

## MEMORANDUM

**TO:** Santa Clara Valley Transportation Authority  
Board of Directors

**FROM:** Kurt Evans, Government Affairs Manager  
Santa Clara Valley Transportation Authority

**DATE:** May 15, 2008

**SUBJECT:** Summary of Federal Energy Legislation

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### **BACKGROUND**

Enacted into law in 2007, the federal Energy Independence and Security Act is an omnibus energy policy law that consists mainly of provisions designed to increase energy efficiency and the availability of renewable energy. The key provisions in the legislation are as follows:

- *Corporate Average Fuel Economy (CAFE) Standards:* Sets a target of 35 miles per gallon (mpg) for the combined fleet of cars and light trucks manufactured by automakers by model year 2020. Repeals two tax subsidies for oil and gas companies in order to offset the estimated costs to implement the CAFE provisions.
- *Renewable Fuel Standard:* Sets a modified standard that starts at 9.0 billion gallons in 2008 and rises to 36 billion gallons by 2022.
- *Energy Efficiency Equipment Standards:* Includes a variety of new standards for lighting, and for residential and commercial appliances.

### **Corporate Average Fuel Economy (CAFE) Standards**

The Energy Independence and Security Act of 2007 requires an increase in CAFE standards and a restructuring of the federal fuel economy program. A single CAFE standard of 35 mpg for the combined fleet of cars and light trucks by model year 2020 is established, and the distinction between passenger cars and light trucks is preserved. Interim standards will be set, beginning with the 2011 model year. Manufacturers will be required to come within 92 percent of the standard for a given model year. However, manufacturers can earn credits for exceeding the standards in one vehicle class that can be applied to boost, within limitations, the CAFE of a different vehicle class that is falling short of compliance. In addition, credits may be bought and sold between manufacturers.

A fuel economy program is established for medium- and heavy-duty trucks, and a separate fuel economy standard is created for work trucks. The legislation also creates a loan guarantee program for advanced battery development, as well as grant programs for plug-in hybrid vehicles, incentives for purchasing heavy-duty hybrid vehicles, and credits for various electric vehicles.

## **RENEWABLE FUEL STANDARD**

The Energy Independence and Security Act of 2007 extends and increases the renewable fuel standard, which requires minimum annual levels of renewable transportation fuel in the marketplace. The previous standard was 5.4 billion gallons for 2008, rising to 7.5 billion by 2012. The new standard starts at 9.0 billion gallons in 2008 and rises to 36 billion gallons in 2022. Starting in 2016, all of the increase in the target must be met with advanced biofuels, specifically cellulosic ethanol, biomass-based diesel and other biofuels derived from feedstock other than cornstarch.

The legislation also promotes research to expand the use of biodiesel and biogas as motor vehicle fuels. The U.S. Department of Energy is directed to create a grant program to help establish or convert infrastructure for renewable fuels use. Studies are also required on the market penetration of flexible-fueled vehicles, the feasibility of constructing dedicated ethanol pipelines, the feasibility of using greater percentages of ethanol in fuel blends, and the adequacy of railroad transportation for delivery of ethanol fuel.

## **APPLIANCE AND LIGHTING EFFICIENCY STANDARDS**

The Energy Independence and Security Act of 2007 sets energy efficiency standards for broad categories of incandescent lamps (light bulbs), incandescent reflector lamps, and fluorescent lamps. A required target is set for lighting efficiency, and energy efficiency labeling is required for consumer electronic products. In addition, efficiency standards are set by law for external power supplies, residential clothes washers, dishwashers, dehumidifiers, refrigerators, refrigerator-freezers, freezers, electric motors, residential boilers, commercial walk-in coolers, and commercial walk-in freezers. Furthermore, the Department of Energy is directed to set standards by rulemaking for furnace fans and battery chargers.

## **GREEN BUILDINGS**

The Energy Independence and Security Act of 2007 encourages the development of more energy-efficient “green” commercial buildings. A national goal is set to achieve zero-net-energy use for new commercial buildings constructed after 2025. A further goal calls for retrofitting all pre-2025 buildings to zero-net-energy use by 2050. Other key provisions of the bill are as follows:

- Requires the Department of Energy to establish a national clearinghouse for information and public outreach about high-performance green buildings.
- Directs the Department of Energy to conduct research on, develop and demonstrate new technologies, operating practices and techniques to significantly improve the energy efficiency of equipment and processes used by energy-intensive industries.

- Creates the Healthy High-Performance Schools Grant Program to encourage states, local governments and school systems to build green schools.
- Creates a program of grants and loans to support energy efficiency and energy sustainability projects at public institutions.
- Directs the U.S. Department of Housing and Urban Development (HUD) to update energy efficiency standards for all public and assisted housing.
- Requires the U.S. Environmental Protection Agency (EPA) to establish a program of competitive grants for local governments for green building demonstration projects.
- Directs the Department of Energy to establish an energy efficiency and conservation block grant program to help reduce energy use and emissions at the local and regional levels.

## **ACCELERATED RESEARCH AND DEVELOPMENT**

The Energy Independence and Security Act of 2007 establishes a plethora of new research and development programs to be overseen by the Department of Energy to:

- Expand the use of geothermal energy.
- Develop technologies that produce electricity from waves, tides, currents, and ocean thermal differences.
- Determine ways in which the weight of motor vehicles could be reduced to improve fuel efficiency without compromising passenger safety.
- Develop hydrogen energy technologies.
- Advance the manufacturing processes, materials and infrastructure for renewable energy.

## **ENERGY TRANSPORTATION AND INFRASTRUCTURE**

The Energy Independence and Security Act of 2007 calls for creating an Office of Climate Change and Environment within the U.S. Department of Transportation to plan, coordinate and implement strategies to: (a) reduce transportation-related energy use; (b) mitigate the effects of climate change; and (c) address the impact of climate change on transportation systems and infrastructure. The legislation also directs the Department of Transportation, in coordination with the EPA, to establish and conduct a pilot grant program to assist railroad carriers in purchasing hybrid locomotives in order to demonstrate the extent to which such locomotives increase fuel economy, reduce emissions and lower operating costs. Finally, the bill expresses a sense of Congress that, in constructing new roadways or rehabilitating existing facilities, state and local governments should employ policies designed to accommodate all users, including motorists, pedestrians, cyclists, transit riders, and people of all ages and abilities.