

STRATEGIC EV MANAGEMENT
ACT OF 2022

R E P O R T

OF THE

COMMITTEE ON HOMELAND SECURITY AND
GOVERNMENTAL AFFAIRS
UNITED STATES SENATE

TO ACCOMPANY

S. 4057

TO DEVELOP A COMPREHENSIVE, STRATEGIC PLAN
FOR FEDERAL ELECTRIC VEHICLE FLEET BATTERY
MANAGEMENT, AND FOR OTHER PURPOSES



AUGUST 3, 2022.—Ordered to be printed

U.S. GOVERNMENT PUBLISHING OFFICE

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STRATEGIC EV MANAGEMENT ACT OF 2022

AUGUST 3, 2022.—Ordered to be printed

Mr. PETERS, from the Committee on Homeland Security and
Governmental Affairs, submitted the following

R E P O R T

[To accompany S. 4057]

[Including cost estimate of the Congressional Budget Office]

The Committee on Homeland Security and Governmental Affairs, to which was referred the bill (S. 4057), to develop a comprehensive, strategic plan for federal electric vehicle fleet battery management, and for other purposes, having considered the same, reports favorably thereon with an amendment in the nature of a substitute and recommends, that the bill, as amended, do pass.

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I. PURPOSE AND SUMMARY

S. 4057, the *Strategic EV Management Act of 2022*, directs the General Services Administration (GSA), in consultation with the Office of Management and Budget (OMB), to work with agencies to develop a system for managing electric vehicle (EV) batteries for the federal EV fleet, including managing EV battery reuse and recycling.

II. BACKGROUND AND THE NEED FOR LEGISLATION

In fiscal year 2020, the federal fleet contained 3,170 EVs (including more than 2,400 vehicles at the Department of Defense alone).¹ As the EV fleet continues to grow, it has become increasingly important that agencies have a comprehensive, strategic plan for the management of these vehicles to maximize the full potential of their economic, environmental, and strategic benefits.

Unlike traditional cars, which rely on an internal combustion engine that runs on petroleum-based fuel, EVs are powered by electricity that is stored in a large traction battery pack.² Given these different mechanics and the central role of batteries in propulsion, EVs introduce new management considerations through the complete life-cycle of the vehicle. Proper battery care is extremely important to prolonging the life of electric vehicles. Experts have found that best practices such as avoiding an over-reliance on level three charging, minimizing the time batteries hold both a one-hundred and zero percent charge, and avoiding extreme temperatures can significantly extend battery life, maximizing government investments in these vehicles.³

Managing degraded batteries is another key component to efficient federal management of EVs. After ten or more years in a vehicle, EV batteries are likely to still hold more than two thirds of their usable energy storage.⁴ While reduced ranges eventually put batteries past their optimal mobile capacity, those that are retired can still have highly productive second-life uses. Spent EV batteries have proven highly useful in providing backup storage for electricity generation. Automakers including General Motors and Nissan have already repurposed batteries towards such uses.⁵

The private sector is also rapidly scaling up operations of EV battery recycling for two key reasons. First, the metals in EV batteries do not break down significantly in the recycling process. Recycling operations can already recover 95 percent of battery minerals.⁶ Additionally, given that EV batteries rely on critical metals and minerals commonly sourced from adversarial countries such as China, effective recycling could create a strategic closed-loop battery economy, decreasing U.S. reliance on foreign supply chains. Having a strategy for reusing and recycling federal EV batteries will create the opportunity for the government to generate value from an expended resource while simultaneously furthering environmental and strategic aims.

As the federal government continues to purchase electric vehicles, it must be equipped with sound management strategies to

¹General Services Administration, *Federal Fleet Report*, (<https://www.gsa.gov/policy-regulations/policy/vehicle-management-policy/federal-fleet-report>) (accessed March 1, 2022).

²U.S. Department of Energy, *How Do All-Electric Cars Work?* (<https://afdc.energy.gov/vehicles/how-do-all-electric-cars-work>) (accessed March 1, 2022).

³University of Michigan School for Environment and Sustainability, *Tips for Extending the Lifetime of Lithium-ion Batteries* (Feb. 1, 2020) (<https://seas.umich.edu/news/tips-extending-life-time-lithium-ion-batteries>).

⁴Union of Concerned Scientists, *Electric Vehicle Batteries Addressing Questions about Critical Materials and Recycling* (Feb. 2021) (<https://www.ucsusa.org/sites/default/files/2021-02/ev-battery-recycling-fact-sheet.pdf>).

⁵Diane Cardwell, *G.M. and Nissan Reusing Old Electric Car Batteries*, *New York Times* (June 16, 2015) (<https://www.nytimes.com/2015/06/17/business/gm-and-nissan-reusing-old-electric-car-batteries.html>).

⁶Jean Kumagai, *Lithium-Ion Battery Recycling Finally Takes off in North America And Europe*, *Institute of Electrical and Electronics Engineers* (Jan. 5, 2021) (<https://spectrum.ieee.org/lithiumion-battery-recycling-finally-takes-off-in-north-america-and-europe>).

maximize value for the taxpayer. The *Strategic EV Management Act* would require GSA and OMB to coordinate with the heads of agencies to devise a comprehensive, strategic plan for federal EV fleet battery management that maximizes environmental and cost efficiencies. Such guidance must include instructions for optimal charging practices that will maximize battery longevity as well as guidelines for reusing and recycling retired vehicle batteries. In developing this guidance, GSA and OMB may consult with appropriate entities including the Department of Energy, Council on Environmental Quality, Environmental Protection Agency, industry, academic and other experts. The bill also includes reporting requirements on the strategic plan and its implementation across agencies, as well as a Government Accountability Office (GAO) study comparing the federal EV and gas-powered internal combustion fleets.

