Low Carbon Transportation: Policy, Planning and Alternative Fuel Implementation

SIM Center
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Nilmini Silva-Send

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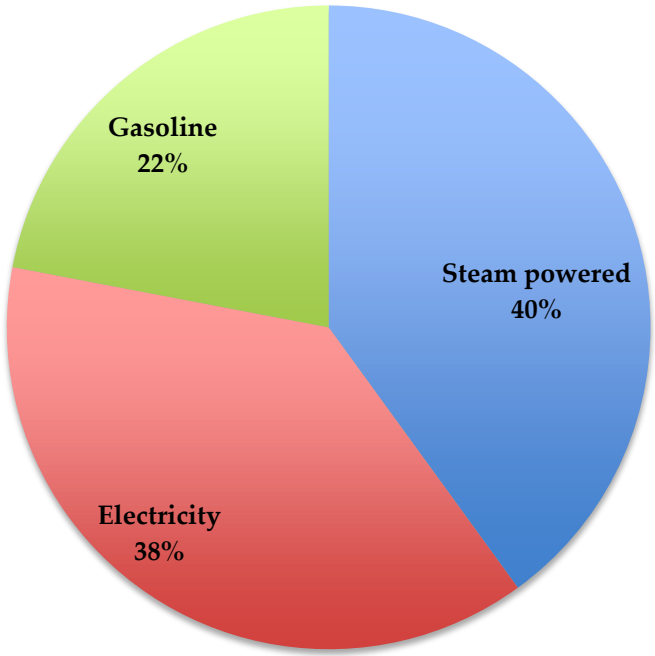
Low Carbon Transportation



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Low Carbon Transportation

A. Vehicles that use low carbon fuel

B. Fuels that have low or no carbon

C. Vehicles that emit nothing or very little in the tailpipe
ZEV and LEVI, II, III, IV

D. Vehicles that emit less than standard in the tailpipe
Pavley I (AB1493) + federal CAFE

E. Advanced Clean Cars

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A. Vehicles That Use Alternative Fuel

Question 2

In model year 2014, how many models of light-duty vehicles are capable of running on alternative fuels or employ hybrid electric drive systems?

