GIBSON DUNN

Omnibus Electric Vehicle Update

January 2023

Gustav Eyler
Partner, Washington, D.C.
GEyler@gibsondunn.com

Arthur Halliday
Associate, Los Angeles
AHalliday@gibsondunn.com

Abbey Hudson
Partner, Los Angeles
AHudson@gibsondunn.com

Vivek Mohan
Partner, Palo Alto
VMohan@gibsondunn.com

Raquel Alexa Sghiatti
Associate, Orange County
RSghiatti@gibsondunn.com

Mark Tomaier
Associate, Orange County
MTvomaier@gibsondunn.com

The legislative and regulatory landscape concerning electric vehicles (EVs) continues to undergo significant changes. EV regulation shares many elements of traditional automobile regulation, but the technologies involved also create new areas of regulatory coverage and manufacturer concern. This alert discusses California's industry-shaping Advanced Clean Car II regulations, California's technology-forcing electric truck regulations, NHTSA reporting and recall enforcement risks, other federal regulatory updates, developments in EV supply chain regulations, the developing space of battery recycling regulation, privacy and cybersecurity concerns, and charging infrastructure incentives and regulation.

For vehicle manufacturers, this alert is meant to act as a quick guide to the current EV regulatory landscape and as a map for spotting where regulatory currents are heading. For additional detail on these topics, please contact the attorneys who assisted in preparing this alert.

CALIFORNIA'S ADVANCED CLEAN CARS RULES

California's 2022 update to the Advanced Clean Cars program ("ACC II") makes the State the national leader in regulating EV production and performance.[1] ACC II fully phases out sales of new gas-powered light-duty vehicles (LDVs) in California by model year 2035 while regulating zero-emission vehicles (ZEVs) to make them more environmentally friendly. Several States are set to adopt ACC II, importing the California framework to those jurisdictions.

ACC II regulations set ZEV certification requirements on range, durability, battery labeling, data collection standardization, service information, warranties (including battery warranties), and charging capabilities. Starting in model year 2026, an increasing percentage of a manufacturer's LDVs must be ZEVs or otherwise count towards this requirement:

Stacie Fletcher, Rachel Levick, Thomas Manakides and Julie Sweeney also contributed to this update.

MODEL YEAR	ZEV REQUIREMENT AS PERCENTAGE OF CA SALES
2026	35%
2027	43%
2028	51%
2029	59%
2030	68%
2031	76%
2032	82%
2033	88%
2034	94%
2035	100%

Manufacturers may receive credit toward their ZEV requirement from sources in addition to certified ZEVs. They can fulfill up to 20% of their ZEV requirement with plug-in hybrid electric vehicles (PHEVs), which can be equivalent to up to 1 ZEV depending on their model year and range values.

In addition, manufacturers may fulfill up to 5% of their ZEV requirement with "environmental justice vehicles." Vehicles that earn value in this way are effectively double-counted, crediting the manufacturer as a base ZEV or PHEV with additional value added for furthering environmental justice goals. Environmental justice vehicle categories are (1) new ZEVs and PHEVs for use in community-based clean mobility programs, sold at least 25% below MSRP (with a vehicle value of .5 for ZEVs and .4 for PHEVs), (2) vehicles with an original MSRP of at most $40,000 sold in California at the end of their lease to dealerships participating in a financial assistance program (with a vehicle value of up to .25), and (3) new ZEVs and PHEVs sold in model years 2026-2028 below a maximum MSRP: $20,275 for passenger cars, $26,670 for light-duty trucks, both adjusted yearly based on the Consumer Price Index (CPI) (with a vehicle value of 1).

Manufacturers may also fulfill up to 15% of their annual ZEV requirement with "early compliance vehicles"—vehicles sold in California during the two model years before the ACC II requirements take effect in excess of 20% of the manufacturer's total California LDV sales for that year. ZEVs may qualify for an early compliance credit of 1 ZEV if they have an urban range greater than 50 miles, while PHEVs can count to up to a full ZEV credit if they meet a variety of compliance and range standards.

Finally, manufacturers can apply converted and pooled values to their annual ZEV requirements. At the end of model year 2025, manufacturer's leftover ZEV and PHEV credits from ACC I will be converted for use in ACC II. These credits will be divided by 2.1, and may only be used during model years 2026-2031, and only then for 15% of the manufacturer's annual ZEV requirement or a cumulative allowance based on the manufacturers yearly environmental justice values. Pooled ZEV and PHEV values are values earned above the manufacturer's annual ZEV requirement in California or another state that implements ACC II, earned between model years 2026 and 2030. These may be transferred from state to state only as necessary to fulfill a deficit or make up for a shortfall.

Manufacturers may bank ZEV and PHEV values for four years, and may bank environmental justice values until model year 2031. After addressing existing deficits, a manufacturer may trade surplus ZEV, PHEV, and environmental justice credits, as well as converted values, until model year 2031.

When generating, pooling, or trading for ZEV credit, a manufacturer must fulfill any model year deficit within three model years of when it was earned.

ACC II also updates low-emission vehicle criteria and greenhouse gas emission standards for medium- and light-duty internal combustion engine (ICE) vehicles, starting in model year 2026.

CALIFORNIA'S ELECTRIC TRUCK REGULATIONS

In 2021, California approved the Advanced Clean Trucks (ACT) rule[2]—mandating increased ZEV truck sales starting in 2024. Massachusetts, New Jersey, New York, Oregon, and Washington have also adopted the ACT rule. Now, California is on the brink of adding to ACT by approving an Advanced Clean Fleets (ACF) rule [3], which seeks to increase the demand for zero emission trucks by requiring truck fleets to be comprised of an increasing percentage of ZEV trucks.

