JOSH GREEN, M.D.
GOVERNOR OF HAWAI'I
KE KIA'ĀINA O KA MOKU'ĀINA 'O HAWAI'I

KENNETH S. FINK, MD, MGA, MPH
DIRECTOR OF HEALTH
KA LUNA HO'OKELE

STATE OF HAWAII
DEPARTMENT OF HEALTH
KA 'OIHANA OLAKINO
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WRITTEN TESTIMONY ONLY

Testimony in SUPPORT of HB0242 HD1 SD1
RELATING TO ELECTRIC VEHICLE BATTERIES

SENATOR DONOVAN M. DELA CRUZ, CHAIR
SENATE COMMITTEE ON WAYS AND MEANS

April 2, 2025; 10:01 AM; Room Number: 211

Fiscal Implications: N/A.

Department Position: The Department of Health (Department) supports this measure and offers comments.

Department Testimony: The Environmental Management Division, Solid and Hazardous Waste Branch (EMD-SHWB) provides the following testimony on behalf of the Department.

The Department supports this measure, which establishes an electric vehicle (EV) battery recycling and reuse working group in the Hawai‘i State Energy Office. The Department agrees that it is prudent to gather more information about the current options for end-of-life EV batteries and develop policy to encourage proper recycling and disposal, as this waste stream will increase in the future. The Department defers to the Hawai‘i State Energy Office on any specific recommendations relating to the working group’s structure, purpose, and financing and looks forward to participating as co-chair.

The department recommends replacing “2026” with “2027” on page 4 line 7 to allow the working group more time. The department believes a change from 2027 to 2026 was made inadvertently in the SD1 version of the measure. In decision-making, the joint EIG/AEN committee referenced the Hawai‘i Natural Energy Institute’s (HNEI’s) testimony. The HNEI testimony used “before the end of 2026 [calendar year],” meaning before the convening of the regular legislative session of 2027.

Offered Amendments: The department recommends replacing "2026" with "2027" on page 4 line 7.

Thank you for the opportunity to testify on this measure.

HAWAII STATE ENERGY OFFICE
STATE OF HAWAII

JOSH GREEN, M.D.
GOVERNOR

SYLVIA LUKE
LT. GOVERNOR

MARK B. GLICK
CHIEF ENERGY OFFICER

235 South Beretania Street, 5th Floor, Honolulu, Hawaii 96813 Telephone: (808) 451-6648
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804 Web: energy.hawaii.gov

Testimony of
MARK B. GLICK, Chief Energy Officer

before the
SENATE COMMITTEE ON WAYS AND MEANS

Wednesday, April 2, 2025
10:01 AM
State Capitol, Conference Room 211 and Videoconference

In Support of
HB 242, HD1, SD1

RELATING TO ELECTRIC VEHICLE BATTERIES.

Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Committee, the Hawai‘i State Energy Office (HSEO) supports HB 242, HD1, SD1 which convenes a working group within the Hawai‘i State Energy Office to examine options for reuse and recycling of electric vehicle batteries.

The rapid development of the electric vehicle (EV) industry presents promising opportunities for technological innovation and sustainability. Concurrently, Hawai‘i’s geographical location as the most populated isolated island state requires adoption of pioneering waste management practices that can reliably ensure health and safety under a practical and effective regulatory framework. Specifically, Hawai‘i needs to step up to develop processes and practices that can stimulate private sector investment in local processing of lithium-ion batteries (LIBs) to ensure LIBs can be properly disposed of at the end of their useful life (EOL). Creating a local industry for EOL processing has the potential to create and retain good paying jobs in Hawai‘i while establishing a process for this that prioritizes safety, affordability, and sustainability. Such a proactive effort will permit Hawai‘i to avert a challenging waste problem and the associated health and safety risks and potentially put Hawai‘i businesses in a leading opportunity to

replicate and support solutions for export given the growing worldwide demand to appropriately handle and recycle the growing volume of battery waste.

HSEO has forecasted significant growth in electric vehicles given its central role in decarbonizing the ground transportation sector. The 2024 Hawai‘i Greenhouse Gas Emissions Report for 2020 and 2021 estimates that in 2021, the tailpipe emissions from ground transportation comprise 37% of all transportation emissions in Hawai‘i. In 2021, ground transportation contributed 3.53 MMT CO2e, making up 17.5% of the aggregated state gross total of 20.18 MMT CO2e emissions.[1] The Decarbonization Report prepared by HSEO pursuant to Act 238 (SLH 2022) and submitted to the Hawai‘i Legislature in December 2023 states that decarbonization of ground transportation requires a two-pronged approach: reducing the amount of energy for ground transportation and transitioning to zero-emission vehicles.[2]

HSEO agrees with the intention of convening a group of experts in technology, law, government, and industry to develop a report that can inform the management practices for EV batteries in Hawai‘i, along with the supporting required regulatory framework. HSEO acknowledges and greatly values the role and input of the Department of Health for the implementation of waste management policies and systems.

