Cap-and-Trade Auction Proceeds Investment Plan:

Fiscal Years 2013-14 through 2015-16

Release Date: May 14, 2013

State of California

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CONSULTATION WITH THE CLIMATE ACTION TEAM

This investment plan benefitted from consultation with the Climate Action Team that includes the agencies and departments listed below, as well as substantial input and participation by representatives of a subset of those agencies and departments.

Chair: California Environmental Protection Agency

- Air Resources Board
- Business, Transportation and Housing Agency
- California Department of Fish and Wildlife
- California Department of Food and Agriculture
- California Department of Transportation
- California Department of Water Resources
- California Energy Commission
- California Health and Human Services Agency
- California Natural Resources Agency
- California Public Utilities Commission
- Department of Forestry and Fire Protection
- Department of Resources Recycling and Recovery
- Department of Toxic Substances Control
- Governor's Office of Planning and Research
- State and Consumer Services Agency
- State Water Resources Control Board

and the Labor and Workforce Development Agency (as required by State law for development of this plan).

Also, with appreciation to the Strategic Growth Council executives who actively participated in the public process and plan development.

PUBLIC INPUT

This document reflects significant public input that was provided during a public consultation, workshops, and a public hearing. On May 24, 2012, an initial public consultation meeting was held to solicit input from stakeholders and experts on the use of cap-and-trade auction proceeds. Comments submitted in response can be viewed at: http://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=investmentplan-ws

The Administration held three workshops during February 2013 in Fresno, Sacramento, and Los Angeles to obtain additional public input in response to a draft concept paper released on February 15, 2013. Comments associated with these workshops can be viewed at:
http://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=2013investmentpln-ws

The Air Resources Board held a public hearing on April 25, 2013 in Sacramento to obtain public input on a draft version of this investment plan. Written comments submitted for this hearing are posted at:
http://www.arb.ca.gov/lispub/comm/bccommlog.php?listname=ghgreductfund13

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I. Introduction

This document is the first investment plan for cap-and-trade auction proceeds. The purpose of this plan is to evaluate the opportunities for greenhouse gas emission reductions, and identify priority State investments to help achieve greenhouse gas reduction goals and yield valuable co-benefits. Inclusion of a recommended investment in this plan does not guarantee funding. This plan is being provided to the Legislature as required by AB 1532 (Chapter 807, Statutes of 2012).

The investment of the cap-and-trade auction proceeds brings both the opportunity and the responsibility to spend them well to further the objectives of AB 32, the California Global Warming Solutions Act of 2006 (Assembly Bill 32 (AB 32); Nunez, Chapter 488, Statutes of 2006). These objectives include reducing the emissions of greenhouse gases that contribute to climate change, as well as cutting other forms of air pollution, including in disadvantaged communities. The plan reflects a balanced effort to address the major sources of climate change in California, while supporting investments in disadvantaged communities, job opportunities throughout the State, and the continued growth of California's economy.

Strategic investments can and should advance the State's climate, air quality, energy, transportation, and natural resources goals for the 2020 timeframe and beyond. Targeted expenditures are critical to help California realize the transformational changes in transportation, energy generation and efficiency, and community development that are vital to meet our longer-range goals as well. Preserving and managing our natural and cultivated lands offers the opportunity to sequester carbon. Funding projects to treat waste as a resource for low-carbon fuels and soil enrichment also advances our waste diversion goals.

Budget Proposal. The Governor's January 2013 Budget had proposed investing $500 million from auction proceeds in programs supporting greenhouse gas emission reductions that were currently or could be funded by the General Fund. The Governor's May 2013 Budget proposes to provide a one-time loan of $500 million from the Greenhouse Gas Reduction Fund to the General Fund. This loan includes the auction proceeds for 2012-13 and 2013-14.

This short-term loan approach allows further time for agencies to design, develop, integrate, and/or modify their programs in a way that maximizes long-term greenhouse gas reductions. In addition, it will provide ARB time to complete the statutorily required update of the AB32 Scoping Plan due at the end of 2013, which can help inform better investment decisions. This approach is also fiscally prudent, particularly during this initial stage of program implementation, as the amount of auction proceeds that will be generated in 2013-14 is unknown.

Loaning the proceeds will not interfere with the objectives of the three year investment plan or AB 32 because it is short-term and the monies will be repaid with interest when necessary to meet the needs of the Fund. It is assumed that proceeds from the sale of

allowances from 2014-15 forward will be available in the same budget year to support the investment plan.

Statutory Requirements. In 2012, the Legislature passed and Governor Brown signed into law three related bills—AB 1532 (Pérez, Chapter 807), SB 535 (De León, Chapter 830), and SB 1018 (Budget and Fiscal Review Committee, Chapter 39) - collectively referred to herein as the "implementing legislation". These bills establish the Greenhouse Gas Reduction Fund (Fund) to receive auction proceeds and price containment reserve ("reserve") sales and to provide the framework for how the auction proceeds will be administered. The State portion of the proceeds from the auction of allowances under cap-and-trade is deposited in the Fund to support programs that further the purposes of AB 32.

