPOs are working towards more stringent GHG reduction targets, yet they have no choice but to bank on more ambitious state and local action to be able to achieve these more ambitious mandated goals, even though they cannot ensure that desired policies will actually be implemented.

2) **Author's statement**:

> AB 2237 takes a multifaceted approach to set California on the course to meet its GHG emission reduction targets expected under SB 375 by making changes at the state, local, and regional levels to provide tools, accountability, and incentives for MPOs to meet their 2035 regional GHG emission targets. AB 2237 requires local governments to make a good faith effort to take actions that support their MPO's SCS. Active transportation must play a vital role in California's goal to reduce GHG and VMT. Walking and bicycling also have many positive benefits associated with public health, strong local economies, and sustainable and equitable development. AB 2237 assists in the development of transformative active transportation projects that other cities and countries have embraced, but have not been done in California, such as bicycle highways and 15 minute cities. AB 2237 will improve the sustainability and quality of California's communities.

3) **Bill presents some practical challenges that should be addressed**. This bill tackles a very big problem, and casts a very broad net. The bill requires each and every project to be reviewed by ARB to determine consistency with state climate goals, which generally don't provide clear benchmarks for individual transportation projects. While conditioning transportation project funding on consistency with broader climate goals is an appropriate response to the apparent failure of the current funding structure to do its part in reducing GHG emissions in the transportation sector, there may be projects that don't meet the test ARB establishes, but that should be funded anyway, for safety or other considerations. Or

there may be small projects where the expense and time of ARB review required by the bill is not justified. In addition, it's not clear that zero tolerance for VMT is practical for all projects, or whether projects should be evaluated based on VMT reduction relative to existing infrastructure or alternative projects.

4) **Double referral**. This bill passed the Transportation Committee by a vote of 8-4 on March 28.

REGISTERED SUPPORT / OPPOSITION:

Support

American Lung Association in California
California Bicycle Coalition
California Environmental Voters
CivicWell
Climate Reality Project, San Fernando Valley
Coalition for Clean Air
Plug in America
Streets for All

Opposition

California Asphalt Pavement Association
California Association of Councils of Governments (unless amended)
California Building Industry Association
California State Association of Counties
League of California Cities
Madera County Transportation Commission
Rural County Representatives of California
San Joaquin Valley Policy Council
San Luis Obispo Council of Governments
Santa Barbara County Association of Governments
Stanislaus Council of Governments
Transportation Agency for Monterey County
Transportation California
Urban Counties of California

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2610 (Friedman) – As Amended March 24, 2022

SUBJECT: Wildlife Conservation Board: ecologically sensitive vegetation management: wildfire risk reduction

SUMMARY: Requires the Wildlife Conservation Board (WCB) to leverage existing state funding to award grants to local government entities, park and open-space districts, resource conservation districts, and nonprofit organizations for projects that carry out ecologically sensitive vegetation management practices designed to, among other things, reduce wildfire risk by maximizing the removal or reduction of invasive plant species using an Integrated Pest Management (IPM) approach or maximizing long-term wildfire risk reduction.

EXISTING LAW:

1) Establishes, pursuant to the Wildlife Conservation Law of 1947, WCB in the Department of Fish and Wildlife.

2) Requires WCB to determine the areas in the state that are most essential and suitable for wildlife production and preservation and that will provide suitable recreation, and to determine those lands in the state that are suitable for specified wildlife-related purposes.

3) Defines "Integrated Pest Management" as a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of techniques, such as monitoring for pest presence and establishing treatment threshold levels, using nonchemical practices to make the habitat less conducive to pest development, improving sanitation, and employing mechanical and physical controls.

THIS BILL:

1) Defines "ecologically sensitive vegetation management" as invasive plant control using best management practices to reduce wildfire risk over the long term while supporting native wildlife and biodiversity.

2) States the intent of the Legislature to encourage ecologically sensitive vegetation management practices for the purpose of maintaining ecological health and strengthening biodiversity while mitigating wildfire risk through fuel load reduction.

3) Requires WCB to establish a grant program to facilitate the application of ecologically sensitive vegetation management practices that can improve long-term wildfire risk reduction, improve native plant and wildlife diversity, protect water quality, and enhance ecosystem function.

4) Requires WCB to leverage existing state funding to award grants to local government entities, park and open-space districts, resource conservation districts, and nonprofit organizations for projects that carry out ecologically sensitive vegetation management practices designed to reduce wildfire risk by doing any of the following:

a) Maximizing the removal or reduction of invasive plant species using an IPM approach.

b) Maximizing biodiversity through the use of locally appropriate native plant species.

c) Maximizing the use of treatments that support native plant species proliferation.

d) Prioritizing the treatment of invasive species over native species.

e) Maximizing long-term wildfire risk reduction.

f) Promoting practices that mimic natural disturbance processes to maintain rare habitats.

g) Minimizing erosion impacts from vegetation management treatments.

h) Using botanists and land management experts to develop long-term ecologically sensitive vegetation management treatments.

i) Promoting ecologically sensitive grazing where applicable.

j) Protecting watersheds, including leaving buffers around bodies of water.

k) Promoting seasonally timed work to decrease potential impacts to birds, bats, and other wildlife.

l) Promoting the development of monitoring plans and incorporating monitoring before, during, and after vegetation management treatments.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

> AB 2610 creates a grant program under the Wildlife Conservation Board to support ecologically sensitive vegetation management projects which mitigate fire risk by producing wildfire fuel loads in a manner that maintains biodiversity and preserves California native plant species. This bill will help address wildland fire fuel reduction goals across the state while protecting the ecological health of our state's native plant species. Beyond this, these projects will benefit communities by providing workforce training and capacity for ongoing efforts to reach California's fuel reduction and biodiversity goals.

2) **Wildfires.** Wildfires have been growing in size, duration, and destructivity over the past 20 years. Growing wildfire risk is due to accumulating fuels, a warming climate, and expanding development in the wildland-urban interface. The 2020 fire season broke numerous records. Five of California's six largest fires in modern history burned at the same time, destroying thousands of buildings, forcing hundreds of thousands of people to flee their homes, and exposing millions of residents to dangerously unhealthy air. More than 4 million acres burned across the state, double the previous record.

New research from Stanford University (February 2022) on wildfire shows that fire risk is increasing due to vegetation in the West drying out even faster due to climate change effects. The researchers found that a combination of plant and soil dehydration coupled with atmospheric dryness is creating what they've termed 'double-hazard zones'. The researchers identified 18 of these double-hazard zones across the Western U.S., including three in California. Their study further showed that the increased population growth in the wild-urban interface (WUI) is concerning as this landscape is often comprised of grasslands or chaparral, which is highly sensitive to drought, making it also highly vulnerable to extreme fire events. In California, more than 11 million of the state's 40 million residents live in the WUI, which encompasses not only densely forested areas like Paradise, but also parts of the wooded coastal foothills around Silicon Valley, the brush-and-grass covered hills around Santa Barbara and Los Angeles, and neighborhoods in the Oakland Hills.

Reducing the fuel load of our wildlands and forests is critical to reduce the risk of wildfires. Hazardous fuels include live and dead vegetation (continuous brush, downed vegetation, or small trees) that have accumulated and creates risk for fire. When fire encounters areas of heavy fuel loads it can burn surface and ladder fuels, accelerating fire spread. Strategic management and control of wildland vegetation is essential to the safety, health, recreational, and economic wellbeing of California. In recognition of this, California and federal officials have committed to a combined goal of treating one million acres of forest land annually via various methods by 2025.