HSEO also acknowledges the valuable research and analysis completed by the Hawai‘i Natural Energy Institute (HNEI) to date; including the publication of three reports that provide the following: an analysis of current battery management practices and the regulatory environment; recommended approaches for battery management and processing; volume estimates; and guidance on feasible policy frameworks.[3]

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[1] State of Hawai‘i Department of Heath (2024) Hawai‘i Greenhouse Gas Emissions Report for 2020 and 2021. Available at: https://health.hawaii.gov/cab/files/2024/05/2020-and-2021-Inventory_Final-Report_5-29-24.pdf

[2] Hawai‘i State Energy Office (2023). Hawai‘i Pathways to Decarbonization Report to the 2024 Hawai‘i State Legislature Act 238 (SLH 2022). Available at: https://energy.hawaii.gov/wpcontent/uploads/2022/10/Act238_HSEO_Decarbonization_FinalReport_2023.pdf pages 102 and 106

[3] Hawai‘i Natural Energy Institute (HNEI), three reports:

2022: *Final Report to Provide Recommendations on Waste Management of Clean Energy Products in Hawai‘i to the 2023 Legislature under Act 92 and HB 1333,* December 2022

Furthermore, HSEO has ongoing and future work with the Hawai‘i Energy Policy Forum (HEPF) and HNEI to establish a working group focused on the requirements for managing the processing of all EOL LIBs (e.g., insurance, utilities, land, first responders, State and Federal regulations). Understanding these requirements is essential to the development of sound policy that the entire industry is likely to support and be able to execute. Collectively, these efforts with HEPF and HNEI reflect a cohesive approach that recognizes Hawai‘i's unique environment, particularly its reliance on off-island shipping. Acknowledging the work produced from this collaboration can be used to inform the work intended to be completed in the working group proposed by this bill, HSEO is happy to work in collaboration with the Department of Health as co-chairs, prioritizing the EOL management of EV LIBs.

HSEO is dedicated to collaborating with the appropriate agencies to develop and align solutions for effective local repurposing and EOL management of LIBs to ensure safety, energy security, enhanced cost-effectiveness, and the re-use of valuable materials.

Thank you for the opportunity to testify.

(https://www.hnei.hawaii.edu/wp-content/uploads/2023-HNEI-Act92-Final-Report-Clean-Energy-Products-Waste-Management.pdf);

2023: *Policy Recommendations on Waste Management of Clean Energy Products in Hawai‘i – Supplemental Report to the Hawai‘i State Legislature in Accordance with HB1333*, December 2023 (https://www.hnei.hawaii.edu/wp-content/uploads/HNEI-Act92-Supplemental-Report-Clean-Energy-Products-Waste-Management.pdf);

2024: *Waste Management of EOL PV Panels and LIBs in Hawai‘i*, December 2024 (https://www.hnei.hawaii.edu/wp-content/uploads/Waste-Management-of-EOL-PV-Panels-and-LIBs-in-Hawaii.pdf).

SIERRA CLUB OF HAWAIʻI

SENATE COMMITTEE ON WAYS AND MEANS

April 2, 2025 10:01 AM Room 211

In SUPPORT of HB242 HD1 SD1: RELATING TO ELECTRIC VEHICLE BATTERIES

Aloha Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Committee,

On behalf of our over 20,000 members and supporters, the Sierra Club of Hawaiʻi **SUPPORTS** HB242 HD1 SD1**,** which will help to confront the growing waste stream concerns associated with lithium ion batteries used in electric vehicles.

Our islands' failure to account for our continuous production of solid waste, and the externalized costs of our consumption-based economy, have resulted in significant and ever-growing impacts to our environment, our public health, and overall quality of life. Leachates from our landfills threaten to contaminate our water resources and nearshore areas; toxic emissions and ash from Oʻahu's waste-to-energy facility have raised the risks of lung and heart disease, neurological complications, reproductive issues, and cancer in nearby, largely Native Hawaiian communities; and our limited land areas and our sensitive environments and groundwater sources severely limit the space we have available to receive and store our waste byproducts.

Unfortunately, while electric vehicles are helping to reduce our dependency on fossil fuels and further our progress towards a net negative carbon footprint by 2045, the lithium ion batteries that power them may exacerbate our solid waste conundrum. Notably, the storage, transportation, and disposition of such batteries present unique waste management challenges, particularly given the potential for fires and toxic chemical releases, the limited options for affordably off-shipping used and damaged batteries, and the lack of any proper lithium battery processing much less recycling facilities in our islands. As more and more electric vehicles are imported, these unique challenges will only increase over time.

