CITY OF LONG BEACH

Memorandum

Date: August 27, 2026

To: Thomas B. Modica, City Manager

From: Meredith Reynolds, Deputy City Manager MKR

For: Mayor and Members of the City Council

Subject: **Climate Resilient & Sustainable City Commission Recommendation to Conduct a Feasibility Study on an Electric Vehicle Battery Reuse and Recycling Hub**

At its June 26, 2025 meeting, the Climate Resilient and Sustainable City Commission (Commission) discussed the waste disposal of electric vehicle batteries. Following the discussion, the Commission established an ad hoc committee to review related issues and opportunities and make a recommendation to City Council.

At its April 23, 2026 meeting, the Commission approved a recommendation to forward to City Council a report on an Electric Vehicle Battery Reuse and Recycling Hub Feasibility Study for consideration (Attached).

While staff worked to report back within the requested 30-day timeline, additional time for research and correspondence with relevant departments was needed to successfully complete the request.

Discussion

Developing an electric vehicle (EV) battery reuse and recycling hub (recycling hub) has the potential to provide opportunities for the City to further environmental sustainability goals and generate revenue. Key considerations around cost, financial impact, and permitting should be reviewed prior to conducting a feasibility study. Through conducting outreach to departments with connections to this work, staff were able to receive additional insights on potential impacts from a potential recycling hub. These initial findings are detailed in the subsections below.

Opportunities

Based on preliminary research, the recycling hub presents the City with potential opportunities for both environmental and financial benefits. EV batteries contain multiple valuable metals that when processed and recovered correctly can be resold for other energy uses, such as solar storage. Recycling also helps reduce the need for additional mining and decreases hazardous landfill waste, aligning with the City's commitment to environmental sustainability. The recommended feasibility study would provide greater details on the depth and scale of environmental and financial benefits that a recycling hub could provide for Long Beach.

Considerations

While the Commission's initial estimate for the cost of conducting a feasibility study was $25,000-50,000, the final cost could be much higher. The Economic Development and Opportunity Department conducted recent economic impact studies, and based on those projects, staff estimates that the cost of this study could be up to $90,000-120,000. Although a larger project in scope, the Public Works Department conducted a Marine Trash and Debris feasibility study in 2024 that totaled $280,600. With limited City funding available, financing this study could be challenging and outside funding would depend on the availability of grants.

Should the feasibility study move forward, several considerations should be included in the scope:

- *Funding:* The study would need to analyze the availability of grants or other outside funding to develop the recycling hub.
- *Service Provider*: The study would need to consider the financial impact of a new City service on taxpayers compared with the costs of identifying a private service provider.
- *Site Selection, Zoning, and Clearances:* The project will require identifying available City land or acquiring available private land with aligned zoning, as well as passing environmental clearances and other permitting requirements.

Department Insights

To gain initial insights into electric vehicle battery reuse and recycling facilities, the Office of Climate Action and Sustainability staff reached out to relevant departments requesting any information related to this topic. The Financial Management Department Fleet Services Bureau and the Energy and Environmental Services Department did not have existing knowledge of developing a recycling hub, but they were generally supportive of pursuing a feasibility study to learn more.

The Harbor Department provided information on anticipated future electrification that could increase demand for electric vehicle battery disposal. The Port of Long Beach (POLB) will be facilitating the continued adoption of zero emission technology across cargo operations, which will include the utilization of battery electric technologies at large scales. Through their Zero Emissions, Energy Resilient Operations (ZEERO) policy, the POLB is also committed to implementing zero emissions equipment into their direct services, which will also involve significant deployment of battery-electric vehicles. Beyond their own fleets, the POLB expects significant deployments of new battery-electric technologies into operations at their container terminal partners, across their drayage fleet, and potentially in other use cases such as switching locomotives and commercial harbor craft. Each of these batteries will need to be handled at the end of their manufactured useful life, which makes a compelling theoretical case for a local handling facility. This proposed feasibility study would clarify the potential opportunities and risks associated with handling the thousands of used batteries that could be recycled or reused once they are no longer useful in port operations.

Conclusion

An electric vehicle battery reuse and recycling hub could present an opportunity for Long Beach to receive financial benefits from repurposing the large supply of EV batteries that circulate through the POLB while aligning with overall City sustainability policies and objectives. Given this preliminary information, the Climate Resilient and Sustainable City Commission recommends that City Council consider a feasibility study to explore the potential of building a facility for EV battery recycling in Long Beach.

For more information, please contact Fern Nueno, Climate Manager, at Fern.Nueno@longbeach.gov or 562-570-7615.