The Department of Forestry and Fire Protection (CAL FIRE) administers a Vegetation Management Program that focuses on the use of prescribed fire, and some mechanical means, for addressing wildland fire fuel hazards and other resource management issues on State Responsibility Area lands. The vegetation management practices include use of mechanical equipment (bulldozer or masticator), hand crews (removing ladder fuels in the forest understory by hand), prescribed burning, and to a lesser extent, grazing and use of herbicides.

3) **Ecologically sensitive vegetation management**. According to the California Invasive Plant Council, given the amount of work needed to reach the state's forest treatment goals, forest health and land management agencies often fail to consider the long-term ecological consequences of techniques used for large scale vegetation management. Many of these commonly used methods, such as mass mechanical mowing, can destroy native species and spread invasive plant seeds, ultimately leading to more dense vegetation and imbalanced ecosystems. While these methods treat vegetation overgrowth for a short period of time, they directly undermine the state's established conservation and biodiversity goals by indiscriminately removing plant life without consideration of ecosystem health, wildlife habitats, or the presence of native plant species.

4) **Wildlife Conservation Board**. This bill would create a new program at WCB to facilitate the application of ecologically sensitive vegetation management practices which, as the author describes, include using minimally disruptive removal methods, mimicking natural disturbance processes to maintain rare habitats, leaving tree canopies intact, and many others. This approach protects native wildlife and plants when possible, limits the spread of invasive species, and preserves biodiversity while reducing fuel loads in the long-term.

The WCB was created to administer a capital outlay program for wildlife conservation and related public recreation. It provides local assistance for conservation projects focusing on resilience to projected climate impacts. WCB receives funding from a variety of sources, including past voter-approved state bond funds Greenhouse Gas Reduction Fund (GGRF), dedicated tax revenues, and the General Fund to support projects including, but not limited to, those that improve climate adaptation and resilience; projects to control and/or eradicate invasive species; and, projects to improve forest health, reduce wildfire danger, or mitigate the effects of wildfires on water quality and supply.

AB 2610 is consistent with the WCB's mission and fits with the WCB's grant experience for vegetation management.

5) **Integrated Pest Management**. This bill leans on IMP to address vegetation management in ecologically sensitive areas. IPM is applied to invasive plants, which are a distinct group of weeds or nonnative plant species that occur in natural habitats and can survive and spread on their own without further human assistance. Invasive plants can cause dramatic ecological changes due to landscape transformations that they cause that reduce the adaptability and competitiveness of more desired native species, and the invasive species can end up creating a greater fire risk by promoting a shorter (or in some cases longer) interval between fires that is not conducive to the survival of native species.

   IPM is non-chemical treatment to eradicate or remove a pest (invasive plant, in this case). It uses a combination of techniques such as monitoring for invasive plant presence and establishing treatment threshold levels, using nonchemical practices to make the habitat less conducive to plant growth, improving sanitation, and employing mechanical and physical controls.

   This bill would provide grants for projects that maximize the removal or reduction of invasive plant species using an IPM approach; maximize the use of treatments that support native plant species proliferation; and, among other things, prioritize the treatment of invasive species over native species.

6) **Double Referral.** This bill was passed out of the Assembly Water, Parks and Wildlife Committee by a vote of 12-0 on April 5.

REGISTERED SUPPORT / OPPOSITION:

Support

Arroyos & Foothills Conservancy (co-sponsor)
California Invasive Plant Council (co-sponsor)
California Native Grasslands Association
East Bay Regional Park District (co-sponsor)
Land Trust of Santa Cruz County
Midpeninsula Regional Open Space District (co-sponsor)
Peninsula Open Space Trust
Santa Clara Valley Open Space Authority
Save Mount Diablo
Sustainable Agriculture Education

Opposition

None on file.

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2667 (Friedman) – As Amended March 15, 2022

SUBJECT: Integrated Distributed Energy Resources Fund

SUMMARY: Establishes an unfunded incentive program for "clean" distributed energy resources (DER) administered by the California Energy Commission (CEC).

EXISTING LAW:

1) Establishes the CEC and assigns it various duties, including applying for and accepting grants, contributions, and appropriations, and awarding grants consistent with the goals and objectives of a program or activity the CEC is authorized to implement or administer.

2) Requires utilities and other retail sellers of electricity to procure 60% of their retail electricity sales from eligible renewable energy resources by 2030 and thereafter, including interim targets of 33% by 2020, 44% by 2024, and 52% by 2027.

3) Establishes a policy that eligible renewable energy resources and zero-carbon electric generating facilities will supply all electricity procured to serve California customers by December 31, 2045, and directs the CEC, Public Utilities Commission (PUC), and the Air Resources Board (ARB) to incorporate this policy into all relevant planning and programs.

4) Authorizes the PUC to authorize investor-owned electric utilities (IOUs) to collect up to $166 million per year from their customers through distribution rates through 2024 to fund the self-generation incentive program (SGIP). Under SGIP, utilities provide ratepayer-funded incentives for eligible DER, including advanced energy storage and generation technologies that the PUC, in consultation with ARB, determines will achieve reductions in greenhouse gas (GHG) emissions.

5) Requires the PUC, in consultation with the California Independent System Operator, to establish resource adequacy (RA) requirements for all load-serving entities to ensure the reliability of electrical service in California while advancing, to the extent possible, the state's goals for clean energy, reducing air pollution, and reducing emissions of GHGs.

THIS BILL:

1) Establishes, and requires the CEC to administer, the clean DER Fund to provide incentives to support statewide customer adoption of clean DER across the industrial, commercial, and residential sectors.

2) Requires eligible resources to include:

   a) Customer demand management.

   b) Managed charging of electric vehicles.

c) Clean backup power.

d) Other DER that the CEC, in consultation with ARB, determines will achieve GHG emissions reductions.

3) Requires the CEC to establish a system to equitably award incentives to support adoption of commercially available DER by eligible customers, and requires the CEC to set incentive levels and prioritize the following attributes and functionalities:

a) The ability to support both local and system electrical grid reliability through managed operation of the DER to meet distribution and transmission system needs.

b) The ability to support resiliency during periods of power system disruptions via self-islanding with clean onsite generation or backup power technology.

c) The ability to reduce environmental pollution in disadvantaged communities or provide resiliency benefits to vulnerable communities.

d) The ability to facilitate all types of clean vehicle charging with an emphasis on medium- and heavy-duty vehicles co-located at ports, warehouses, and in transit corridors.

4) Requires the CEC, to streamline and improve customer experience, to establish a process to allow a load-serving entity to apply for incentives on behalf of a customer or a set of customers as part of that load-serving entity's customer program to reduce its resource adequacy compliance obligations.

5) Requires the CEC, to the extent possible, to use existing expertise in implementing the bill.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Background**. SGIP was established in 2001 by the PUC, in response to legislative action during the energy crisis, to provide incentives for DERs that could reduce peak energy demand. Since 2001, the Legislature has refined and extended SGIP several times. During 2014 and 2015, the PUC acted to extend SGIP funding through 2019 and updated program eligibility criteria related to GHG emissions. In 2016, the PUC made significant programmatic changes for how SGIP incentive dollars were awarded and other program refinements. In 2016, the Legislature gave the PUC the authority to double collections for SGIP from $83 million annually to $166 million. In 2018, the Legislature extended the sunset date until 2024 and made other programmatic changes. And in 2019, the Legislature allocated 10% of SGIP funds for the installation of energy storage and other DERs at facilities that provide critical infrastructure to communities in High Fire Threat Districts to support community resiliency.