Accordingly, the Sierra Club supports this measure's efforts to begin the process of researching and planning for the management of electric vehicle batteries entering our waste stream, including through potential battery recycling and reuse. Not only may this head off a looming hazardous waste crisis, but innovative strategies for recycling and reuse could also result in educational opportunities and economic benefits for local residents and businesses.

Accordingly, the Sierra Club of Hawaiʻi respectfully urges the Committees to **PASS** HB242 HD1 SD1. Mahalo nui for the opportunity to testify.

Hawaii Electric Vehicle Association
hawaiiev.org
noel@hawaiieva.com

March 30, 2025

SUPPORT FOR HB242 HD1 SD1 (RELATING TO ELECTRIC VEHICLE BATTERIES)

Dear Chairs Wakai and Gabbard, Vice-Chairs Chang and Richards, and members of the Committees,

My name is Noel Morin. I am submitting testimony on behalf of Hawaii Electric Vehicle Association (Hawaii EV) in STRONG SUPPORT of HB242 HD1 SD1, which *Establishes a working group within the Hawai'i State Energy Office to examine how to maximize the recycling and reuse of electric vehicle batteries and recommend electric vehicle battery management practices.*

As the number of EVs on our roads continues to grow, it will be critical that we establish clear pathways to maximize the value of EV batteries and unlock economic benefits that exist in upcycling and recycling.

Batteries are valuable even after they are no longer of use in EVs – they may have 70-80% of their useful capacity. At this stage of their lifecycle, they can be repurposed as stationary batteries, which is already being done in other markets. These stationary batteries can store energy in commercial and residential applications.

Of course, once fully depleted, these batteries must be recycled as they contain valuable minerals that can be repurposed to create new batteries. 'Mining' minerals already concentrated in depleted batteries is many times better economically and environmentally than virgin mineral mining.

HB242 HD1 SD1 is a critical step toward establishing an effective EV battery upcycling and recycling framework. The proposed working group will help Hawaii establish a best practice for this framework, ensure coordination with various stakeholders throughout the battery lifecycle (local and offshore), and ensure that we establish a process that prioritizes economic viability and environmental sustainability.

Hawaii EV urges the committee to pass HB242 HD1 SD1.

Thank you for the opportunity to testify.

Sincerely,

Noel Morin
President
Hawaii EV Association

Hawaii EV Association is a grassroots non-profit group representing electric vehicle owners in Hawaii. Our mission is to accelerate the electrification of transportation through consumer education, policy advocacy, and electric vehicle charging infrastructure expansion. For more information, please visit hawaiiev.org.

HB-242-SD-1
Submitted on: 3/30/2025 12:10:03 PM
Testimony for WAM on 4/2/2025 10:01:00 AM

Submitted By	Organization	Testifier Position	Testify
Ted Bohlen	Testifying for Climate Protectors Hawaii	Support	Written Testimony Only

Comments:

SUPPORT!

SanHi
GOVERNMENT STRATEGIES
A LIMITED LIABILITY LAW PARTNERSHIP

DATE: April 1, 2025

TO: Senator Donovan Dela Cruz
Chair, Committee on Ways and Means

Senator Sharon Moriwaki
Chair, Committee on Ways and Means

FROM: Tiffany Yajima

RE: **H.B. 242, H.D. 1, S.D.1 – Relating to Electric Vehicle Batteries**

Decision Making Hearing Date: Wednesday, April 2, 2025 at 10:01 a.m.
Conference Room: 211

Dear Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Committee on Ways and Means:

On behalf of the Alliance for Automotive Innovation ("Auto Innovators") we submit this testimony in **support** of H.B. 242, H.D.1, S.D.1, Relating to Electric Vehicle Batteries. The Alliance for Automotive Innovation is the singular, authoritative and respected voice of the automotive industry. Focused on creating a safe and transformative path for sustainable industry growth, the Alliance for Automotive Innovation represents the manufacturers producing nearly 99 percent of cars and light trucks sold in the U.S. Members include motor vehicle manufacturers, original equipment suppliers, technology, and other automotive-related companies and trade associations.

This measure establishes a working group to study how to maximize the recycling and reuse of electric vehicle batteries and tasks the group to make recommendations on electric vehicle battery management practices with a report to the legislature before the 2026 legislative session.

As the representative of both the makers of electric vehicles and electric vehicle batteries, Auto Innovators is willing to and interested in serving as a resource to the state on this working group. We would also suggest that the group consider current programs that exist today to manage EV battery recycling, and would support additional time for the working group to organize and develop comprehensive battery management best practices.

