About SAFE

Securing America's Future Energy (SAFE)

SAFE is a nonpartisan, nonprofit organization committed to accelerating new transportation and mobility technologies to strengthen U.S. national security and reduce America’s oil dependence.
Before COVID-19...

- 26 million children ride school buses
- 100 million commuters drive to work
- 24 million people ride public transit
- 2.7 million people fly on over 44,000 flights
- 3 million truck drivers transport goods over half billion miles
During COVID-19...

- Over 36 million Americans are unemployed
- Nearly every school bus is parked
- Personal travel is down 46%
- Retail sales plunged 16% in April 2020
- Public transit ridership has plummeted
- The Conference Board Leading Economic Index® for the U.S. declined 6.7 percent in March 2020
- Airline passenger traffic is down about 95%
- Trucks are traveling 13% fewer miles
Coronavirus: Los Angeles, Before and After

We Can Maintain Cleaner Air with New Auto Technology

Photo Credits: Before Mario Tama/Getty Images After Mario Tama/Getty Images
Get America Moving Again (GAMA)

GAMA presents strategies to help Americans return to work safely, stimulate the economy, and make investments to strengthen U.S. global competitiveness in transportation and energy:

- Advanced Manufacturing
- Electric Vehicles
- Autonomous Vehicles
- New Mobility: Shared and Micromobility
- Grid Modernization
- Industrial Supply Chain Resilience
The Automotive Sector Drives the U.S. Economy

- Auto manufacturing drives $953 billion annually into the U.S. economy.

- Thirteen automakers operate 44 assembly plants across 14 states. Approximately ten million Americans are directly employed in vehicle and parts manufacturing.

- The U.S. automotive sector is our nation's manufacturing innovation hub, employing a skilled workforce, investing heavily in R&D and able to produce high-tech products at scale.
Electric Vehicles

• The direction of the auto industry is no longer in question: the global automotive industry has invested more than $300 billion dollars in preparing for a future dominated by electric vehicles.

• With EV technology reaching maturity and the industry retooling its facilities, the new question is *where* they will be built and *who* will control the supply chain.

• In the short term, policies should be fuel-neutral to support alternative fuel vehicles for a wide range of duty cycles.
EV Supply Chain: Made in China

- China exerts vast control over the EV supply chain, from minerals to markets.
- 98% of all rare earth minerals and oxides are processed in China.
- 46 of the 70 gigawatt battery factories built or planned are in China, and only 5 in the U.S.
- The U.S. must leverage its natural resources, skilled workforce, and manufacturing capacity to build a domestic supply chain to be globally competitive in the 21st Century auto industry.
Advanced Vehicle Manufacturing in the U.S.

- New job opportunities and industries can grow across the EV supply chain in the U.S. For instance, lithium mining in North Carolina.
- SK Innovation, a supplier for VW and Ford, announced plans in April to invest $727 million in building a second battery manufacturing plant in Georgia.
- There are currently 300,000 manufacturing jobs in EVs, hybrid electric vehicles, fuel-efficient technologies, their components.

Source: Blue Green Alliance
Autonomous Vehicles

• The pandemic has heightened worldwide demand for the isolated transportation options and contactless delivery services that autonomous vehicles can provide. The global autonomous vehicle industry is projected to be an $8 trillion market opportunity.

• Creating regulatory certainty for nationwide AV deployment is a vital step for ensuring that right-sized, electrified transportation options are on our roads as soon as possible.

• Similar to the EV market, the U.S. cannot afford to fall behind, particularly China which has less regulatory constraints and companies like Huawei are investing heavily.
• Public transit plays a vital role in the mobility landscape and has been decimated by the pandemic.

• Ridership in some major transit systems has declined by 70 percent or more, and transit agencies may require additional federal assistance.

• As the nation begins to reopen, micromobility can be nimbly deployed to provide an additional mobility option that is unconfined and easily sanitized.
Grid Modernization

- Our electric system underpins every aspect of our digital economy and supports transportation electrification.

- The U.S. must take steps to increase the resilience of the electric grid and enhance its reliability.

- Microgrids and battery storage are essential to grid security, and complimentary to electrification as bidirectional charging technology matures.

- If mobility is foundational to our economy, electricity is its bedrock.
Proposal 1: Provide Immediate Federal Funding to State and Local Agencies

1) Provide an appropriate level of federal funding to sustain state and local transportation infrastructure projects during the recovery to maintain infrastructure in a state of good repair, keep projects moving, and workers employed.

2) Establish a federal program to support communities in enhancing active transportation infrastructure to support the health and safety of residents while also rethinking new types of mobility and the use of the sidewalk and street real estate.

"States will lose an average of 30 percent of transportation revenues in the next 18 months."
Proposal 2: Monitor the needs of public transit agencies and provide additional assistance, as needed

1) Evaluate needs of public transit agencies as the pandemic progresses and provide appropriate assistance, as appropriate.

