



CALIFORNIA ENERGY COMMISSION

The Alternative and Renewable Fuel and Vehicle Technology Program

Behavior, Energy and Climate Change Conference

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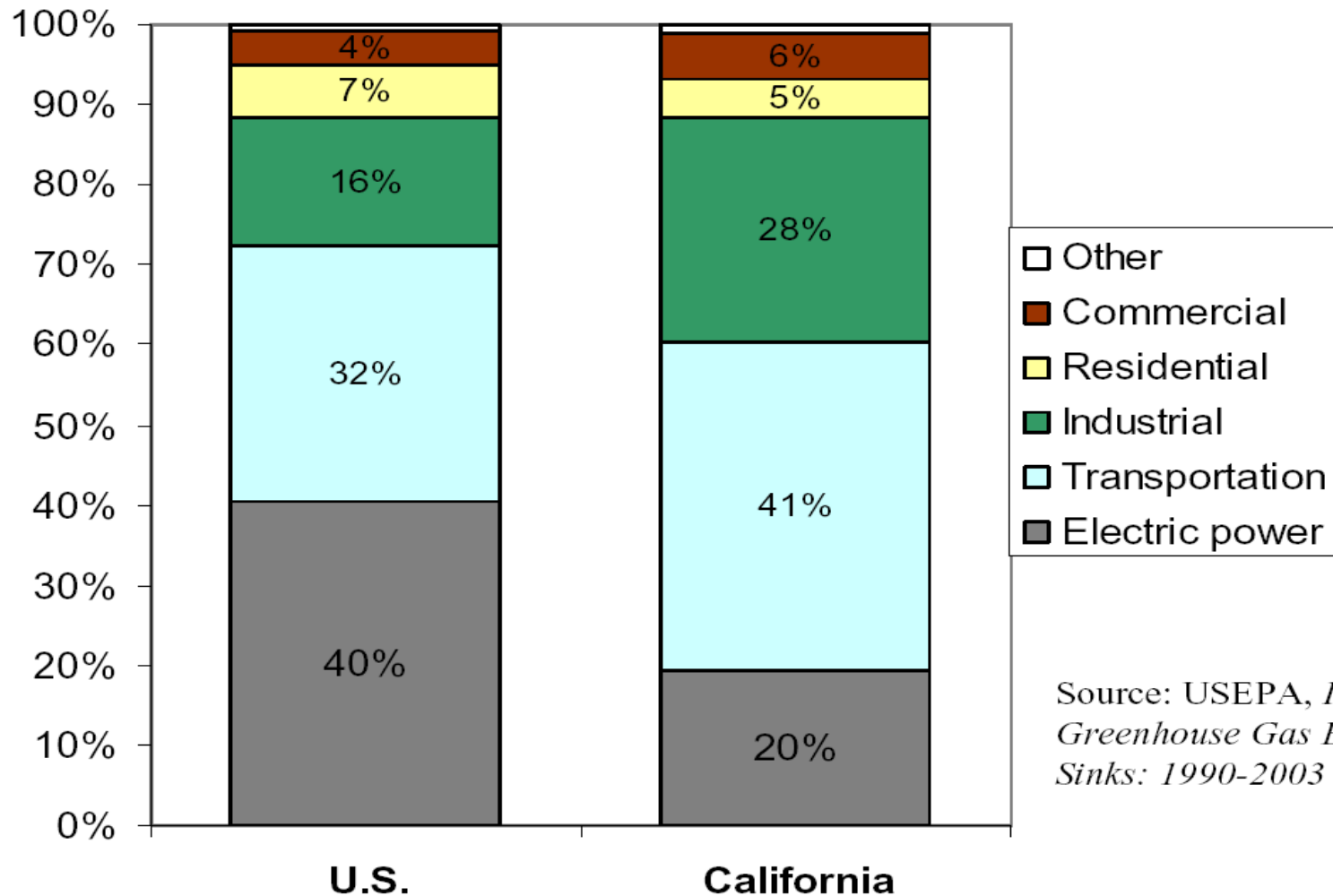


The Nation State Of California

- **8th largest economy in the world**
- **5th largest consumer of energy in the world**
- **3rd largest consumer of gasoline and diesel in the world – only China and the US consume more**
- **Approximately 26 million registered vehicles**
- **Population – expected to grow from 36 million now to 45 million by 2025**
- **Vehicle Miles Traveled: 1980-2000 increased 3.3% per year**
- **Over \$150 million for gasoline and diesel daily**



Sources of Greenhouse Gas Emissions



Source: USEPA, *Inventory of US Greenhouse Gas Emissions and Sinks: 1990-2003*



State Policy Priorities

- **Near-total reliance on petroleum-based fuels in the transportation sector continues**
- **Multiple state policy drivers: global climate change petroleum reduction, fuel diversity, air quality and environmental improvement and waste reduction**
- **State commitment to transform the state's fuels market by developing and expanding the use of alternative transportation fuels, particularly, low-carbon and ultra low-carbon fuels – and advanced vehicle technologies**
- **Surplus biomass resources from agriculture, forestry and urban waste streams presents both a challenge and opportunity for fuel developers and suppliers.**



Alternative and Renewable Fuel and Vehicle Technology Program

- **The Governor signed landmark legislation, (Assembly Bill 118, Nunez, 2007) to help attain Climate Change goals, increase alternative fuel use and reduce petroleum dependence.**
- **Up to \$120 million per year for 7.5 years is appropriated to the Energy Commission for state incentives.**
- **Energy Commission will co-fund the development and deployment of alternative fuels production, fuel distribution, and advanced vehicle and fuels technology.**
- **Up to \$80 million per year to the ARB for vehicle retirement and air quality improvement.**



Purpose of the Program

- **The goal of the Program is to “...develop and deploy innovative technologies that transform California’s fuel and vehicle types to help attain the state’s climate change policies.”**
- **AB 32 establishes a goal of reducing statewide GHG emissions to 1990 levels by 2020.**
- **Governor’s Executive Order S-03-05 establishes a statewide goal of reducing GHG emissions to 80 percent below 1990 levels by 2050.**
- **GHG reduction for the transportation sector is approximately 38 percent of the total emission reduction needed to achieve the 2020 and 2050 emission reduction targets.**



Eligible Projects

- **Develop and improve alternative and renewable low-carbon fuels**
- **Optimize alternative and renewable fuels for existing and developing engine technologies**
- **Produce alternative and renewable low-carbon fuels in California**
- **Decrease the overall impact of an alternative and renewable fuel's life-cycle carbon footprint and improve sustainability**



Eligible Projects

- **Fuel infrastructure, fueling stations, and equipment**
- **Improve and deploy light-, medium-, and heavy-duty advanced vehicle technologies**
- **Retrofit medium- and heavy-duty on-road and non-road vehicle fleets**
- **Infrastructure connected with existing fleets, public transit, and transportation corridors**
- **Workforce training programs**
- **Education, promotion and technology centers**



Other Funding Categories

- **Analytical Needs**
- **Workforce Training**
- **Public Education**
- **Outreach**
- **Support for Standards and Certifications**



Solicit Proposals

- **Begin planning solicitations in early 2009; after the Investment Plan is adopted**
- **Public process to develop solicitations**
- **Begin soliciting for funding proposals in Spring of 2009 after regulations are published**



Successful ET Ventures: What are the odds?