Under ACT, manufacturers of medium- and heavy-duty vehicles from Class 2b to Class 8 must sell an increasing number of ZEVs, scaling up each year from MY 2024 to MY 2035+.

	ZEVS AS % OF MY 2024 SALES	ZEVS AS % OF MY 2035+ SALES
Class 2b-3	5%	55%
Class 4-8	9%	75%
Class 7-8 Tractors	5%	40%

ACF will require that by MY 2040 all medium- and heavy-duty sales to an ultimate purchaser in California must be ZEVs.

While ACT requires manufacturers to sell more ZEV trucks, ACF will require truck fleets to be comprised of an increasing percentage of ZEV trucks. These fleets can be broken down into three categories with the following regulatory targets:

These technology-forcing regulations challenge manufacturers to produce ZEV trucks for uses and at a scale that the industry is not currently achieving[4] and, as a result, will generate a significant demand for ZEV truck production so that manufacturers can satisfy ACT targets, and so that fleets can meet the ACF requirements.

Large fleets (including federal agencies)	Two options: (1) all new vehicles are ZEV, retire ICE vehicles when statutory useful life is reached OR (2) meet increasing fleet ZEV percentage by class
California state/local government fleets	In 2024, 50% of new vehicles are ZEV; in 2027, 100% of new vehicles are ZEV
Drayage fleets	New trucks must be ZEV starting in 2024, follow ICE retirement schedule, 100% ZEV in 2035

NHTSA REPORTING AND RECALL REQUIREMENTS

As vehicles—especially EV vehicles—become increasingly reliant on software, wirelessly connected to the Internet, and equipped with new technology, vehicle manufacturers are encountering new compliance risks associated with reporting and recall requirements.

Statutes administered by the National Highway Traffic Safety Administration ("NHTSA") have long required vehicle manufacturers to report periodically to the agency certain early-warning aggregate data and information about foreign safety recalls. As manufacturers acquire more information about vehicle operation, however, they face increased expectations to report more information more quickly. This is particularly true with respect to vehicles equipped with Automated Driving Systems ("ADS") and Level 2 Advanced Driver Assistance Systems ("ADAS"). NHTSA has committed to ensuring that such vehicles "are free of defects that pose an unreasonable risk to motor vehicle safety" and that vehicles "are recalled if such a safety defect is identified."

On August 21, 2021, NHTSA issued its First Amended Standing General Order 2021-01, concerning safety-related incidents involving vehicles using ADS or ADAS.[5] The order directs 108 specific vehicle and equipment manufacturers to submit incident reports for vehicle crashes on any U.S. "publicly accessible road" in which ADS or ADAS was engaged "at any time during" the 30-second period immediately before the crash through its conclusion. Manufacturers must report within one day—and then submit an updated report on—any crash involving an individual transported to a hospital for medical treatment, a fatality, a vehicle tow-away, an air bag deployment, or a vulnerable road user (*e.g.,* a pedestrian). Manufacturers must report on a monthly basis any incident involving an ADS vehicle, and they must confirm monthly if they have nothing to report. NHTSA already has begun to release reported information to the public.[6] Through the Department of Justice, NHTSA may seek civil penalties of up to $24,423 for each failure to report, up to a maximum of $122,106,996 "for a related series of violations."[7] And NHTSA is under congressional pressure to pursue "strong enforcement actions."[8] In response, manufacturers should establish and review compliance processes to ensure the reporting of required information while protecting confidential business information.

Manufacturers also are encountering new challenges related to recalls. One notable development is that NHTSA and the Department of Justice are collaborating more closely to investigate vehicle and equipment manufacturers for potentially failing to conduct timely or sufficient recalls. With broad investigative authorities and both civil and criminal remedies available, these investigations often focus on manufacturer conduct preceding large recalls associated with reported consumer harm over a meaningful period of time. Investigations could result in charges related to reporting failures, misrepresentations to NHTSA, or fraud on consumers or investors. Recalls related to EV vehicles and newer technology could attract particular attention from investigators.

Another recall-related development concerns over-the-air ("OTA") updates. An OTA update is any software improvement that a vehicle or equipment manufacturer sends wirelessly. The updates can leverage data received from vehicles quickly to remediate potential safety issues or to upgrade features. NHTSA has approached OTA updates remediating a potential "safety defect" as requiring application of the established recall process. That process, however, often does not align well with the scope and operation of many OTA updates.[9] Indeed, many OTA updates are implemented long before owners receive notice of the updates through the recall process. Regulations and guidance associated with recalls also have not kept pace with the full sweep of technology that can be enhanced with OTA updates.[10] As a result, some have criticized the view that an OTA update addressing a defect must follow the formal reporting and recall process.[11]

NHTSA and the Department of Justice may pursue enforcement actions against manufacturers that do not conduct recalls in connection with safety-related OTA updates. Those actions could seek both to enforce a recall order and to secure civil penalties. As a result, manufacturers should proceed

thoughtfully, determining a protocol for identifying when OTA updates should be conducted as recalls and engaging consistently with NHTSA regarding those determinations. Manufacturers also may consider administrative and pre-enforcement options to address potential disputes with NHTSA regarding the need for a recall.