“Ridership in some major transit systems has declined by 70 percent or more”
Proposal 3: Ensure the continued survival and growth of emerging transportation options, including micromobility and TNCs

1) Provide flexibility in the use of CARES Act funds to defray foregone or deferred regulatory fee payments from transportation network companies (TNCs) and micromobility companies to cities.

2) Establish a competitive grant program that will temporarily designate micromobility companies as essential services within cities and provide $200 million in financial assistance to cover operating and capital costs.

3) Give transit agencies the flexibility to use either operational or capital funds to contract with TNCs and micromobility companies to reduce crowding on typical bus/rail routes.

4) Create a federal definition for micromobility and provide broad-based program eligibility for transit agencies to use federal dollars for micromobility pilot programs.

“Participants in Spin’s program, providing free rides and helmets to healthcare workers, found that 74 percent of its participants did not have a car and 83 percent used scooters to commute to and from work”
Proposal 4: Provide and expand current federal incentives for advanced technology vehicles

1) Reform the Light-Duty EV Tax Credit (30D) to make it more accessible to more consumers and encourage the expedited manufacturing and adoption of EVs in the passenger vehicle market by eliminating 200,000 per manufacturer credit replaced with sunset and provide consumers with cash-on-hood option.

2) Establish a $12.5 billion federal voucher program that will provide consumers who trade in less efficient vehicles with a voucher of $5,000 toward the purchase of a newer, more efficient vehicle with an additional $1,000 voucher for the purchase of an EV or other alternative fuel vehicle.

3) Establish a 30 percent tax credit for the purchase of new vehicle not covered on 30D, including micromobility, MDV and HDV. This should include provisions for manufacturing in the United States.

“9.9 million jobs are directly and indirectly supported by the auto industry”

“Class 3-8 vehicles comprise just 3.6 percent of vehicles on the road, but they account for 27 percent of oil used in the U.S. transportation sector”
Proposal 5: Buses, USPS, CMAQ, and Airports

1) Provide $1 billion annually for five years for the Low- or No- Emissions Grant Program that can be used for purchasing or leasing zero-emission and low-emission transit buses and the infrastructure to support them.

2) Enable the electrification of up to one-half of the USPS delivery fleet with a direct appropriation of $2.35 billion for vehicles and charging infrastructure.

3) Support the electrification of the nation's freight and logistics sector through a five-year $500 million, annual competitive grant program that supports the integration of EVs and AFVs at ports and intermodal facilities.

4) Appropriate $12.5 billion over 5-years for a Diesel Emissions Reduction Act (DEPA) school bus rebate program diesel school buses with alternative fueled buses.

“The FY 2019 grant solicitation received applications for 157 projects but funded just 38 projects – demonstrating significant unmet demand for the program”
5) Expand funding for the CMAQ program by $1 billion a year for five years, so state and local fleet managers can replace existing vehicles with alternative fuel vehicles.

   I. Waive the requirements that CMAQ eligible projects come from a transportation plan and Transportation Improvement Program and for non-federal matching dollars.

6) Support ground-side and air-side adoption of zero- and low-emission vehicles at airports by providing $500 million a year for five years for both the VALE Program, and the Airport ZEV and Infrastructure Pilot Program.

“The iconic yellow school buses that carry 25 million American children to school every day also expose them to harmful diesel emissions”
Proposal 6: Stimulate manufacturing investments in next-generation transportation technologies

1) Update DOE’s ATVM program to support investments in state-of-the-art manufacturing facilities that will support the domestic production of AVs and AFVs and associated infrastructure.

I. Appropriate $50 million to reduce application costs, including the cost of independent financial advisors, and to accelerate the loan review process;

II. Expand eligibility to include manufacturing facilities for medium- and heavy-duty AFVs, autonomous vehicles, micromobility devices, and their associated components;

III. Consider establishing a performance-based mechanism wherein manufacturers’ repayment liability is decreased for each vehicle produced.

“ATVM has contributed to a total of 17 facilities being built or retrofitted in nine states, leading to the direct employment of 38,000 Americans”
2) Establish and fund the competitive grant program already authorized by the Energy Independence and Security Act of 2007 to provide expeditious financial support to companies in building or retooling domestic manufacturing facilities during the economic recovery and extend the program through December 31, 2030.

3) Revive the 48C Advanced Manufacturing Tax Credit to provide a 30 percent investment tax credit to provide $2.5 billion annually for three years to re-equip, expand, or establish domestic manufacturing facilities in the clean energy and transportation technology sectors.
Proposal 7: Invest in nationwide electric charging and alternative fueling infrastructure

1) Enact the Clean Corridors Act with an annual appropriation of $750 million for five years for the deployment of electric, hydrogen, and natural gas vehicles in corridors throughout the United States.

