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Americans' love affair with cars threatens climate goals

By: Maxine Joselow

Dan Becker has dedicated his career to fighting climate change. But he hasn't renounced a key element of American life that produces the most planet-warming emissions: driving.

Becker, who served as director of the Sierra Club's Global Warming Program from 1989 to 2007, recently decided to vacation in Maine with his wife. So he hopped into their car — a Toyota Prius, of course — and drove 12 hours from their home in Washington, D.C.

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Those compromises, however, come at a cost.

Greenhouse gas emissions from transportation have been steadily climbing in recent years, while power-sector emissions have been dropping. In 2016, transportation officially eclipsed power plants as the country's largest source of carbon dioxide.

Cars and light trucks account for 60 percent of emissions from the transportation sector, according to EPA data. That's because the average American drives more than 1,000 miles every month. Heavy-duty trucks contributed the second-largest chunk at 23 percent, followed by aircraft at 9 percent and boats at 2 percent.

Becker's experience points to a fundamental dichotomy in American attitudes. Awareness of pollution from the power sector is on the rise. Power plant emissions were targeted by former President Obama, and the Sierra Club's Beyond Coal campaign has helped spread the word. Dozens of coal-fired units around the country have shuttered in recent years.

Cars are a different story.

Many Americans continue to view driving as an essential part of daily life without recognizing its environmental drawbacks. They may recycle and compost, but they don't think twice about driving six hours to visit relatives in another state.

"There is a discussion that I have with my so-called environmentalist friends all the time," said Timothy Papandreu, founder of Emerging Transport Advisors. "They recycle, they compost, they try to live an eco-friendly lifestyle, and yet they drive everywhere."

President Trump last year announced his intention to pull the United States from the Paris Agreement on climate change. The United States had committed to cutting greenhouse gas emissions 28 percent by 2025, as compared with an all-time high in 2005.

The country is on track to fall far short of meeting that goal, according to a report by the Rhodium Group, an economic consulting firm.

A big reason is transportation. If Americans don't end their love affair with cars, the United States will find

it much harder to meet its climate goals, said Papandreou, who advises governments and companies on emerging transportation trends. Put simply, "transport is going to be the thing that makes or breaks our environmental footprint," he said.

Model T to the minivan

So how did Americans become so dependent on four wheels?

Pulitzer Prize-winning author Paul Ingrassia attempts to tackle that question in his book "Engines of Change: A History of the American Dream in Fifteen Cars." He devotes the first chapter to the Model T, the revolutionary brainchild of Henry Ford.

Ford envisioned the Model T as a "car for the great multitude," not the elite. It initially cost \$850 — much less than those made by competitors at the time. And its price dropped sharply in the mid-1920s, thanks to the pioneering invention of the moving assembly line.

"In the early 1920s, the story goes, a farmwoman was asked by a social scientist why her family had a Model T Ford but not indoor plumbing," Ingrassia writes. "She replied: 'You can't go to town in a bathtub.'"

In an interview, Ingrassia said his research for the book convinced him that cars are inextricably linked to American identities and lifestyles.

"Beginning in the mid-'80s, when the minivan was first developed, the normal strife of family car trips went away," Ingrassia said. "Each kid could have their own space without fighting too much.

"After that, SUVs became popular sort of as a fashion statement. It was a symbol of your outdoor lifestyle, even though most people who bought them never took them off-road. It was sort of a fashion statement just like your L.L. Bean shoes and plaid shirt."

The 1950s were pivotal for the American auto industry, with the post-World War II era bringing a host of new technologies. People moved into the suburbs and cul-de-sacs that could only be reached by driving. And many cities were designed with cars — not people — in mind.

"In the '50s, the decision was made that this was the promised mode of transport," Papandreou said. "We had a very clear vision. It was an auto-oriented, single-occupant vision."

He added, "The reason that we have 60 percent of all car trips 1 mile or less is because we've made it impossible to get around from A to B without having to drive. Engineers have designed our streets, parking structures and buildings to make it super-simple and easy to get from A to B by car."

Guzzlers vs. EVs

When it comes to choosing a vehicle, Americans have shown a healthy appetite for gas guzzlers.

