To reach clean energy goals, Hawaii needs to address VMT

By Beth Osbourne

SSTI news, May 7, 2018

Ten years ago, the State of Hawaii set an ambitious goal to reduce their dependence on imported oil and create a clean energy future by 2045. The Elemental Excelerator commissioned Rhodium Group and Smart Growth America to analyze specifically what it will take for Hawaii to reach that goal.

The report on that analysis—*Transcending Oil: Hawaii's Path to a Clean Energy*—was released on Earth Day and explains that transitioning Hawaii off of oil will:

- Save Hawaiians money. Hawaiians pay the highest rates for electricity in the country currently. Transitioning to clean, locally produced energy can save local residents and businesses billions.
- Create jobs. The generation of clean energy in Hawaii is estimated to produce as many as 3,500 additional jobs at higher wages.
- Provide greater mobility options. Hawaii needs to shift to electric vehicles but also needs to adjust development patterns and provide transportation alternatives to reduce the additional load transportation will place on the electricity grid.

Focusing on the transportation side of the report, to make the shift to clean energy, Hawaii needs to move all vehicles to electric—such as today's Nissan Leaf or the Ford Focus Electric—by 2045, which will take a big effort and is not completely in their hands. But no state can make this happen overnight, as the lifespan of a new car can be about 15 years. That means even if Hawaii required 100 percent of vehicles sold in the state to be electric by 2025, it would still take until around 2040 before everyone replaced their old gas/diesel-powered vehicles with EVs.

Hawaii only has the authority to do this by joining California, who through a federal waiver has the authority to set their own vehicle emissions standards. It is not clear that Hawaii will be permitted to do this, because they have no areas out of attainment for air quality due to the prevailing winds pushing pollution out to sea. Without the California waiver, the federal government controls fuel efficiency standards. The Trump administration recently announced it would like to roll back the current standards to allow vehicle manufacturers to sell more polluting cars and trucks—in spite of the automakers' past support for the current standards. Further, the Trump administration has been looking at ways to limit or revoke the California waiver.

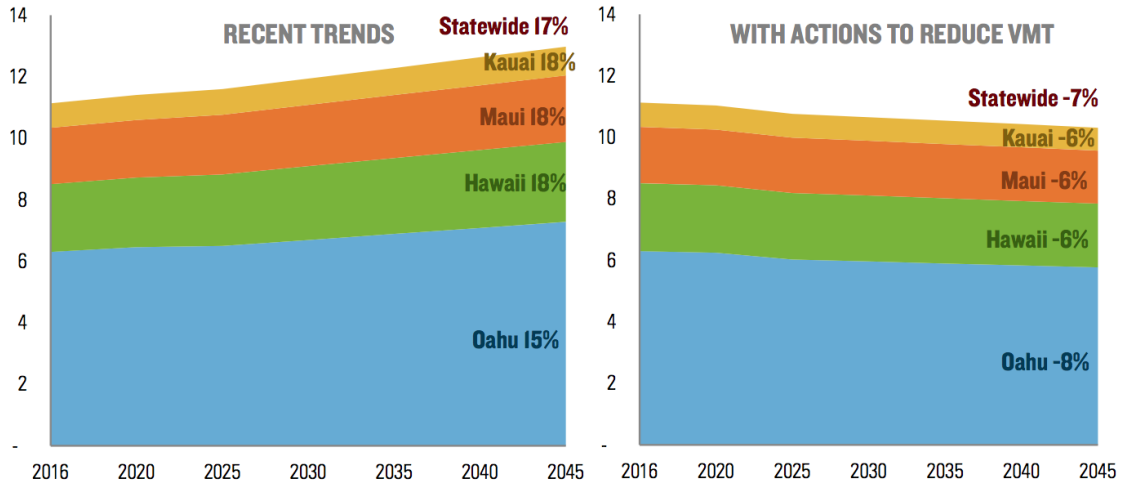
If Hawaii did manage to shift to an all-electric vehicle fleet but continued driving the way they do now (and more every year), the energy grid would need to produce one-third more energy than it does today. Current trends suggest that by 2045, Hawaiians will drive 17 percent more than they do today. For the average person who drives about 30

miles per day, that is an additional 5 miles per day. In Hawaii traffic, that can easily translate to 10-15 extra minutes in the car every day.

The power industry will already be struggling to find enough renewable energy to address other electricity needs without having to add such a large load. But if Hawaii pairs EVs with building more connected, compact, mixed-use development and improved facilities for non-auto travel, vehicle miles traveled would go down by over 20 percent from what is projected, making it easier to meet Hawaii's clean energy goals and reducing Hawaiians' transportation costs.

Figure 3.4: VMT projections by county, 2016-2045

Billion miles traveled



Reducing the demand for energy through smarter growth will help Hawaii make all its energy renewable and clean. While Hawaii is unique, there are more lessons in common with the other 49 states than not. Read the full report to see how it can be done.