SGIP provides incentives to support existing, new, and emerging DERs. SGIP provides rebates for qualifying DERs installed on the customer's side of the utility meter that the PUC, in consultation with ARB, determines will achieve reductions in GHG emissions. Qualifying technologies include wind turbines, waste heat to power technologies, pressure reduction turbines, internal combustion engines, micro-turbines, gas turbines, fuel cells, and advanced

energy storage systems. Currently, SGIP allocates 85% of the funds to energy storage technologies.

In 2018, the PUC established an "Equity Budget" for SGIP to ensure that a portion of SGIP monies is reserved for projects that are located in disadvantaged and low-income communities. The objective of the investments is to: 1) bring positive economic and workforce development opportunities to the state's most disadvantaged communities; 2) help reduce or avoid the need to operate conventional gas facilities in these communities, which are exposed to some of the poorest air quality in the state; and 3) to ensure that low-income customers, and non-profit or public sector organizations in disadvantaged or low-income communities, have access to energy storage resources.

Because SGIP is funded by IOU ratepayers, it is only available to customers of electric (or gas) IOUs, leaving areas served by publicly-owned utilities out.

2) **Author's statement**:

> As California faces climate-triggered extreme weather events, natural disasters, reliability planning challenges, and energy market instabilities due to global geopolitical unrest, the state should expand deployment of clean DER as a critical tool to support statewide and economy-wide de-carbonization, resiliency, and equity objectives.

3) **What is "clean" DER**? This bill establishes the following environmental objectives in its findings: Decarbonization, GHG reduction, renewable integration, reducing local air pollution. However, the bill does not define what "clean" DER is. It does require eligible resources to be determined by the CEC to achieve GHG emissions reductions, but does not provide any reference point to compare, leaving a vague standard with uncertain results.

   The author and the committee may wish to consider amending the bill to align the clean DER standard with the 100% Clean Energy Act of 2018 (SB 100), by requiring eligible resources to be eligible renewable energy resources pursuant to the Renewables Portfolio Standard, zero-carbon resources pursuant to PUC Section 454.53, or other resource that emits zero air pollution or GHG.

4) **Double referral**. The bill passed the Utilities and Energy Committee by a vote of 10-0 on April 6.

REGISTERED SUPPORT / OPPOSITION:

Support

California Efficiency + Demand Management Council
California Solar & Storage Association
Capstone Green Energy
Center for Sustainable Energy
Environmental Defense Fund
Environmental Working Group
Kaluza
Mainspring Energy
Microgrid Resources Coalition

NRG Energy
The Climate Center

Opposition

None on file.

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2649 (Cristina Garcia) – As Amended April 20, 2022

SUBJECT: Natural Carbon Sequestration and Resilience Act of 2022

SUMMARY: Establishes goals and programmatic planning for carbon storage on natural and working lands.

EXISTING LAW:

Pursuant to the California Global Warming Solutions Act of 2006 (Health and Safety Code § 38500 et seq.):

1) Establishes the Air Resources Board (ARB) as the state agency responsible for monitoring and regulating sources emitting greenhouse gases (GHG).

2) Requires ARB to approve a statewide GHG emissions limit equivalent to the statewide GHG emissions level in 1990 to be achieved by 2020 and to ensure that statewide GHG emissions are reduced to at least 40% below the 1990 level by 2030.

3) Requires ARB to prepare and approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs by 2020. Requires ARB to consult with all state agencies with jurisdiction over sources of GHGs. Requires the scoping plan to identify and make recommendations on direct GHG emissions reduction measures, among other things. Requires ARB to update scoping plan for at least once every five years.

4) States that it is the policy of the state that the protection and management of natural and working lands is an important strategy in meeting the state's GHG emissions reduction goals, and that the protection and management of those lands can result in the removal of carbon from the atmosphere and the sequestration of carbon in, above, and below the ground.

Pursuant to state law on Resources Conservation (Public Resources Code Division 9):

5) Declares the policy of the state that the protection and management of natural and working lands is an important strategy in meeting the state's GHG emissions reduction goals.

6) Requires all state agencies to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands.

THIS BILL:

1) Defines the following terms for purposes of this bill:

a) "Natural carbon sequestration" as the removal and long-term storage of atmospheric carbon dioxide equivalents by vegetation and soils on natural, working, and urban lands, including submerged lands;

b) "Natural lands" and "working lands" have the same definition as found in Section 9001.5 of the Public Resources Code;

c) "Low-income communities" has the same meaning as paragraph (2) of subdivision (d) of Section 39713; and,

d) "Disadvantaged farmer" has the same meaning as a "socially disadvantaged farmer" as defined for purposes of the Farmer Equity Act of 2017.

2) States that is the policy of the state to sequester the maximum feasible additional amount of carbon dioxide equivalent from the atmosphere through the implementation of natural carbon sequestration actions and programs on natural, working, and urban lands, in ways that enhance ecological function, but at least 60,000,000 metric tons of carbon dioxide equivalent annually on or before December 31, 2030, and 75,000,000 metric tons of carbon dioxide equivalent annually on or before December 31, 2035.

3) Requires, or before July 1, 2023, the Natural Resources Agency (NRA), in coordination with its departments, ARB, and the Department of Food and Agriculture (CDFA), to refine existing and establish new, where appropriate, natural carbon sequestration pathways and strategies, as outlined in the Scoping Plan Update, Climate Smart Land Strategy, 30x30 Plan, and other relevant state planning processes to guide the specified agencies in developing and implementing programs to help the state achieve the carbon sequestration goals.

4) Requires the NRA to include, but not be limited to, the following strategies pursuant to the establishment of the natural carbon sequestration actions pathways:

a) Workforce development, staffing, and training to support strategies, programs, and projects to achieve the goal;
b) Enhanced infrastructure to support natural carbon sequestration programs and projects, such as, but not limited to, plant nurseries and compost facilities;
c) Advancing the use of organic alternatives to synthetic fertilizers, including compost; and,
d) Increased support for the natural and working lands mitigation and adaptation planning at the city, county, and regional scale where projects are undertaken to achieve the natural carbon sequestration goal.

5) Requires NRA, in coordination with ARB and CDFA, to evaluate and update the pathways, strategies, and actions to achieve the goal on an annual basis beginning in 2024, concurrently with the scoping plan, with annual reporting.

6) Provides that the carbon dioxide equivalent removal goal shall be in addition to, and therefore, not calculated toward the emission goals established pursuant to the Global Warming Solutions Act.

7) Requires achievement of the carbon dioxide equivalent removal goal to enhance community health and resilience and shall not be accomplished in a manner that increases detrimental air

quality or water quality impacts on disadvantaged communities, Black, Indigenous, and people of color communities, or lower income communities, and achievement of the goal needs to prioritize investments and projects in communities that have historically been overburdened by pollution or faced other environmental justice hurdles.

8) Requires NRA, CDFA, California Environmental Protection Agency (CalEPA), the Office of Planning and Research, and other departments and offices within these agencies, and the State Department of Education to expand existing and establish new natural carbon sequestration programs in consultation with a full range of stakeholders, including public and private land owners and managers, federal agencies, resource conservation districts, , local governments, land trusts and other nongovernmental organizations, community organizations and leaders, and labor organizations.

9) Requires the programs to maximize cobenefits, such as enhanced biodiversity and climate resilience, prioritize avoided conversion of natural and working lands, and facilitate practices such as compost application, cover crops, hedgerows, planned grazing, urban forestry, riparian restoration, restoration of tidal flows to wetlands, and other forms of wetland restoration, among other relevant practices, and need to do so with attention to the monitoring and technical assistance that facilitates these goals.

