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Comment from Dr James J A Blair, Cal Poly Pomona

Dear Commissioners:

Thank you for the opportunity to comment on the draft report of the Blue Ribbon Commission on Lithium Extraction in California. I submit this comment as an academic researcher and environmental justice advocate committed to supporting fenceline communities around Lake Cahuilla, currently known as the Salton Sea region. This report has the potential to have a significant impact for a just transition to renewable energy at a critical conjuncture for Imperial Valley and the Salton Sea region, while playing a key part in Californiaâ€™s leading role in the fight against climate change. In what follows, I acknowledge some of the reportâ€™s virtues while also noting areas needing further clarification and improvement.

The report has promising aspirations for a closed-loop, cradle-to-cradle approach to developing a circular economy for lithium-ion batteries. As a potentially innovative pairing of renewable energy at geothermal power plants with direct lithium extraction (DLE) technologies, this proposed development project has the capacity to have a relatively smaller ecological footprint than conventional open pit-mining or brine evaporation methods of obtaining lithium. However, around the globe DLE has only been used in limited stages of the production process in combination with conventional methods like brine evaporation, so the report risks exaggerating claims that â€œDLE is a more sustainable and beneficial approachâ€ (p. 6) if this assertion has not been demonstrated at scale. This language should be reworded to say that â€œDLE is designed to be a more sustainable and beneficial approach.â€ The language should also be revised on p. 17 in Chapter 1 to say â€œAs discussed in detail in Chapter 4 of this report, extracting lithium using direct lithium extraction (DLE) technologies proposed for use in Imperial County is designed to be a more sustainable [cut and environmentally superior] approach as compared to methods predominantly used in other places.â€ Because it is a new process, the burden of proof is on the extractive industry to show definitively that the local ecology and society are not threatened by geothermal DLE, and until it has done so, such speculation should be minimized, and precautionary measures should be described in detail. Given these unknowns, it is thus also misleading to state on p. 18 of Chapter 1 that DLE is a more benign process of recovery that should not be considered a form of extraction like mining or evaporation. That statement should be removed. It bears reminding that the â€œEâ€ in DLE stands for â€œextraction.â€

Moreover, even though geothermal lithium development is designed as a closed-loop system that might eventually be vertically integrated with battery manufacturing and battery recycling, there is not sufficient detail about planned battery manufacturing or battery recycling in the report to demonstrate circularity of the economy from upstream

to downstream in the life cycle for lithium. The report features maps showing geothermal resources, but it does not give the public a geographical understanding of the location of mineral leases for lithium or development of new geothermal plants. Some geothermal energy developers have indicated in public forums that they plan to significantly expand and even build double the current number of plants. Figure 11 on p. 25 in the report should show where these additional plants will be located.

It is also important to be clear about exactly what aspects of the geothermal DLE process will escape the cycle and cause pollution of soil, water, and air. Specifically, in relation to waste streams, it is critical to state how the iron-silica filter cakes resulting from lithium extraction will be stored and disposed (p. 54). Given their potentially hazardous chemical composition, it must be stated clearly which toxic waste facility or facilities will receive them, and how exactly potential pollution from this material will be mitigated in health impact assessments. Cumulative impacts of waste streams from potential battery manufacturing and recycling should also be accounted for in the report. Similarly, if the aim is to mitigate fossil fuel emissions by producing critical materials primarily for manufacturing of electric vehicle batteries for clean transportation (Figure 2 on p. 5 of Chapter 1), then there should be a clearly stated commitment to deploy electric truck fleets on site for geothermal lithium development and operation as soon as possible to prevent further pollution from particulate matter emitted by diesel trucks. Finally, community members have expressed concerns about how geothermal energy production interacts with seismic activity, and this should be addressed more clearly in the report.

Regarding water use, it is reassuring that the report states that it is not being proposed to use evaporation ponds with geothermal DLE. However, some of the claims about DLE requiring less water than evaporation ponds need clarification. On p. 47 the report states that â€œBHE Renewables plans to limit freshwater usage to 50,000 gallons per metric ton of lithium carbonate, which is 90 percent less than the amount used in lithium evaporation ponds in South America.â€ This needs clarification and/or more citations. In Chile brine is treated as a mineral rather than water, so it is not clear what amount of freshwater in lithium evaporation ponds is being used to compare in this instance. Based on my own research in South America, I have advocated for reclassifying brine as water in the Atacama salt flat, but it is not clear here if brine is being included in this estimated comparison. Even if geothermal DLE may not involve evaporation ponds, some DLE technologies may require significant amounts of freshwater, and some industry experts have even argued that DLE may require even more freshwater than evaporation ponds if brine is not categorized as freshwater. It is therefore necessary to not only prohibit evaporation ponds but also plan for long-term cumulative impacts of water use, including specifying how water will be reused in the DLE process, and modeling for water supply constraints due to diversions and droughts. Finally, it is helpful that the report states that no water from the Salton Sea will be used for the projects (p. 55), but this does not address water from the Colorado River that might have ended up in the Salton Sea if it were not allocated for DLE. This projected allocation of water for DLE rather than ecological restoration may thus contribute indirectly to the continued shrinking of the sea and dust pollution from exposure of

