

Status of ARB's Transportation GHG Measures

**AB 32 Transportation Measures
(Scoping Plan Update)**

Status

VEHICLE-RELATED MEASURES

**Advanced Clean Cars Program
(T-1)**

- 2012: ARB approved Advanced Clean Cars Program
 - Developed through collaboration with U.S. EPA and National Highway Traffic Safety Administration (NHTSA)
 - Lays foundation for next generation of ultra-clean vehicles
 - Includes more stringent GHG emission standards, tighter criteria pollutant standards, and increased zero-emission manufacturer production requirements for 2017 to 2025 passenger vehicles
 - Designed to cut 2025 new passenger vehicle GHG emissions by half, compared with today's fleet
- Because of the technology-forcing nature of the standards and California's commitment to a national program, ARB is currently conducting a mid-term review of the standards, in collaboration with U.S. EPA and NHTSA
- Mid-2016: Target release date for draft technical assessment, with staff update to Board in Fall 2016

Vehicle Efficiency Measures (T-4)

- Combination of measures applicable to light-duty vehicles, most of which are covered in ARB's 2012 Advanced Clean Cars Program
- 2009: ARB approved Under Inflated Vehicle Tires Regulation to reduce GHG emissions from vehicles operating with under inflated tires
 - As of September 2010, all automotive service providers required to check and inflate tires to recommended tire pressure ratings when performing any automotive maintenance or repair

**Heavy-Duty Vehicle GHG
Emission Reduction (T-7)**

- 2008: ARB adopted Tractor-Trailer Greenhouse Gas Regulation
 - Nation's first-ever GHG emission reduction requirements for heavy-duty trucks
 - Starting in 2010, requires owners of long-haul tractors and box trailers (53' feet or longer) to upgrade vehicles with aerodynamic technologies and use low-rolling resistance tires
- 2013: ARB approved Phase 1 standards that set GHG emission standards for new heavy-duty engines and vehicles
 - Aligns with U.S. EPA's 2011 federal Phase 1 Regulation
- ARB's action provides nationwide consistency for engine and vehicle manufacturers and allows ARB to enforce the requirements
- Phase 1 standards set stage for more stringent Phase 2 GHG standards for heavy-duty vehicles

<p>Goods Movement Efficiency Measure (T-6)</p>	<ul style="list-style-type: none"> • 2007: ARB adopted <u>Port Drayage Truck Regulation</u> <ul style="list-style-type: none"> ○ All drayage trucks must meet 2007 model year engine emission standards by January 2014 • Spring 2015: In developing a <u>Sustainable Freight Strategy</u>, ARB will release a draft document – “Sustainable Freight: Pathways to Zero.” This document will: <ul style="list-style-type: none"> ○ Identify near-term 2015 actions to further reduce health risk in communities near freight hubs ○ Look beyond 2020 and identify both regulatory and voluntary levers to implement zero/near-zero freight system • Significant portion of ARB’s 2014 and 2015 funding allocated for Low Carbon Transportation will target zero-emission projects for goods movement sources such as electric drayage trucks
<p>Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP) (T-8)</p>	<ul style="list-style-type: none"> • 2009: ARB approved as part of Air Quality Improvement Program established by AB 118 in 2007 statute <ul style="list-style-type: none"> ○ Accelerates deployment of hybrid and zero-emission medium-duty and heavy-duty vehicles in California • Since project’s 2010 launch, over \$60 million invested in projects and nearly 2,000 vouchers issued to help offset the incremental cost of purchasing advanced technology hybrid and zero-emission heavy-duty trucks and buses • ARB targeting funding specifically to disadvantaged communities
<p style="text-align: center;">UPCOMING VEHICLE-RELATED MEASURES</p>	
<p>Phase 2 Heavy-Duty Vehicle Greenhouse Gas Emission Standards</p>	<ul style="list-style-type: none"> • Expands on Phase 1 GHG standards • ARB staff working with U.S. EPA and NHTSA • U.S. EPA expected to release Notice of Proposed Rulemaking in May 2015, with Final Rule in Spring 2016 • ARB staff plans to bring proposed California Phase 2 rule to Board after federal Phase 2 program is adopted <ul style="list-style-type: none"> ○ Phase 2 standards provide significant opportunity to achieve further fuel economy improvements and GHG reductions from heavy-duty trucks • Technical analyses indicate that combined Phase 1 and 2 programs could cut fuel consumption and CO₂ emissions by at least 40 percent, compared with 2010 levels
<p>Advanced Clean Transit</p>	<ul style="list-style-type: none"> • 2000: ARB adopted <u>Fleet Rule for Transit Agencies</u> <ul style="list-style-type: none"> ○ Strategy to reduce greenhouse gas emissions by transforming transit sector to deploy near-zero and zero emission technologies • Development of integrated efforts to transform public transportation systems may take several years, but some steps can be taken now to begin process • ARB staff currently developing proposed amendments to Transit Fleet Rule that may require purchase of hybrids and low-NOx engines and zero-emission buses, as well as use of renewable fuels • 2016: Staff expects to present proposed amendments to Board

FUEL-RELATED MEASURES

Low Carbon Fuels Standard (T-2)

- 2009: ARB adopted Low Carbon Fuels Standard
 - Designed to reduce greenhouse gas emissions associated with lifecycle of transportation fuels used in California
 - Lifecycle includes emissions associated with producing, transporting, distributing, and using the fuel
 - Standard mandates minimum 10 percent reduction in carbon intensity of California transportation fuels by 2020
- Re-adopted February 2015 to clarify requirements and provide additional compliance flexibility

Ship Electrification at Ports (T-5)

- 2007: ARB adopted At-Berth Regulation
 - Requires oceangoing vessels to use shore power in lieu of auxiliary engines while at-berth in California ports
 - Will reduce at-berth emissions 80 percent by 2020
 - Effective 2014

LAND USE MEASURE

Regional Transportation-Related Greenhouse Gas Targets (T-3) (SB 375)

- 2010: ARB approved 2020 and 2035 per-capita passenger vehicle greenhouse emission reduction targets for each of California's 18 federally-designated Metropolitan Planning Organization regions
- Required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), which encourages regional planning that integrates land use and transportation to reduce passenger vehicle GHG emissions
- Regional plans (Sustainable Communities Strategies) encourage sustainable development and transportation investment priorities to reduce GHGs
- October 2014: ARB approved process for updating emission reduction targets

CAP-AND-TRADE

Cap-and-Trade Regulation (impacts sources across various economic sectors)

- 2010: ARB adopted Cap-and Trade Regulation
 - Program places economy-wide "cap" on major sources of GHGs
 - January 2013: Largest industrial emitters, along with utilities and electricity generators and importers, are regulated under the program
 - January 2015: Fuels subject to Cap-and-Trade program
 - Cap is lowered by approximately 3 percent each year, and industries in the program must either reduce GHG emissions or buy a limited quantity of pollution permits, called "allowances"
 - ARB manages quarterly auctions of allowances, and auction proceeds are reinvested in California projects that further reduce GHG emissions