10) Requires the specified state agencies to implement programs in every region of the state with ready access to technical expertise and assistance. Requires the programs to be implemented in a manner that builds climate resilience and promotes native biodiversity in the state's forests, soils, croplands, rangelands, coastal areas, wetlands, parklands, schoolyards, urban greenspaces and brownfields, waterways, and nearshore habitats, with an emphasis on protection and ecological restoration on natural lands, conservation practices on agricultural lands, and increased urban greening.

11) Requires each state agency described that implements a program to ensure that at least 50% of the resources of the program are directed to ensure benefits to low-income communities, disadvantaged communities, farmers of small- and medium-sized farms, disadvantaged farmers, and tribes.

12) Requires 30% of the resources of a program to be directed to the provision of extension, planning, technical and financial assistance, monitoring and reporting, and other necessary services to landowners, producers, and land managers, including those that are disadvantaged and underserved, to implement natural carbon sequestration projects and practices as integral to implementation of the pathways, strategies, and programs.

13) Authorizes services to be provided by resource conservation districts, the University of California Cooperative Extension, the California Conservation Corps, urban parks departments, and other qualified nonprofit organizations.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

> As the climate deteriorates and the world rapidly approaches the 1.5 degree Celsius threshold of dangerous warming, California must re-assume its leadership role in the effort to stop global warming. It is critical that we not only sharply reduce emissions but also work to remove existing carbon pollution from the atmosphere using natural solutions. Recent research has shown that California's working lands have the ability to sequester up to 100 MMT of carbon dioxide per year. AB 2649 takes action on these insights by setting into statute a goal of sequestering 60 MMT/year by 2030 through natural carbon removal techniques, ramping up to 75 MMT/year by 2035. Beyond providing key climate benefits, the bill will also increase water retention and soil health, thereby increasing California's drought resilience and food security. In doing so, the state will utilize a time-tested strategy of using ambitious statutory targets to drive climate action across the public and private sectors, as was seen with the Renewable Portfolio Standard and the state's clean vehicle statutes and regulations. These landmark policies have been emulated by numerous jurisdictions, demonstrating how California has led in the past and showing that California can lead again through the enactment of this critical measure.

2) **Natural and working lands**. Current law defines natural lands as lands consisting of forests, grasslands, deserts, freshwater and riparian systems, wetlands, coastal and estuarine areas, watersheds, wildlands, or wildlife habitat, or lands used for recreational purposes such as parks, urban and community forests, trails, greenbelts, and other similar open-space land. Working lands include lands used for farming, grazing, or the production of forest products. Natural and working lands cover approximately 90% of the state's 105 million acres, including California Native American tribes' ancestral and cultural lands and waters.

   Healthy natural and working lands can sequester and store carbon, limit future carbon emissions into the atmosphere, protect people and nature from the impacts of climate change, and build resilience to future climate risks. Our natural and working lands are a critical yet underutilized sector in the fight against climate change. International leaders recognize this timely opportunity. According to the United Nations Environment Program, "By working with nature, we have the potential to reduce emissions by more than a third of what is needed by 2030."

   In October 2020, Governor Newsom outlined a comprehensive and results-oriented nature-based solutions agenda for California in Executive Order (EO) N-82-20. The EO recognized that California's natural and working lands sustain our economy, support our unique biodiversity, contribute to the global food supply, support outdoor heritage and provide clean water and air. It also called on NRA to enable enduring conservation measures on a broad range of landscapes, including natural areas and working lands, in partnership with land managers and natural resource user groups.

   In response to the Governor's EO, the state released the draft *Natural and Working Lands Climate Smart Strategy* in 2021, which describes how these lands can deliver on our climate change goals and identifies options to track nature-based climate action and measure progress. The state is committed to "track nature-based climate solutions and their outcomes,

as well as to improve our understanding and ability to measure outcomes of climate smart actions. To improve over time, our efforts will need to be flexible; successful climate smart land management requires adaptive approaches that are continually reassessed as ecosystems are affected by climate change and our understanding of the processes at work grows."

Although natural and working lands can remove carbon dioxide from the atmosphere and sequester it in soil and vegetation, disturbances such as severe wildfire, land degradation, and conversion can cause these landscapes to emit more carbon dioxide than they store.

California's natural and working lands are not healthy and the critical ecosystem services they provide, including their ability to sequester carbon from the atmosphere, are at risk. Actions to protect, restore, and sustainably manage the health and resiliency of these lands can greatly accelerate our progress to mitigate climate change and our ability to reduce worsening climate change impacts.

3) **Natural carbon sequestration goals**. The bill would establish as the policy of the state to sequester the maximum feasible amount of carbon dioxide equivalent from the atmosphere through the implementation of natural carbon sequestration programs on natural, working, and urban lands, but at least 60,000,000 metric tons of carbon dioxide equivalent annually on or before December 31, 2030, and 75,000,000 metric tons of carbon dioxide equivalent annually on or before December 31, 2035.

   The Climate Center's January 2022 report, *Setting an Ambitious Sequestration Goal for California's Working Lands: Analysis and Recommendations for Net-Negative Emissions by 2030*, finds that California's working and urban lands can sequester up to 100 million metric tons (MMT) of carbon dioxide equivalent (CO2e) per year.

   This analysis focuses on arable lands (cropland, pastureland, and rangeland), as well as some urban spaces and roadside strips and suggests this goal can be realized (and exceeded) through implementation of a comprehensive statewide strategy that engages: most of the state's 20.4 million acres of arable land, at least 3.5 million acres of California rangelands (equates to more than 6% of California's 57 million acres of rangeland, such as grasslands, chaparral, oak woodlands, and related non-agriculturally managed lands), 50% of the state's 400,000 miles of highway rights of way, and one million acres of riparian area (assumes roughly 1% of the state land area is riparian today and could benefit from restoration efforts). In an optimized scenario, this analysis yields the potential to sequester up to 289 MMT CO2e in the working land sector by 2030. The study's calculations relied on peer-reviewed publications and data in the COMET-Planner tool (NRCS, 2022). According to Climate Center, that's equivalent to about one-quarter of the state's annual GHG emissions.

   In 2020, The Nature Conservancy (TNC) of California released a report titled *Nature-Based Climate Solutions: A Roadmap to Accelerate Action in California* outlining 12 nature-based solutions and associated strategies suitable for implementation across 28 million acres of California's natural and working lands. TNC claims that, if enacted now, under the most ambitious scenarios these strategies could reduce GHG emissions by more than 500 MMT cumulatively and save more than $24 billion in damages by the year 2050. For comparison, California's total economy-wide GHG emissions in 2018 were 425.3 MMT.

   ARB's 2017 scoping plan set a preliminary goal to reduce GHG emissions from natural and working lands by at least 15 – 20 million metric tons of carbon dioxide equivalents (MMT

CO2e) by 2030. ARB Resolution 17-46 directs the ARB Executive Officer to work with NRA, CDFA, CalEPA, and other agencies to reevaluate the 15 – 20 MMT CO2e 2030 goal; determine if the goal should be adjusted in light of ongoing analyses to estimate the GHG mitigation potential of natural and working lands; and, to develop the Natural and Working Lands Climate Change Implementation Plan.

The October 11, 2021, draft *Natural and Working Lands Climate Change Implementation Plan* reaffirms California's commitment to achieving carbon neutrality by 2045 and acknowledges pathways to restoring these lands and enhancing carbon storage and GHG mitigations, but doesn't explicitly provide the same numeric target included in the 2017 scoping plan.

