SIDLEY

FIRST ANNUAL SIDLEY BATTERY SCHOOL
ELECTRIC VEHICLES: TECHNOLOGY, LAW, AND POLICY

WHAT DOES THE FUTURE HOLD FOR ELECTRIC VEHICLES?

The automotive industry is seeing dramatic changes that might signal new legal developments for electric vehicles (EVs). Major car manufacturers and small upstarts alike have announced their intent to add electric models to their line-ups in 2021. Add to this President Joe Biden's aim of making the power sector carbon-free by 2035 and the drive toward increased incorporation of EVs. There is also the lure of investing. Edison Electric Institute (EEI) says electric companies are investing more than US$2.6 billion to deploy charging infrastructure and accelerate electric transportation.

New regulations may also affect battery deployment. As an example, Federal Energy Regulatory Commission Order No. 2222, which promotes competition in electric markets by removing the barriers preventing distributed energy resources from competing on a level playing field. The order allows electric cars, which can even store excess energy in the batteries of idle cars, to participate alongside traditional resources in the energy markets.

Notwithstanding these signals, the navigation of this revolutionary landscape is complex. To sort it out, Sidley recently hosted its First Annual Sidley Battery School — Electric Vehicles: Technology, Law, and Policy. That webinar, attended virtually by business leaders, investors, government relations professionals, and lawyers from major industry players, sought to provide audience members with an understanding of the technical, legal, and policy issues relevant to EVs. Navigating this evolving landscape includes:

- Understanding the viability of EV environmental regulation and credit trading programs at the state and federal levels
- Anticipating environmental, social, and governance (ESG) legal risks and opportunities
- Developing strategies to address product compliance and stewardship, including end-of-life considerations
- Assessing how the grid will be built to accommodate vehicle-to-grid (V2G) technology

"We at Sidley want to be part of the effort that brings electrification to transportation in a smart way."

— KENNETH W. IRVIN

So said leading practitioners from Sidley Austin LLP, including firm partners Justin A. Savage and Kenneth W. Irvin, senior associate Samina M. Bharmal, and associate Joseph T. Zaleski, as well as industry experts JT Guerin, principal, Energy Systems Advisors, and David Garrett, president, Garrett & Associates, Inc.

Of what inspired this year's roundtable talk and its focus on EVs, Savage, co-leader of the firm's Environmental practice and the originator of the "Battery School" concept and series, says, "With new technologies such as batteries, there can be a lag between technology and legal service providers. We thought a first-in-market battery '101' school might help close the gap in understanding the key technical concepts and legal issues, providing value to executives, lawyers, and investors."

Irvin, co-leader of Sidley's Energy team, says of the reason he was drawn to participate, "We at Sidley want to be part of the effort that brings electrification to transportation in a smart way. I want people to see the validity of the allure of the investment thesis. I want people to see what technology is there, or just around the corner, and what it will take to make it all happen in a way that's going to find a long-term viable market."

MY WAY OR THE HIGHWAY

"An attempt to upend the current approach to state electrification mandates."

President Biden has said that on his first day in office he would employ executive action to move the federal government procurement system toward 100% "clean energy and zero-emission vehicles." This has caused a measure of concern in some quarters regarding the new regulations that may be on the horizon. According to Justin A. Savage, co-leader of Sidley's Environmental practice, Biden is poised to transform existing rules regarding EVs. "The new administration will attempt to upend Trump's approach to state electrification mandates."

Savage says the Clean Air Act generally vests only the Environmental Protection Agency (EPA) with the authority to control emissions from cars and trucks, but allows the EPA to grant California a "waiver" to set its own standards, which other states may adopt — or opt into — as their own. Under California's waiver authority, California and 12 other states had adopted zero-emission vehicle (ZEV) mandates. The Trump administration, however, revoked California's waiver to impose those mandates. "I expect the Biden administration to try to reinstate California's authority and harmonize federal and state approaches to electrification mandates," Savage says.

