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Public Comments for PowerForward Grant

Additional submitted attachment is included below.



September 18, 2023

California Energy Commission (“CEC”)
715 P Street
Sacramento, CA 95814

Re: BYD Coach & Bus LLC (“BYD”) Comments on Docket No. 23-TRAN-03-PowerForward: ZEV Battery Manufacturing Block Grant

Dear California Energy Commission and Calstart Staff,

BYD hereby submits its comments on CEC’s PowerForward: ZEV Battery Manufacturing Block Grant (“PowerForward Grant”). As a company that has been relentlessly focused on advancing clean energy technology and manufacturing, BYD is the leading manufacturer of zero-emission battery electric buses and operates a 550,000-square-foot ZEV manufacturing facility in Lancaster, California that currently employs 750 union workers, many with no prior experience. BYD applauds CEC’s PowerForward Grant and deeply appreciates the opportunity to submit our comments and perspective for CEC’s consideration on how best to successfully grow California’s battery manufacturing capacity and strengthen California’s presence as the trailblazer powering the nation’s march towards a green energy future.

Proposed Funding and Eligibility

- 1. Will the program have a greater impact with funding beyond \$25M? How do you see the expected award sizes of \$10M - \$15M catalyzing near-term projects with meaningful impact?*

BYD suggests increasing the total program funding beyond \$25 million and individual awards beyond \$15 million. The current funding level is sufficient to stimulate the expansion of existing manufacturing facilities but falls short of incentivizing new battery manufacturing facilities with meaningful impact in the near term.

Constructing a 50,000-square-foot battery plant in the US costs \$50 - \$75 million on average, and in California, with its higher land, labor, and other overhead costs, such a factory could cost nearly \$80 million. Notably, battery factories in the US, whether planned, under construction, or operational, have over \$1 billion in capital expenditure. In contrast, the federal 40207(c) Battery Manufacturing Grants Round II provides funding from \$50 million to \$300 million.

We understand that state funding may not match federal levels, but BYD encourages the CEC to consider expanding the solicitation to at least align with other CEC grants such as the ZEV Vehicle Manufacturing Grant. This would enable a more comprehensive approach to meeting program objectives and pursuing innovative, high-impact solutions at a meaningful scale.

- 2. Are the eligible activities (supply chain verticals) aligned with the needs and opportunities in California? Are any activities strategically critical?*

BYD recommends including module production and battery pack testing as eligible activities. The proposed activities are categorized into pre- and post-ZEV manufacture categories but the industry typically employs a more granular categorization scheme. It encompasses four key steps in the ZEV battery supply chain: upstream (raw material extraction), midstream (material processing for cell production), downstream (comprising module production, pack assembly, and testing), and end-of-life (involving recycling and reuse).

Module production serves as the initial phase of the downstream process in battery production, and pack testing concludes the downstream process. Together they represent a strategically critical point where battery cells transform into functional and safe units for ZEVs. Excluding module production and pack testing from the list of eligible activities creates a segmentation within the downstream production system, thereby introducing gaps in the battery value chain, along with potential safety and quality concerns.



Furthermore, it's important to note that California currently accounts for less than seven percent of the world's midstream and downstream battery production capacity. To bolster in-state battery manufacturing and enhance California's position in the battery value chain, it is imperative to encompass all activities within the downstream battery production process as eligible for this grant. This should include module production, pack production, and pack testing, ensuring a more comprehensive and integrated approach to strengthening the state's battery production capabilities.

Manufacturing in California

3. *Can a non-US based company participate in PowerForward? Should there be a preference for CA- and/or US-based companies?*

BYD strongly suggests the grant does not impose eligibility restrictions based on geographic origin. The grant should be eligible to all companies with a physical place of business in the United States, with California headquarters a plus.

As clearly defined, the objective is to attract, foster, and expand opportunities for ZEV battery manufacturing. Both Governor Newsom and CEC constantly emphasize the state's momentum in becoming a global source for battery production. This grant presents a valuable opportunity for California to gain deeper insights into the ZEV manufacturing landscape and underscore the competitive advantages of the state. With such aims, it's crucial for the grant to welcome and ensure a level playing field for all participants with a US and California presence to maximize the impacts.

Federal manufacturing grants are also providing the broadest eligibility criteria for participating entities. Broader eligibility not only represents inclusion but also encourages collaboration with in-state organizations and innovations in project design. Limiting the applicants would slow progress and shortchange the probability of signing with experienced manufacturers.

4. *What are some of the barriers to expanding or establishing manufacturing operations in California? How should this manufacturing solicitation be deployed to alleviate some of those barriers, while maximizing in-state job creation?*

As a California-based ZEV and battery manufacturer, we face challenges due to high land and labor costs. BYD urges CEC to increase the total solicitation beyond \$25 million and individual awards beyond \$15 million to help overcome these barriers.

Land prices in the state can make projects more expensive than in other areas, and California's per-square-foot construction costs are among the nation's highest. Labor costs add to the challenge.

