

Date of Hearing: April 20, 2022

ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY

Eduardo Garcia, Chair

AB 2929 (Eduardo Garcia) – As Amended March 24, 2022

SUBJECT: Lithium production: report

SUMMARY: Directs the Legislative Analyst’s Office (LAO) to annually submit a report to the legislature on the health, environmental, and economic impacts and benefits of producing lithium from geothermal brines located in Imperial County in the area commonly referred to as “Lithium Valley.”

EXISTING LAW:

- 1) Gives the Joint Legislative Budget Committee the authority to appoint the Legislative Analyst. (Government Code § 9143)
- 2) Requires the California Energy Commission (CEC) to establish the Blue Ribbon Commission on Lithium Extraction in California to review, investigate and analyze specified issues relating to lithium extraction and use in California, including the following:
 - a. market opportunities for lithium,
 - b. safe environmental methods and standards for lithium extraction from geothermal brines and how this compares to other methods for deriving lithium,
 - c. potential economic and environmental impacts to the state resulting from extraction, processing, and production of lithium and lithium-dependent products from geothermal brines, and
 - d. the importance of, and opportunities for, local, state, and federal incentives and investments to facilitate lithium extraction from geothermal brines.

Also requires the Blue Ribbon Commission on Lithium Extraction in California to submit a report to the Legislature documenting its findings and recommendations by October 1, 2022. (Public Resources Code § 25232)

- 3) Requires the LAO to annually, until 2031, report to the Legislature on the economic impacts and benefits of the greenhouse gas emissions (GHGs) targets to hit a statewide limit equivalent to 1990 emissions by 2020 and 40% below the statewide limit by 2030. (Health and Safety Code § 38592.6)

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

BACKGROUND:

Lithium Valley and the Blue Ribbon Commission –Global demand for lithium is expected to grow as much as ten-fold over the next decade, particularly with the increasing use of lithium in

batteries for multiple energy and transportation applications. Currently, virtually all of the lithium used in the United States is produced outside the country and most is mined in Argentina, Chile, China, and Australia. However, uniquely high concentrations of dissolved lithium are found in the brine produced by California's geothermal hotspots. Most of these brine resources are located in, and around, the Salton Sea in the Imperial Valley in an area commonly referred to as "Lithium Valley." As part of state efforts to incorporate these geothermal brine resources into a new domestic lithium supply chain, the Lithium Valley Commission (LVC) was convened in 2021 as a result of AB 1657 (Garcia). Since its inception, the LVC has worked to identify ways to resolve barriers to development and support opportunities for lithium recovery from geothermal brine within California. A report which considers the same types of impacts included in this bill: health, environmental, and economic, as well as any policy recommendations are due to the legislature from the LVC in October of this year.

LAO Reporting – As an organization that has provided fiscal and policy advice to the legislature for 75 years, LAO has produced reports similar to that requested by this bill on related topics, including:

- *Climate Change Impacts Across California* is a 2022 series of six reports intended as framing documents to help policymakers think about how climate change will impact various sectors and, consequently, what key corresponding policy and fiscal issues the Legislature will face in the coming years. The report on health impacts of climate change concluded that there will be a wide variety of direct and indirect health effects on Californians. The adverse health effects are not uniformly distributed across regions and populations, however. Some areas are more susceptible to climate-induced disasters or other changes and certain populations, particularly lower-income, older, or medically compromised individuals, as well as outdoor workers, will disproportionately bear the adverse health burdens of climate change. The report on climate change impacts on workers and employers mentioned that workers likely face increased work instability, both in the short term due to extreme weather events, but also in the longer term, as some industries will need to shift operationally or geographically. The LAO report found that adapting workplace practices to improve safety as well as preparing workers to respond to the economic impacts caused by climate change will be both challenging and, in many cases, costly. However, preemptive efforts that help workers and industries adapt could bring longer-term health benefits and be less economically disruptive for the state compared to if actions were not undertaken.
- *Assessing California's Climate Change Policies* is a report on the economic impacts and benefits of California's statutory greenhouse gas (GHG) emission goals—statewide emissions to 1990 levels by 2020 and to 40 percent below 1990 levels by 2030. Companion reports focus on specific, high-impact sectors in which the state has enacted major policies such as a report on transportation in 2018, electricity generation in 2020, and agriculture in 2021. The annual reports are a result of AB 398 (E. Garcia, Chapter 135, Statutes of 2017)). As an example, the 2021 report on climate change policies in the agriculture sector found that, for varying reasons, the magnitude of GHG benefits estimated for each of the four programs considered in the report could be overstated. LAO recommended that state departments be directed to conduct additional evaluation and research to better assess the GHG benefits, as improved information could help the Legislature target limited state funding to maximize GHG and methane reductions at the lowest cost possible. And although additional evaluation and research activities incur

additional costs, LAO found that in many cases, these costs would be modest compared to the amount of total state spending on the programs themselves.

COMMENTS:

- 1) *Author's Statement.* According to the author, "As the U.S transitions to a decarbonized economy, its heavy reliance on importing lithium from foreign countries robs us of the opportunity to pair our climate change and transportation goals with the creation of high-quality, green jobs. Today, the United States is falling behind Europe and Asia in lithium production with only one operating mine, in Southern Nevada. While California has an enormous opportunity to be a competitive player in the world lithium market, concerns have been raised on how this new industry will impact the residents of Lithium Valley. AB 2929 takes the first step in exploring all aspects of the impacts of developing a domestic lithium manufacturing supply chain in our state."
- 2) *Ongoing Progress in Lithium Valley.* The LVC, CEC, and many others are focused on advancing the production of lithium from geothermal brines in the Imperial Valley while carefully considering the health, environmental, and economic impacts that such an undertaking will have. Although these projects will take years to come to fruition, the October 2022 report from LVC offers only a snapshot in time. As legislative, executive, and community activity surrounding Lithium Valley continues to progress and evolve, this bill would provide the legislature with annual updates to inform oversight and policymaking on an ongoing basis, at least through 2027.

- 3) *Related Legislation*

AB 2581 (E. Garcia) establishes the Lithium Valley Office of Development within the Natural Resources Agency and requires the office to coordinate activities related to funding, economic development, construction, manufacturing, technical development, and reclamation of lithium located in the Salton Sea geothermal resource area.

- 4) *Prior Legislation*

AB 398 (E. Garcia) requires, among other provisions, LAO to annually report to the Legislature on the economic impacts and benefits of specified GHG emissions targets until January 1, 2031. Status: Chapter 135, Statutes of 2017.

AB 588 (Archuleta) implements changes to the Disabled Veteran Business Enterprise (DVBE) Program and requires, among other provisions, LAO to complete a comprehensive assessment of the DVBE program by January 1, 2023. Status: Chapter 80, Statutes of 2020.

REGISTERED SUPPORT / OPPOSITION:

Support

None on file.

Opposition

None on file.

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