Savage also predicts that supply chains for batteries will be subject to scrutiny for both compliance with federal laws such as the Toxic Substances Control Act and compliance with corporate norms such as ESG metrics. He says this would be because the batteries require substantial rare earth minerals. "Expect mining in the U.S. and other markets to be scrutinized against these metrics."

He also anticipates waste issues over batteries will become significant going forward. "Policymakers globally take different views of the wisdom of 'take-back' requirements for manufacturers. The U.S. and other countries thus have avoided imposing an obligation on manufacturers to take back spent batteries, while Germany and other countries impose that obligation on manufacturers, subject to significant fines and penalties."

"Expect mining in the U.S. and other markets to be scrutinized against these metrics."

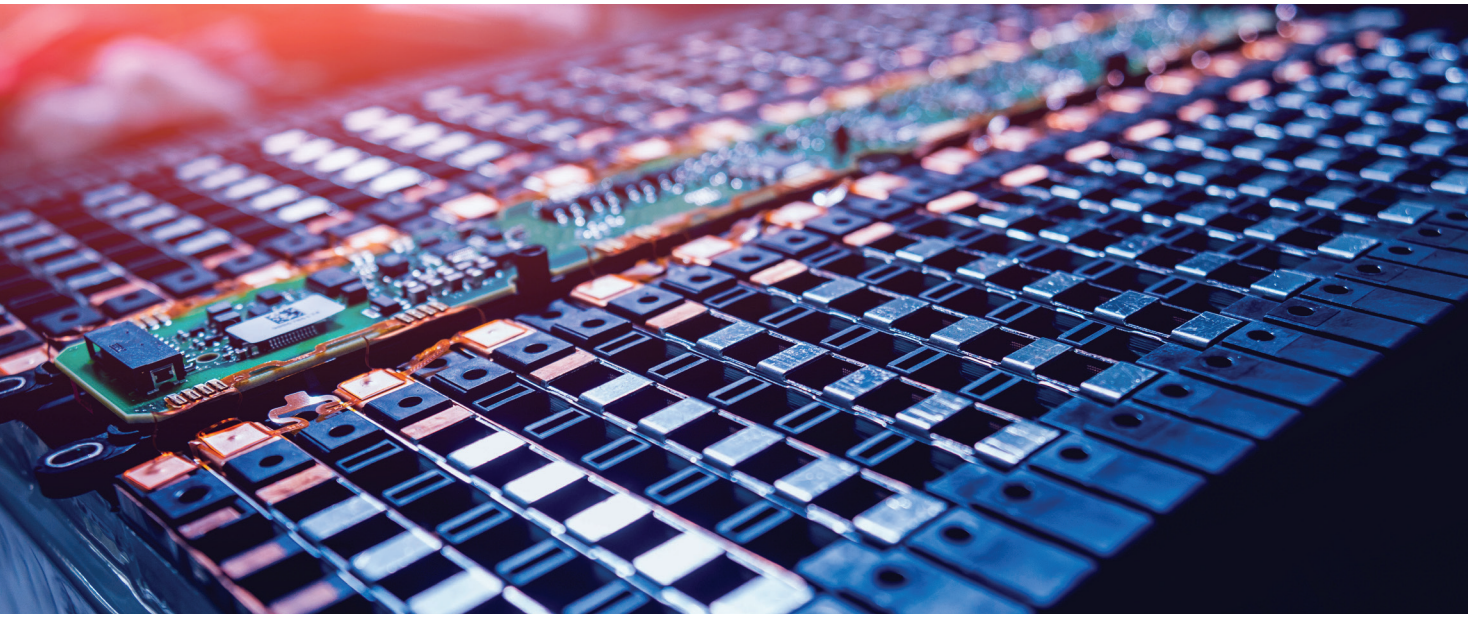
—JUSTIN A. SAVAGE

THE FUTURE IS RECHARGEABLE

"It's a combination of car nuts and internet geeks."

The massive sea change to electric vehicles is driven, in part, by the increasing energy efficiency of consumers, says Kenneth W. Irvin, co-leader of Sidley's Energy practice. "Utilities have finally awakened to the possibility of EVs. Right now, if you sell electric energy to consumers, you are selling less product, because people are consuming less electricity due to efficiency. They are switching over to LED lightbulbs and to efficient appliances. So the electrification of transportation — that's like manna from heaven for the electric utility."

