Alternative Vehicle Outlook for Thurston County

Thurston Regional Planning Council Technical Brief
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Summary

Flex-fuel, hybrid and other alternative vehicles accounted for roughly 13 percent of new vehicle registrations in Thurston County between 2006 and 2012, according to an analysis of state data. The U.S. Energy Information Administration (EIA) projects that new light-duty alternative vehicles will grow from 13 percent of the U.S. automobile sales market in 2008 to 49 percent in 2035 due to rising oil prices and federal renewable fuel and fuel-economy standards. The Thurston Regional Planning Council projects that the market share of new alternative vehicles in Thurston County — the home of state government agency fleets — will be slightly higher than the national figure in 2035 due to robust alternative-fuel targets for the state and its municipalities.

Thurston County data

Alternative vehicles accounted for an estimated 8,000 of the 60,000 new vehicles registered in Thurston County between Jan. 1, 2006 and Dec. 31, 2011, based on an analysis of the Washington State Department of Licensing's vehicles transaction database; most of the alternative vehicles registered were hybrid gas-electric, diesel and flex-fuel cars and trucks. TRPC and DOL analyzed only model year vehicles registered during the same calendar year so as to have county baseline data that could be compared with EIA's national new vehicle sales data.

By June 1, 2015 all Washington State agency vessels, vehicles and construction equipment must achieve 40 percent fuel usage from electricity or biofuel, per a 2009 state law. Washington's municipalities have until June 1, 2018 to satisfy all of their fuel usage for operating publicly owned vessels, vehicles and construction equipment from electricity, biofuel or compressed natural gas, according to legislation adopted last June[1]. Transit agencies using compressed natural gas on June 1, 2018 are exempt from the requirements.

U.S. projections

In its national projection, EIA defined alternative vehicles as diesel, hybrid, pure electric, plug-in hybrid electric, mild hybrid, natural gas, liquefied petroleum gas, fuel cell and flex-fuel cars and light-duty trucks. EIA noted in a policy paper that flex-fuel vehicles — those with engines that can run on gasoline only or a blend of up to 85 percent ethanol — represented about 80 percent of all alternative vehicle sales in 2008[2]; the agency projected that, with continuing improvements over time, conventional gasoline-powered vehicles will retain the majority of U.S. sales in 2035.

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[1]Washington State Legislature. House of Representatives. *Final Bill Report: ESHB 2545*. 2012 Special Session. Olympia, WA. Online. Accessed 2 December 2012.
[2]United States. Department of Energy. Energy Information Administration. *This Week in Petroleum: The Cars of the Future*. Washington, D.C., 3 March 2010. Online. Accessed 1 December 2012.

EIA considered only existing policies and technologies in its projection. Policies to mitigate greenhouse gas emissions (e.g., a tax or cap on U.S. emissions), technological breakthroughs and government incentives are among the "most important factors that will drive the evolution of the actual sales mix" of new light-duty vehicles in coming decades, EIA underscored in its policy paper.

Market drivers

There are more than 75 alternative vehicle models available for sale in North America today, and more than 40 new models will hit the market by the 2015 model year, according to the website hybridcars.com. Federal standards aimed at reducing oil consumption and greenhouse gas emissions are helping fuel the market's growth.

The Energy Independence and Security Act of 2007 will nearly triple to 36 billion gallons the volume of renewable fuel required to be blended into transportation fuel by 2022[3]. Cellulosic biofuel derived from fibrous plant materials will constitute an increasing share of the renewable fuel mix.

The Obama administration's new corporate average fuel economy (CAFE) standards will increase fuel economy to the equivalent of 54.5 miles per gallon for cars and light-duty trucks by model year 2025[4]. The standards will nearly double the fuel efficiency of cars and trucks currently on the roads, save drivers more than $1.7 trillion at the pump and slash U.S. oil consumption by 12 billion barrels, according to the National Highway Traffic Safety Administration.

[3]United States. Congress. House of Representatives. *HR 6: Energy Independence and Security Act of 2007*. Washington, D.C.: GPO. 2007. Online. Accessed 1 December 2012.
[4]United States. National Archives and Records Administration. *Federal Register: Corporate Average Fuel Economy Standards; Final Rule*. 15 October 2012. Online. Accessed 1 December 2012.