Currently, in the life cycle of a battery, when an EV battery begins to show signs of failure, these battery modules or packs can first be refurbished to as good or

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better quality and performance levels through the replacement of worn or deteriorated components which can be re-certified to OEM specifications. If a battery module or pack cannot be reused, these batteries and components can also be refurbished on the secondary market to fulfill a different use from what was originally intended. At the end of the life of a battery, EV batteries can be processed to recover the maximum amount of raw materials for reuse in similar or alternative industries.

For vehicles that have reached their end-of-life and that are unwanted without parts removed by a dismantler, Automakers have adopted a “Full Vehicle Backstop” program. The Full Vehicle Backstop program covers the whole electric vehicle and not just the battery. Under the program, the vehicle manufacturer is responsible to accept the vehicle and ensure that it is properly dismantled and the lithium-ion battery is properly reused, refurbished, or recycled.

As we continue the shift to an electric vehicle future, Auto Innovators is interested in supporting this working group to provide input on EV battery management practices.

Thank you for the opportunity to submit this testimony.

CLIMATE FUTURE FORUM

Date:	March 31st 2025
To:	Senator Donovan M. Dela Cruz, Chair Senator Sharon Y. Moriwaki, Vice Chair Members of the Senate Committee on Ways and Means
From:	Climate Future Forum
Re:	**SUPPORT for HB242 HD1 SD1**
Hearing:	**04-02-25 10:01AM**

On behalf of the Climate Future Forum, thank you for the opportunity to testify in support of HB242. As a young resident of Hawai‘i who has grown up witnessing the rapid adoption of electric vehicles, I am both excited by the promise of cleaner transportation and deeply concerned about the challenges that come with managing the end-of-life of EV batteries.

I’ve seen firsthand how the surge in electric vehicles is transforming our communities and reducing our reliance on fossil fuels. However, with this transition comes the very real risk of improperly handled battery waste—an issue that could harm our beautiful environment if not addressed responsibly. HB242 is personal to me because it recognizes the urgency of this challenge and proposes a forward-thinking solution: establishing a dedicated working group within the Hawai‘i State Energy Office to examine and improve battery recycling, reuse, and repurposing practices.

Without proper management, these batteries could end up as a hidden threat to our local ecosystems. HB242 offers a proactive approach by bringing together diverse experts to develop best practices and practical policy recommendations that safeguard our community and natural resources.

For me, supporting HB242 is a commitment to a future where sustainable innovation and environmental stewardship go hand in hand. It reassures me that as Hawai‘i continues its journey toward a decarbonized future, we will not overlook the critical importance of responsibly managing the byproducts of our technological progress.

I respectfully urge you to pass HB242, ensuring that Hawai‘i remains at the forefront of not only clean transportation but also of sustainable, responsible energy practices. Thank you for considering my testimony and for your dedication to a cleaner, healthier Hawai‘i.

Sincerely,

Tahan Bapna
Youth Leader of Hawai‘i Climate Future Forum

Date: April 2, 2025
Time: 10:01am
Place: VIA VIDEOCONFERENCE and Conference Room 211
Bill: HB242 HD1 SD1, Relating to Electric Vehicle Batteries

Aloha Chair Dela Cruz, Vice Chair Moriwaki, and members of the committee,

On behalf of the Hawai'i Automobile Dealers Association (HADA), we are writing to **support** HB242 HD1 SD1, Relating to Electric Vehicle Batteries. This bill establishes a working group within the Hawaii State Energy Office to examine how to maximize the recycling and reuse of electric vehicle batteries and recommend electric vehicle battery management practices.

HADA's membership includes small and locally-owned businesses, many of which are operated by the family members of their founders. These business leaders are the fabric of life in Hawai'i, directly employing thousands of workers, indirectly employing tens of thousands, and providing vehicle transportation to consumers across the islands.

The Hawaii Automobile Dealers Association (HADA) supports this bill because it promotes responsible recycling and reuse of electric vehicle (EV) batteries, addressing environmental concerns associated with the growing number of EVs in Hawaii. By establishing best management practices and encouraging coordinated efforts across industries, the bill helps ensure sustainable business practices, which align with the association's commitment to responsible automotive industry standards.

We thank you for the opportunity to testify.

The Hawai'i Automobile Dealers Association is the voice of more than 60 new car dealerships across the islands, accounting for over 4,000 direct jobs, $6 billion total sales and more than $250 million in general excise taxes paid.

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SERVCO

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Senator Donovan Dela Cruz, Chair
Senator Sharon Moriwaki, Vice Chair
Committee on Ways and Means

RE: **HB 242 HD1 SD1 - Relating to Electric Vehicle Batteries – In Support**
April 2, 2025; 10:01 AM
Conference room 211 & Videoconference

Aloha Chair Dela Cruz, Vice Chair Moriwaki and members of the committee:

Servco appreciates this opportunity to offer testimony in support of HB 242 HD1 SD1, which establishes a working group within the Hawaii State Energy Office to examine how to maximize the recycling and reuse of electric vehicle batteries and recommend electric vehicle battery management practices.