Irvin is particularly encouraged by new deployments of V2G — technology that enables energy to be pushed back to the power grid from the battery of an EV. Increased commitments to renewable energy, clean transportation fleets, and even building electrification have facilitated a major growth spurt for energy storage. These trends, he says, have led countries around the world to strive to move to carbon-free transportation.



The challenge is: Will we be ready to handle the sea change? Irvin isn't sure. "President Joe Biden wants to deploy 500,000 charge points around the country. It is not clear that the transmission grid is currently set up to deal with the demand that will come of that. If they were installed today, it would probably be very problematic for the grid operators."

He describes the grid as a mesh network, with some parts of the strands holding the network together being robust and able to move a lot of electricity. Some parts, however, are aged, weak, and brittle. There is therefore the potential for grid operators to struggle to accommodate the electricity supply demands of EVs and thus face brownouts or blackouts. Indeed, recent studies echo the broad agreement on the need for new long-distance high-voltage transmission lines in order for the United States to integrate enough renewable generation to reach decarbonization goals.

"We have to develop the grid to accommodate the demand and offset costs. V2G means the car is the source of energy, and it's selling it and supplying it back into the grid," Irvin says, adding that the car could ideally be a tool to the operator, supplying or consuming energy depending on whether the operator is in short supply or excess supply situations. For that to work, however, the operator would need to have the computerization, the transmission, and the facilities to actually connect to the car and control it.

Despite those challenges, Irvin is confident the revolution is coming. "It's being pioneered by a combination of car nuts and internet geeks." Key to success, Irvin says, is to avoid falling back on old methodologies. "We can't just take tailpipe emissions and convert them into coal fire generation emissions — that's not helpful. If we're smart about it and we harness renewable energy in a successful way, that's better for the environment, that's better for the cost of delivered goods, and it will give people jobs."

He predicts the installation of Biden's proposed 500,000 charge points — the infrastructure buildup necessary to do all that — will yield skilled, well-paying jobs. On a worldwide scale, he says, the price of fossil fuels would go down because demand would be going down. That would make it cheaper for the emerging economies and the developing world to transition to V2G technology.

"Look at all the electric car companies that are sprouting around the country right now," Irvin says, clearly inspired by the innovation. "It's like the early 20th century, when we had so many car companies using the technology that was state of the art back then. I would like clients to see the promise of the new technology, for Sidley to help them invest in or be a developer of it, because I want to be part of that future."

"If we're smart about it and we harness renewable energy in a successful way, that's better for the environment ... and it will give people jobs."

—KENNETH W. IRVIN

CONSCIENTIOUS OBJECTORS

"That sounds nice, but what are you doing for the environment?"

"If you are saying, 'We are going net zero in 2021,' you need to show that you are able to do that."

—SAMINA M. BHARMAL

The idea of electric vehicles in the abstract for many is romantic on an environmental level. In recent years, however, company stakeholders and the public have intensified their expectations around environmentalism, including those in the EV arena. Samina M. Bharmal, a senior associate with Sidley's Environmental practice and its associate lead for the firm's ESG practice, seeks to educate clients on what their investors and shareholders may expect beyond general compliance and forward thinking on existing environmental laws.

She says one of the things many find attractive about EVs is that "they have zero tailpipe emissions. Well, that sounds nice, but when you think about ESG, the query is deeper. Your stakeholders — your investors, customers, the public — want to know more. What are you doing that shows financial stability and performance? A principle of ESG is that environmental performance is one way to answer that question. So the stakeholder question becomes, 'What are you doing for the environment?'"

Bharmal helps clients outline the footprint their businesses may have along the path to producing EVs. "Although there are no emissions coming out of the back of the car, you are replacing your standard internal combustion engine with an electrified vehicle, with a battery. What does that mean for your carbon footprint? For example, where does this battery come from?"