- 27
- 84
- 159
- 196

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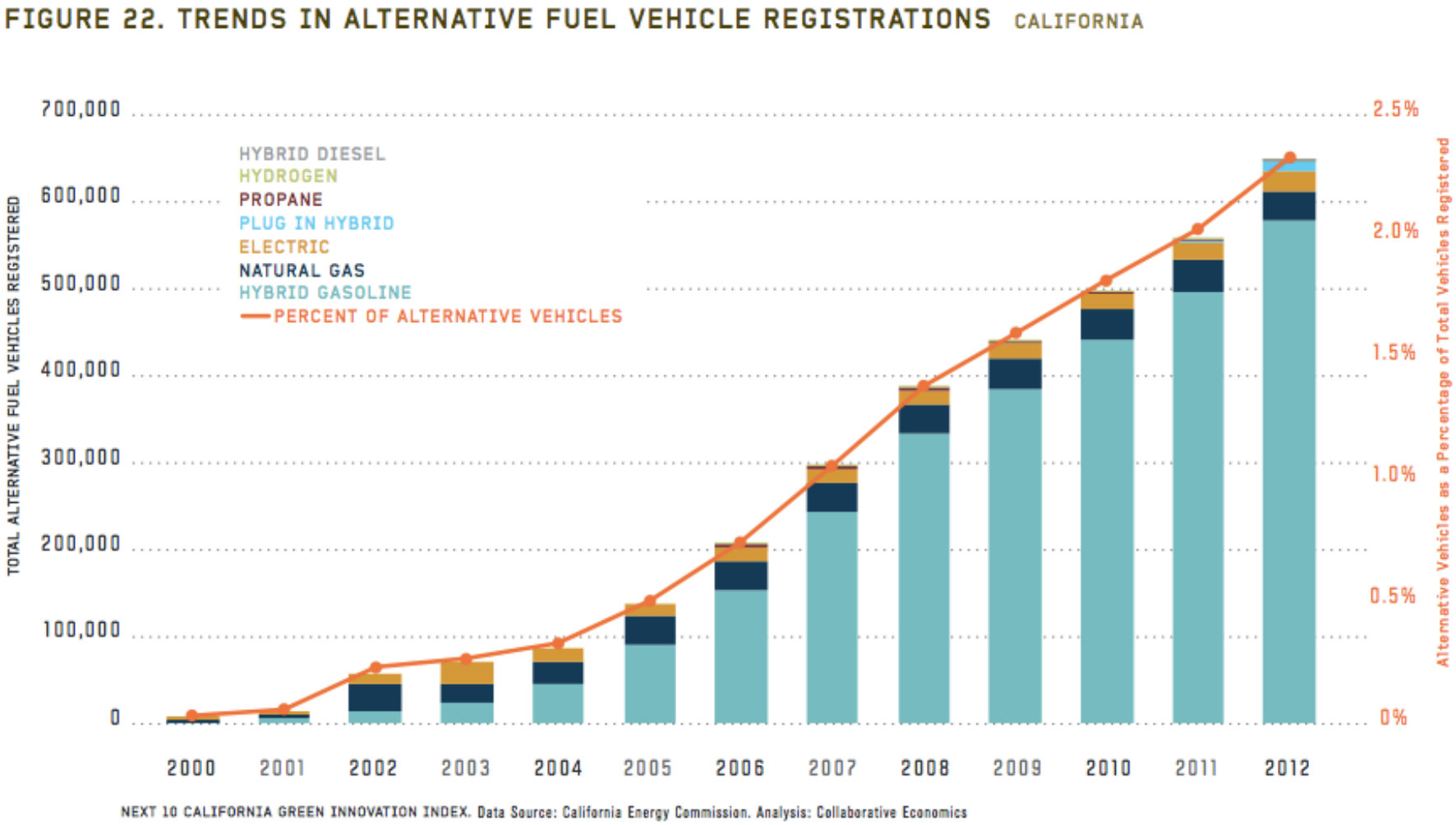
A. Vehicles That Use Alternative Fuel



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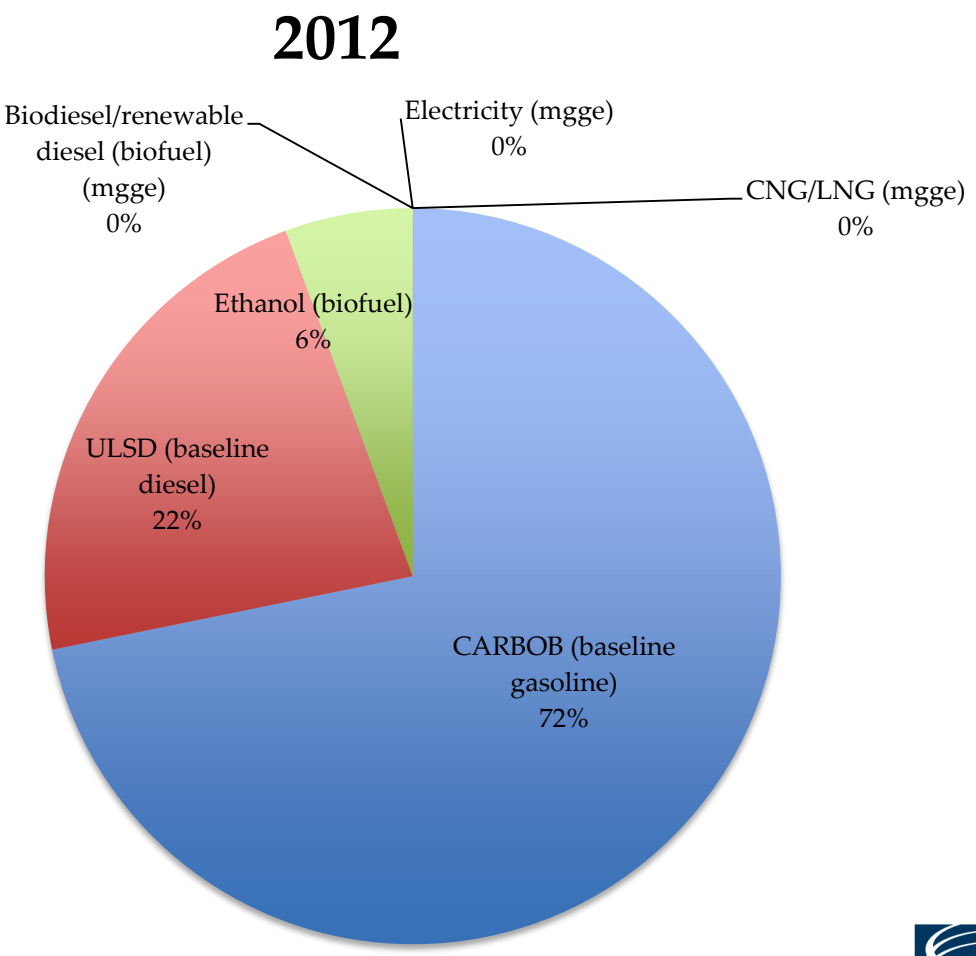
B. Alternative Fuels Sold (LCFS data, CA)