playa.

It is laudable that the report recommends mandating community benefit agreements, as well as project labor agreements (Economic Impacts Recommendation 5, p. 63; Workforce Development Recommendation 2, p. 64). Such benefit agreements should be understood similar to the way the report frames CEQA or tribal consultations as a minimum requirement and a floor, not a ceiling. While such agreements may return modest profits to the community, they can also give the false impression that the industry may relinquish its responsibility when the ink is dry. If this project is going to live up to its lofty ambitions regarding environmental, social and governance claims, then community benefits agreements will just be the beginning of a long process of reversing the considerable environmental injustice that has already occurred in the Salton Sea region: a historically marginalized sacrifice zone that community members have made clear should not include Palm Springs but should include Westmorland. Westmorland should be added to the list of communities on p. 8 of Chapter 1, and Palm Springs should be removed from Community Recommendation 4 on p, 30.

In South America and elsewhere, full participation and equal distribution of benefits among Indigenous peoples and local communities have not been ensured in a democratic process. This has resulted in silencing of dissent, non-responsiveness from state agencies to community needs, and an absence of regulation, monitoring and transparency. For these reasons, the reportâ€™s requirement to mandate community benefit agreements should remain in the final text (Economic Impacts Recommendation 5, p. 63). In my experience as a researcher and advocate for local and Indigenous communities near the Atacama salt flat in Chile, benefit-sharing agreements have helped to support Indigenous-led environmental monitoring, but they have also provided the basis for greenwashing by companies that have failed to remain accountable amid controversial scandals regarding corruption and lack of data transparency. It is clear that the Salton Sea region would stand to benefit from further funding for community organizations and Indigenous-led initiatives, and agreements with developers may be a positive first step in that direction, as long as there is continued responsibility. Taxes may also be used for needed infrastructure improvements and public health programs.

Finally, regarding Tribal perspectives in the report, I also appreciate that â€œlegally required consultation should be considered as a floor, not a ceilingâ€ (Tribal Perspectives, Recommendation 2, p. A3). This intention must be demonstrated by adhering to the legal requirements of timely consultation with sovereign Tribes that should be treated as government-to-government relations. The principle of free, prior, and informed consent is enshrined in the United Nations Declaration on the Rights of Indigenous Peoples, and this means going beyond consultation on projects like this one where it is presented as though it already has a predetermined outcome. I concur with the thoughtful and detailed feedback in the comment submitted by Courtney Ann Coyle on behalf of Carmen Lucas, Kwaaymii Laguna Band of Indians. The reportâ€™s frequent absence of affiliated Tribes where they should appear in recommendations that only mention the presumably non-Indigenous community indicates an all-too-common tendency of Indigenous erasure. This is especially concerning given the projectâ€™s

impact on a cultural landscape that features sacred sites. While it is mentioned without elaboration on p. 31 of Chapter 3, the 2010 ethnographic report prepared for the CEC that was cited by Preston Arrow-weed in a previous public comment, focusing on the cultural significance of Obsidian Butte to Native American communities, should be cited with recommendations incorporated because it already offered clear guidance of how this sacred site could be treated with respect and dignity (Gates 2010, DOCKET 02-AFC-2C). I defer to elders like Lucas and Arrow-weed on how this cultural resource should be formally recognized and protected. In any case, the obtrusion of the geothermal plants on the cultural landscape must be mitigated, especially if there will be expansion. Finally, while it is helpful that the report describes the Salton Sea as within the boundaries of ancient Lake Cahuilla on p. 27 of chapter 3, the triangulation with other locations seems to be incorrect. It should say â€œThe Salton Sea sits [cut west] east of Anza Borrego Desert State Park.â€□

Thank you again for the opportunity to provide this public comment. I hope that my remarks will help this proposed development project happen in a sustainable, just and equitable manner.

Sincerely,
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