The minerals needed to create EV batteries come from resources outside the United States, Bharmal says. "Right now, there is a very long supply chain to get the materials economically for the manufacturing of the batteries. They are in Africa and Eastern Asia. One thing to consider is that any disruption will impede meeting all of your contractual agreements, your commitment to your investors, your ability to execute."

"Greenwashing" is another key consideration. "Making ESG commitments in the EV space, where so much technology and legal possibility is evolving, is another area that requires not only business, but also legal strategy," Bharmal explains. Net-zero goals need to be able to be substantiated and thoughtfully crafted in light of Federal Trade Commission guidelines, shareholder suit risks, and ever-present risks from private plaintiffs and state attorneys general.

"If you are saying, 'We are going net zero in 2021,' you need to show that you are able to do that. And if you are unable to do that, you could be perceived as deceptive," Bharmal says. "It's not that companies are intentionally greenwashing — it's that they have to understand how to quantify what they are saying. My goal is to help them anticipate these kinds of issues so they are prepared."

ON THE ROAD TO A NEW REGULATORY FRAMEWORK

"A shift toward much higher percentages, if not a near-total switch to zero-emission vehicles."

Electric vehicles entered the market about 10 years ago and now number more than 1.2 million in the United States. EEI predicts that the number of EVs in the United States will reach more than 18 million in 2030. Each of those vehicles has a large battery pack that will eventually reach the end of its life. Joseph T. Zaleski, an associate in Sidley's Environmental practice, says he seeks to inform clients regarding the existing framework under federal waste law for batteries and battery handling, or used battery handling, used battery disposal, and used battery recycling.

While the waste is not yet a mammoth problem, it will be in the future. Lawmakers in several states, including California, Massachusetts, and New York, are in the process of developing policy options to manage it.

"As more battery-powered ZEVs enter the market and head out on the road, we anticipate, at both the federal and the state level, the development of a more specific framework to cover waste batteries for electric vehicles," says Zaleski, who expects to see new requirements for how to handle end-of-life batteries with a kind of recycling-and-use component. Right now, the existing framework is not specific to electric vehicle batteries. States, he says, are already starting to take up the torch on this, but there may very well soon be some movement at the federal level as well.

Samuel B. Boxerman, a partner in the firm's Environmental practice who regularly handles matters pertaining to federal and state solid and hazardous waste requirements, agrees. "There's an existing framework of rules that govern what to do with a battery at the end of its life, but that's one thing when you have only 1-2% of cars that are electric on the road." Boxerman says that, as that percentage increases dramatically, "the question is open as to exactly how current regulations may change as the number of EVs increases — and how the overall waste management system will adjust to deal with those changes. Our goal is to ensure clients are aware of how and when those changes may occur and to prepare for them."

Boxerman cites President Biden as another variable to consider. "The new administration, including President Biden's cabinet nominations of Walsh to head Labor, Buttigieg to lead Transportation, and Granholm to lead Energy, has made it clear that the Biden administration intends to pursue a mandate to reduce carbon emissions across the economy. If that takes place, you are obviously going to need a lot more than 18 million EVs to fulfill that goal."

"The new administration … has made it clear that [they intend] to pursue a mandate to reduce carbon emissions across the economy."

—SAMUEL B. BOXERMAN

Contacts

Kenneth W. Irvin
Partner
Washington, D.C.
kirvin@sidley.com
+1 202 736 8256

Justin A. Savage
Partner
Washington, D.C.
jsavage@sidley.com
+1 202 736 8853

Samina M. Bharmal
Senior Associate
Washington, D.C.
sbharmal@sidley.com
+1 202 736 8350

Joseph T. Zaleski
Associate
Washington, D.C.
jzaleski@sidley.com
+1 202 736 8898

About the Firm

Sidley Austin LLP is a premier law firm with a practice highly attuned to the ever-changing international landscape. The firm has built a reputation for being an adviser for global business, with more than 2,000 lawyers in 20 offices worldwide. Sidley maintains a commitment to providing quality legal services and to offering advice in litigation, transactional, and regulatory matters spanning virtually every area of law. The firm's lawyers have wide-reaching legal backgrounds and are dedicated to teamwork, collaboration, and superior client service.