Arizona State Senate
Issue Brief

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Note to Reader:

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ALTERNATIVE FUEL VEHICLES IN HOV LANES

INTRODUCTION

High occupancy vehicle (HOV) lanes are intended to maximize the person-carrying capacity of the roadway. In general, the definition of an HOV includes buses, public transportation vehicles, motorcycles, vanpools and carpools of two or more people. HOV lanes increase the total number of people moved through a congested corridor by offering two kinds of travel incentives: 1) travel time savings and 2) reliable and predictable travel time. This can increase the person-movement capacity of the roadway by carrying more people in fewer vehicles.[1]

The federal Transportation Equity Act for the 21st Century (TEA-21), enacted in 1998, established policy level guidance related to HOV lanes as well as specific program requirements. TEA-21 allowed for the construction of HOV lanes on freeways in areas designated as nonattainment areas under the federal Clean Air Act.[2]

ARIZONA HOV LANE USAGE

Implementation of HOV lanes in Arizona began with construction of the Interstate 10 in 1983. According to the Arizona Department of Transportation (ADOT), approximately $200 million in federal funds were spent on the construction of HOV lanes on Interstates 10 and 17.

Currently, there are HOV lanes on Interstates 10 and 17, Loops 101 and 202 and State Routes 51 and 60. There are currently no HOV lanes outside Maricopa County.[3]

ALTERNATIVE FUEL VEHICLES

Beginning in 1997, the Legislature authorized single occupant alternative fuel vehicles that met specified criteria to use HOV lanes if they obtained an alternative fuel vehicle special license plate or sticker.[4] The current statutory requirements for the alternative fuel vehicle classification include a vehicle that is powered 100 percent by

[1] FHWA: High Occupancy Vehicle Facilities
[2] FHWA: TEA-21
[3] FHWA: Compendium of Existing HOV Lane Facilities in the U.S.
[4] Laws 1996, Seventh SS, Chapter 6

alternative fuel sources, such as electricity, solar energy, hydrogen, natural gas, propane or a combination of at least 70 percent alternative fuel and up to 30 percent petroleum-based fuel in an engine that meets federal low emission vehicle standards.[5]

LOW EMISSION AND ENERGY EFFICIENT VEHICLES

TEA-21 authorizes states to allow inherently low emission vehicles or other low emission and energy efficient vehicles. In 2001, the Legislature allowed hybrid vehicles to use HOV lanes regardless of the number of people in the vehicle, subject to the approval of the FHWA. Arizona made an official request to the FHWA, but the FHWA determined that hybrid vehicles do not meet the applicable federal requirements to use the HOV lanes.[6]

Laws 2009, Chapter 187 conforms Arizona transportation statutes with the federal definition for LEEEVs, specifying LEEEVs as vehicles certified by the EPA Administrator or part of a federally approved pilot program.[7] Subject to the adoption of federal guidelines on LEEEV use in HOV lanes, ADOT was authorized to issue LEEEV special license plates to owners of such vehicles. This allowed LEEEVs with the special plate to travel in HOV lanes at any time, regardless of occupancy level, without penalty. The 2009 law specifies that qualified LEEEVs must achieve at least a 50 percent increase in city fuel economy or not less than a 25 percent increase in combined city-highway fuel economy in accordance with federal law.[8]

ARIZONA ENERGY EFFICIENT PLATE (EEP) PROGRAM

In August 2005, President George W. Bush signed into law the federal Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users of 2005 (SAFETEA-LU). SAFETEA-LU provides states with the option to allow hybrid vehicles to use HOV lanes if the state establishes a method of marking the vehicles, monitoring and reporting on performance and ensuring that the program does not degrade the performance of HOV lanes.[9]

In September 2006, Governor Napolitano issued an executive order requiring ADOT, in consultation with the Arizona Department of Environmental Quality, to implement a pilot program allowing designated hybrid vehicles to drive in HOV lanes.[10] An HOV lane capacity analysis conducted by ADOT determined the list of eligible hybrids should be limited to a small number of the most fuel efficient vehicles.

The EEP Program was discontinued in 2020 to comply with federal regulations regarding HOV lane usage. Only vehicles powered solely by alternative fuel may continue to qualify for an alternative fuel special license plate, which allows the vehicle unrestricted access to HOV lanes, regardless of the number of passengers.[11]

ADDITIONAL RESOURCES

- Arizona Department of Transportation
  602-712-7355
  http://www.azdot.gov
  Alternative Fuel Vehicle
- Federal Highway Administration
  High Occupancy Vehicle Facilities
- Transportation Equity Act for the 21st Century
  https://www.fhwa.dot.gov/tea21/tea21.pdf
- U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy
  http://www.eere.energy.gov
  http://www.fueleconomy.gov
- U.S. Environmental Protection Agency:
  Green Vehicle Guide

[5] A.R.S. §§ 1-215 & 28-5805
[6] FHWA: Case Studies of Exempt Vehicle Use by State
[7] A.R.S. § 28-601; 23 U.S.C. § 166
[8] A.R.S. § 28-2416.01
[9] ADOT: SAFETEA-LU, 2005
[10] Executive Order 2006-13: Climate Change Action
[11] ADOT: EEP Program