A conversation with Allan Marks

Assessing the new US National Electric Vehicle Infrastructure Program

with Drew Campbell

Allan Marks

Drew Campbell, *senior editor of* Institutional Investing in Infrastructure, *recently discussed the new $5 billion U.S. National EV Infrastructure Program and what it means for electric vehicles and the energy transition with* **Allan Marks,** *partner with Milbank and member of the firm's global project, energy and infrastructure finance group.*

The Biden administration and the U.S. Department of Transportation is allocating $5 billion for electric vehicle (EV) charging infrastructure — what are the primary objectives of this program? How will these be accomplished?

In February 2022, the U.S. Departments of Transportation and Energy jointly announced a new National Electric Vehicle Infrastructure Formula Program (NEVI), allocating $5 billion in funding under the bipartisan infrastructure law enacted last November to build a nationwide EV charging network. The money will be dispersed over five years. It is targeted at designated alternative fuel corridors, particularly along the Interstate Highway System. The initial $615 million is being made available for the 2022 fiscal year.

NEVI is designed to stimulate use of electric vehicles as part of a broader effort to decarbonize the nation's transportation sector in order to combat climate change and to facilitate a transition to cleaner energy sources. Implementation of the program is also meant to promote environmental justice and to create new union jobs.

To participate in the program, a state must submit an EV Infrastructure Deployment Plan to the new Joint Office of Energy and Transportation — a collaboration between the U.S. Departments of Energy and Transportation — describing how the state intends to use its share of NEVI funds consistent with Federal Highway Administration (FHWA) guidance. In the words of the FHWA, NEVI is "the most transformative investment in EV charging in U.S. history that will put us on a path to a nationwide network of 500,000 EV chargers that ensures a convenient, reliable, affordable, and equitable charging experience for all users." This year, the submission deadline is August 1, and eligible plans will be approved by the FHWA by Sept. 30, 2022. A second, competitive grant program to further increase the charging stations will be announced later this year.

Will this program support purchases of EVs by consumers?

No, the new program will not directly support the purchases of EVs. One major constraint to more EV adoption by consumers is fear of running out of power without a nearby charging station, especially on longer trips. To address that impediment to wider EV use, the program targets deployment of new EV charging networks, especially on highly traveled highways. The Biden-Harris administration has previously proposed an EV incentive package that would allocate additional money for consumers who bought electric vehicles built by unionized workers. Since 2010, U.S. Internal Revenue Code Section 30D has provided an income tax credit for qualified plug-in electric drive motor vehicles, including passenger vehicles and light trucks. The credit ranges from $2,500 to $7,500 depending on the vehicle's battery capacity and phases outs for particular vehicles once 200,000 qualifying vehicles from a manufacturer have been sold for use in the United States.

NEVI calls for alternative fuel corridors could you explain what these are?

The Alternative Fuel Corridor Designation Program was established by FAST Act

Section 1413 in 2015 to create a national network of alternative fueling and charging infrastructure along National Highway System (NHS) corridors — basically on interstate highways. The Transportation Secretary, through FHWA, has worked with states in five rounds so far to designate national EV charging, hydrogen, propane and natural gas fueling corridors that currently cover over 165,722 miles of the interstate highways. Funding under NEVI is meant to develop charging points on alternative fuel corridors to form the spine of the new national EV charging network. The Joint Office of Energy and Transportation will also play a key role in the implementation of NEVI by providing direct technical assistance and support to help states develop their plans before they are reviewed and approved by the Federal Highway Administration, which administers the funding.

Are there regions of the country where this investment will be focused?

Under the NEVI formula, each state that submits an Electric Vehicle Infrastructure Deployment Plan that is approved by FHWA may receive a share of program funding equal to the state's share of the combined amount that FHWA distributes in federal-aid highway apportionments plus Puerto Rico Highway Program funding. Most investments will be made along the NHS, and the administration is also making an active effort to include rural areas. Pending approval of state plans, the initial $615 million is allocated to every state with the largest allocations to Texas (about $60 million), California (about $57 million), Florida (nearly $30 million), New York and Pennsylvania (nearly $26 million each).

According to FHWA and NEVI, these funds will support the Justice40 Initiative, which establishes a goal that at least 40 percent of the benefits of federal investments in climate and clean energy infrastructure be distributed to disadvantaged communities. That does not necessarily dictate the location of EV charging stations, however, and each state has discretion in setting and achieving its plans to meet the federal goals. The FHWA is expected to publish proposed regulations setting minimum standards and requirements for NEVI by May 2022.

Will this program be administered through the U.S. DOT and state departments of transportation?

Yes. State departments of transportation are expected to deploy NEVI funds just as they would other federal-aid moneys for transportation improvements under other programs. NEVI is administered through the new Joint Office of Energy and Transportation using NEVI funds consistent with FHWA guidance to access the funds.

How is capital allocated — grants, loans, subsidies, public-private partnerships?

Federal aid will be used by state and local agencies to invest in EV charging infrastructure. The Federal cost-share for NEVI projects is 80 percent. Private and state funds can be used to provide the remaining cost-share. The allocated amount for each state that participates in NEVI will be advanced as grants to the state to cover costs pursuant to the state's FHWA-approved plan. If states do not submit a plan, then FHWA may reallocate the funds earmarked for that state to local agencies or municipalities within the state. Any remaining funds that are not used by a state or its localities may be redirected by FHWA ratably to other participating states with approved plans. The federal government intends to foster cooperation among state, local, tribal and private sector stakeholders to achieve the program's goals. In addition, a competitive grant program designed to further increase EV charging access in locations throughout the country, including in rural and underserved communities, will be announced later this year.