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C. Vehicles that emit nothing or very little (tailpipe)

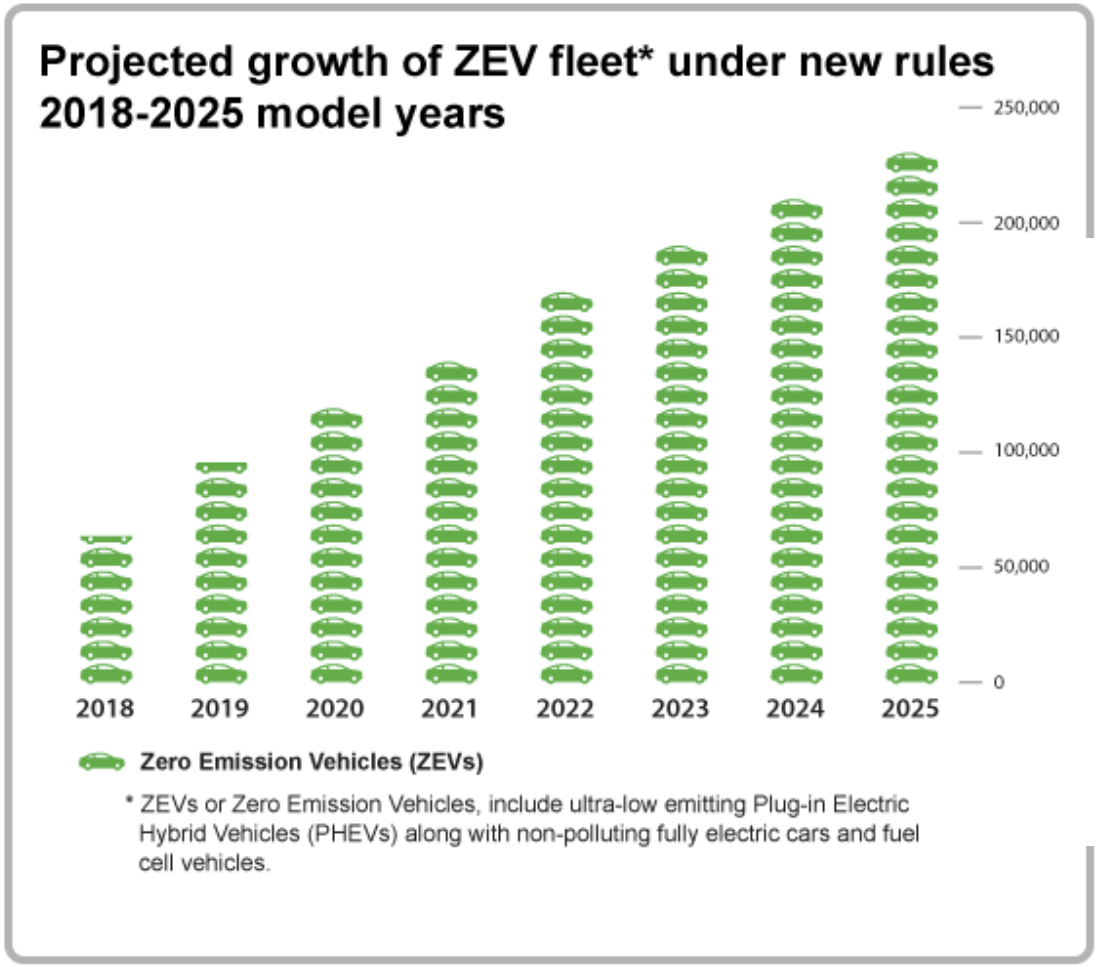

Table 6: Cumulative Vehicle Placements (1996 – 2010)