OTHER FEDERAL UPDATES

a. Range Regulations and Defeat Devises

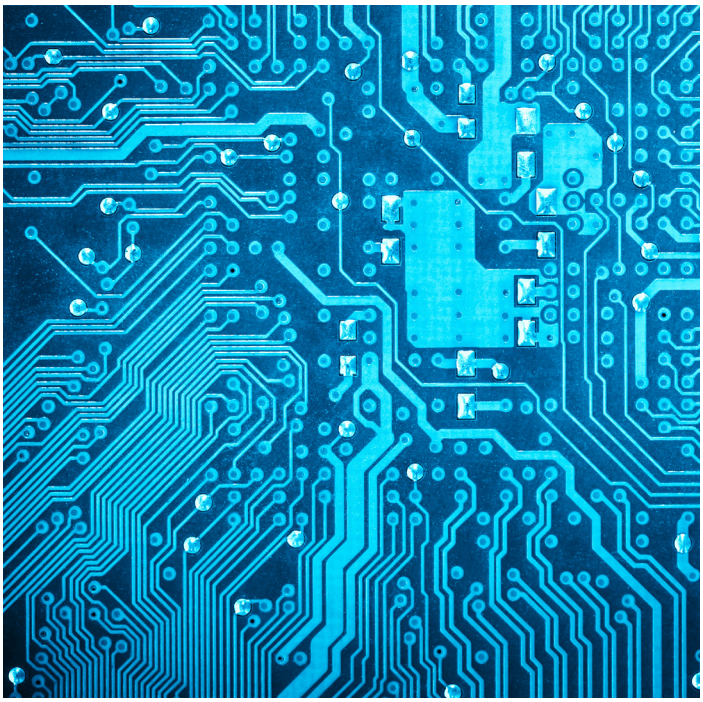
On July 25, 2022, EPA released guidance suggesting that the Clean Air Act prohibition against defeat devices applies in certifying electric vehicles for sale.[12] As with internal combustion engine vehicles, EV companies must undergo testing to obtain a certificate of conformity for every model year of a vehicle.[13] This testing focuses on the range of EV batteries, which helps determine EV fuel economy expressed as miles per gallon equivalent, or MPGe. Under the new guidance, which is generally applicable to new testing for model year 2024 vehicles and later, EVs with multiple driver mode selections should be tested in the default drive mode representative of real-world performance. Failure to test in a representative default drive mode may violate the agency's prohibition against defeat devices.

b. Electric Vehicle Tax Credits

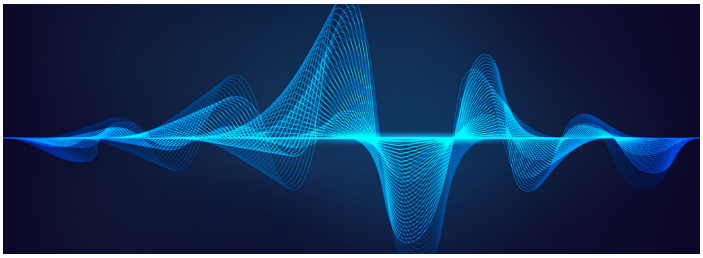
The Inflation Reduction Act's ("IRA") EV consumer tax credits introduce a number of new requirements pertaining to EV assembly and batteries.[14] Most significantly, the IRA establishes requirements that increase over time for EV assembly and related materials sourcing. While these deadlines are fast approaching, both the U.S. Senate and the House (in the prior Congress) have recently introduced legislation to delay the IRA's EV consumer tax credit deadline requirements.[15]

The majority of the changes to the clean vehicle tax credit take effect starting in 2023. Most significantly, an EV's battery must meet critical mineral and battery component requirements.[16] With respect to critical minerals, an increasing percentage of the value of the battery's applicable critical minerals must have been extracted or processed in the United States or in a country with which the United States has a free trade agreement, or must have been recycled in North America.[17] This percentage starts at 40% in 2023 (after proposed guidance is issued by Treasury and the Internal Revenue Service), and ramps up by ten percent each year to an 80% requirement in 2027 and thereafter.[18] With respect to battery components, at least 50% of the value of the battery's components must have been manufactured or assembled in North America.[19] The percentage increases to 60% in 2024 and 2025, then increases by annual 10% increments to a 100% requirement in 2029 and thereafter.[20]

There are additional deadlines that fall before and after 2023. For vehicles purchased after August 16, 2022, only vehicles with final assembly in North America qualify for the tax credit.[21] Starting in 2024, an EV is not eligible for the tax credit if the battery components are manufactured or assembled by a foreign entity of concern, as designated by the Secretary of State or the Office of Foreign Assets Control, among others.[22] In 2025, an EV is not eligible for a tax credit if the battery's critical minerals were extracted, processed, or recycled by a foreign entity of concern.[23]



c. Acoustic Vehicle Alerting Systems



Internal combustion engines emit noise, and indeed need to be muffled to avoid emitting excess noise. Vehicles running on electric motors do not inherently emit the same level of noise—e.g., a noise sufficient to warn pedestrians, accustomed to internal combustion engines, of the car's presence. As of 2022, electric and hybrid vehicles are required by regulation to address this problem with federally mandated acoustic vehicle alerting systems, which make an artificial noise.[24]

The alert sound may vary based on vehicle speed and direction, and it is not required when the vehicle is traveling faster than approximately 20 miles/hr (the regulations specify 32 km/hr). When a vehicle with an automatic transmission is stationary and the propulsion system is activated, it must emit a sound when it is in "Neutral" or any gear other than "Park" that can propel the vehicle forward. The alert sound for a given speed and direction condition must be the same in cars of the same make, model, and model year.

The NHTSA recently considered and rejected a proposed rule change to allow drivers to customize the sounds their cars emit.[25]

SUPPLY CHAIN UPDATES

a. Federal Actions to Address Supply Chain Issues

In 2020, the COVID-19 pandemic caused a computer chip shortage from which the automotive industry is only now showing signs of recovery.[26] The average electric vehicle uses about 3,000 chips (i.e., semiconductors)—double that of a non-electric vehicle—making chips essential to EV market success.