The next draft of the scoping plan, which is expected to be released this May, will include goals for carbon storage on these lands. According to the Joint Legislative Committee on Climate Change Policies, ARB asserts that they are continuing to evaluate whether natural and working lands will produce residual GHG emissions that must be compensated for in 2035 and 2045 to meet the carbon neutrality goal. ARB intends to use the results of the natural and working lands modeling to help determine the extent to which natural and working lands can be relied upon to compensate for residual emissions from fossil fuel combustion and release of non-combustion GHGs, or if they will be a net source of emissions.

The author may wish to review that draft and consider how ARB's science, modeling, and goal setting influence the specified goals in this bill.

4) **Fitting new goals in with existing goals**. The state currently has two ambitious but critically important climate goals: reducing GHG emissions to 40% below the 1990 levels by 2030 (SB 32, Pavley, Chapter 249, Statutes of 2016); and, achieving carbon neutrality by 2045 (Governor Brown's Executive Order B-55-18).

   Identifying where the goals in this bill fit into the plans and strategies to meet the existing goals will be important. The goals in this bill should be a part of the state's climate strategy as it relates to carbon removal; however, whether these should remain separate from the SB 32 and carbon neutrality goals as it relates to GHG reductions should be considered. Meeting these targets is going to require a lot of effort and many strategies across every sector, and the state is going to have to be exceptionally aggressive to achieve carbon neutrality and avoid the most catastrophic impacts of climate change. Therefore, the Legislature should consider assuring that the goals to sequester carbon in natural and working lands does not supplant alternative efforts to reduce emissions through reductions.

5) **Team work makes dream work**. In 2005, Governor Schwarzenegger created the Climate Action Team (CAT), via EO S-3-05, comprised of 22 state agency members who focused on developing, evaluating, and implementing GHG emission reduction strategies in accordance with the California Global Warming Solutions Act of 2006.

   State-level coordination on climate strategies is ongoing today, as the jurisdictional overlap of various agencies compels co-management for effective implementation of projects, programs, and goal achievement.

This bill would require NRA to coordinate with its departments, including, but not limited to, the Department of Fish and Game, Department of Forestry and Fire Protection, Wildlife Conservation Board, and Department of Parks and Wildlife, as well as ARB and CDFA to refine existing and establish new natural carbon sequestration pathways and strategies. This requirement is consistent with NRA's work to reduce GHG emissions, implement the Smart Land Strategy, and the 30x30 Plan; it has worked with nearly every agency and their respective departments on natural and working lands and nature-based solutions efforts.

6) **Vulnerable communities**. Climate change exacerbates existing inequities, and disproportionately impacts those with the least capacity to prepare for, respond to, and recover from the impacts of climate change. Targeted nature-based solutions can reduce climate risks for and build climate resilience of the most vulnerable among us.

   AB 2649 requires each state agency that implements a program pursuant to this bill to ensure that at least 50% of the resources of the program are directed to ensure benefits to low-income communities, disadvantaged communities, farmers of small- and medium-sized farms, disadvantaged farmers, and tribes.

   In 2018, OPR developed a resource guide, *Defining Vulnerable Communities in the Context of Climate Adaptation*, as a starting point for practitioners to use when first considering how to define vulnerable communities in the context of climate. That guide defines vulnerable communities as:

   > Climate vulnerability describes the degree to which natural, built, and human systems are at risk of exposure to climate change impacts. Vulnerable communities experience heightened risk and increased sensitivity to climate change and have less capacity and fewer resources to cope with, adapt to, or recover from climate impacts. These disproportionate effects are caused by physical (built and environmental), social, political, and/ or economic factor(s), which are exacerbated by climate impacts. These factors include, but are not limited to, race, class, sexual orientation and identification, national origin, and income inequality.

   Later this year, OPR will be releasing its Vulnerable Communities Platform, which may have an updated definition for vulnerable communities. When that's available, the author may wish to consider whether alignment with OPR's definition works for the context of this bill.

7) **Suggested amendments**. *The Committee may wish to amend the bill as follows*:

   a) In the definition of "Natural carbon sequestration," clarify what is included in submerged lands.

   b) Clarify the scope of NRA's reporting requirements.

   c) Clarify how the goals specified in this bill are calculated alongside existing state climate goals.

   d) Include Native American Tribes in the list of stakeholders to be consulted on state agency implementation plans.

8) **Related legislation**.

AB 2479 (Wood) requires all state agencies, when funding restoration efforts on natural and working lands, to prioritize restoration projects that have a permanent, enforceable mechanism to ensure that the project area will be managed in a manner that maintains the desired conditions and the value of the state's investment. This bill is pending before the Assembly Appropriations Committee.

SB 1395 (Muratsuchi, 2021) declares the policy of the state both to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter. This bill is currently on the Senate inactive file.

SB 1386 (Wolk, Chapter 545, Statutes of 2016) declared protecting and managing natural and working lands as an important strategy in meeting GHG reduction goals a policy of California, and required all state entities to consider this policy when carrying out activities related to the protection and management of natural and working lands.

AB 1482 (Gordon, Chapter 603, Statutes of 2015) recognized climate smart land management of our natural and working lands as a critical pillar of our state adaptation efforts.

AB 691 (Muratsuchi, Chapter 592, Statutes of 2013) requires local trustees that manage state lands to assess vulnerability to state lands and assets from sea level rise and describe potential adaptation strategies for their protection and resiliency.

REGISTERED SUPPORT / OPPOSITION:

Support

350 Bay Area Action
350 Humboldt: Grass Roots Climate Action
350 Silicon Valley
Better World Group; the
California Association of Resource Conservation Districts (co-sponsor)
California Environmental Voters
California Interfaith Power & Light
California Marine Sanctuary Foundation
California Nurses for Environmental Health and Justice
California Urban Forests Council
Californians Against Waste
Carbon Cycle Institute (co-sponsor)
Center for Food Safety; the
Central California Environmental Justice Network
Ceres
Citizens Committee to Complete the Refuge
Civicwell
Communitiy Water Center
Conejo Climate Coalition
Environment California
Environmental Center of San Diego
Environmental Working Group
Fibershed

Foodwise
Friends Committee on Legislation of California
Friends of The River
Gold Ridge Resource Conservation District
Greenbelt Alliance
Heritage Growers
Indivisible Ventura
Let's Green Ca!
Los Angeles Neighborhood Land Trust
Los Angeles Waterkeeper
Mojave Desert Land Trust
Mothers Out Front California
Nature for All
Outward Bound Adventures
Pacific Forest Trust
Pew Charitable Trusts; the
Point Blue Conservation Science
Puentes
Restore the Delta
River Partners
Sacramento Area Congregations Together
Sage
San Diego Green New Deal Alliance
San Francisco Bay Physicians for Social Responsibility
San Francisco Baykeeper
San Joaquin River Parkway & Conservation Trust, INC.
Santa Clara Valley Audubon Society
Save Mount Diablo
Sequoia Riverlands Trust
Sierra Cascade Farm
Socal 350 Climate Action
South Yuba River Citizens League
The Climate Center (co-sponsor)
The Wildlands Conservancy
Third City Coalition
Tomkat Ranch
Tree People
Trust for Public Land
Ventura Climate Coalition
Wildcoast

Opposition

None on file.

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2140 (Muratsuchi) – As Amended April 18, 2022

SUBJECT: Once-through cooling policy: powerplants

SUMMARY: Prohibits the State Water Resources Control Board (State Water Board) from granting an operator of a powerplant any extension of time to comply with the once-through cooling policy if specified conditions are met.

EXISTING LAW:

1) Requires, pursuant to the federal Clean Water Act, that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.

2) Establishes the State Water Board within the California Environmental Protection Agency (CalEPA) with specified duties relating to, among other things, administering water rights, the Porter-Cologne Water Quality Control Act, and the California Safe Drinking Water Act.