ATTACHMENT

CC: DAWN MCINTOSH, CITY ATTORNEY
DOUGLAS P. HAUBERT, CITY PROSECUTOR
LAURA L. DOUD, CITY AUDITOR
APRIL WALKER, ASSISTANT CITY MANAGER
TERESA CHANDLER, DEPUTY CITY MANAGER
MEREDITH REYNOLDS, DEPUTY CITY MANAGER
GRACE YOON, DEPUTY CITY MANAGER
TYLER BONANNO-CURLEY, DEPUTY CITY MANAGER
KEVIN LEE, CHIEF PUBLIC AFFAIRS OFFICER
MONIQUE DE LA GARZA, CITY CLERK
DEPARTMENT HEADS

Memorandum

Date: April 23, 2026

To: Thomas B. Modica, City Manager

From: Climate Resilient and Sustainable City Commission

For: Mayor and Members of the City Council

Subject: Climate Resilient and Sustainable City Commission Recommendation - EV Battery Reuse and Recycling Hub Feasibility Study

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At its April 23, 2026 meeting, the Climate Resilient and Sustainable City Commission (Commission) discussed the strategic opportunity to establish a Long Beach EV Battery Recycling Hub to capture revenue from electrification investments in Long Beach. The Commission created an ad hoc committee, which reviewed the state of EV battery end of life processing and submitted a recommendation to the full Commission. The Commission approved the recommendation that City Council authorize a 90-day feasibility study.

Consistent with Commission bylaws, we kindly request:

1. That this recommendation be transmitted to the City Council for consideration within thirty (30) days or sooner after finalization; and
2. That the original Commission recommendation is transmitted unaltered, and if staff or City Manager recommendations differ, they are presented to City Council separately.

ATTACHMENT: Climate Resilient and Sustainable City Commission Battery Reuse and Recycling Hub Recommendation Letter

CC:
MEREDITH REYNOLDS, DEPUTY CITY MANAGER
FERN NUENO, CLIMATE MANAGER
LARRY RICH, SUSTAINABILITY MANAGER

ATTACHMENT A

CLIMATE RESILIENT AND SUSTAINABLE CITY COMMISSION
BATTERY REUSE AND RECYCLING HUB RECOMMENDATION

April 23, 2026

Honorable Mayor Richardson and Members of the City Council
City of Long Beach
411 West Ocean Boulevard
Long Beach, CA 90802

RE: Climate Resilient and Sustainable City Commission Recommendation - Long Beach EV Battery Reuse and Recycling Hub Initiative

Honorable Mayor Richardson and Members of the City Council:

The Climate Resilient and Sustainable City Commission (Commission) advises the City Council on sustainability and climate resilience, including energy, waste reduction, and environmental justice[1]. In carrying out this mission, the Commission has identified an innovative revenue opportunity that aligns with the City of Long Beach (City) climate action priorities.

It is in this context that the Commission submits this recommendation to authorize a feasibility study for the Long Beach EV Battery Reuse and Recycling Hub (Hub) as a strategic initiative to transform Long Beach Container Terminal's electrification investments into sustainable revenue generation.

The Opportunity

The Long Beach Container Terminal (LBCT) has invested up to $2.5 billion[2] in port electrification with no end-of-life battery plan. The $2.5 billion is LBCT's own 15-year capital investment in terminal redevelopment and electrification. LBCT built 102 autonomous battery-powered vehicles, 69 electric cranes, and the world's two largest battery exchange buildings. Dead batteries are shipped approximately 400 miles to Nevada with zero local value captured. The Hub would transform this generators pay program to Long Beach at an estimate of $50-150 per battery for collection.

The Hub is proposed as a collection and aggregation operation, not a full processing plant. It would receive end-of-life batteries from LBCT (currently shipped 400 miles to Nevada), triage them for potential second-life reuse, aggregate volume to improve negotiating leverage with recyclers, and charge generators a collection fee. The City would act as broker/intermediary. The Hub would aggregate batteries and negotiate with recyclers, potentially capturing between $860K to $3.2M in annual revenue from: (1) a $50–$150/battery generator fee charged to LBCT and others, and (2) the resale spread from aggregated battery materials. The Hub would also advance the Westside Promise by creating 10-15 jobs in West Long Beach, which would be primarily battery teardown technicians (forklift + electrical skills, no degree required), warehouse/logistics operators, a safety/environmental compliance specialist (mandatory for Li-ion storage), an operations/procurement coordinator, and likely a grants manager.

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[1] Long Beach Municipal Code, ORD-23-0031; City of Long Beach Office of Climate Action and Sustainability.
[2] LBCT Net Zero 2025 Progress Report; Business Wire federal grant announcement (April 2024)

ATTACHMENT A

CLIMATE RESILIENT AND SUSTAINABLE CITY COMMISSION
BATTERY REUSE AND RECYCLING HUB RECOMMENDATION

Commission Recommendation

The Commission recommends that the City Council authorize a feasibility study with $25,000-50,000 in planning funds to validate market demand, conduct site selection, and identify $2M-$5M in available federal/state grants or green credits to fund the Hub construction and operation. This positions Long Beach as California's first city to close the EV battery loop with a national circular economy leadership model.

We appreciate your consideration and look forward to advancing this initiative.

Sincerely,

Keisha Gaines
Climate Action and Environmental Commission, Chair