

Date of Hearing: April 11, 2023

ASSEMBLY COMMITTEE ON PRIVACY AND CONSUMER PROTECTION

Jesse Gabriel, Chair

AB 1659 (Gabriel) – As Amended March 30, 2023

As Proposed to be Amended

SUBJECT: Sale of small electronic devices: charging devices

SYNOPSIS

This author-sponsored measure would ensure that California becomes the next major economy, after the European Union and India, to require small electronic devices like cellphones and laptops to use standardized USB Type-C charging.

Adopting a single charging standard for small electronic devices promises a number of benefits, including:

- *Reduced electronic waste, particularly from chargers for obsolete or discarded devices.*
- *Cheaper prices for those who buy devices without the need for bundled chargers.*
- *Better consumer comprehension of the power requirements of the devices they purchase.*
- *The ability to replace lost or broken chargers even if the original manufacturer goes out of business.*
- *Reduced market fragmentation, as device manufacturers are no longer able to lock customers into their proprietary charging technologies.*

The bill would apply to devices manufactured on or after January 1, 2026. Its requirements would be enforceable by public attorneys, including the Attorney General, district attorneys, city attorneys, and county counsel.

As discussed in further detail, the bill should not impair the development of more efficient methods of device charging; rather, particularly when considered together with similar laws adopted by the European Union and India, this bill should induce the industry to agree upon standards for future charging technologies so that these standards can then be reflected in updated statutes.

This bill is supported by California Product Stewardship Council, Californians Against Waste, Climate Equity Policy Center, and Natural Resources Defense Council. It has no recorded opposition.

If passed by this Committee, the bill will next be heard by the Assembly Judiciary Committee.

SUMMARY: This bill would require all small electronic devices, as defined, manufactured on or after January 1, 2026 and sold in California to support USB Type-C charging. Specifically, **this bill:**

1) Makes the following findings and declarations:

- a) On November 23, 2022, the European Parliament adopted Directive (EU) 2022/2380 (EU Directive), a law making USB Type-C charging mandatory on all handheld mobile

phones and other enumerated small electronic devices, effective December 28, 2024, and on all laptops, effective April 28, 2026, sold in European Union member countries.

- b) On December 19, 2022, the Bureau of Indian Standards, within India’s Ministry of Consumer Affairs, Food, and Public Distribution, issued S/IEC 62680-1-2:2022 and IS/IEC 62680-1-3:2022 (Indian Standards), which established similar technical standards requiring that USB Type-C receptacles, plugs, and cables be used in various electronic devices like mobile phones and laptops sold in India.
 - c) The EU Directive includes the following recitals:
 - i) “Harmonisation should pursue the objectives of ensuring consumer convenience, reducing environmental waste and avoiding fragmentation of the market among different charging interfaces and charging communication protocols[.]”
 - ii) “The future adaptation of the harmonisation of the charging interfaces and charging communication protocols should continue to pursue those objectives by ensuring that it incorporates the most appropriate technical solutions for charging interfaces and charging communication protocols for any means of charging. The harmonised charging solutions should reflect the most appropriate combination of achieving market acceptance as well as meeting the objectives of ensuring consumer convenience, reducing environmental waste and avoiding market fragmentation.”
 - iii) Adoption of a common standard is also intended “to address any future market developments, such as the emergence of new categories or classes of radio equipment in relation to which a significant degree of fragmentation of the charging interfaces and charging communication protocols takes place, and any developments in charging technology.”
 - d) This bill, like the EU Directive and the Indian Standards, will help ensure that new types of small electronic devices and more-efficient charging technologies that are developed in the future are standards-based. The statutes this bill would enact can then be updated to reflect any new standards, while continuing to satisfy the goals of achieving market acceptance, ensuring consumer convenience, reducing environmental waste, and avoiding market fragmentation.
- 2) Defines the following terms:
- a) “Small electronic device” means a smartphone, other cellular radio telephone or other mobile voice communications handset device, tablet, digital camera, headphone, headset, handheld video game console, portable speaker, e-reader, keyboard, mouse, portable navigation system, earbud, laptop, or other similar device that is used for audio, video, or text communication, and any other type of portable computer or computer-like instrument that is capable of being charged.
 - b) “USB Power Delivery” means the 2021 international standards and specifications of the International Electrotechnical Commission for USB Power Delivery in “International Standard IEC 62680, Part 1-2.”