As the exclusive distributor for Lexus, Toyota, and Subaru in Hawaii, Servco has a strong presence in both sales and service aspects of the automotive industry in the state. Our experience in Japan and Australia also supports the adoption and efficient use of alternative fuel vehicles through consumer education and services.

Given the rapid adoption of EVs and the eventual end-of-life cycle of batteries, establishing a working group is appropriate. Servco would be interested in participating and sharing insights on management, regulation, and recommendations for developing a recycling and reuse framework for EV batteries.

This initiative aligns with Hawaii's efforts to address the growing need for proper EV battery management. As the number of EVs on Hawaii's roads increases, establishing clear pathways for maximizing the value of EV batteries and unlocking economic benefits through upcycling and recycling becomes critical. The working group will help Hawaii establish best practices, ensure coordination with various stakeholders, and prioritize economic viability and environmental sustainability in the EV battery lifecycle management process.

Thank you for the opportunity to provide comments in support.

Peter Dames
President & CEO

SENATE COMMITTEE ON WAYS AND MEANS

APRIL 2, 2025

HB 242, HD1, SD1, RELATING TO ELECTRIC VEHICLE BATTERIES

POSITION: SUPPORT

Coalition Earth **supports** HB 242, HD1, SD1, relating to electric vehicle batteries, which Establishes a working group within the Hawai'i State Energy Office to examine how to maximize the recycling and reuse of electric vehicle batteries and recommend electric vehicle battery management practices.

According to a report produced by the Hawai'i Climate Change Mitigation and Adaptation Commission, global sea levels could rise more than three feet by 2100, with more recent projections showing this occurring as early as 2060. In turn, over the next 30 to 70 years, approximately 6,500 structures and 19,800 people statewide will be exposed to chronic flooding. Additionally, an estimated $19 billion in economic loss would result from chronic flooding of land and structures located in exposure areas. Finally, approximately 38 miles of coastal roads and 550 cultural sites would be chronically flooded, on top of the 13 miles of beaches that have already been lost on Kaua'i, O'ahu, and Maui to erosion fronting shoreline armoring.

As we work to reduce carbon emissions and stave off the worst consequences of climate change, we must begin preparing for the adverse impact of sea level rise on our shores. We are now quantifying the speed at which we must act. We cannot continue to develop the 25,800-acre statewide sea level rise exposure area–one-third of which is designated for urban use–without risking massive structural damage and, potentially, great loss of life.

Just two years ago, we witnessed the impact of the climate emergency on our shores. On August 8, 2023, wildfires swept across Maui and killed at least 100 people, making it one of the nation's deadliest natural disasters. The spread of the fires has been attributed to climate change conditions, such as unusually dry landscapes and the confluence of a strong high-pressure system to the north and Hurricane Dora to the south. The wildfires destroyed over 2,200 structures,

including numerous residential buildings, historic landmarks, and school facilities. In September 2023, a report from the United States Department of Commerce estimated the total economic damage of the wildfires to be roughly $5.5 billion. Investing in renewable energy generation could not be more urgent, given the growing threat of climate catastrophes to our island home.

Therefore, **our state should take steps to accelerate our transition to a clean energy economy and continue our fight against climate change, including by strengthening policies related to electric vehicles.** A growing number of people are adopting electric vehicles in Hawai'i. As of December 2024, there were about 35,000 registered electric vehicles in the state–a 30 percent increase from prior years. As electric vehicle usage continues to quicken and EV batteries enter the local waste stream, we should prepare proper recycling and disposal practices to prevent such batteries from damaging our environment.

For recycling purposes, EV battery packs are shipped to a facility specializing in battery disassembly and reprocessing of their components. Parts like steel, copper, and aluminum scrap metal usually go into the nationwide metals-recycling stream. The plastics may not be recyclable, but they constitute a small proportion of the total contents of an EV battery pack. EV battery cells, on the other hand, include lithium, cobalt, manganese, nickel, and, to a lesser extent, aluminum. When they are ground up, the resulting stream is purified in various ways, and the end of the process is a pure supply of the desired metals.

Additionally, an EV battery pack is assumed to be at the end of its life when it has no more than 70 to 75 percent of its original capacity. Yet, hitting this mark may take 10 years or more. Even with a quarter or more of peak capacity gone, aging battery packs still offer plenty of energy storage—20-to-90 kilowatt-hours, or up to three days' worth of electricity for the average U.S. household. Many experts believe a robust "second use" industry is emerging to buy and repurpose used battery packs, extending their lives by a decade or longer.