Spurred in part by lower gas prices, more consumers are gravitating toward SUVs. For the first time, SUVs and crossovers accounted for more than one-third of cars sold globally last year, according to figures from the auto research firm JATO Dynamics.

Electric vehicles, meanwhile, account for just over 1 percent of the country's fleet (Climatewire, Jan. 5, 2017).

Max Baumhefner, senior attorney in the clean vehicles and fuels program at the Natural Resources Defense Council, said there are three commonly recognized barriers to EV adoption: "higher upfront costs, lack of charging infrastructure and lack of awareness."

The first barrier is coming down as the cost of batteries rapidly declines, Baumhefner said. But the other two barriers have proved more formidable.

Utilities can play a key role in investing in charging infrastructure and spreading awareness of EVs among ratepayers, Baumhefner said. For example, Southern California Edison recently unveiled a \$30 million plan for EV market education and outreach that is now pending before the California Public Utilities Commission.

Research from the University of California, Davis' Institute of Transportation Studies has found that consumers across the country lack awareness of EVs as a purchasing option. Even in California — the country's largest EV market — consumers have failed to notice a recent uptick in charging infrastructure.

Part of the problem can be traced to automakers spending less money on advertising for EVs.

While automakers have produced more all-electric and hybrid cars, they've rarely used high-profile ad buys to promote those models. For instance, Chevrolet spent just \$7 million advertising its plug-in hybrid Volt in 2015, while spending more than 10 times that on ads for the Malibu sedan and 23 times that to promote its beefy Silverado pickup (Greenwire, Jan. 9, 2017).

Blue states in the fast lane

Complicating matters is that the Trump administration has sought to undo President Obama's signature clean transportation policy.

In August, the administration proposed scaling back Obama-era clean car rules. In practical terms, that means new car models in 2022 would travel on average about 30 miles per gallon, rather than 36 mpg.

With the federal government dialing back clean transportation targets, blue states have signaled that they'll keep the momentum going. But decarbonizing the transportation sector in those states is no small feat.

Transportation emits at least twice as much carbon as power plants in states like Massachusetts, New Jersey, New York and Washington (Climatewire, April 17). In New York, power-sector emissions fell 52 percent between 1990 and 2014, but much of those gains was offset by a 23 percent increase in transportation emissions, according to the most recent state figures.

Even the country's most committed carbon cutter has struggled with tailpipes. Although California has seen its overall emissions steadily fall over the last decade, state officials report that transportation emissions rose slightly in 2014 and 2015.

Still, blue states have some key levers to pull when it comes to curbing transportation emissions.

The first is the adoption of tougher clean car standards than the federal government's. Through a special provision in the Clean Air Act, California can set tougher tailpipe emission standards than the feds. Twelve states and the District of Columbia have signed onto those standards, representing about 40 percent of the country's auto market.

The second is the zero-emission vehicle program. California and nine others participate in the program, which requires automakers to sell a certain number of electric cars and trucks. The number of vehicles is linked to the automaker's overall sales within the state.

"Transportation is now the leading source of carbon pollution, and states are recognizing the need to focus on reducing those emissions," said Luke Tonachel, director of the clean vehicles and fuels project at the Natural Resources Defense Council. "That's why they are working to defend strong clean car standards and are working to accelerate the market for cleaner electric vehicles."

Cities also have a variety of tools at their disposal to prevent rush-hour bottlenecks.

For example, New York City is considering "congestion pricing" that would charge drivers as much as \$11.52 for passing through downtown Manhattan (Climatewire, March 16). And San Francisco has started charging drivers more for parking during popular times.

Still, those initiatives pale in comparison with efforts underway in Europe and Asia, said Hal Harvey, CEO of San Francisco-based startup Energy Innovation.

"In Beijing, you have to win a lottery to get a permit to buy a car. And almost all the tickets are reserved for electric cars," Harvey said. "In Shanghai, you have to buy a permit on a free market in order to buy a car. And a permit costs around \$13,000."

He added, "The most important thing is a mindset. You have to decide: Is your city for people or for cars? If

your city is for people, it will include cars. But if your city is for cars, it will be a miserable environment for people."

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