ZEV Technology Type	Quantity of Vehicles
Fuel Cell	180
Battery Electric	5,200
Neighborhood Electric	28,800
Hybrid or Compressed Natural Gas	380,000
Conventional Gas	1,750,000

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D. Vehicles that emit very little (tailpipe)
LEVs

LEV I

1981-2003 + 2% of 1998-2000 models (to 3750 lbs) be ZEVs; 5% 2001-2002, 10% for >2003

LEV II

2004 and up

All LDTs meet the same standards as passenger cars and <8,500 lbs is an LDT

Minimum % of LEV lis

LEV III vehicles

must meet Pavley regulations 2006-2016 models and opt to meet 2017-2025 standards

LEV IV proposed

< 100 g/mile for >2025 models

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D. Vehicles that emit less than standard (tailpipe)

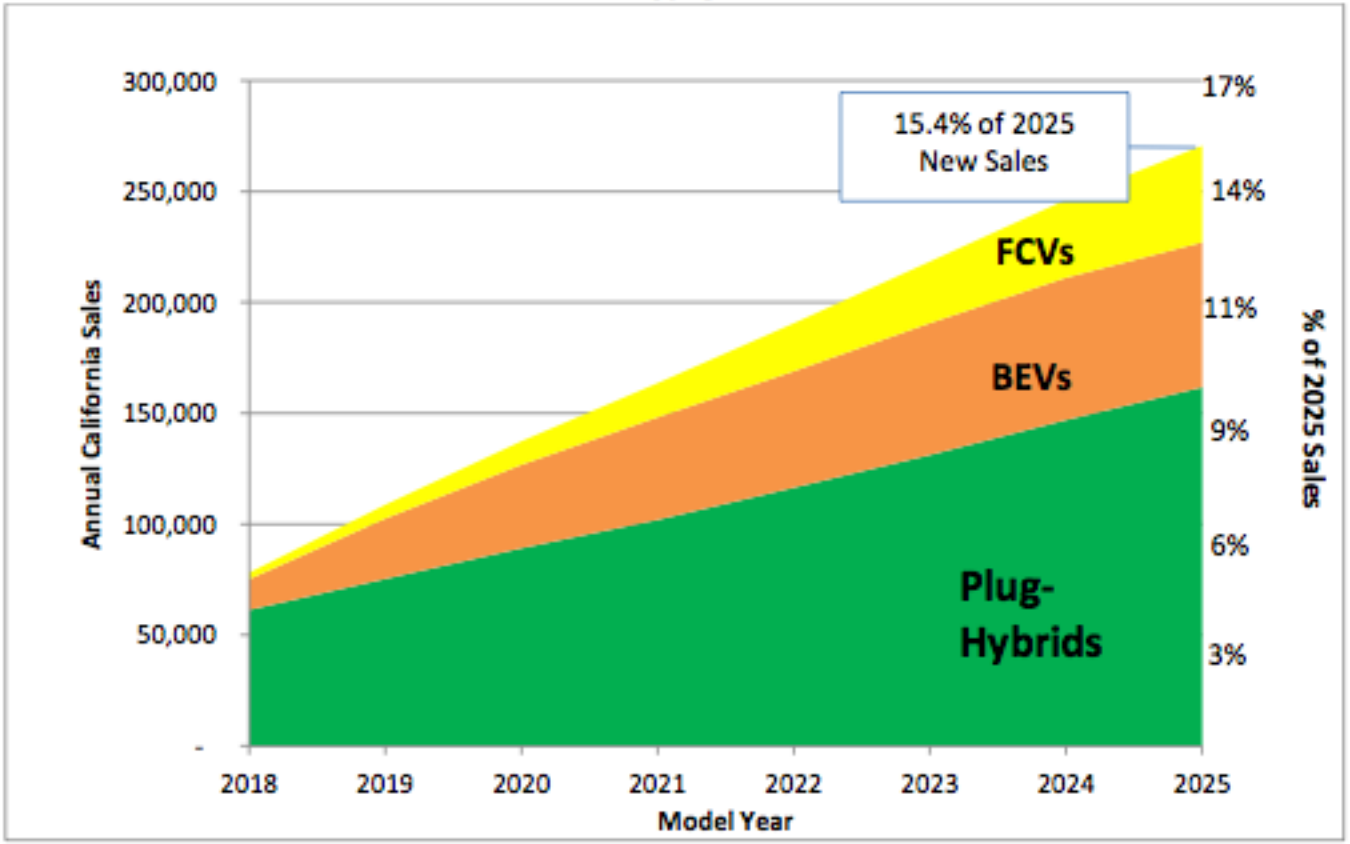
Pavley I (AB1493): tailpipe emissions standards (250 g/mile 2009-2016 models and 163 g/mile 2017-2025 models)