- c) “USB Type-C” means the 2021 international standards and specifications of the International Electrotechnical Commission for USB Type-C cables and connectors in “International Standard IEC 62680, Part 1-3.”
- 3) Prohibits a manufacturer from selling a small electronic device manufactured on or after January 1, 2026 that can be charged via a wired cable unless the device meets all of the following criteria:
 - a) The device is equipped with a USB Type-C receptacle that remains accessible and operational at all times.
 - b) The device can be charged with a USB Type-C cable and connector.
 - c) If the device can be charged using wired charging at voltages higher than five volts or current higher than three amperes or powers higher than 15 watts, the device allows for full USB Power Delivery functionality, irrespective of the charging device used.
 - 4) Requires a wholesaler or retailer that offers to sell a small electronic device together with a charging device to also offer to sell that small electronic device without a charging device.
 - 5) Clarifies that 4) does not require a wholesaler or retailer to open the original packaging provided by the manufacturer of a small electronic device and remove a charging device from that packaging in order to comply.
 - 6) Requires a wholesaler or retailer that offers a small electronic device manufactured on or after January 1, 2026 for sale to consumers or other end users to display a pictogram, in a visible and legible manner, that is a graphic representation of a two-prong plug, modified in the following ways, as applicable:
 - a) If no charging device is included with the small electronic device, then a line must be drawn across the graphic representation of the two-prong plug.
 - b) If a charging device is included with the small electronic device, then the graphic representation must be accompanied by two numbers corresponding to the following:
 - i) The minimum power that a charging device needs to supply in order to charge the device.
 - ii) The maximum power that a charging device needs to supply in order to achieve the maximum charging speed of the device.
 - c) If the small electronic device supports USB Power Delivery, the acronym “USB PD.”
 - 7) Clarifies that a wholesaler or retailer may meet the requirement to display, in a visible and legible manner, the pictogram required by 6) by doing the following:
 - a) Ensuring the pictogram is printed on the packaging or affixed to the packaging as a sticker.
 - b) If it makes an offer to sell a small electronic device through a remote offering, including a catalog, electronically through the internet, or other similar means that does not involve

an in-store sale, the wholesaler or retailer must display the pictogram required by 6) close to the price indication.

- 8) Requires a wholesaler or retailer to provide an end user who purchases a small electronic device manufactured on or after January 1, 2026 the following information, as applicable:
 - a) A description of the power requirements of the wired charging devices, in substantially the following form: “The power delivered by the charger must be between min ____ watts required by the small electronic device, and max ____ watts in order to achieve the maximum charging speed.”
 - b) If the small electronic device is capable of being charged using wired charging at voltages higher than five volts or current higher than three amperes or powers higher than 15 watts, a description of the specifications relating to those charging capabilities, including both of the following, as applicable:
 - i) The text “USB PD fast charging.”
 - ii) The name of any other supported charging protocol.
- 9) Clarifies that the information required to be provided under 8) may be provided either:
 - a) In printed form on the packaging.
 - b) If there is no packaging, on a clear and conspicuous label accompanying the small electronic device that may only be removed by the end user.
- 10) Exempts the sale of a secondhand small electronic device from this bill’s requirements.
- 11) Provides for enforcement exclusively by the Attorney General, a district attorney, a county counsel, or a city attorney, any of which may seek injunctive relief and obtain attorney’s fees and costs if they prevail.

EXISTING LAW:

- 1) Defines “smartphone” as a cellular radio telephone or other mobile voice communications handset device with all of the following features:
 - a) It utilizes a mobile operating system.
 - b) It possesses the capability to utilize mobile software applications, access and browse the internet, utilize text messaging, utilize digital voice service, and send and receive email.
 - c) It has wireless network connectivity.
 - d) It is capable of operating on a long-term evolution network or successor wireless data network communication standards. (Bus. & Prof. Code § 22761(a)(1).)
- 2) Requires smartphones manufactured on or after July 1, 2015 and sold in California to provide, as an anti-theft measure, a “kill switch” function that allows the device’s owner to

disable the smartphone if it is lost or comes into another's possession. (Bus. & Prof. Code § 22761(b)(1).)

FISCAL EFFECT: As currently in print this bill is keyed fiscal.

COMMENTS:

1) **Background.** This bill seeks to make USB Type-C charging the standard charging protocol for all small electronic devices—including smartphones, laptops, tablets, handheld video game consoles, wireless keyboards and mice, and portable speakers— sold in California, so long as these devices are manufactured on or after January 1, 2026.

In so doing, California would be adopting standards that were adopted in 2022 by two of the world's largest markets: the European Union (population 447 million people) and India (population 1.4 billion people).

2) **Author's statement.** According to the author:

Most Californians are no strangers to the junk drawer or bin full of miscellaneous chargers and cables caused by each device seemingly having a unique charging port. This existing system has contributed to a variety of negative impacts on consumers and the environment including generating thousands of tons of e-waste each year and causing unnecessary costs and inconvenience caused by not having a compatible charger. In recognition of this, the European Union recently adopted regulations requiring small electronic devices to utilize a standardized charging interface starting in 2024. Other large countries, such as India, have done the same.