III. LEGISLATIVE HISTORY

Chairman Gary Peters (D–MI) introduced S. 4057, the *Strategic EV Management Act of 2022*, on April 7, 2022, with Senators Mitt Romney (R–UT), Richard Burr (R–NC), and Bill Hagerty (R–TN) as original cosponsors. The bill was referred to the Committee on Homeland Security and Governmental Affairs. Senators Jon Ossoff (D–GA) and James Lankford (R–OK) joined as cosponsors on May 24, 2022. Senator Tom Carper (D–DE) joined as a cosponsor on May 25, 2022.

The Committee considered S. 4057 at a business meeting on May 25, 2022. During the business meeting, a substitute amendment and a modification to the substitute amendment were offered by Chairman Peters and adopted by voice vote *en bloc*. The modified substitute amendment clarifies the intent to maximize cost efficiencies, adds more parameters on when guidance could be updated, adds the Environmental Protection Agency and universities as entities that could be consulted for expertise while developing the report, and adds a requirement to conduct a study on evaluating the value of EVs compared to internal combustion engine vehicles. The bill was ordered reported favorably by voice vote *en bloc* as amended, with Senator Hawley recorded as a “no”. Senators Peters, Hassan, Sinema, Rosen, Padilla, Ossoff, Portman, Lankford, Romney, Scott, and Hawley were present.

IV. SECTION-BY-SECTION ANALYSIS OF THE BILL, AS REPORTED

Sec. 1. Short title

This section cites the short title of the bill as the “*Strategic EV Management Act of 2022*.”

Sec. 2. Definitions

This section defines various terms listed throughout the bill including administrator, meaning the Administrator of General Services; agency, which has the same meaning as it does in section 551 of title 5 in the United States Code; appropriate congressional committees, meaning the Senate Homeland Security and Governmental Affairs Committee and the House Oversight and Reform Committee; and director, meaning the Office of Management and Budget Director.

Sec. 3. Strategic guidance

Subsection (a) directs the OMB Director and GSA Administrator to work with the heads of agencies to develop a comprehensive, strategic plan for federal electric vehicle fleet battery management within 2 years.

Subsection (b) describes the contents of the strategic plan, which must: maximize both cost and environmental efficiencies; incorporate guidelines for optimal charging practices that maximize battery longevity; establish guidelines for reusing and recycling batteries of retired vehicles; and include any other relevant components as determined by the Director and Administrator.

Subsection (c) permits the Director and the Administrator to periodically update the strategic plan as they determine necessary based on new information relating to electric vehicle batteries that becomes available.

Subsection (d) allows the Director and the Administrator to consult with appropriate entities in developing the strategic plan including the Secretary of Energy and other relevant public and private sector stakeholders.

Subsection (e) requires that three years after the date of enactment, the Director and the Administrator submit a report describing the strategic guidance. By the following year, they must provide a briefing to the Committee on Homeland Security and Governmental Affairs of the Senate and the Committee on Oversight and Reform of the House of Representatives on the implementation of the strategic plan.

Sec. 4. Study of federal fleet vehicles

This section requires the GAO to conduct a study on how the costs and benefits of operating and maintaining electric vehicles in the federal fleet compare to the costs and benefits of operating and maintaining internal combustion engine vehicles. GAO must report on the findings of this study to Congress within 2 years after the bill is enacted.

V. EVALUATION OF REGULATORY IMPACT

Pursuant to the requirements of paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee has considered the regulatory impact of this bill and determined that the bill will have no regulatory impact within the meaning of the rules. The Committee agrees with the Congressional Budget Office's statement that the bill contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

VI. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, July 28, 2022.

Hon. GARY PETERS,
Chairman, Committee on Homeland Security and Governmental Affairs, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 4057, the Strategic EV Management Act of 2022.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Matthew Pickford.

Sincerely,

PHILLIP L. SWAGEL,
Director.

Enclosure.

S. 4057, Strategic EV Management Act of 2022			
As ordered reported by the Senate Committee on Homeland Security and Governmental Affairs on May 25, 2022			
By Fiscal Year, Millions of Dollars	2022	2022-2027	2022-2032
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Increase or Decrease (-) in the Deficit	0	0	0
Spending Subject to Appropriation (Outlays)	0	*	not estimated
Statutory pay-as-you-go procedures apply?	No	Mandate Effects	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2033?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	No
* = between zero and \$500,000.			

S. 4057 would require the General Services Administration (GSA) to coordinate with the heads of federal agencies, and within two years of enactment, develop a comprehensive plan to optimize the useful life of batteries that power electric vehicles in the government's fleet. The bill also would require the Government Accountability Office (GAO) to report on the costs and benefits of a fleet of electric vehicles compared with a fleet powered by gasoline and diesel fuel.

Using information from GSA about the agency's management of its electric vehicle fleet, CBO expects that developing a comprehensive plan for battery management would not significantly increase the agency's administrative costs. In addition, because GAO is currently studying the issues that the bill would require for the report, CBO estimates that implementing this provision would have insignificant costs. Therefore, CBO estimates that the bill would not significantly affect spending subject to appropriation over the 2022-2027 period.

The CBO staff contact for this estimate is Matthew Pickford. The estimate was reviewed by H. Samuel Papenfuss, Deputy Director of Budget Analysis.

VII. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

This legislation would make no change in existing law, within the meaning of clauses (a) and (b) of subparagraph 12 of rule XXVI of the Standing Rules of the Senate, because this legislation would not repeal or amend any provision of current law.