CAFE: tailpipe emissions and MPG standards 2017-2025 are combined (34.1 mpg/250 g/mile and 54.5 mpg/163 g/mile)

D. Advanced Clean Cars Regulation Package

= LEV + CAFE tailpipe standards + ZEVs and plug in hybrids to 15.4% of new sales by 2025 + Clean Fuels Outlet Regulation

Figure 3 Expected ZEV Regulation Compliance for 2018 through 2025 Model Years



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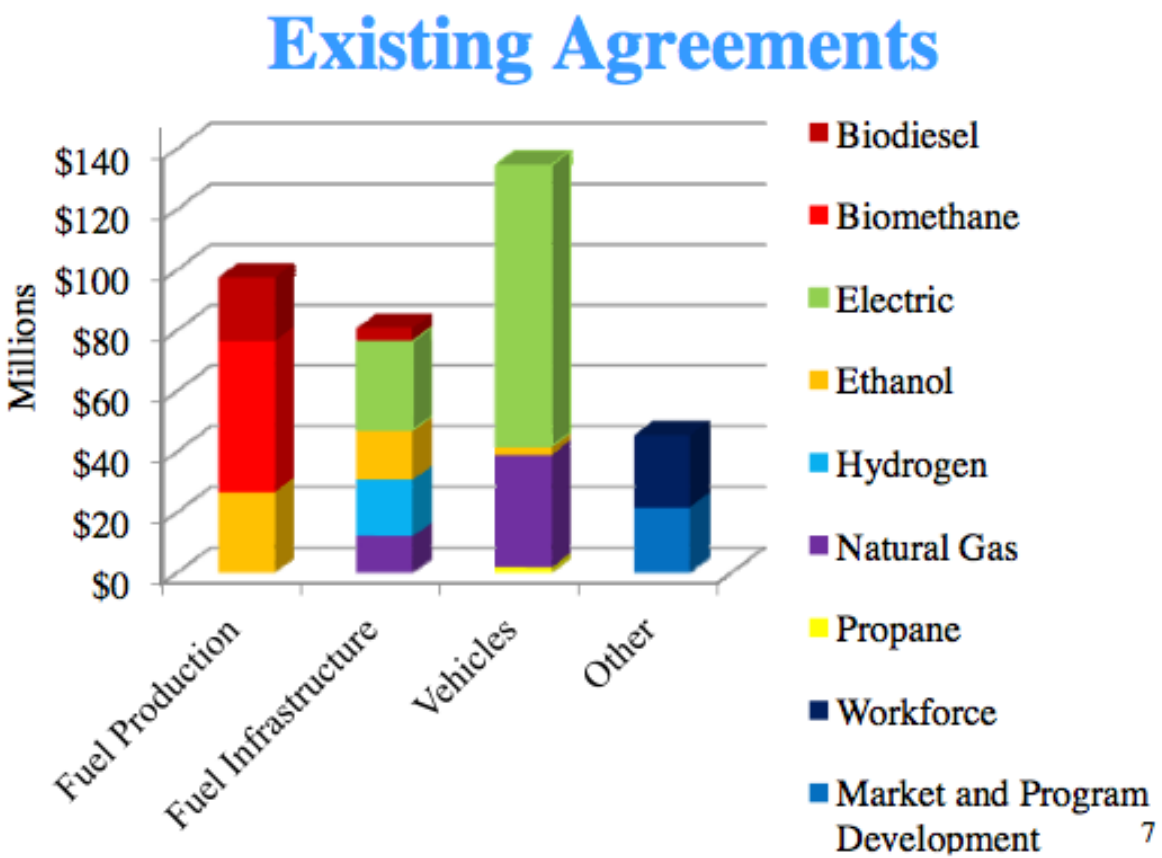
Alternative and Renewable Fuel and Vehicle Technology Funding Summary 2009-2012 (CEC)



