

The American Clean Energy and Security Act of 2009

Summary of Transportation Provisions

June 2009



Overview

The *American Clean Energy and Security Act of 2009*, H.B. 2454 (“ACES”), was passed out of the Committee on Energy and Commerce in the House of Representatives on May 21, 2009. The bill, also known as Waxman-Markey after Rep. Waxman (Chairman, Energy & Commerce) and Rep. Markey (Chairman, Subcommittee on Energy & Environment), sets forth an ambitious and comprehensive reform of U.S. climate and energy policy. ACES proposes to build the foundation of a sustainable economy that moves passengers and products on a lower carbon, more efficient transportation system.

This Summary prepared by ENE offers a section-by-section abstract of the transportation-related provisions included in the bill appearing in Title I, Subtitle C, Sections 122, 123 and Title II, Subtitle C, Sections 221, 222, and 223. These sections include:

- financial support for large-scale demonstration of electric vehicles;
- financial support for automakers retooling plants to make electric vehicles;
- requiring electric utilities or state regulatory agencies to draw up plans to implement charging infrastructure for xEVs (including battery swapping, fast-charging, and other services);
- directing the President to work with the relevant agencies and California to harmonize the federal fuel economy standards, emissions standards promulgated by EPA, and the CA standards for light-duty vehicles;
- requiring states to establish goals for reducing global warming pollution from the transportation sector and requiring large metropolitan planning organizations to submit transportation plans to meet those goals; and,
- facilitating the deployment of a “Smart Grid,” including measures to reduce utility peak loads through smart grid applications, as well as encouragement for use of customer-owned distributed energy storage to reduce peak loads.

The Committee draft of the bill does not include a low carbon fuel standard (LCFS), which had been proposed in earlier bill drafts.¹

¹ An LCFS would establish a market mechanism to encourage a switch to low carbon fuel alternatives, such as cellulosic ethanol and electricity, in place of higher carbon fuels such as tar sands oil or liquid coal.

ENE Glossary of Terms

GHG: Gases that trap heat in the atmosphere, often referred to as greenhouse gases. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases.

Leakage: A concern when designing carbon regulations is avoiding carbon “shuffling” or “leakage.” If the regulation regime is not comparable between two jurisdictions, production and sales may be shuffled out of the jurisdiction where regulation is stringent into the other jurisdiction where regulation is looser and compliance costs are lower. While the stringent regulation is thus met, it will not actually result in any net reduction in greenhouse gas emissions, which have simply been moved (or “leaked”) from one jurisdiction to the other.

Smart Grid: A Smart Grid uses digital information technology to help consumers control when and how they use electricity from the grid so that they save energy, reduce cost, and increase reliability. Such a modernized electricity network also has the potential to provide energy independence and global warming benefits.

Time-of-use pricing (TOU): Under a time-of-use pricing plan, electricity prices vary by the time of day. Energy consumed during peak demand periods (usually the late afternoon and early evening) is more expensive than energy consumed during off-peak periods (mornings and nights). These prices are pre-established and known to consumers in advance, allowing them to vary their electricity demand in response to such prices and manage their energy costs by shifting use to a lower cost period.

xEV: An abbreviation used to encompass a range of electric vehicles including, plug-in hybrid electric vehicles (PHEVs), battery-electric vehicles (BEVs), or electric vehicles (EVs).

Detailed Summary of Transportation-Related Provisions

Title I	Clean Energy
Subtitle C	Clean Transportation
Sec. 121	<p data-bbox="367 999 1443 1031">Electric Vehicle Infrastructure</p> <ul data-bbox="399 1041 1443 1990" style="list-style-type: none"> <li data-bbox="399 1041 1443 1157">• Amends the Public Utility Regulatory Policies Act of 1978 (PURPA) to mandate that each electric utility develop a plan to support the use of plug-in electric vehicles, including heavy-duty plug-ins; <li data-bbox="399 1188 1443 1346">• Plans can include deployment of charging stations; battery exchange and fast charging infrastructure; market triggers for deployment of infrastructure; and other similar elements determined necessary by each state to support plug-in electric vehicles; <li data-bbox="399 1377 1443 1535">• Charges state regulatory authorities and non-regulated utilities to ensure that the charging infrastructure is “interoperable with products of all auto manufacturers to the extent possible” and to consider adopting minimum requirements for the deployment of the charging infrastructure; <li data-bbox="399 1566 1443 1682">• Directs state regulatory authorities and non-regulated utilities to establish protocols and standards for integrating plug-in electric drive vehicles into an electrical distribution system, including Smart Grid systems and devices; <li data-bbox="399 1713 1443 1990">• Also directs state regulatory authorities and non-regulated utilities to include, to the extent feasible, the ability for each plug-in electric drive vehicle to be identified individually and to be associated with its owner’s electric utility account, regardless of the location that the vehicle is plugged in, for appropriate billing for any electricity required to charge the vehicle’s batteries as well as crediting for electricity provided to the electric utility from the vehicle’s batteries (vehicle-to-grid, V2G). Time-of-use pricing is also to be considered as well as the ability for