AB 1659 seeks to achieve this same goal by requiring that all small electronic devices sold in California and made after 2026 utilize a USB-C charging interface. By joining the other countries that have made this change, this bill will help reduce the amount of e-waste produced by unnecessary or unused charging cables and improve the consumer experience, saving them time and money.

3) **What this bill would do.** To achieve the author's goals, the bill would do the following:

1. Small electronic devices manufactured on or after January 1, 2026 would have to be
 - (a) equipped with a USB Type-C receptacle that remains accessible and operational at all times and
 - (b) able to be charged with a USB Type-C cable and connector.

USB Type-C (also known as "USB-C") is a connector interface specification for electronic devices formally adopted by the International Electrotechnical Commission, or IEC. A USB Type-C cable connector has 24 pins; the connector's receptacle, into which the connector plugs, has 24 slots into which these pins fit. What is important to understand is that the term "Type-C" refers only to the physical structure of plugs and receptacles. Any two USB Type-C chargers have the same plug shape, and therefore are able to fit the same devices, but each may deliver different amounts of power to a device once they are plugged into it. This bill places no restriction on such differential power delivery, which makes sense, since devices differ in their power requirements. (To take an obvious example, wireless earbuds require less power and take less time to charge than laptop computers.) Under this bill, any small electronic device ought to

be able to be charged with any USB Type-C charger; however, devices will charge faster with some chargers than others.

The statutory requirement that the USB Type-C receptacle remain accessible and operational at all times is meant to safeguard against manufacturer evasion of the universal standards that this bill would establish. For example, suppose Acme Corp., a handheld videogame company, manufactured USB Type-C chargers containing a proprietary computer chip (aka an “authenticator chip”), and then programmed its handheld videogame consoles to only charge when chargers containing the Acme chip were plugged into it. Such behavior might be profitable for Acme Corp., since its customers would have to buy Acme’s USB Type-C chargers to replace lost or damaged chargers. However, allowing such behavior would defeat this bill’s purpose, which is to ensure that all small electronic devices sold in California are capable of being charged by any USB Type-C charger. This provision is meant to prevent such self-serving behavior.

2. Small electronic devices manufactured on or after January 1, 2026 that can be charged at voltages higher than five volts, current higher than three amperes, or power greater than 15 watts must allow for full USB Power Delivery functionality.

USB Power Delivery is a specification that allows for higher levels of power delivery through a standard USB Type-C interface. This provision ensures that all devices capable of receiving higher power delivery can be charged using a USB Power Delivery-enabled charger. In other words, this provision would establish USB Power Delivery as a baseline standard for higher-power consumer electronics.

As with requirement #1 above, this statutory requirement is meant to safeguard against manufacturers seeking to evade universal standards for high-speed charging. To take the previous example, Acme could not manufacture a handheld videogame that charged quickly when charged with an Acme-made USB Type-C charger and charged slowly when charged with another manufacturer’s Type-C charger, even if the latter could provide high-speed USB Power Delivery charging. Under this bill, so long as a charger is capable of providing USB Power Delivery functionality, the handheld videogame will charge quickly when that charger is used. That said, nothing in the bill prohibits a manufacturer from developing, manufacturing, and selling a proprietary high-speed method of charging that is faster than USB Power Delivery; but in all cases the device must allow for charging via USB Power Delivery.

3. Wholesalers and retailers that sell a small electronic device manufactured on or after January 1, 2026 bundled with a charger must also offer to sell that device without a charger.

If USB Type-C becomes the standard form of charger in the state, it is hoped that Californians will own enough chargers that they will not have to buy a charger with every small electronic device they purchase. This requirement ought to reduce costs for purchasers, and may reduce both household clutter and downstream electronic waste. It is hoped that the bill will incentivize manufacturers to ship devices to wholesalers and retailers that are packaged both with and without chargers.

Note that the bill specifies that “a wholesaler or retailer [need not] open the original packaging provided by the manufacturer of a small electronic device and remove a charging device from that packaging in order to comply with this [requirement].”

4. Wholesalers and retailers selling a small electronic device must display a pictogram on the packaging or attached to any unpackaged device indicating (a) whether the device includes a charger or not, (b) the device's minimum and maximum power requirements, and (c) whether the device supports USB Power Delivery.

This requirement is meant to ensure that customers will be properly informed as to the charging capabilities of the small electronic devices they are purchasing. In the case of online or catalog sales, where inspection of the physical packaging or device is impossible, the bill requires that the pictogram be placed near the price of the item.