http://www.energy.ca.gov/2012-ALT-2/documents/2013-02-28_meeting/presentations/

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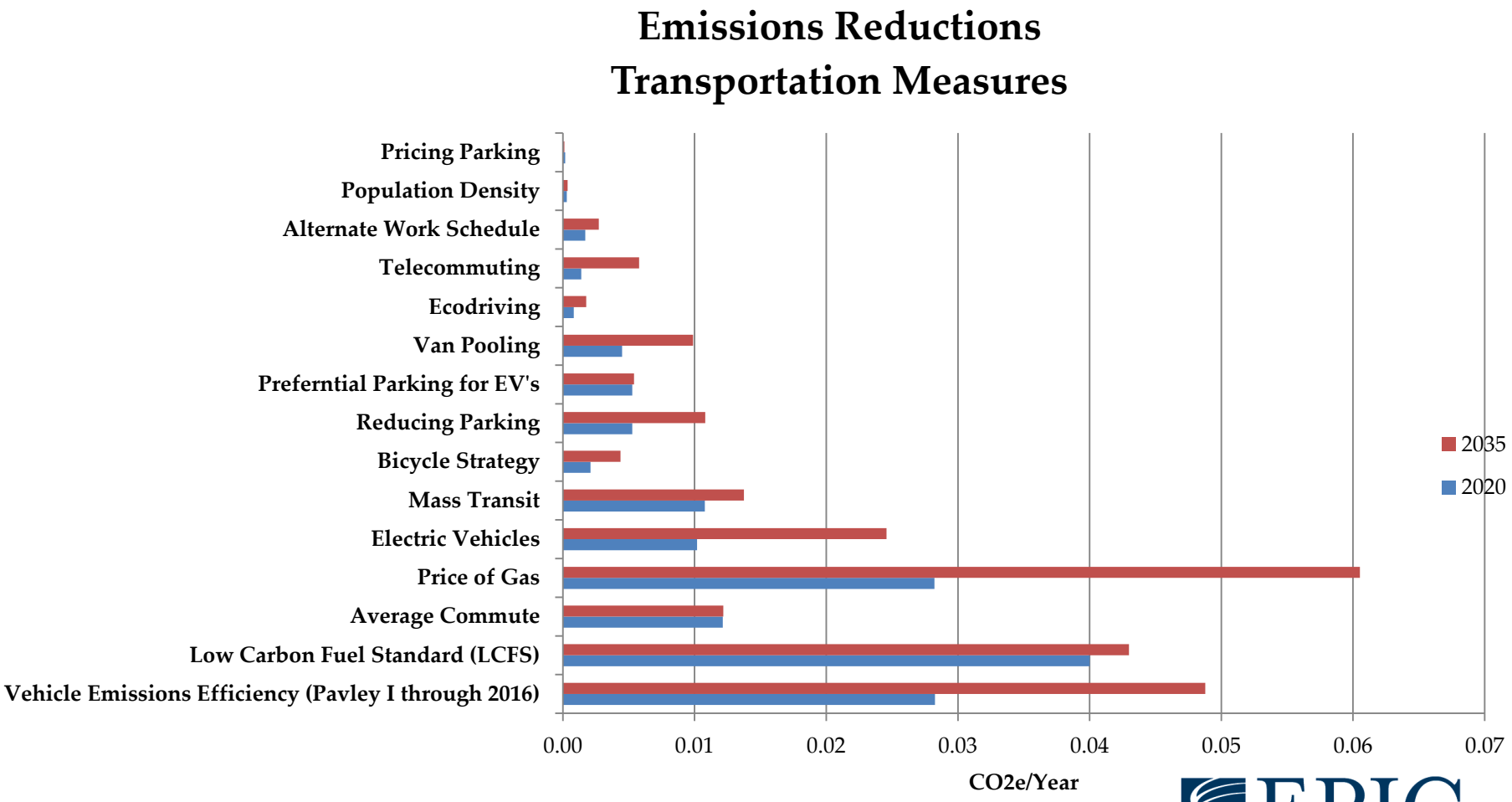
How Incorporated Into Climate Action Plans?