To help alleviate this issue, the CHIPS and Science Act, intended to boost American semiconductor research, development, and production, was signed into law on August 9, 2022.[27] Spurred by the passage of the CHIPS Act, companies have announced nearly $50 billion in additional investments in American semiconductor manufacturing, bringing total business investment to nearly $150 billion.[28]

Additionally, an adequate supply chain for lithium-ion batteries has become a matter of national importance. Currently, China produces three-quarters of all lithium-ion batteries and is home to 70% of production capacity for cathodes and 85% for anodes (both are key components of batteries). The United States, in contrast, has a very small role in the global EV battery supply chain, housing only 7% of global battery production capacity.[29] To help bridge this gap, Bipartisan Infrastructure Law, CHIPS & Science Act, and Inflation Reduction Act combined will invest more than $135 billion to build America's electric vehicle future.[30] The Bipartisan Infrastructure Law along invests a total of more than $7 billion to strengthen the overall U.S. battery supply chain to help avoid battery production disruptions, lower battery cost, and accelerate battery production in America.[31]

On October 19, 2022, the Department of Energy announced the first set of projects funded by the President's Bipartisan Infrastructure Law to expand domestic manufacturing of EVs, the electrical grid, and for materials and components currently imported from other countries.[32] Twenty companies will receive a combined $2.8 billion to build and expand commercial-scale facilities in 12 states to extract and process lithium, graphite, and other battery materials, and to manufacture components including from recycled materials.[33] The federal investment is matched by recipients to generate a total of more than $9 billion in funding. The initiative supports President Biden's national goals for electric vehicles to make up half of all new vehicle sales by 2030 and to transition to a net-zero emissions economy by 2050.

b. Direct-to-Consumer Sales

Supply chain pressures are also shaping the way vehicles are sold. Current EV supply chain pressures and long manufacturing timelines may require manufacturers to reevaluate how they stock dealership lots. In addition, EVs do not require the traditional network of dedicated service technicians associated with internal combustion vehicles because they need significantly less maintenance.[34] Dealerships bring in nearly half of their gross profits from their service and parts departments,[35] and there will be significantly less demand for this work as EV sales increase.

For EV-only manufacturers, there are fewer reasons to build up a dealership network, and significant incentives to operate on an order-based online sales model. Consumers appear to prefer to buy online, and with nonnegotiable pricing.[36] Some auto manufacturers are currently seeking to sell their EVs through special dealerships, subject to greater manufacturer control, that will exclusively serve to deliver online orders at set prices. This sort of semi-direct sales model may allow manufacturers to avoid dealership laws while providing the EV-buying experience that consumers prefer.

BATTERY RECYCLING DEVELOPMENTS

The Inflation Reduction Act has spurred a need for domestically sourced battery minerals, and recycling EV batteries will play a crucial role. As discussed above, the Act requires that, to obtain an EV tax credit, EV vehicles must reach a specified percentage of the value of the battery's critical minerals that are "extracted or processed in the United States, or in any country with which the United States has a free trade agreement in effect, or recycled in North America."[37] By including North American recycled minerals as a viable source to meet the requirement, the Act recognizes that mineral extraction alone will not meet the United States' need for EV battery minerals. In fact, the White House's recently launched American Batteries Materials Initiative reflects the importance of EV battery recycling by seeking to "help guide research, grants, and loans supporting environmentally responsible critical minerals … recycling."[38]

There are significant management and policy issues inherent in recycling these critical minerals. California has provided some guidance on this growing need. On May 9, 2022, the California Lithium-ion Car Battery Recycling Advisory Group released its finalized recommendations on policies pertaining to the recovery and recycling of lithium-ion vehicle batteries sold with motor vehicles in California.[39] States are likely to rely on California's Advisory Group's recommendations to inform their policies.

The most significant takeaway from the group focused on assigning responsibility for managing battery recycling and reuse. Specifically, the Advisory Group sought to define responsibility for the coordination and payment of recycling in cases where the cost burdens the vehicle owner and the battery is unwanted. The most popular recommendation on this issue—"core exchange with a vehicle backstop policy"—gained 93% support in the Advisory Group.[40] Under this approach, responsibility is assigned to the vehicle manufacturer, the EV's dismantler, or the entity removing the battery for out-of-warranty battery reuse, repurpose, or recycling based on various circumstances such as, for example, whether the EV is reaching end-of-life (EOL).[41]

Sixty-seven percent of the Advisory Group also supported "a producer take-back policy."[42] Under this approach, the auto manufacturer would be "responsible for ensuring proper repurposing, reuse, or recycling of its EV traction batteries by a licensed facility at no cost to the consumer if and when they are no longer wanted by the owner, and in the event no other entity has taken possession of the battery."[43]

For additional analysis on the Advisory Group's findings, please see our article published on this topic in Law360.

PRIVACY AND CYBERSECURITY

The new wave of EVs, vehicles featuring Vehicle-to-Vehicle Communications technology, vehicles with autonomous driving technology, and even vehicles that simply feature wireless connectivity, are certain to provide important benefits to consumers and have the potential to revolutionize motor vehicle safety. These vehicles, laden with advanced sensors and connected technologies, generate incredible volumes of data, including data that may be considered personal or sensitive under rapidly evolving legal regimes – including precise location information, data captured from vehicle cameras, as well as information about driver ability and occupant entertainment preferences. The creation – as well as collection, use, and sharing – of this data, including with insurance companies or businesses located on frequented routes, has triggered privacy concerns.[44] Some of these issues are common to connected vehicles and are not necessarily unique to EVs; however, EV manufacturers should keep these issues front of mind given the trend toward increased connectivity and the natural expectation of EV buyers that such vehicles will feature the latest in connected vehicle technologies.