4) **What are the anticipated benefits of this bill?** The following benefits can be anticipated if this bill is successful in standardizing USB Type-C charging across small electronic devices sold in California:

- Reduced electronic waste, particularly from chargers for obsolete or discarded devices.
- Cheaper prices for those who purchase small electronic devices without bundled chargers.
- Better consumer comprehension of the power requirements of the small electronic devices they purchase.
- The ability to replace lost or broken chargers even if the original manufacturer goes out of business.
- Reduced market fragmentation, as device manufacturers are no longer able to lock customers into their proprietary charging technologies.

5) **Analysis.** The question before this Committee is whether, by establishing USB Type-C charging as a statewide standard, this bill risks impairing innovation in power delivery so significantly as to outweigh the benefits outlined above.

This question is addressed in part by the EU Directive this bill is modeled after. One of the recitals that prefaces the EU Directive (analogous to the findings and declarations in this bill) notes that adopting a charging standard is meant “to address any future market developments, such as the emergence of new categories or classes of radio equipment in relation to which a significant degree of fragmentation of the charging interfaces and charging communication protocols takes place, and any developments in charging technology.”

In other words, if an innovative method of power delivery emerges, this bill—together with the EU Directive and the Indian Standards—is meant to induce manufacturers to converge on a standard for utilizing that method of power delivery. The pertinent laws can then be updated to reflect the agreed-upon standard.

Allowing a free-for-all in methods of device charging has demonstrably not led to market consolidation around a single standard. To not pass this bill therefore likely means continued market fragmentation, increased cost, more e-waste, and continued confusion among buyers as to which chargers work with which devices.

Further, this bill does not forbid device manufacturers from deploying other forms of wired charging—they simply have to also provide USB Type-C charging as a baseline. A manufacturer that created a more efficient charger or charging standard would be free to offer it as an alternative method, and thereby seek a competitive advantage; but USB Type-C charging would nonetheless have to remain as a default option for those users who wanted it.

Moreover, it is worth considering the extent to which using proprietary device chargers is meant to provide more-efficient charging vs. locking customers in to proprietary technologies with little discernible benefit. If one can only use a particular manufacturer's charger, then one must go to that manufacturer to pay for replacement chargers. While that may benefit the manufacturer's profit margins, it does little for goals such as reducing e-waste and cost, and increasing customer convenience. And if that manufacturer goes out of business, or is acquired by a competitor that uses a different form of charger, past purchasers may be simply out of luck and left with dead devices.

Ultimately, as noted in the bill's findings and declarations:

This bill, like the EU Directive and the Indian Standards, will help ensure that new types of small electronic devices and more-efficient charging technologies that are developed in the future are standards-based. The statutes this bill would enact can then be updated to reflect any new standards, while continuing to satisfy the goals of achieving market acceptance, ensuring consumer convenience, reducing environmental waste, and avoiding market fragmentation.

6) **Author's amendment—providing for injunctive relief, rather than civil penalties.** The bill in print authorizes public enforcement—by the Attorney General, a district attorney, a county counsel, or a city attorney—of the bill's requirements. The remedy takes the form of civil penalties in an unspecified amount. The author proposes to amend the bill to instead provide for injunctive relief and award of attorney's fees and costs to prevailing public attorneys, as follows:

Business and Professions Code § 22949.90.9. (a) A manufacturer, wholesaler, or retailer that violates a provision of this chapter shall be subject to ~~a civil penalty of not less than _____, nor more than _____, per small electronic device that it sells or offers for sale, as applicable, in California in violation of this chapter. Actions for civil penalties pursuant to this section shall be~~ ***an action for relief*** brought exclusively by the Attorney General, a district attorney, a county counsel, or a city attorney.

(b) The prevailing plaintiff in an action brought under this section shall be entitled to the following relief:

(1) Injunctive relief.

(2) Reasonable attorney's fees and costs.

ARGUMENTS IN SUPPORT:

Bill supporter Californians Against Waste lauds the bill's quantifiable environmental benefits:

[T]he environmental cost of not having a common charging connector across all small electronic devices is significant. The European Union report found that unused or discarded charging cables accounted for 11,000 tons of e-waste each year in Europe.

California Product Stewardship Council explains that this device reduces electronic waste at its source, rather than relying on recycling:

This bill is...a good form of source reduction because it helps to eliminate the stockpiling of obsolete cables at home and in businesses. By establishing a common charging interface, California can take the lead nationally to ensure that one charger can be used across all small electronic devices, saving consumers time, money, and providing source reduction. Additionally, it will help to combat the increasingly concerning problem of e-waste by reducing the number of cables produced, left unused, or discarded.

REGISTERED SUPPORT / OPPOSITION:

Support

California Product Stewardship Council
Californians Against Waste
Climate Equity Policy Center
Natural Resources Defense Council

Opposition

None on file

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