Sincerely,

Kris Coffield

Kris Coffield, Chairperson, Board of Directors

Coalition Earth is a nongovernmental organization that works to preserve the well-being of people and our planet. We champion policies that advance climate resilience, clean energy, public health, and economic fairness for working families. Contact us at info@coalitionearth.org.

April 2, 2025

Tony Belot
91-56 Hanua Street
Kapolei, HI 96707
abelot@rdus.com

Senator Donovan Dela Cruz, Chair
Committee on Ways and Means

RE: HB 242 HD1 SD1, Relating to Electric Vehicle Batteries

Chair Dela Cruz, Vice Chair Moriwaki, and members of the committee,

Radius Recycling (formerly Schnitzer Steel Industries), is a world leader in sustainable and environmentally responsible recycling. The Company was listed as one of TIME's 100 Most Influential Companies of 2023, recognized as the Most Sustainable Company in the World by Corporate Knights in 2025, and has been honored by Ethisphere as one of the World's Most Ethical Companies® for ten consecutive years.

HB 242 HD1 SD1 recognizes the need for Hawai'i to maximize the recycling and reuse of electric vehicle batteries and establishes a working group to recommend electric vehicle battery management practices. An important goal for the state is to preserve our local environment while concurrently optimally utilizing resources through recycling.

As our organization routinely encounters these batteries in our recycling stream, we strongly support the inclusion of at least one or more representatives from the automotive recycling industry. Such a representative will, we believe, contribute a significant and valuable viewpoint, grounded in practical experience, concerning the safe, environmentally responsible, and efficient handling of end-of-life electric vehicles.

Radius Recycling is deeply appreciative of the intent of this measure to assure that there is proper recycling and disposal of EV batteries. We look forward to serving as a resource to policymakers on EV recycling.

Sincerely,

Tony Belot, Government and Public Affairs Manager, Radius Recycling

April 1, 2025

Senate Ways and Means Committee (WAM)
Hawaii State Capitol
415 South Beretania Street
Honolulu, HI 96813

RE: Redwood Materials' Written Testimony for HB 242 HD1 SD1, Relating to Electric Vehicle Batteries

Chair Dela Cruz, Vice Chair Moriwaki and Members of the Senate Ways and Means Committee:

As the leader in the sustainable end-of-life management of electric vehicle (EV) batteries, Redwood Materials is supportive of HB 242 HD1 SD1 and respectfully requests a favorable vote from the WAM committee.

If HB 242 HD1 SD1 is approved, the proposed Electric Vehicle Battery Recycling and Reuse Working Group will include one representative from a company specializing in the recycling of electric vehicle batteries. We believe that the inclusion of this stakeholder group will allow for the unique expertise of specialized battery recyclers, such as Redwood Materials, to participate in this important working group and advance sustainable practices in EV battery management in Hawaii.

Redwood is at the forefront of ensuring that the United States meets its clean energy and electric vehicle (EV) ambitions. We are dedicated to developing a domestic, secure, and sustainable battery supply chain and work across the battery ecosystem with emphasis on repurposing and recycling end-of-life EV batteries.

In regard to recycling, our strategic approach includes:

- Recycling: We focus on collecting and recycling end-of-life lithium-ion batteries from consumer devices to EV battery packs, turning these items into high-value battery materials.
- Refining and Processing: Our facilities process and refine critical minerals contained in these batteries, ensuring their optimal reuse.
- Re-manufacturing: We specialize in re-manufacturing sustainable battery materials, particularly cathode active materials, essential for domestic battery manufacturing.

Our company's mission aligns with the objectives of HB 242 HD1 SD1, advocating for responsible and sustainable management of electric vehicle (EV) batteries at end-of-life. Today, Redwood receives more than 20 GWh of lithium-ion batteries annually, which equates to more than 250,000 electric vehicles, 1.57 billion cell phones, or 60,000 metric tons/year. The vast majority of lithium-ion batteries recycled in North America come through our doors.

Redwood's Engagement in Hawaii

Redwood recognizes Hawaii's pioneering role in sustainable energy and battery deployment. In collaboration with Kaua'i Island Utility Cooperative (KIUC), we've worked on decommissioning the first generation battery storage system at the Anahola substation, a 4.6 MWh battery energy storage system (BESS). The successful decommissioning and recycling of these initial projects serve as an industry model for future gigawatt-scale projects.

Additionally, we contributed to the EPA's Maui Wildfire Response by facilitating the safe transport of fire damaged lithium-ion batteries from Maui to our Northern Nevada facilities for proper recycling. This effort was part of our commitment to environmentally responsible practices in emergency situations. We have also engaged with the University of Hawaii in their research on EV battery recycling. By hosting their researchers at our facilities, we shared insights into our methods for EV battery circularity, aiming to contribute to broader knowledge in this field and inform local policy development.