Privacy: Although there is no federal law that specifically governs privacy and EVs, vehicle manufacturers are subject to a range of obligations and restrictions with regard to how data generated from a vehicle can be collected and used. These include, first and foremost, the public commitments and representations that a company makes, including – for example – the Automaker Alliance Privacy Principles.[45]

In the absence of comprehensive federal privacy legislation, the Federal Trade Commission (FTC) has established itself as the *de facto* agency overseeing privacy issues, including for connected vehicles. The FTC's primary authority derives from its "Section 5" authority to proscribe deceptive acts and practices, which has been used in a range of cases, including against companies that have allegedly deceived consumers about data use or misled consumers about data security. The FTC has made clear that it is focused on the area of connected vehicles, including through a 2018 workshop,[46] and the Commission has recently signaled that it seeks to further bolster its authorities in this space through announced rulemaking efforts on privacy (styled as "commercial surveillance") and data security.[47] These proposed rules, if promulgated, would fundamentally reshape the federal landscape around privacy and security requirements for connected vehicles.

At the state level, a growing number of privacy laws that are starting to come into effect would impose significant new obligations on vehicle manufacturers that collect or process personal data.[48] These laws purport to restrict companies in a number of novel ways, including by imposing European-style privacy regimes that require not only providing broadly known and accepted so-called "data subject rights" around access, correction, and deletion of data, but also a range of new and untested rights, such as "opt-outs" for the sale or sharing of personal or sensitive data. Additional restrictions, such as Virginia's requirement that a "data controller" seek opt-in consent before processing precise geolocation data, will raise important questions for vehicle manufacturers about when data is collected and processed, including where data remains on the vehicle versus when it is sent to the cloud, and how such obligations attach to OEMs versus vehicle owner/operators.[49]

The application of these obligations to the automotive sector, and the regulatory appetite for enforcement, remains to be seen, but the trend is clear – these laws are likely to become more common and more restrictive, and recent efforts, such as the vetoed SB 346 in California,[50] make clear that there is an intense focus on data generated in the connected vehicle context. As we await implementing rules for certain states that have implemented comprehensive privacy laws, manufacturers would be well advised to consider the significant risk associated with not developing an affirmative strategy for explaining how vehicles may collect and use personal data.

Spotlight - Biometrics Laws: Biometrics laws, including in particular Illinois' Biometric Information Privacy Act (BIPA) and Texas' Capture or Use of Biometric Identifier (CUBI), have been in the spotlight and should be top-of-mind for vehicle manufacturers given the expansive interpretations and restrictive requirements set out by those laws.[51] BIPA in particular carries significant consumer class action risk, and courts have read the law broadly – both as to what data constitutes a "biometric" and as to when such data is deemed collected under the law. Recently, the Texas Attorney General has brought high-profile actions for alleged violations of CUBI, and the scope of how the law is interpreted, including in areas of particular interest to vehicle manufacturers (such as the use of externally-oriented cameras), will be important to monitor. Laws governing the collection or processing of biometric data are becoming more prevalent, and several forthcoming state privacy laws – including for example one in Virginia – require opt-in consent for a "data controller" to collect biometric data, presenting potentially novel challenges for vehicle manufacturers.

Cybersecurity: EV vehicles are also at a heightened risk of cybersecurity threats, given their connectivity to the Internet, wireless networks, and EV charging infrastructure. NHTSA has taken the lead on vehicle cybersecurity issues, and regularly provides "non-binding guidance" that describes the steps that vehicle manufacturers can take to mitigate cybersecurity risk, such as implementing cybersecurity governance, risk assessments, and regular audits.[52]

Vehicle manufacturers also face the risk of private litigation arising from cybersecurity incidents, including claims arising under theories of negligence, product liability, or fraud. For example, a recent class action alleged that vehicles could be hacked and stolen as a result of a security defect—as demonstrated in viral TikToks.[53] In 2015, a class action against other manufacturers claimed that hackers could penetrate the vehicles' networked electronic control units.[54] Cybersecurity risks for EVs are not purely legal – reputational risk can carry significant concern. In the EV space, a 19-year-old was able to remotely hack into more than 25 vehicles and control elements of the cars because of a vulnerable third-party software integrated into the vehicles.[55] These are just a few examples of how cybersecurity vulnerabilities can create immense legal, and public relations, risk.

As federal legislation encourages the development of EV charging stations around the country, there is growing recognition by the Biden Administration and the Office of the National Cyber Director of the need to harmonize cybersecurity standards across "the EV ecosystem."[56] While the administration readout from its recent Cybersecurity Executive Forum on EV cybersecurity was light on details, it does suggest that EV charging stations could be considered "critical infrastructure." If true, EV charging stations could be subject to the provisions of the recently enacted Cyber Incident Reporting for Critical Infrastructure Act of 2022 (CIRCIA), which establishes a cyber incident reporting framework under the oversight of the Department of Homeland Security's Cybersecurity and Infrastructure Security Agency (CISA).[57]

This is just a snapshot of the vibrant public and regulatory discourse around vehicle cybersecurity and related issues, and manufacturers would be well advised to remain abreast of these developments both domestically and abroad.

VEHICLE CHARGING INFRASTRUCTURE

a. Public Charging Stations

The Infrastructure Investment and Jobs Act establishes a National Electric Vehicle Infrastructure Program ("NEVI") to provide $5 billion in funding to states to create a nationwide, interconnected network of DC fast chargers along the National Highway Systems.[58] On June 22, 2022, the Federal Highway Administration released draft regulations setting minimum standards and requirements for projects funded under NEVI.[59] The comment period closed on August 22, 2022. Final regulations are expected within a year.

