



CALIFORNIA ENERGY COMMISSION

# **Staff and Advisory Committee Workshop on the Investment Plan Process**

## **Alternative and Renewable Fuel and Vehicle Technology Program**

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**Peter Ward  
Fuels and Transportation Division  
California Energy Commission**



## Agenda

- Introduction and Overview
- Updates to the Analyses
  - ‘Reverse Engineering’ from 2050; to 2020 and 2008
  - Gap Analysis
- Components of the Investment Plan
- Status of Regulation Development
- Funding Priorities and Opportunities
- Public Comment



## Comments/Dockets from July 9 Meeting

- Coordination with PIER Alternative Fuels Roadmap
- Guided by FFCA- Commitment to Updating
- Goal Driven Methodology for Allocating Funds
- Capital Efficiency
- ‘Reverse Engineering’ from 2050 Vision for GHG Reduction Targets
- Perform “Gap Analysis”
- Emphasize Economic Development, Workforce Training
- Continue Sustainability, Market and Incentive Studies



# Overview of the Investment Plan Process

- Context for 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.
- Transportation activities are responsible for 38 percent of the greenhouse gas (GHG) emissions in California



# Overview of the Investment Plan Process

- The Investment Plan:
  - will prioritize categories by assigning to each a percentage of the available funds, based on their GHG reduction potential
  - will describe categories of funding that would be eligible to receive funding under the Program
  - may incorporate other considerations in determining the final percentage allocation of available funds and funding opportunities
  - is adopted by the Energy Commission; all funding decisions will be consistent with the priorities and opportunities determined by this process
  - will further define sustainability goals to influence the determination of priorities and opportunities



## The Investment Plan Process

- Determining Priorities and Opportunities for Program Funds
  - Define Program Goal(s)- to 2020, and extended to 2050
  - Step-by-Step Analytical Methodology for Allocation
  - Perform Gap Analysis- Areas of Need/Opportunity
  - Seek Industry, Stakeholder Input- Refined Gap Analysis



## Seek Industry, Stakeholder, Public Input On “Gaps”

- Determine which “Gaps” Being Addressed by Industry/Stakeholders
- Determine which “Gaps” remain; prioritize and refine
- Seek input from ‘Partners’ on addressing prioritized “Gaps”
- Prepare Strategic ‘Opportunities for Funding’ List-Prioritized to Goals



# Consider Other Categories for Funding

- Vehicle Fuel Efficiency
- Areas of Analysis
- Workforce Training
- Public Education
- Outreach



# Identifying Existing, Complimentary Funding Sources

- Identify Strategic Partnerships/ Leverage Opportunities
  - Partnership Opportunities (Agencies, Air Districts, Local governments)
  - Leveraging Funds (STO example, others?)
  - Identifying Federal Partnership Potential (Volpe Center, NREL, DOE Clean Cities, USEPA, and USDFA)



# Identifying Existing, Complimentary Incentive Mechanisms

- Evaluating Incentive Mechanisms for Capital Efficiency and “Best Fit”, on a project basis
  - Project Suggestions from Stakeholders and Dockets-Program Workshops
  - Generic Project Examples with Proposed Incentive or Funding Mechanisms



## Other Considerations for Allocation

- Provide Consumer Choice
- Increase Economic Development
- Expand Technological Excellence
- Leverage California's Innovation
- Build on Existing Investments
- Use California's Waste
- Use Renewable Energy Resources



# Program Implementation

- Informing the Program -Establish Information and Analysis Program Element
  - Continuation of Sustainability Analysis
  - Updating FFCA
  - Fuel and Vehicle Market and Technology Assessments
  - Incentive Mechanism Evaluation
  - Identification of Solicitation Areas
  - Annual Program Evaluation
  - Measuring Markets Success- Establishing Metrics



# Program Implementation

- Formalize Partnership Relationships
- Address Administrative Needs and Remedies
- Implementation Schedule



# Potential Strategic Alliances

- California Air Resources Board
- California State Treasurer's Office
- SCAQMD and Other Air Districts
- Ports of Los Angeles and Long Beach
- CALPERS and CALSTRS
- USEPA
- USDOE
- Sustainable Energy Finance (SEF) Alliance - Carbon Trust, STDC and Other Members
- Several Private Equity Funds
- Several Venture Capital Investment Funds
- Commercial Banks



## Entities Expressing Interest

- **Vehicle/Technology Improvements**

- CALSTART
- CalETC
- Environmental Business Cluster
- Cummins Engine Company
- Westport Innovations
- General Electric Marine
- Several Auto Manufacturers
- A-Z Bus Company
- Fuoss Maritime
- Global Electric Motor Cars
- Vectrix
- ISE Corporation
- Sustainable Transport Club
- Environmental Business Cluster – San Jose
- Natural Gas Vehicle Coalition
- Propane Energy Research Council
- Capstone Turbine Corporation
- UC Riverside Center for Nanoscale Science and Engineering
- Sturman Industries
- Roush Enterprises Inc
- International Truck and Engine Corporation
- Perfect Motor Corporation
- California Fuel Cell Partnership
- California Cars Initiative (CalCars)
- IMPCO

- **Alternative/Renewable Fuels**

- Bioenergy Producers Association
- California Ethanol and Power
- Renewable Energies, LLC
- New Fuels Alliance
- Sustainable Biodiesel Alliance
- Crimson Renewable Energy
- Next Fuels
- Biodiesel Industries, Inc
- Pacific Ethanol, Inc
- Great Valley Energy
- Cilion
- Altra Biofuels
- TSL Seed Company
- Bluefire Ethanol
- LS9, Inc
- Amyris Biotechnologies
- Swan Biomass
- American Bioethanol Corporation
- Energy and Industrial Solutions
- Hythane Company LLC
- Neste Oil
- Vinod Kosla
- Western Propane Gas Association
- Ferrellgas
- Sustainable Conservation
- Praxair
- Air Products
- Linde



## Entities Expressing Interest

- Pearson Ford
- Clean Energy
- Pinnacle
- Trillium
- Plug Power
- Propel Biofuels
- Propane Education and Research Council
- Delta Liquid Energy
- Clean Fuels USA
- National Hydrogen Association
- Ace Hardware Corporation
- Biofuels Logistics & Terminals, LLC
- Cascade Sierra Solutions
- Coulomb Technologies
- Clean Air Logix
- APM Terminals
- Evergreen Marine Corporation
- Long Beach Container Terminal, Inc
- Seaside Transportation Services, LLC
- Southern California Edison Company
- Pacific Gas and Electric Company
- San Diego Gas and Electric Company
- SEMPRA Energy
- Los Angeles Department of Water and Power
- Sacramento Municipal Utility District
- Imperial Irrigation District
- City of Fairfield
- City of Oceanside
- Plumas Unified School District
- Riverside County
- City of Chula Vista
- San Diego Unified School District
- Real Energy
- City of Commerce
- City of Los Angeles
- California Clean Cities Coalition
- California State Automobile Association
- CAPCOA members

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