3) Establishes the policy on the use of coastal and estuarine waters for power plant cooling under State Water Board Resolution No. 2010-0020. Establishes uniform, technology-based standards to implement federal Clean Water Act section 316 (b), which requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. (California Code of Regulations, Title 23, Division 3, Chapter 22, Sec. 2922)

THIS BILL:

1) Prohibits the State Water Board from granting an operator of a powerplant an extension of time to comply with the OTC policy if both of the following conditions are met:

    a) The Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) determines that the extension is not necessary to ensure statewide electricity reliability; and,
    b) The city or county that has jurisdiction over the site of the powerplant formally adopts a resolution objecting to the extension.

2) Requires the Public Utilities Commission (PUC), the State Energy Resources Conservation and Development Commission (CEC), and the Independent System Operator (CAISO) to work together to identify and procure alternative energy sources to replace the powerplants that cease operations as a result of the enforcement of the OTC policy.

3) Defines "once-through cooling policy" as the policy described in Section 2922 of Chapter 22 of Division 3 of Title 23 of the California Code of Regulations.

4) Defines SACCWIS as the advisory committee convened by the state board to advise the state board on the implementation of the once-through cooling policy and that includes, pursuant

to a memorandum of agreement, representatives from the state board, the State Energy Resources Conservation and Development Commission, the Public Utilities Commission, the Independent System Operator, the State Air Resources Board, the State Lands Commission, and the California Coastal Commission.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement**.

> As Chair of the Joint Legislative Committee on Climate Change, I cannot overstate the importance of maintaining our commitment to retire our outdated natural gas power plants. The OTC compliance deadline has been in place for as many years, and the plants had been scheduled to shut down by the end of this past year. I remain concerned about this latest extended the deadline as it will increase the public health and environmental impacts associated with the operation of the largest stationary source of pollution in this densely populated part of the state. The plants' outdated and inefficient technology will continue to affect nearby residents who breathe in the fine particulates generated by the natural gas plant. Further, if California is going to meet its goals to get 60 percent of its electricity from renewable sources by 2030, and to achieve 100 percent carbon neutrality by 2045, we need to remain steadfast in our timeline and commitment to shut down these power plants.
>
> AB 2140 ensures that the water board does not grant an operator of a power plant any further extension to comply with the OTC policy if the SACCWIS determines that the extension is not necessary to ensure statewide electricity reliability, and the city the power plant is located in formally adopts a resolution objecting to any further extension. This bill also requires the Public Utilities Commission, the state energy resources development commission, and the California Independent Systems Operator to work together to identify and procure alternative energy sources to replace the power plants.

2) **Once-through cooling**. Once-through cooling (OTC) refers to technologies at steam turbine power plants that rely on open seawater intakes to pump seawater from an ocean, estuary, or bay and then discharge the water back to the ocean after only one cycle of cooling. This technology, which became widely used in the 1950's, has detrimental effects on marine life. Marine animals, seaweeds, and billions of eggs and larvae of fish and invertebrates are taken in with the seawater and killed as they are subjected to thermal, physical, and/or chemical stresses. Larger organisms may also be pinned against seawater intake screens, causing injury or death. These impacts contribute to the decline of fisheries and the degradation of marine habitats near power plants using once-through cooling.

3) **State policies on OTC**. California is phasing out the use of OTC technology at coastal power plants that use marine water for cooling.

   The Clean Water Act requires the U.S. Environmental Protection Agency (US EPA) to ensure that the location, design, construction, and capacity of cooling water intake structures

reflect the best technology available for minimizing adverse environmental impacts. While states have enforced this requirement on a case-by-case basis since 1972, California developed a clearer, more prescriptive rule.

In March 2008, the State Water Board published a scoping document titled Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to implement the US EPA's aforementioned policy, and subsequently adopted, in 2010, a regulatory policy to phase out the use of OTC. It included many grid reliability recommendations made by CAISO, as well as a joint implementation proposal developed by the CEC, CPUC, and CAISO. The OTC policy requires power plants that are not in compliance to make mitigation payments annually based on their annual intake volume of water until they come into compliance.

The OTC phase out regulation affected 19 California power plants that had the ability to withdraw more than 15 billion gallons per day from the state's coastal and estuarine waters using OTC systems. Of those, 16 power plants totaling about 18,000 megawatts (MW) were in the CAISO balancing authority area, and 3 (about 2,600 MW) were in the Los Angeles Department of Water & Power balancing area. The use of OTC has been phased out at 10 power plants representing 10,400 MW. The retirement of OTC power plants with 6,300 MW of capacity is expected by 2020, and the remaining 3,800 MW are expected to retire by 2029.

To ensure grid reliability, final compliance dates were negotiated with each of the operating plants. In September 2020, the State Water Board amended the OTC policy as a result of events that raised concern about system-wide grid reliability. The amendments included changes to the compliance dates for four powerplants that were scheduled to comply with the OTC policy by December 31, 2020, to address grid reliability concerns. This included a one-year extension for compliance for the Redondo Beach power plant to December 31, 2021, which is in the author's district.

On October 19, 2021, the State Water Board amended the OTC policy under Resolution No. 2021-0048 to extend the compliance date for Redondo Beach Generating Station Units 5, 6, and 8 to December 31, 2023, to further address statewide grid reliability concerns.

4) **Managing the energy**. The State Water Board has twice delayed the deadline to phase out OTC at specified powerplants because of grid reliability and the energy from those powerplants is factored into the state's energy planning.

The CPUC has required a larger planning reserve margin and authorized the procurement of unprecedented amounts of new, renewable energy to meet the state's ever-growing renewable portfolio standard (RPS) goals. The CPUC's actions also take into consideration the planned retirement of thermal power plants, including the Diablo Canyon Nuclear Power Plant and the OTC generating stations covered under the OTC policy.

As the state has been investing in and planning to meet the 2045 RPS procurement mandates, it has been thrown some significant curveballs that have complicated management of the energy system. The intense wildfire season lead to massive power outages across the state; the COVID-19 pandemic resultant stay-at-home orders and workforce shortages stunted renewable energy deployment; and, the subsequent supply chain shortage created delays for materials and supplies, and ultimately impacted the timing of when planned renewable energy projects would come on line and produce energy. Furthermore, the CPUC is now

planning for extreme heat events, which are occurring more frequently and at times of the year never before experienced, requiring the CPUC to adjust its modeling for energy forecasting and procurement. Because of those unexpected challenges, the CPUC needs to consider the input of the MWs the power plants covered by the OTC policy produce before they can be decommissioned.

However, the CPUC has authorized new electric resources under D.19-11-016 and D.21-06-035 to replace a portion of the OTC fleet's capacity subject to the OTC Policy. The CPUC continues to actively monitor procurement under these decisions, reporting that 2,650 MW of incremental capacity has come online as of January 2022. Additionally, the CPUC currently estimates that 12,700 MW of additional resources will be online by 2026.

SACCWIS, which includes the State Water Board, CEC, CPUC, CAISO, among others, advises on the OTC Policy to ensure that implementation plans and schedules established by the OTC Policy are realistic and will not cause disruption to the state's electrical power supply.

SACCWIS' March 2022 Report, *Statewide Advisory Committee on Cooling Water Intake Structures*, concludes that "Currently, the SACCWIS does not recommend any changes to the compliance schedules in the OTC Policy for associated generating facilities."