Last year, over 250,000 electrified vehicles reached the end of their lifecycle in the United States, presenting a crucial opportunity for sustainable practices in battery management. Our involvement in policy development and environmental sustainability initiatives, both locally and nationally, positions us as a key contributor in this evolving industry.

Should this policy move forward, Redwood Materials expresses its keen interest in serving on the Electric Vehicle Battery Recycling and Reuse Working Group as the representative of a company specializing in the recycling of electric vehicle batteries. We believe we are well suited for this role due to our demonstrated expertise in providing end-of-life battery management solutions, including recovering materials from end-of-life batteries and manufacturing sustainable battery materials both in Hawaii and nationwide. Redwood Materials is committed to advancing our industry, driving circularity in battery material production, and collaborating with partners and policymakers. Regarding electric vehicles, we are dedicated to reducing costs, enhancing sustainability, and fostering innovation, contributing to a more sustainable future.

Thank you for your favorable consideration of this important bill.

Sincerely,

Daniel C. Zotos
Senior Manager of Public Affairs & Advocacy
Redwood Materials
daniel.zotos@redwoodmaterials.com

300 Renaissance Center
Detroit, MI 48265-3000

TO: **Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Senate Ways and Means Committee**

FROM: **Alisa Reinhardt, Western Region Director of State and Local Public Policy, General Motors**

DATE: **April 1, 2025**

RE: **Testimony in SUPPORT of HB 242 HD1 SD1: Relating to Electric Vehicle Batteries**

General Motors writes in **SUPPORT** of HB 242, which would establish a working group within the Hawaii State Energy Office to examine how to maximize the recycling and reuse of electric vehicle batteries and recommend electric vehicle battery management best practices.

GM is well on its way to creating a circular economy for battery materials here in the U.S. and North America and is committed to properly managing EV batteries that are returned to us at their end-of-life. In addition to becoming the nation's number 2 seller of electric vehicles, over the past five years, we have invested more capital in battery manufacturing and infrastructure than any other American automaker. This commitment has resulted in significant progress securing our EV manufacturing and supply chain, including the following investments and partnerships:

- FactoryZERO (Michigan) and Spring Hill (Tennessee) manufacturing plants dedicated to EVs.
- Ultium Cells EV battery plant in Spring Hill, with the first battery cells shipped in March 2024.
- Multi-year, multi-billion-dollar agreement with Vianode for synthetic graphite anode materials, starting in 2027.
- Joint venture with Lithium Americas to develop the largest known lithium resource in the country at Thacker Pass in Nevada.
- Support for MP Materials' rare earth metal, alloy, and magnet manufacturing facility in Fort Worth, Texas, with production expected to begin in late 2025.
- GM supplier e-VAC Magnetics breaking ground on a new magnet facility in Sumter, South Carolina, with production scheduled to start in early 2026.

A study on EV battery management best practices conducted in the State of Hawaii is a practical, thoughtful approach to examining the complex issues related to battery recycling taking place on islands in the Pacific Ocean. The electric vehicle market in Hawaii continues to grow year-over-year, and the time is ripe to bring stakeholders together to proactively develop a plan for best management practices for the recycling, reuse, and/or repurposing of electric vehicle batteries.

GM is proud to employ experts who are leading public policy efforts and industry engagement on EV battery recycling best practices and innovation throughout the country. GM would welcome the opportunity to work hand-in-hand with the state of Hawaii and other critical stakeholders on any working groups to advance our shared goals of decreasing vehicle-related emissions and increasing recycling rates and overall life-cycle sustainability of our products and product components now and into the future.

I can be reached at alisa.reinhardt@gm.com any time to discuss further. Thank you for considering our request for your **SUPPORT** of HB 242.

Sincerely,

Alisa Reinhardt

Alisa Reinhardt
Western Region Director, State and Local Public Policy
General Motors

HB-242-SD-1
Submitted on: 4/1/2025 6:50:43 AM
Testimony for WAM on 4/2/2025 10:01:00 AM

Submitted By	Organization	Testifier Position	Testify
Paul Bernstein	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Dela Cruz and Members of the WAM Committee:

I'm writing in **support** of HB242 HD1 SD1 for the following reason:

- After EV batteries are no longer suitable for use in an EV, they have much useful life to offer utilities for storage, which we desperately need as we move to more and more intermittent resources. These batteries are being repurposed as stationary storage and, when completely depleted, recycled into new batteries.
- EV batteries contain valuable minerals and have material economic value.
- Establishing clear pathways to ensure efficient upcycling and recycling will help Hawai‘i leverage these opportunities.

