

## What to know about electric trucks, buses and cars

1. JOBS: Moving to clean electric vehicles will help America win the race for good jobs today and tomorrow.

The question isn't electric vehicles versus gas-powered vehicles -- the global industry is already moving to EVs, and spending \$257 billion this decade to make the switch -- it's whether American workers will benefit. Switching to zero-emissions electric trucks, buses, and cars will create jobs today and in the future, clean the air, and help us compete with Europe and China in this rapidly expanding market. We can build these vehicles in places like Hamtramck, MI and Spartansburg, SC or have them shipped to us from Hamburg and Shanghai.

The American electric vehicle industry is off to a great start, with GM, Ford, Volvo and others making multi-billion-dollar investments in U.S.-based manufacturing. But if Washington doesn't act to accelerate this opportunity, as our overseas competitors have, we are in danger of losing valuable jobs that could go to Americans. Right now 95% of electric trucks are made in China, and Europe is making major investments. We need to lead if we are going to ensure these zero emitting vehicles are made in America.

There is an enormous potential for jobs as American manufacturers have over 175 models of electric vehicles in development--cars, trucks and SUVs, as well as medium and heavy duty vehicles. Companies are making investments, The question is where those plants — and jobs — will be located.

- 2. CLIMATE: EVs are much better for the climate. Electric vehicles in the US emit less climate pollution than fully gasoline-powered cars, even when powered by today's mixed sources of electric power. Their engines are just much more efficient. And as we move to 100% clean power nationwide, EVs will be even better. And that transition is already underway: 1 in 3 Americans are already getting service from a utility that's moving to 100% clean electric generation.
- 3. HEALTH: Zero emissions vehicles mean healthier communities.

Fully electric cars have zero tailpipe emissions, so transitioning to trucks, buses, emergency vehicles, taxis and ridesharing fleets to electric vehicles will reduce air pollution for everyone. This means fewer hospitalizations related to asthma and associated

health problems -- and can especially benefit people of color who, due to discrimination in housing, zoning and economic opportunity, more often live near ports, highways and other industrial sites and are more likely to be exposed to harmful pollution from diesel and gasoline-powered vehicle traffic.

4. ACHIEVABLE GOALS: The speed of technology and investment, along with smart policies, will let us reach our goal of all zero emission new cars by 2035 and new trucks by 2040.

More than 175 zero-pollution truck, bus, car and SUV models are in production or development for the U.S. market. Companies from <a href="Market-Pepsi">Amazon</a> and <a href="FedEx">FedEx</a> to <a href="Pepsi">Pepsi</a> are looking to switch to clean vehicles. Every major car manufacturer is making significant investments in electric vehicles, with many aiming for a fully electric future, including General Motors' recent goal of eliminating tailpipe pollution from all of its cars and pickup trucks by 2035.

This market transformation is already happening, but to achieve them at the speed science says is necessary to meet our goals we need strong policies centered on vehicle standards, as well as investments in research and innovation.

U.S. companies have proven time and time again, they can rise to meet any challenge — but they need a predictable business climate to scale up production and plan for the longer term. Congressional investment will also be needed to promote job growth and accelerate the transition.

5. GRID: Our power grid is being modernized to manage and support all demand from electric vehicles.

Growth in electric cars and trucks provides an opportunity to use vast amounts of American-made clean energy, bolstering American energy independence and supporting investments in a reliable energy grid. Energy regulators, electric utilities and grid operators are monitoring the clean vehicle transition in real time and investments are underway to support it.

Installing charging systems and upgrading the electric grid to support electric vehicles is a domestic jobs creator that benefits all areas of the economy and all regions of the country.

6. CONSUMER CHOICE: Electric cars are being built and developed in as many varieties -- from pick-up trucks to sports cars -- as gasoline-powered cars. And their performance is better. These electric options *expand* consumer choice.

Electric vehicles are popular, and increasing availability of styles, price points and charging infrastructure will only increase their popularity. Performance models go from zero to sixty in 2.3 seconds, stats no gasoline-powered car off the lot can match.

Before too long, gas-powered cars will seem old-fashioned. Sure, some people will still enjoy their vintage cars. But technology moves quickly -- and brings with it lower costs, higher performance and more fun. Does anyone wonder why there's zero demand today for buggy whips, whale oil, typewriters or floppy disks?

Globally, sales of electric cars <u>rose</u> by 43% in 2020, despite overall car sales slumping by a fifth during the coronavirus pandemic.

And, of course, people can keep their current gas powered car if they prefer.

7. AFFORDABLE: EVs costs are declining and will save consumers thousands on gas and other avoided costs.

For years we've had debates about what increases the price of gas -- but with EV's you pay zero at the gas station. Just about the only people arguing against the switch to EVs are the oil companies and their allies -- they're grasping to preserve their profits. Of course they want people to pay to fill up their cars with gasoline every week.

General Motors committed to eliminating tailpipe pollution from its cars and pickup trucks by 2035 because they know that's what American consumers want -- high performance, no costly, messy trips to the gas station and cleaner air.

Every major car manufacturer is investing in electric cars so a wide range and cost of EVs will be available in the near future, and analysts predict EVs will reach price parity with gasoline-powered cars by 2025. In addition, the cost of both fueling and maintaining an electric car is on average half as much annually as a gas powered vehicle. In fact research suggests that by 2030, the buyer of a new battery electric vehicle will save more than \$7,000 over the life of the car compared to a gasoline-powered car.

## 8. BATTERIES: We can produce cleaner car batteries in the USA

As we build more clean cars, we should also be producing cleaner batteries. A report from the International Council on Clean Transportation (ICCT) shows that while electric vehicles with batteries made in China are better for the climate than fully gas powered vehicles, the environmental impact of these vehicles could be further improved if the batteries were made in the US. The ICCT says that the place where a battery is made has a lot to do with the amount of emission from the manufacturing process. Batteries made in the US, with American manufacturing techniques, produce 65% less emissions than those currently made in China. It's another reason for policies to boost American production of electric vehicles and their components.

We should also increase battery life and recycling, to reduce the mining of minerals that are needed. USA Today reports that "researchers found that recycling car batteries on a large scale

was 'very promising'" and the National Renewable Energy Laboratory says that lithium-ion car batteries <u>could last up to 15 years.</u>

9. MINING LABOR: To combat child labor in the overseas mining industry, we need strong monitoring and to build more batteries here under US labor laws.

Mineral sourcing from countries with gross human rights abuses, including child labor, is unacceptable. But the solution isn't sticking to a broken system of polluting transportation that carries its own unacceptable human toll. Instead, we need standards that guarantee through credible third-party verification that minerals are being sourced sustainably and ethically. Those who are truly concerned about labor standards overseas should be advocating for zero emission vehicle standards and domestic manufacturing incentive programs in the US. It's exactly those standards and investment rewards that will provide market certainty and drive private capital into domestic manufacturing so cars, trucks and their components are built in America.

10. STRONG LEGAL BASIS: U.S. EPA and the State of California have clear authority to establish pollution safeguards that rely on the increasing availability of zero-emitting vehicles.

The Environmental Protection Agency has <u>time tested authority</u> under the Clean Air Act to adopt pollution standards that rely on the increasing availability of zero-emitting vehicles. California can set more protective standards for cars and trucks (and other states can adopt these standards).