5) **This bill**. AB 2140 prohibits the State Water Board from granting an operator of a powerplant an extension of time to comply with the OTC policy if SACCWIS determines that the extension is not necessary to ensure statewide electricity reliability the city or county that has jurisdiction over the site of the powerplant formally adopts a resolution objecting to the extension.

   The bill requires the PUC, CEC, and CAISO to work together to identify and procure alternative energy sources to replace the powerplants that cease operations as a result of the enforcement of the OTC policy.

6) **Related legislation**.

   AB 2071 (Muratsuchi, 2020) would have prohibited the State Water Board, on or after January 1, 2021, from granting to an operator of a powerplant additional time for complying with the OTC policy adopted by the state board if specified conditions were met. This bill was held due to the COVID-19 pandemic and limits on how many bills policy committee could hear.

   AB 353 (Muratsuchi, 2019) would have prohibited the State Water Board from granting an operator of a powerplant additional time for complying with the OTC policy if the powerplant is situated on a site containing coastal wetlands, and a local agency, nonprofit organization, or nongovernmental land conservation organization has been awarded a grant on or before January 1, 2020, for the purposes of acquiring all or a portion of the site of the powerplant to develop parklands and restore wetlands. It was held in the Senate Environmental Quality Committee.

   SB 42 (Corbett, 2009) would have prohibited a state agency, as defined, from authorizing, approving, or certifying a new powerplant or industrial facility, as defined, that uses once-through cooling. It was held in the Senate Energy, Utilities and Communications Committee.

7) **Double Referral**. Should this committee approve the bill, it will be referred to the Assembly Utilities and Energy Committee and heard on April 27th.

REGISTERED SUPPORT / OPPOSITION:

Support

City of Hermosa Beach

Opposition

California State Association of Electrical Workers
California State Pipe Trades Council
Coalition of California Utility Employees
International Brotherhood of Electrical Workers, Local 18
Western States Council Sheet Metal, Air, Rail and Transportation

Analysis Prepared by: Paige Brokaw / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2793 (Muratsuchi) – As Amended March 24, 2022

SUBJECT: Greenhouse gases: market-based compliance mechanism

SUMMARY: Requires the Air Resources Board (ARB) to evaluate the cap and trade program every three years, as specified, to determine the program's effectiveness in meeting the greenhouse gas (GHG) emission reduction goals of AB 32.

EXISTING LAW:

1) Requires ARB to adopt a statewide GHG emissions limit equivalent to 1990 levels by 2020, to ensure that statewide GHG emissions are reduced to at least 40% below the 2020 statewide limit no later than December 31, 2030, and to adopt rules and regulations to achieve maximum technologically feasible and cost-effective GHG emission reductions.

2) Requires any direct regulation or market-based compliance mechanism to achieve GHG reductions that are real, permanent, quantifiable, verifiable, and enforceable by ARB.

3) Requires ARB to prepare and approve a scoping plan every five years for achieving the maximum technologically feasible and cost-effective reductions in GHG emissions from sources or categories of sources of GHGs.

4) AB 32 authorized ARB, in furtherance of achieving the 2020 statewide limit, to adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit GHG emissions, applicable from January 1, 2012, to December 31, 2020, to comply with GHG reduction regulations, once specified conditions are met. Under this authority, ARB adopted a cap and trade regulation which applies to large industrial facilities and electricity generators emitting more than 25,000 metric tons of carbon dioxide equivalent per year, as well as distributors of fuels, including gasoline, diesel, and natural gas.

5) In 2017, AB 398 extended ARB's cap and trade authority to 2030, required ARB to establish a price ceiling on GHG emission allowances in consideration of specified factors, added several new conditions governing the management and allocation of allowances, and reduced limits on compliance offsets. Specifically, AB 398 requires ARB to:

    a) Evaluate and address concerns related to over-allocation of the number of available allowances.

    b) Establish allowance banking rules that discourage speculation, avoid financial windfalls, and consider the impact on complying entities and volatility in the market.

    c) Limit the use of offsets to 4% of a covered entity's compliance obligation from 2021 to 2025 and 6% from 2026 to 2030, of which no more than one-half may be sourced from projects that do not provide direct environmental benefits in state.

d) Report to the Legislature, in consultation with the Independent Emissions Market Advisory Committee (IEMAC), if two consecutive auctions exceed specified allowance price limits.

e) Report to the relevant fiscal and policy committees of the Legislature, including the Joint Committee on Climate Change Policies (JLCCCP), with updates on scoping plan adoption and implementation, as well as implementation of the cap and trade regulation.

6) SB 398 also established the IEMAC within the California Environmental Protection Agency, and requires the IEMAC to hold a public meeting at least annually and report to both ARB and the JLCCCP on the environmental and economic performance of the cap and trade regulation and other relevant climate policies. Requires the IEMAC to be composed of at least five experts on emissions trading market design appointed according to the following:

a) Three members appointed by the Governor.

b) One member appointed by the Senate Committee on Rules.

c) One member appointed by the Speaker of the Assembly.

d) Requires IEMAC to include a representative from the Legislative Analyst's Office (LAO), and requires members to meet all of the following requirements:

i) Have academic, nonprofit, and other relevant backgrounds.

ii) Lack financial conflicts of interest with entities subject to the cap and trade regulation.

7) Requires the LAO to annually report to the Legislature on the economic impacts and benefits of the 2030 GHG emissions targets.

THIS BILL:

1) Requires ARB, on a triennial basis, in consultation with the IEMAC, conduct an evaluation of cap and trade to determine its effectiveness in meeting the goals of AB 32. Requires the evaluation to:

a) Review how cap and trade is performing in achieving objectives specified in the most recent scoping plan.

b) Evaluate whether the supply of allowances and offsets are consistent with the most recent scoping plan and cap-and-trade regulation.

2) Requires ARB, in consultation with the IEMAC, to adopt public banking metrics that track the number of unused compliance instruments in public and private accounts on an annual basis.

3) Requires, following the triennial evaluation, ARB’s chair to present the results of the evaluation and any proposed revisions to the cap and trade regulation as part of the chair’s annual appearance before the JLCCCP.

4) Authorizes ARB to revise cap and trade regulations to more effectively meet the goals of AB 32 and the objectives of the most recent scoping plan.

FISCAL EFFECT: Unknown

COMMENTS:

1) **Author's statement**:

> AB 2793 seeks to improve the cap and trade program by requiring ARB to conduct a regular review of the program to ensure that it is tailored to meet its objectives. AB 2793 would also require ARB to adopt public banking metrics and track the number of unused compliance instruments.
>
> Numerous stakeholders and studies have raised questions about cap and trade's ability to deliver its planned emission reductions, primarily citing a supply-demand imbalance with its compliance instruments or allowances. Given the central role that cap and trade plays in helping California meet its GHG emission reduction goal of 40% below 1990 levels by 2030, it is imperative for us to ensure ARB is regularly measuring the performance of the cap and trade program against the objective and recalibrating accordingly.
>
> Requiring ARB to adopt banking metrics would give them the ability to track banking conditions in real time. This would equip ARB with a better understanding on how to address the issue of over allocation (of allowances).

2) **Adding to a plethora of reports**. As noted above, AB 398 includes several provisions, including LAO reporting and the IEMAC, to address issues similar to the issues addressed by the reporting requirement in this bill. While the provisions of AB 398, the IEMAC, and academic critiques may not be adequate to address the issue of over-allocation of allowances and the risk that cap and trade may not deliver GHG emissions reductions as promised, that is largely due to resistance within ARB. So requiring ARB itself to report on these issues seems unlikely to move the needle.