5. *How should the program incent the cleanest possible manufacturing?*

BYD recommends including sustainable construction and operation into the scoring criteria, and giving priority to projects that embrace emission reduction and energy-saving practices to incentivize the cleanest possible manufacturing. These practices may include implementing smart building technologies, utilizing energy-efficient and energy-saving appliances, installing solar panels, utilizing energy storage systems, and implementing carbon capture and storage (CCS) methods. These practices are pivotal for mitigating the environmental footprint associated with construction activities and promoting sustainable and environmentally responsible operational practices.

Proposed Evaluation Criteria

6. *"Use of domestic lithium supply" worth 10 points in the Proposed Evaluation Scoring.*

BYD recommends removing the "Use of domestic lithium supply" criteria from the evaluation. Despite significant lithium deposits in the United States, domestic mining and processing capacity has been stagnant for decades. In 2022, approximately 130,000 tons of lithium were produced globally, with the majority coming from Australia, China, and



Chile. The only operating lithium mine in Silver Peak, Nevada produces around 5,000 tons of lithium per year¹. Even with various federal incentives for US lithium and critical material production, the US lithium supply has not yet reached a commercial level. Including "use of domestic lithium supply" as an evaluation criterion is relatively unrealistic and may discourage projects from applying.

7. *Are there any missing categories we should consider adding to the proposed scoring criteria?*

BYD suggests (a) adding Innovation and Quality criteria for evaluation, (b) increasing the Manufacturing Operations score, and (c) emphasizing supply chain stability criteria under Manufacturing Operations.

Innovation and quality should be prioritized. California is the innovation hub and technology hotbed of the US. The establishment of the Lithium Valley is centered around greener technology innovation. Therefore, the grant should serve as an incentive for increasing domestic production and spurring technology advancement in battery and battery production. Proposed projects that go beyond traditional ZEV lithium battery design, aim to increase battery lifetime and efficiency, utilize emerging technology for material processing, or explore innovative recycling methods and second life uses, should receive priority consideration when awarding the grant.

The Manufacturing Operations score should also be increased as it determines the feasibility of successful production. The funding should be awarded to realistic projects whose proposed output is achievable. A strong, stable, affordable, and well-planned supply chain, preferably from the local industry, is the key to a successful battery manufacturing operation. Such a supply chain will also benefit the local economy, especially for traditionally disadvantaged communities in the state.

8. *How can we encourage supply chain projects located in Lithium Valley?*

BYD recommends giving equal weight to projects throughout all of California as prioritizing projects developed in particular regions (including Lithium Valley) over others may slow overall adoption if the regions do not yet have adequate infrastructure, a stable workforce, and other essential resources necessary to sustainably support the project.

9. *Should geographic colocation with mining activities be a consideration in project selection?*

We suggest not increasing consideration for projects that are in geographic colocation with mining activities. Existing manufacturing facilities in the United States rely heavily on lithium imported from outside of the US as the domestic supply is currently unable to support the demand. The PowerForward Grant should not limit the manufacturers' efforts to increase manufacturing capacity by focusing on limited locations that do not have the infrastructure to build a sustainable project.

Match Funding & Equity

10. *To increase total program funding, a 50% match share requirement is planned. What forms of match should be included or excluded?*

BYD recommends granting maximum flexibility in both cash and non-cash cost share options, including the ability to count eligible project costs and federal funding as match shares. For cash match shares, we propose keeping it below 10% of the grant funding. For non-cash match shares, the grant should allow the match in the forms of labor, real property, equipment, supplies, services provided by a third party or subcontract, research and development, and other cost of activities related to ZEV battery manufacture.

Calstart could use the GFO-21-605-01 Zero-Emission Transportation Manufacturing Grant as a reference. By providing such flexibility in cost share, the grant can attract more entities interested in scaling up California manufacturing operations.

¹ <https://undark.org/2023/09/05/californias-salton-sea-eyed-for-lithium-extraction-with-new-tech/>



11. How should the program ensure projects benefit their local communities?

BYD recommends the grant prioritizes projects that underscore community engagement, local employment, and in-state procurement. Prioritization could be reflected as either a bonus on individual awards or a bonus on scoring. The grant could encourage applicants to submit support letters from community partners.

We believe that ensuring community benefits is integral to the success and sustainability of any manufacturing incentive program. Manufacturing projects that actively involve community members in project planning, design, and decision-making, possess community agreements prioritizing local hiring, or demonstrate higher percentages of local procurement targets should be granted priority in the award process. Prioritizing community engagement and local employment and procurement components can ensure the proposed project meets community needs, effectively stimulates the local economy, creates jobs, and supports local businesses.

12. How should the program effectively address workforce development?

BYD suggests prioritizing projects that emphasize workforce capacity building and skills training. Prioritization could be reflected as either a bonus on individual awards or a bonus on scoring. The grant could encourage applicants to submit support letters from workforce development partners or workforce development plans.

Manufacturing projects that integrate on-the-job training, establish apprenticeship programs in collaboration with local unions or community colleges to enhance diversity and inclusion, and give priority to hiring disadvantaged individuals should be awarded with higher evaluation scores. Prioritizing capacity building and facilitating opportunities for workforce upskilling and reskilling will effectively address local workforce development needs and contribute to a fair and equitable transition toward clean energy.

If there are any questions, please do not hesitate to contact us.

Very truly yours,

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