The draft regulations set forth a number of minimum standards focused on achieving six general goals: (1) consistency with regard to the installation, operation, and maintenance and technician qualifications for NEVI projects; (2) a seamless national network of EV charging infrastructure that can communicate and operate on the same software platforms from one State to another; (3) cross-referencing to existing guidance requirements about traffic control devices and on-premise signs; (4) state quarterly and annual reports on topics such as charging station use, reliability maintenance, installation cost information; (5) communication between charging stations through Open Charge Point Protocol to minimize cybersecurity concerns while mitigating the potential for stranded assets (i.e., a provider abandons operations at a charging station); and (6) provision of basic charging station information (such as location, connector type, and power level), real-time status, and real-time price to charge free of charge to third-party software developers through an application programming interface.[60]

b. Vehicle-to-Grid Integration

When an EV owner plugs their car in to charge it, AC power from the electrical source (often the electrical grid) is converted to DC power and stored in the car's battery. If the EV has a bidirectional charger, presently utilized in some EVs, the EV owner could allow the DC power to be converted back to AC, and transmitted back to the grid or to their home.

Bidirectional charging can be an attractive feature to tout to consumers This two-way integration of EVs into homes and the electrical grid is known as V2G (vehicle-to-grid) or V2H (vehicle-to-home) charging.

Small V2G pilot projects are cropping up, mostly in Europe and in California. Integrating V2G vehicles into the grid as power sources requires regulatory and infrastructure changes to the electrical grid, but offers material benefits for consumers and utilities. V2G could allow consumers who participate to make money from selling their EVs' power back to the grid (much as net metering policies currently allow home solar users to sell excess power to the grid). It could also help overloaded grids during periods of high electricity demand.[61]

For manufacturers, V2G capability may become an important feature to attract EV buyers. This will require bidirectional charging and technology to prevent battery degradation through smart V2G protocols. Manufacturers must be aware of grid connection and transmission regulations, the impact of V2G use on battery warranties and consumer expectations, and the possible risks of

related false advertising claims.

All of these spaces are either still developing or have yet to develop regulations that specifically address V2G. Grid connection and transmission regulations may operate like demand-response technologies, which currently allow utilities to send a signal to participating consumers at times where there is high electricity demand, and then to reward consumers for reducing their usage in response to this signal. V2G demand response would work in an opposite way—prompting EV owners to use their cars to feed electricity back to the grid, increasing supply during periods of high demand. This process could be automated, with the right vehicle technology, allowing consumers to set their car to automatically feed back into the grid if it's plugged in when the utility requests more supply.

As this alert explains, both states and the federal government regulate EV warranties—and most importantly EV battery warranties. V2G technology, especially if it takes the form of automated demand response, would cause participating EV batteries to charge and drain more often and possibly more rapidly. Many fear that these rigors will lead batteries to degrade more quickly, making it difficult for manufacturers to cover batteries used for V2G under existing warranty frameworks. However, studies show that these fears may be unfounded—or at least that smart V2G, with the right vehicle and battery software, need not decrease battery lifespans.[62] Manufacturers will need to consider how to phrase and structure battery warranties in concert with developing technology to protect their batteries from V2G degradation.

CONCLUSION

This alert is meant to outline the scope of EV regulations, and to suggest where they might be heading—not to provide detailed information on compliance or other issues. To learn more about any of these topics, or to discuss EV policy and legal developments more broadly, please contact the Gibson Dunn attorneys who prepared this alert. We are excited to use our experience and expertise to help drive your EV business forward.

ENDNOTES

1. California Air Resources Board, *Proposed Advanced Clean Cars II (ACC II) Regulations*, ARB.CA.GOV, https://ww2.arb.ca.gov/rulemaking/2022/advanced-clean-cars-ii (last visited Oct. 28, 2022).
2. CALIFORNIA AIR RESOURCES BOARD, FINAL REGULATION ORDER: ADVANCED CLEAN TRUCKS REGULATION (2021), https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/act2019/fro2.pdf.
3. California Air Resources Board, *Advanced Clean Fleets Regulation Summary*, ARB.CA.GOV, https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-fleets-regulation-summary (last visited Nov. 14, 2022).
4. Eric Miller, *Truckers Express Concern as California Lawmakers Seek to Phase Out Diesel Big Rigs*, TRANSPORT TOPICS (Oct. 28, 2022, 10:34 AM), https://www.ttnews.com/articles/california-lawmakers-seek-phase-out-diesel-big-rigs.
5. 86 Fed. Reg. 74217, *available* at https://www.nhtsa.gov/sites/nhtsa.gov/files/2021-08/First_Amended_SGO_2021_01_Final.pdf
6. *See* https://www.nhtsa.gov/press-releases/initial-data-release-advanced-vehicle-technologies
7. 49 C.F.R. § 578.6(a)(1)

8. *See* Letter from Sens. Blumenthal and Markey to Dr. Stephen Cliff (June 15, 2022), *available at* https://www.blumenthal.senate.gov/imo/media/doc/061522nhtsasgorelease.pdf

9. *See* Emma Hines, *NHTSA Up in the Clouds: The Formal Recall Process & Over-the-Air Software Updates*, 28 Mich. Tech. L. Rev. 153 (2021).

10. *See id.* at 158-60.

11. *See* Elon Musk, Twitter (Sept. 22, 2022) (responding to report regarding recall related to automatic windows by noting: "The terminology is outdated & inaccurate. This is a tiny over-the-air software update.").

12. EPA, *EPA interpretation of CFR Sections 86.128-79 and 1066.415 for Chassis Certified MPGe and Range Testing for Battery Electric Vehicles (BEV)*, https://dis.epa.gov/otaqpub/display_file.jsp?docid=55592&flag=1

13. *Id.; See* 40 C.F.R. § 86.128-79; see 40 C.F.R. § 1066.415.

14. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

15. Affordable Electric Vehicles for America Act of 2022, H.R. ___, 117th Congress (2022), available at https://tinyurl.com/5n96re92; Affordable Electric Vehicles for America Act of 2022, S. 5020 (2022) available at https://tinyurl.com/fjuvcxy9.

16. On December 19, 2022, the U.S. Treasury Department announced that guidance on critical minerals and battery components requirements would be delayed until March 2023, when the Department plans to issue a related notice of proposed rulemaking. By statute, the critical mineral and battery component requirements take effect only after the Treasury issues that proposed rule (which the U.S. Treasury Department was required by statute to issue no later than December 31, 2022). Press Release, U.S. Treasury Department, Treasury Announces Information Timeline for Inflation Reduction Act Tax Implementation (Dec. 19, 2022), https://home.treasury.gov/news/press-releases/jy1173. On December 29, 2022, the U.S. Treasury Department and the Internal Revenue Service issued Notice 2023-1, describing in limited detail the forthcoming proposed regulations regarding the clean vehicle credit (although Notice 2023-1 does not itself constitute the proposed guidance that makes effective the critical mineral and battery component requirements in the statute). Notice 2023-1, 2023 I.R.B. 1, https://www.irs.gov/pub/irs-drop/n-23-01.pdf. On the same day, the U.S. Treasury Department issued a whitepaper entitled "Anticipated Direction of Forthcoming Proposed Guidance on Critical Mineral and Battery Component Value Calculations for the New Clean Vehicle Credit," outlining relevant terms and concepts that reflect U.S. Treasury Department's and the Internal Revenue Service's preliminary views concerning the critical mineral and battery component requirements (https://home.treasury.gov/system/files/136/30DWhite-Paper.pdf), and the Internal Revenue Service issued FAQs related to new, previously-owned and qualified commercial clean vehicle credits (https://www.irs.gov/pub/taxpros/fs-2022-42.pdf).

17. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

18. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

19. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

20. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

21. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

22. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401; see also 42 USC § 18741 (defining foreign entity of concern).

23. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401; see also 42 USC § 18741 (defining foreign entity of concern).

24. 49 C.F.R. § 571.141 (2022).

25. Federal Motor Vehicle Safety Standards; Minimum Sound Requirements for Hybrid and Electric Vehicles, 87 Fed. Reg. 41618 (July 12, 2022) (to be codified at 49 C.F.R. § 571).

26. *Supply Chain Issues and Autos: When Will the Chip Shortage End,* J.P.MORGAN (Aug. 11, 2022), https://www.jpmorgan.com/insights/research/supply-chain-chip-shortage#:~:text=More%20chips%20will%20become%20available,auto%20industry%20demand%20until%202024.

27. The White House.Gov, FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China, https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/

28. *Id.*

29. IEA, GLOBAL SUPPLY CHAINS OF EV BATTERIES (2022), https://iea.blob.core.windows.net/assets/4eb8c252-76b1-4710-8f5e-867e751c8dda/GlobalSupplyChainsofEVBatteries.pdf. Over half of lithium, cobalt and graphite processing and refining capacity is located in China. Europe is responsible for over one-quarter of global EV assembly, but it is home to very little of the supply chain apart from cobalt processing at 20%.

30. The White House.Gov, FACT SHEET: Biden-Harris Administration Driving U.S. Battery Manufacturing and Good-Paying Jobs, https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/19/fact-sheet-biden-harris-administration-driving-u-s-battery-manufacturing-and-good-paying-jobs/.

31. The White House.Gov, FACT SHEET: Biden-Harris Administration Driving U.S. Battery Manufacturing and Good-Paying Jobs, https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/19/fact-sheet-biden-harris-administration-driving-u-s-battery-manufacturing-and-good-paying-jobs/.

32. *Biden-Harris Administration Awards $2.8 Billion to Supercharge U.S. Manufacturing of Batteries for Electric Vehicles and Electric Grid, DEPARTMENT OF ENERGY* (Oct. 19, 2022), https://www.energy.gov/articles/biden-harris-administration-awards-28-billion-supercharge-us-manufacturing-batteries.

33. The White House.Gov, FACT SHEET: One Year into Implementation of Bipartisan Infrastructure Law, Biden-Harris Administration Celebrates Major Progress in Building a Better America, https://www.whitehouse.gov/briefing-room/statements-releases/2022/11/15/fact-sheet-one-year-into-implementation-of-bipartisan-infrastructure-law-biden-%E2%81%A0harris-administration-celebrates-major-progress-in-building-a-better-america/.

34. Nick Yekikian, *The Government Confirms Obvious: Electric Cars Cheaper to Maintain Than Internal Combustion Vehicles,* MOTORTREND (June 21, 2021), https://www.motortrend.com/news/government-ev-ice-maintenance-cost-comparison/.

35. *Where Does the Car Dealer Make Money?,* EDMUNDS (June 13, 2019), https://www.edmunds.com/car-buying/where-does-the-car-dealer-make-money.html#:~:text=A%20dealership's%20service%20and%20parts,gross%20profits%2C%20according%20to%20NADA.

36. *90% of Car Shoppers Prefer a Dealership Where They Can Start the Buying Process Online,* V12 (Aug. 9, 2022), https://v12data.com/blog/90-car-shoppers-prefer-dealership-where-they-can-start-buying-process-online/.