Mahalo,

Paul Bernstein

HB-242-SD-1
Submitted on: 3/27/2025 9:36:25 PM
Testimony for WAM on 4/2/2025 10:01:00 AM

Submitted By	Organization	Testifier Position	Testify
Caroline Azelski	Individual	Support	Written Testimony Only

Comments:

Support. We need to be proactive on this. Thank you.

HB-242-SD-1
Submitted on: 3/28/2025 10:57:07 AM
Testimony for WAM on 4/2/2025 10:01:00 AM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

I have been driving an ev in Hawaii for 13 years. I've been fortunate not to have been confronted with the problem of how to deal with an ev battery at the end-of-life, but I know several people who have, and it is a big problem here. As more and more people adopt evs, and as those vehicles age out, Hawaii will be confronted with a significant environmental problem it has not prepared for. "Traditional" disposal methods for non-functional vehicles, such as pushing into a ravine could pose serious fire hazards and environmental contamination risk if a lithium battery remains with the vehical. Hawaii needs to get ahead of this problem and create affordable solutions for dealing with ev batteries at end of life. This bill would be improved by adding funding for a staff position, but HB242 needs to be passed.

HB-242-SD-1
Submitted on: 3/31/2025 10:04:31 AM
Testimony for WAM on 4/2/2025 10:01:00 AM

Submitted By	Organization	Testifier Position	Testify
chris c.	Individual	Comments	Written Testimony Only

Comments:

Where are the neighbor island Counties' environmental management representatives on the working group?

The manufacturers and buyers of EVs should be responsible for the disposal of EV batteries. Stop externalizing costs.

HB-242-SD-1
Submitted on: 4/1/2025 9:47:37 AM
Testimony for WAM on 4/2/2025 10:01:00 AM

Submitted By	Organization	Testifier Position	Testify
Nanette Vinton	Individual	Support	Written Testimony Only

Comments:

Aloha Chair Dela Cruz, Vice Chair Moriwaki, and committee members,

I am writing to express my strong support for HB242 HD1 SD1. As Hawaii accelerates its transition to clean energy, the establishment of an Electric Vehicle Battery Recycling and Reuse Working Group represents a critical step toward addressing the impending wave of end-of-life EV batteries. The rapid growth of EV adoption in Hawaii demands proactive policies to mitigate environmental risks.

Passing HB 242 HD1 positions Hawaii as a leader in sustainable EV battery management, safeguarding our environment while capitalizing on emerging economic opportunities.

Vote YES to support a circular clean energy future.

Sincerely,

Nanette Vinton

Mililani resident

300 Renaissance Center
Detroit, MI 48265-3000

TO: **Chair Dela Cruz, Vice Chair Moriwaki, and Members of the Senate Ways and Means Committee**

FROM: **Alisa Reinhardt, Western Region Director of State and Local Public Policy, General Motors**

DATE: **April 1, 2025**

RE: **Testimony in SUPPORT of HB 242 HD1 SD1: Relating to Electric Vehicle Batteries**

General Motors writes in **SUPPORT** of HB 242, which would establish a working group within the Hawaii State Energy Office to examine how to maximize the recycling and reuse of electric vehicle batteries and recommend electric vehicle battery management best practices.

GM is well on its way to creating a circular economy for battery materials here in the U.S. and North America and is committed to properly managing EV batteries that are returned to us at their end-of-life. In addition to becoming the nation's number 2 seller of electric vehicles, over the past five years, we have invested more capital in battery manufacturing and infrastructure than any other American automaker. This commitment has resulted in significant progress securing our EV manufacturing and supply chain, including the following investments and partnerships:

- FactoryZERO (Michigan) and Spring Hill (Tennessee) manufacturing plants dedicated to EVs.
- Ultium Cells EV battery plant in Spring Hill, with the first battery cells shipped in March 2024.
- Multi-year, multi-billion-dollar agreement with Vianode for synthetic graphite anode materials, starting in 2027.
- Joint venture with Lithium Americas to develop the largest known lithium resource in the country at Thacker Pass in Nevada.
- Support for MP Materials' rare earth metal, alloy, and magnet manufacturing facility in Fort Worth, Texas, with production expected to begin in late 2025.
- GM supplier e-VAC Magnetics breaking ground on a new magnet facility in Sumter, South Carolina, with production scheduled to start in early 2026.

A study on EV battery management best practices conducted in the State of Hawaii is a practical, thoughtful approach to examining the complex issues related to battery recycling taking place on islands in the Pacific Ocean. The electric vehicle market in Hawaii continues to grow year-over-year, and the time is ripe to bring stakeholders together to proactively develop a plan for best management practices for the recycling, reuse, and/or repurposing of electric vehicle batteries.

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