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THANK YOU!

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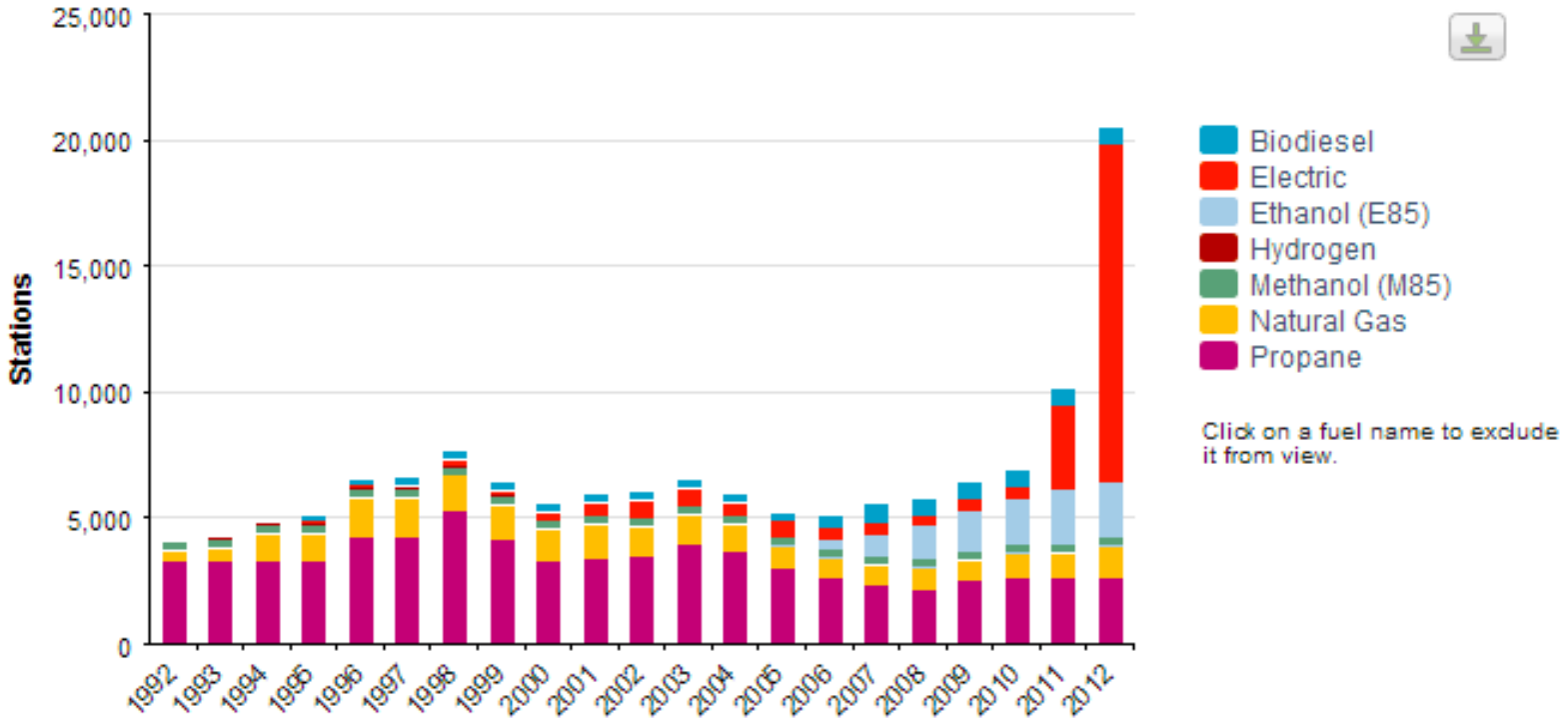
Ships and Planes