Are there opportunities for private investors to participate in this program?

It is up to the states to contract with private-sector partners and contractors, which they are free to do. Most of the program funds will likely be deployed through traditional capital facilities procurement models, though the broader bipartisan infrastructure law is also intended to spur further investment by the private sector in clean energy programs and transportation infrastructure, including

through public-private partnerships. For instance, the law increased the cap for Surface Transportation Private Activity Bonds from $15 billion to $30 billion. This increase will allow state and local governments to enter into additional public-private partnerships to supplement future surface transportation projects with private investment.

How will this program support product manufacturing to supply the EV charging infrastructure program?

NEVI will stimulate demand for EV charging equipment and systems by providing a significant and predictable source of federal funding for the installation of new EV-enabling infrastructure over the next five years. Beyond NEVI, the Biden-Harris administration has lately touted its "work to ensure that the future is made in America by American workers by strengthening and expanding Buy America rules to all taxpayer-funded infrastructure and public works projects." A recent White House statement mentioned new EV-related private investments, in particular in manufacturing facilities by Intel, GM, Boeing and Siemens, and highlighted the groundbreaking for Tritium's first U.S. manufacturing facility in Lebanon, Tenn. This facility will house six production lines that will produce up to 30,000 Buy America–compliant DC Fast Chargers per year at peak production and create 500 local jobs.

Other programs contemplated by the Bipartisan Infrastructure Law and the Biden-Harris administration also encourage investment in EV supply chains, from domestic mining and processing of battery metals like lithium to manufacturing of the batteries and chips used in electric vehicles and transit fleets. According to the International Energy Agency (IEA), a typical electric car requires six times the mineral inputs of a conventional car. Sources of supply and processing of these minerals is highly concentrated geographically. The IEA has noted that the world's top three producing nations control well over three-quarters of global output of lithium, cobalt and rare earth elements. For the widespread adoption of EVs envisioned by the rollout of a nationwide charging network — together with billions of dollars of new wind and solar power plants, energy storage facilities and transmission line upgrades — we also need massive new investments to expand and diversify the global battery metals supply chain. That will take time, money and planning and will not happen overnight.

Are there other topics that are important to cover about this program?

The program will be most successful in states that submit thoughtful electric vehicle infrastructure deployment plans and that have extensive interstate highway networks. The large states will likely take full advantage of the program. California alone accounts for over 40 percent of all EVs registered in the United States. Florida and Texas have also seen high numbers of EV registrations. In those states, expanded EV charging networks will meet existing demand and will allow more consumers to seriously consider making their next car electric. There are other states where NEVI may stimulate growth in EV adoption off of a much smaller base. I remain optimistic that the new investments in EV charging networks on the nation's highways will accelerate the electrification of vehicle travel, including for long-distance trips. Taken with other parts of the bipartisan infrastructure bill that fund electric buses, clean transit systems, alternative fuels, grid modernization and energy storage, I am confident that the U.S. transportation sector can be largely decarbonized in the most populous states and that greenhouse gas emissions can be reduced.

I would make one cautionary note, though, about how interconnected transportation and energy are and how location matters. Wyoming, where drivers have the highest average per capita annual mileage — over 18,000 miles a year — is a case in point. Almost one-third of those miles are driven on interstate highways, the focus of the $5 billion in new federal aid under NEVI. Wyoming is the second lowest state in the ratio of EVs to charger ports — at a ratio of 4.18, or less than one-third the national average. Under the bipartisan

infrastructure law, Wyoming — if it submits an Electric Vehicle Infrastructure Deployment Plan that is approved by FHWA — could expect to receive as much as $27 million over five years to support the expansion of an EV charging network along interstates in the state and would be eligible for additional federal grants. Those charging points could be especially attractive to long-distance travelers — and, eventually, drivers of electric trucks — crossing the state. Wyoming has ample wind energy resources, with wind energy accounting for 12 percent of the state's total electricity generation in 2020, according to the U.S. Energy Information Agency, so adoption of electric vehicles could result in some decarbonization of the state's transportation sector. But coal still accounts for most electricity production in Wyoming, which is a net exporter of energy to other states. Shifting motor vehicles there from gasoline to electricity produced by coal will not reduce greenhouse gas emissions or further climate goals. To make sense, the switch to EVs facilitated by new charging networks must be accompanied by shifts in electricity generation sources, a politically sensitive issue in the top coal-producing state in the United States. Fuel taxes, which fund about 11 percent of Wyoming's highway program, have provided diminishing returns with the rise of more fuel-efficient vehicles, a trend likely to be exacerbated by electric and hybrid motor vehicles. The federal government, not surprisingly, covers most of the costs of building and maintaining Wyoming's highway system. It is far from clear that states like Wyoming will seek federal aid to electrify their highways, or, absent further shifts toward renewable power, that they should. Many of the climate-related incentives for clean energy championed by the Biden-Harris administration were not included in the bipartisan infrastructure law and will have to wait for new regulations under existing law, or for passage of the "Build Back Better" bill — at least the relevant parts of it — now stalled in Congress. Transportation and energy go hand in hand. ❖