REGISTERED SUPPORT / OPPOSITION:

Support

Elders Climate Action, Norcal and Socal Chapters
Nextgen California
The Nature Conservancy

Opposition

Western States Petroleum Association

Analysis Prepared by: Lawrence Lingbloom / NAT. RES. /

Date of Hearing: April 25, 2022

ASSEMBLY COMMITTEE ON NATURAL RESOURCES
Luz Rivas, Chair
AB 2287 (Stone) – As Amended March 28, 2022

SUBJECT: California Ocean Resources Stewardship Act of 2000.

SUMMARY: Authorizes the California Ocean Science Trust (OST) to administer grants and expenditures of the trust for specified purposes from private and public fund sources, including, but not limited to, direct appropriations from the annual Budget Act and block grants from other state agencies with relevant need for coordination and engagement with the OST. The bill would exempt contracts with the trust OST for the sole purpose of delivering contracted science services to state agencies with relevant need, including, but not limited to, peer reviews, technical guidance, and scientific reports and analyses from state contracting requirements, as specified.

EXISTING LAW:

Pursuant to the California Ocean Resources Stewardship Act (CORSA):

1) Authorizes the Secretary of the Natural Resources Agency (NRA) to enter into an agreement with an existing nonprofit corporation with broad experience as the trustee of public funds, court-ordered mitigation funds, or other funds used to assist public agencies in carrying out their responsibilities to establish a nongovernmental trust, to be known as the California Ocean Trust. (Public Resources Code (PRC) § 36990 (a))

2) Establishes the purposes of the California Ocean Trust, commonly known as the California Ocean Science Trust, are to seek funds for California ocean resource science projects, emphasizing the development of new funding sources; to fund California ocean resource science projects that help fulfill the missions of the state's ocean resource management agencies; to encourage coordinated, multiagency, multi-institution approaches to ocean resource science; to encourage graduate education programs in management-oriented ocean resource science in public and private universities and colleges in California; to encourage new technologies that reduce the cost, increase the amount, or improve the quality of ocean resource management information; and, to promote more effective coordination of California ocean resource science useful to management agencies. (PRC § 36990 (b))

Pursuant to the California Ocean Protection Act:

1) Establishes the Ocean Protection Council (OPC). (PRC § 35600)

2) Requires OPC to, among other things, contract with the OST and other nonprofit organizations, ocean science institutes, academic institutions, or others that have experience in conducting the scientific and educational tasks that are required by the OPC. (PRC § 35615 (a)(4))

THIS BILL:

1) Renames the California Ocean Trust as the California Ocean Science Trust.

2) Authorizes the Trust to administer grants and expenditures of the OST for specified purposes from private and public fund sources, including, but not limited to, direct appropriations from the annual Budget Act and block grants from other state agencies with relevant need for coordination and engagement with the OST.

3) Finds and declares it is the policy of the state to ensure adequate coordination of ocean resources management science among state, regional, and federal agencies and marine science-institutions, including, but not limited to, science related to climate change mitigation and adaptation.

4) Modifies the purposes of the Trust to encourage coordinated science to deliver actionable science solutions that accelerate equitable climate change adaptation and encourage graduate education programs training, and workforce development opportunities in management-oriented ocean resource science in public and private universities and colleges in California.

5) Authorizes the Trust to administer grants and expenditures of the trust from private and public fund sources, including, but not limited to, direct appropriations from the annual Budget Act and block grants from other state agencies with relevant need for coordination and engagement with the OST.

6) Exempts contracts with the Trust from state contracting requirements for the sole purpose of delivering contracted science services to state agencies with relevant need, including, but not limited to, peer reviews, technical guidance, and scientific reports and analyses.

7) Requires, notwithstanding any other law, contracts or grants awarded to Trust to be exempt from both of the following:

   a) The personal services contracting requirements of Article 4 (commencing with Section 19130) of Chapter 5 of Part 2 of Division 5 of Title 2 of the Government Code; and,
   b) The Public Contract Code and the State Contracting Manual.

8) Precludes, notwithstanding any other law, contracts or grants awarded to Trust from being subject to the approval of the Department of General Services (DGS).

9) Repeals obsolete law requiring the Secretary to report on the steps taken to ensure adequate coordination of ocean resource management science.

FISCAL EFFECT: Unknown.

COMMENTS:

1) **Author's statement.**

   As a non-profit, the Ocean Science Trust (OST) is uniquely positioned to nimbly and efficiently respond to the science and research needs of state agencies and

departments. Not only is OST successful in coordinating multi-agency approaches to ocean resource management, they have a history of developing quality scientific analyses to support agency and legislative decision-making.

Over the last two decades, the impacts of climate change have added new challenges the list of factors involved in careful ocean resource management. To complicate things further, those challenges fall within the jurisdictions of many departments outside NRA, including the Air Resources Board, the Department of Food and Agriculture, and the CA Department of Insurance, to name a few. However, OST only has explicit authority to contract with Departments within the Agency to provide science and research services.

AB 2287 takes the simple but important step of authorizing the Trust to provide critical science and research services to state agencies in the face of climate change.

2) **California's oceans.** The state's 840-mile coastline and ocean provide the state a marine economy of more $44 billion annually. Our coastal waters are used for an abundance of purposes, including:

- The living resources sector, which includes commercial fishing, fish hatcheries, and aquaculture.
- The offshore mineral resources sector, which includes exploration and production of oil, gas, sand, and gravel from offshore sources.
- The ship and boat building sector, which includes the construction and repair of ships and boats.
- The marine construction sector, which includes heavy construction associated with beach nourishment and harbor dredging.
- The tourism and recreation sector, which includes water sports, like surfing and boating.
- The marine transportation sector, which includes the transportation of cargo and passengers, as well as port operations and the manufacture of marine instrumentation.

3) **Ocean Science Trust.** The OST was created by CORSA to provide funding for ocean resource science projects and to encourage coordinated, multiagency, multi-institution approaches to ocean resource science. OST is a tax-exempt, 501(c) 3 non-profit organization, with support from the state, academic institutions, federal government, philanthropy and private industry.

In 2004, the OPC was given explicit authority to contract with the OST, which has been an important resource to the OPC, but no other state entity is explicitly authorized to with the OST for scientific studies.

4) **Broadening who can access OST science:** When OST was first established, the Legislature knew there were a number of factors involved in careful ocean resource management. Over the last two decades, the impacts of climate change have added new challenges to that list. To complicate things further, those challenges fall within the jurisdictions of many departments outside the NRA, including the Air Resources Board, the Department of Food and

Agriculture, the California Coastal Commission, the State Lands Commission, Department of Transportation, and the Department of Insurance, to name a few.

OST advances a constructive role for science in decision-making, and access to their scientific knowledge could benefit the programmatic decision making at other state agencies. But, without an ability to directly contract for the science and research services that OST provides, other state agencies and departments are not able to benefit from a resource that informs best available outcomes.

AB 2287 updates CORSA to provide clear authority for the OST, which will be renamed to reflect the name it currently uses, to enter into contracts with agencies and departments outside NRA.

5) **Double Referral.** This bill was passed by the Assembly Water, Parks, and Wildlife Committee by 13-0 on April 5th.

6) **Related legislation**. AB 2207 (McCarty) would, among other things, exempt the California Conservation Corps' contracts for professional services, such as construction and design that is necessary for the maintenance, service, and improvement of real property used by the CCC, from DGS approval. This bill is pending in the Assembly Appropriations Committee.

REGISTERED SUPPORT / OPPOSITION:

Support

Monterey Bay Aquarium Foundation
Nature Conservancy; the
Ocean Science Trust (sponsor)

Opposition

None on file.

Analysis Prepared by: Paige Brokaw / NAT. RES. /