The U.S. navy goal: generate 50 percent of its energy from alternative sources by 2020: nuclear energy, electricity from renewable sources, and biofuels

Aviation has no alternative to liquid hydrocarbon fuels in the next decades

US Alternative and Renewable Fueling Stations



Today's drivers can find thousands of fueling stations across the country that provide natural gas, electricity, ethanol, and other alternative fuels. *Source: Alternative Fuels Data Center*

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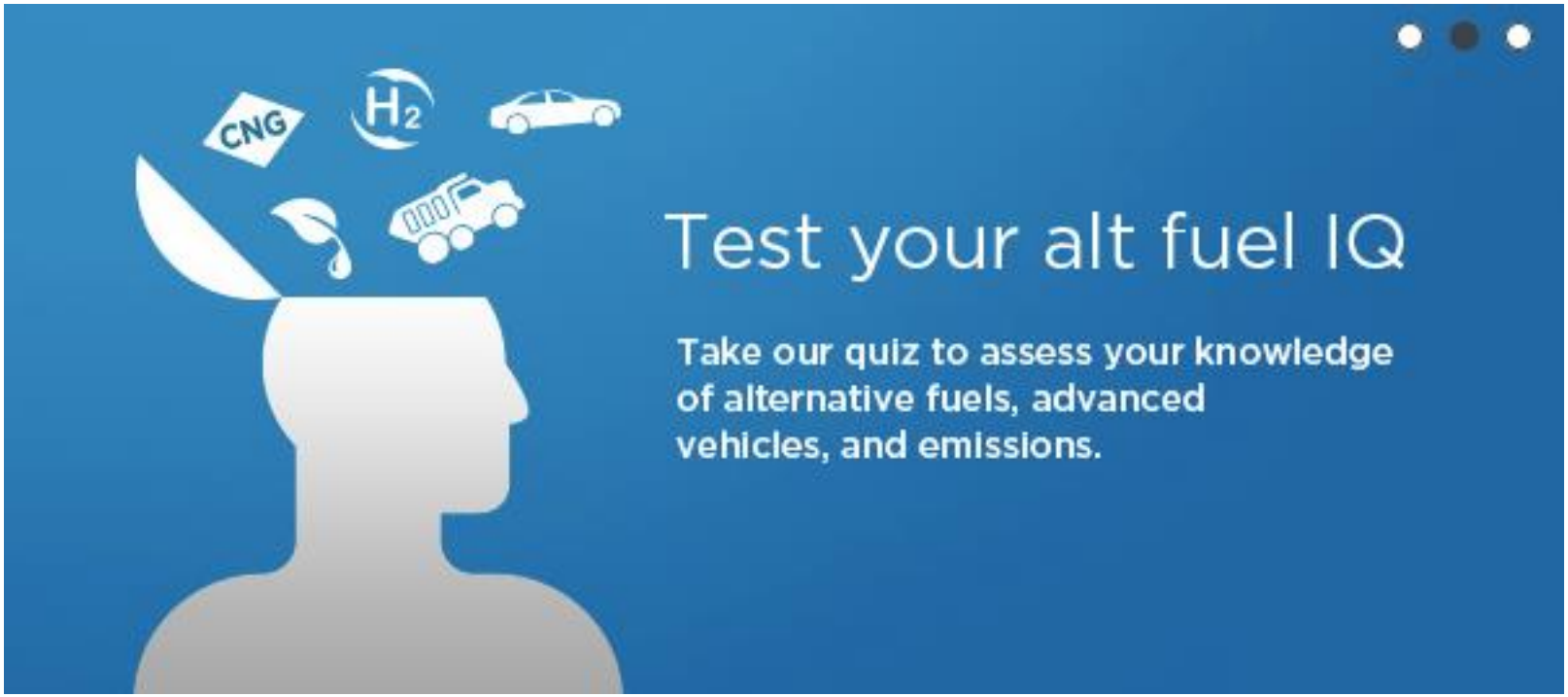

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