2) Update the Alternative Fuel Vehicle Refueling Property Tax Credit (30C):
   I. Convert 30C to a refundable tax credit;
   II. Eliminate the $30,000 limit per refueling property; and
   III. Extend the credit through December 31, 2025.

3) Create a competitive grant program of $200 million annually to support the construction of charging depots equipped with DC Fast Chargers in urban areas.

4) Revitalize Workplace Charging Challenge.

“The United States will need 900,000 public charging stations and 1,200,000 Level 2 workplace charging stations to support an estimated 18.7 million EVs by 2030.”
Proposal 8: Create regulatory certainty to enable the safe and expeditious deployment of autonomous vehicles

1) Enable the at-scale manufacturing of AVs with novel designs by providing NHTSA with the authority to grant FMVSS exemptions for up to 100,000 vehicles per manufacturer - as long as the vehicle is as safe as, or safer than, FMVSS compliant vehicles.

2) Establish a level playing field where all AV developers - automakers, research institutions, and technology companies alike - have the ability to test vehicles which are not certified to FMVSS on public roads.

3) Preserve the traditional role of the federal government as the sole regulator of the design, construction, and performance of motor vehicles.

4) Provide regulatory certainty for the autonomous trucking sector by including ADS-equipped trucks in any legislation.

“China has used autonomous systems to disinfect city streets and more than 2,000 hospitals and to transport goods to hospitals”

“The U.S. DOT noted that the current exemption structure must be updated to allow for U.S. companies to compete globally and to justify the level of investment needed to develop the technology domestically”
Proposal 9: Promote a U.S.-based supply chain for rare earth elements by chartering a cooperative, seeded with $500 million in capital

1) Grant an antitrust safe harbor so that companies can coordinate in the establishment of a co-op to refine and process rare earth elements in the United States.

2) Offer a federal charter to an entity to take ownership of, and accept liability for, the thorium produced as a byproduct or rare earth refining, store it consistent with all regulatory requirements, and work to expand market for thorium.

3) Contribute $500 million to a rare earth processing co-op.

4) Fund $250 million in research to develop industrial, defense and energy applications for thorium.

“China’s control of rare earths presents a security risk to the United States and other nations!”
Proposal 10: Revise outdated trucking regulations to increase capacity, improve safety and efficiency in the freight and logistics sector

1) Authorize Twin 33s to operate on interstates, provided that they are equipped with: a speed limiting device capped at 68 miles per hour; an automatic emergency braking (AEB) system; electronic stability control; and an on-board safety video recorder.

2) Update federal truck regulations to be fuel-neutral by providing a weight limit exemption to hydrogen-powered trucks.

“This regulatory update would allow trucks to move the same amount of freight with 18 percent fewer truck trips – reducing fuel consumption by 255 million gallons annually”
Proposal 11: Implement an Energy Storage Investment Tax Credit (ITC)

1) Congress should enact an Energy Storage Investment Tax Credit. (Bipartisan bills have been introduced: S. 1142/H.R. 2096 - identical bills).

“Energy storage is a vital part of making our nation’s electric system more reliable and resilient”
Proposal 12: Establish an Electric Transmission Investment Tax Credit (ITC)

1) Congress should establish an Electric Transmission Investment Tax Credit with a “commence construction” date prior to December 31, 2026. (S. 3107 provides a good basis for this provision.)

“Electric transmission is vital to moving power generation resources from rural and remote areas to population centers”
Proposal 13: Enhance grid resilience and reliability through greater deployment of grid modernization technologies and capabilities

1) Congress should fund $5 billion annually for two years through grants and/or other direct assistance as appropriate, to fund the deployment of grid modernization infrastructure, particularly smart meters/AMI to improve electricity, gas, and water management. Assistance should be able available to all utilities who have not yet installed smart meters/AMI, and to maximize the resilience and reliability benefits thereof to the greatest extent practicable, as well as to equipment manufacturers.

“This technology already exists and its deployment can create projects and jobs quickly. It also saves utilities and consumers large sums of money by reducing outage times”
Proposal 14: Support a microgrid grant pilot program to enhance resilience

1) Congress should appropriate $200 million in funding to DOE per year, over five years, for grants for a microgrid pilot deployment program.

2) The microgrid projects should serve different types of load and be geographically dispersed to demonstrate their capabilities in different circumstances and in different parts of the nation.

“In the event of an interruption of electrical service over the grid, microgrids can disconnect from the grid and continue to serve their load”
Proposal 15: Support research & development to modernize the grid and to enhance grid cybersecurity

1) Congress should fund $3.4 billion for research and development to modernize the grid and to strengthen the capacity of the energy sector to prepare for and withstand cyber and physical attacks.
Thank You

Read the full report at SecureEnergy.org/GAMA

Contact
Greg Rogers
Director, Government Affairs and Mobility Innovation
Email: grogers@secureenergy.org