	<p>plug-in electric drive vehicles to contribute to meeting peak load and ancillary service power needs.</p>
<p>Sec. 122</p>	<p>Large Scale Vehicle Electrification Program</p> <ul style="list-style-type: none"> • Directs the Secretary of Energy to establish a program to deploy and integrate plug-in electric drive vehicles into the electricity grid in multiple regions. The goals of the programs are: <ul style="list-style-type: none"> ○ To demonstrate the viability of a vehicle-based transportation system that is not overly dependent on petroleum as a fuel and contributes to lower carbon emissions than a system based on conventional vehicles; ○ To facilitate the integration of advanced vehicle technologies into electricity distribution areas to improve system reliability and performance; ○ To demonstrate the potential benefits of coordinated investments in vehicle electrification on personal mobility and a regional grid; ○ To demonstrate protocols and standards that facilitate vehicle integration into the grid; and, ○ To investigate differences in each region and regulatory environment regarding best practices in implementing vehicle electrification. • State, Indian tribe, or local governments can apply for financial assistance in furthering the regional deployment and integration into the electricity grid of plug-in electric drive vehicles. These applications may be jointly sponsored by electric utilities, auto manufacturers, technology providers, car sharing companies or organizations, or 2 other persons or entities. • Under the bill, the Department of Energy can provide financial assistance to be used for: <ul style="list-style-type: none"> ○ Assisting persons located in the regional deployment area, including fleet owners, in the purchase of new plug-in electric drive vehicles by offsetting in whole or in part the incremental cost of such vehicles above the cost of comparable conventionally fueled vehicles; and, ○ Supporting the use of plug-in electric drive vehicles by funding projects for the deployment of any of the following: <ul style="list-style-type: none"> ▪ Electrical charging infrastructure for plug-in electric drive vehicles, including battery exchange, fast-charging infrastructure, and other services, in public or private locations, including street parking, parking garages, parking lots, homes, gas stations, and highway rest stops; ▪ Smart Grid equipment and infrastructure to facilitate the charging and integration of plug-in electric drive vehicles; ▪ Other projects as the Secretary determines appropriate to support the

	large-scale deployment of plug-in electric drive vehicles in regional deployment.
Sec. 123	<p>Plug-in Electric Drive Vehicle Manufacturing</p> <ul style="list-style-type: none"> Establishes a program to provide financial assistance to automakers to facilitate the manufacture of plug-in electric drive vehicles. This can include the reconstruction or retooling of facilities for the manufacture of plug-in electric drive vehicles developed in the U.S., and the purchase of domestically produced vehicle batteries to be used in the construction of the plug-ins. Financial assistance is available to automakers who would otherwise not be able to finance the reconstruction or retooling of facilities in order to produce plug-in electric drive vehicles, or would not be able to finance the purchase of vehicle batteries.
Sec. 124	<p>Investment in Clean Vehicles</p> <ul style="list-style-type: none"> Enables the provision of funding to automakers for up to 30% of the cost of retooling, expanding, or establishing manufacturing facilities for advanced technology vehicles, with preference to applications for projects saving “the maximum number of gallons per vehicle.”
Title II	Energy Efficiency
Subtitle C	Transportation
Sec. 221	<p>Emissions Standards</p> <p>Directs the President to set motor vehicle greenhouse gas emissions standards that:</p> <ul style="list-style-type: none"> Are achievable by the automobile manufacturing companies; To the extent practicable, harmonize CAFE standards that may be set by the National Highway Traffic Safety Administration, Clean Air Act standards that may be set by the Administrator of the Environmental Protection Agency; and standards that have or may be set by the state of California; Achieves at least as much emissions reductions as would be achieved by implementation of the California law AB 1493 (Pavley) if enforced in the State of California and the other states that have adopted the standard; and, Do not preempt California’s legal authority to adopt and enforce its own mobile source emissions standards. <p>The bill amends the Clean Air Act to call for greenhouse gas emissions standards for heavy-duty on-road vehicles as well as non-road vehicles and engines, and aircraft.</p> <ul style="list-style-type: none"> Each state will be required to submit goals for transportation-related greenhouse gas emissions reductions to the Administrator of the EPA.
Sec. 222	<p>Greenhouse Gas (GHG) Reductions through Transportation Efficiency</p> <ul style="list-style-type: none"> Each state has 3 years to submit goals for transportation-related GHG emissions reductions; Metropolitan areas with population greater than 200,000 are also required to have the metropolitan planning organization (MPO) submit a plan for transportation-

	<p>related GHG emissions;</p> <ul style="list-style-type: none"> • State and MPO plans must establish targets to reduce mobile source emissions from transportation from levels projected under a business-as-usual scenario; • Plans may include but are not limited to a variety of measures, such as efforts to increase public transportation, updating zoning and land-use regulations, or adopting other smart growth policies; • The bill requires that states and MPOs update their plans every 4 years and make regional plans available to the public via the Internet; and, • The bill authorizes a competitive grant program for regions implementing the plans.
Sec. 223	<p>SmartWay Transportation Efficiency Program</p> <ul style="list-style-type: none"> • Directs EPA to establish a SmartWay Program to quantify, demonstrate, and promote the benefits of technologies, products, fuels, and operational strategies that reduce petroleum consumption, air pollution, and greenhouse gas emissions from the mobile source sector; • Directs EPA to promote best practices and drive demand for energy-efficient, low greenhouse gas transportation; and, • Directs EPA to promote the availability and adoption of SmartWay certified technologies and strategies.
Sec. 224	<p>State Vehicle Fleets</p> <ul style="list-style-type: none"> • Amends the Energy Policy Act of 1992 with respect to the types of alternative-fueled vehicles required for compliance of Sec. 303 of ACESA.
Title III	Reducing Global Warming Pollution (Cap and Trade)
Subtitle A	Reducing Global Warming Pollution
Sec. 331	<p>Reducing Global Warming Pollution</p> <p>See ENE, “American Clean Energy and Security Act of 2009: Summary and Preliminary Recommendations” April 10, 2009 at www.env-ne.org/resources/open/p/id/867/from/693</p>

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