37. Inflation Reduction Act of 2022, H.R. 5376, 117th Cong. § 13401.

38. Press Release, Biden-Harris Administration Driving U.S. Battery Manufacturing and Good-Paying Jobs (Oct. 19, 2022), available at https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/19/fact-sheet-biden-harris-administration-driving-u-s-battery-manufacturing-and-good-paying-jobs/. Supporting this goal, on November 16, 2022, the White House announced $74 million in funding for projects aimed at advancing technologies and processes for EV battery recycling and reuse. Press Release, Biden-Harris Administration Announces Nearly $74 Million To Advance Domestic Battery Recycling And Reuse, Strengthen Nation's Battery Supply Chain (Nov. 16, 2022), available at https://www.energy.gov/articles/biden-harris-administration-announces-nearly-74-million-advance-domestic-battery-recycling.

39. CalEPA, *Lithium-ion Car Battery Recycling Advisory Group*, https://calepa.ca.gov/lithium-ion-car-battery-recycling-advisory-group (last visited May 8, 2022).

40. *Id.* at 6.

41. *Id.* at 6.

42. *Id.* at 6.

43. *Id.* at 6.

44. Steve Tengler, *Privacy Battle Over Connected Cars Takes An Interesting Turn In California*, FORBES (May 17, 2022), https://www.forbes.com/sites/stevetengler/2022/05/17/privacy-battle-over-connected-cars-takes-an-interesting-turn-in-california/?sh=50bb234b4d72.

45. Alliance for Automotive Innovation, Inc., *Consumer Privacy Protection Principles: Privacy Principles for Vehicle Technologies and Services*, (Nov. 12, 2014) https://www.autosinnovate.org/innovation/Automotive%20Privacy/Consumer_Privacy_Principlesfor_VehicleTechnologies_Services-03-21-19.pdf.

46. *The Connected Cars Workshop: The Federal Trade Commission Staff Perspective,* FEDERAL TRADE COMMISSION (Jan. 9, 2018), https://www.ftc.gov/reports/connected-cars-workshop-federal-trade-commission-staff-perspective.

47. *Proposed Rule by the Federal Trade Commission: Trade Regulation Rule on Commercial Surveillance and Data Security,* 87 FR 51273, FEDERALREGISTER.GOV (Aug. 22, 2022), https://www.federalregister.gov/documents/2022/08/22/2022-17752/trade-regulation-rule-on-commercial-surveillance-and-data-security.

48. California, Colorado, Connecticut, Virginia, and Utah have enacted privacy laws. See California Privacy Rights Act, Cal. Civ. Code § 1798 (Cal. 2020); Colorado Privacy Act, S.B. 21-190, § 6-1-1309, 73d Leg., 2021 Regular Sess. (Colo. 2021); Connecticut Data Privacy Act, S.B. 6, 2022 Gen. Assemb., Reg. Sess. (Conn. 2022); Virginia Consumer Data Protection Act (VCDPA), S.B. 1392, § 59.1-576, 2021 Spec. Sess. (Va. 2021); Utah Consumer Privacy Act, S.B. 227, 2022 Leg. Sess. (Utah 2022). These laws become effective throughout 2023 (i.e., Virginia and California (January 1, 2023); Colorado and Connecticut (July 1, 2023); Utah (December 31, 2023).

49. VCDPA, § 59.1-57.

50. In-vehicle cameras, SB 346, 2022 Leg. (Cal. 2022) (vetoed).

51. Biometric Information Privacy Act (BIPA), 740 Ill. Comp. Stat. 14 (2008); Capture of Use of Biometric Information (CUBI), Tex. Bus. & Com. Code § 503.001.

52. Infrastructure Investment and Jobs Act, H.R. 3684, 117th Congress (2022).

53. *Stephanie McQuarrie, et al. v. Kia America, Inc. and Hyundai Motor America*, No. 8:22-cv-01721 (C.D. Cal. Sept. 21, 2022).

54. *Cahen, et al. v. Toyota Motor Corp., et al.*, No. 15-cv-01104-WHO, 2015 WL 7566806 (N.D. Cal. Nov. 25, 2015) (dismissed for lack of Article III standing).

55. Lorenzo Franceschi-Bicchierai, *How a Hacker Controlled Dozens of Teslas Using a Flaw in Third-Party App*, VICE (Jan. 13, 2022, 7:21 AM), https://www.vice.com/en/article/akv7z5/how-a-hacker-controlled-dozens-of-teslas-using-a-flaw-in-third-party-app.

56. *Readout of Cybersecurity Executive Forum on Electric Vehicles and Electric Vehicle Charging Infrastructure Hosted by the Office of the National Cyber Director,* WHITEHOUSE.GOV (Oct. 25, 2022), https://www.whitehouse.gov/briefing-room/statements-releases/2022/10/25/readout-of-cybersecurity-executive-forum-on-electric-vehicles-and-electric-vehicle-charging-infrastructure-hosted-by-the-office-of-the-national-cyber-director/.

57. Cyber Incident Reporting For Critical Infrastructure Act of 2022, CISA.GOV, https://www.cisa.gov/circia (last visited Dec. 5, 2022). Implementing rules are expected by March 2024.

58. Infrastructure Investment and Jobs Act, H.R. 3684, 117th Congress (2022).

59. 87 Fed. Reg. 37262.

60. 87 Fed. Reg. 37263.

61. Aarian Marshall & Matt Simon, *Electric Vehicles Could Rescue the US Power Grid*, WIRED (Sept. 19, 2022), https://www.wired.com/story/electric-vehicles-could-rescue-the-us-power-grid/.

62. *Will V2G Activities Degrade Your EV's Battery Life?*, HIVE POWER (Nov. 15, 2021), https://www.hivepower.tech/blog/will-v2g-activities-degrade-your-evs-battery-life.