The Vehicle Emissions Reduction Strategy No One's Talking About
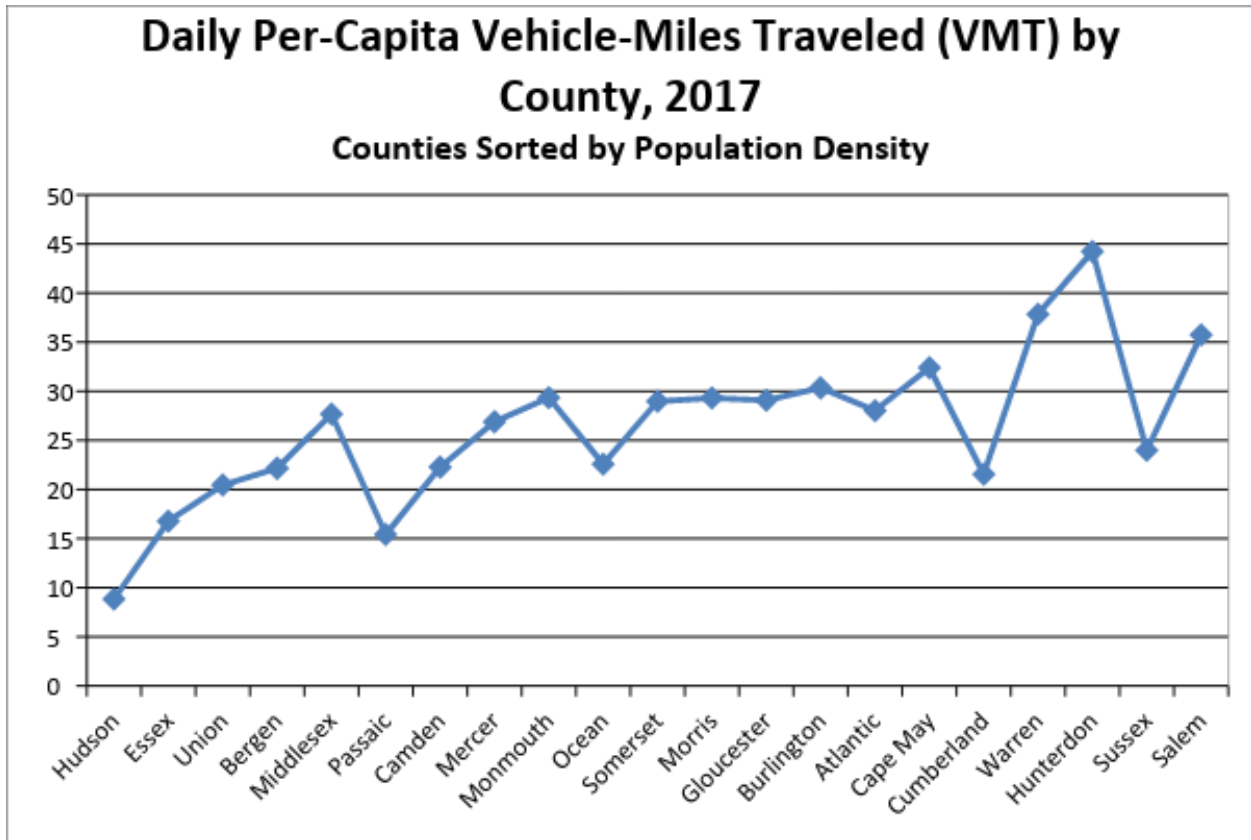
By Tim Evans
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The transportation sector is now the biggest contributor to New Jersey's greenhouse gas emissions. For both the health of our residents and our efforts to fight a rapidly changing climate, it is critical that we take all feasible steps to reduce the amounts of harmful pollutants and heat-trapping CO_2 produced by the large number of vehicles on our roads. In order to accomplish this, many experts have focused on reducing emissions per mile, through greater use of electric and other alternative-fuel vehicles.

This is a good strategy, but not the only one. If we assume, prudently, that much of the power required to run electric vehicles will continue to come from fossil fuels, and if we assume that it will be many years before the majority of vehicles on the road are electric, then it's clear that our driving will still be emitting greenhouse gases. That means we also have to reduce the total number of miles driven.

And we're not talking about that nearly as much as we should be.

Total miles driven is at its core an issue of how and where we build. If we build a variety of things close together – houses, stores, offices, the school, the park, the library, all within an easy walk or short drive on local streets – people don't need to travel far to get from one destination to another. Conversely, if we build things farther apart, with different types of destinations separated from each other, people have to travel farther among their desired destinations. (In some areas, up to 30 percent of morning traffic congestion is attributable to parents dropping their children off at school.)

We can see this phenomenon at work within New Jersey. In Hunterdon County, for example, where development is spread out and mostly car-dependent, residents drove an average of 44.2 miles per person every day in 2017, the highest of any New Jersey county (see chart). This is exactly five times the rate of 8.8 miles per day per resident in Hudson County, which is characterized by compact, mixed-use development where people can walk, bike, take public transit, or drive much shorter distances than they can in Hunterdon.

Daily Per-Capita Vehicle-Miles Traveled (VMT) by County, 2017

Counties Sorted by Population Density

Sources: New Jersey Department of Transportation (VMT); Census Bureau (population)

With a few exceptions, there is a clear overall pattern: Counties with higher population densities, where destinations are generally closer together, rack up lower rates of vehicle travel per capita than do residents of more spread-out counties.

Because emissions and energy use are in part dependent on travel behavior, and because travel behavior is in turn dependent on development patterns, New Jersey needs to do two things if we are truly interested in moving to a clean-transportation future. First, the state can re-constitute the state planning effort that coordinates across state agencies all the policies, rules and investments for how and where we build. The state planning process helps to minimize inefficient investments, or investments that promote conflicting goals, and fosters the kind of compact, walkable places that will reduce vehicle miles traveled. As part of this process, state agencies should review all the ways in which their programs, policies, and regulations influence New Jersey residents' travel behavior. Agencies should consider how to modify these programs so as to discourage the spread of low-density, car-dependent development and instead to foster the growth of compact, walkable, mixed-use centers, especially near transit.

And second, New Jersey needs to provide incentives and technical assistance to municipalities that want to update their local regulations to make their communities more compact and walkable. It's no secret that local zoning restrictions, including separation of uses and low housing densities, coupled with 30 years of job sprawl that defies attempts at effective transit service, have made many New Jersey

communities uniquely car-dependent. We are not going to fix that overnight, but without significant changes in growth patterns, we are not going to be able to fix it at all.

Changing our growth patterns will not only reduce vehicular emissions by reducing the need to drive, it can also reduce household transportation costs, free up time otherwise spent in the car for more productive or pleasurable uses, and make towns more livable for aging residents who can no longer drive everywhere. It can also generally make towns more attractive to new residents, since recent population trends indicate clearly the movement of population growth back into the state's cities, towns, and older, more walkable suburbs. Members of the Millennial generation in particular are attracted to places where they can live, work, and play without having to travel very far. So by addressing the need-to-drive component of transportation emissions and not just the fossil-fuel component, New Jersey can not only chart a faster course to its clean-energy goals but provide a higher quality of life for present and future generations.

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