This implementing legislation requires that the Department of Finance (Finance) submit a plan to the Legislature which identifies priority investments that will help achieve greenhouse gas reduction goals. Funding will be appropriated to State agencies by the Legislature, consistent with the three-year investment plan submitted by the Administration. While developing the investment plan, Finance coordinated with the Air Resources Board (ARB), the California Environmental Protection Agency (CalEPA), the Climate Action Team (CAT), and other State agencies.

A multi-agency team composed of agency Secretaries and staff, and Governor's Office leaders, heard more than eight hours of public comment and reviewed more than 400 written comment letters from dedicated groups and individual stakeholders about investment of auction proceeds. The inter-agency team started with the priorities identified in the Governor's January Proposed State Budget for FY 2013-14. The implementing legislation provided direction and consideration was given to public input. The resulting investment recommendations focus on a few key sectors that provide the best opportunities for achieving the legislative goals and supporting the purposes of AB 32 with auction proceeds received in subsequent years. These sectors are: sustainable communities and clean transportation, energy efficiency and clean energy, and natural resources and waste diversion.

II. Background

In 2006, the Legislature passed and the Governor signed the California Global Warming Solutions Act of 2006 (Assembly Bill 32 (AB 32); Nunez, Chapter 488, Statutes of 2006). AB 32 created a comprehensive, multi-year program to reduce greenhouse gas (GHG) emissions in California. AB 32 requires California to reduce greenhouse gases to 1990 levels by 2020, and to maintain and continue reductions beyond 2020. ARB has adopted a Scoping Plan and, together with other State and local agencies, has developed and implemented numerous regulations and programs to reduce emissions and meet these goals.

Cap-and-Trade: Source of Auction Proceeds

The cap-and-trade program (title 17, California Code of Regulations, section 95800 et seq.) is a key element of the Scoping Plan and California's GHG emissions reduction strategy. Cap-and-trade will reduce GHG emissions by about 18 million metric tons in 2020, about 20 percent of the total needed to achieve the AB 32 limit for that year. The program also ensures that the 2020 limit is met by complementing other GHG emissions reduction measures. For example, in the event that the anticipated reductions from other measures are not realized, cap-and-trade provides a mechanism to meet the emissions reduction targets.

Cap-and-trade creates a limit on the emissions from sources responsible for 85 percent of California's GHG emissions, establishes the price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy, and gives covered entities flexibility to implement the lowest-cost options to reduce emissions. While ensuring and providing additional GHG reductions, the program also complements and supports California's existing efforts to reduce criteria and toxic air pollutants.

In the cap-and-trade program, ARB places a limit, or cap, on GHG emissions by issuing a limited number of tradable permits (called *allowances*) equal to the cap. Each year, the number of allowances declines in proportion to the cap to achieve the intended emission reductions. The cap is enforced by requiring each source that operates under the cap to turn in one allowance or offset credit for every metric ton of carbon dioxide equivalent (MTCO2e) emissions that it produces. Businesses that aggressively reduce their emissions can trade their surplus allowances to firms that find it more expensive to reduce their emissions.

Beginning in 2013, the cap applies to GHG emissions from electricity and large industrial sources. Transportation fuels and residential and commercial use of natural gas and propane are included in the cap starting in 2015.

In distributing the emissions allowances, ARB allocates a portion of the allowances for free to covered entities, some are placed in a cost containment reserve, and the remainder is auctioned. The price of auctioned allowances, beyond the ARB-established floor price, is set by the marketplace. Over time, program regulations require a greater reliance on auctioning, which will, among other things, help maximize incentives for sources to reduce their emissions, provide a level playing field for new entrants, support a liquid and well-functioning market in allowances, spur continued investment in clean and efficient technologies and provide proceeds that can be reinvested for public benefit to further the purposes of AB 32.

The first two cap-and-trade auctions were held on November 14, 2012, and February 19, 2013; subsequent auctions are currently conducted quarterly.

III. Legislative Direction

As described above, the implementing legislation (i.e., AB 1532, SB 535, and SB 1018) provide the Legislative direction on the establishment of the Fund, the process for allocating auction proceeds, the eligible uses for those proceeds, and the minimum level of investments in disadvantaged communities.

Process

The implementing legislation establishes a two-step process for allocating funding to State agencies, with Finance as the lead agency.

1. *Three-Year Investment Plan:* Finance, in consultation with ARB and other State agencies, must develop and submit to the Legislature a three-year investment plan identifying priority programmatic investments of auction proceeds. The first such plan is due to the Legislature with the Revised FY 2013-14 State Budget in May 2013. Subsequently, updates to the investment plan must be developed every three years and submitted to the Legislature with the release of the Governor's January budget proposal.

   The investment plan must identify near-term and long-term greenhouse gas emission reduction goals and targets; analyze gaps in current State strategies for meeting greenhouse gas reduction goals; and identify priority investments that facilitate greenhouse gas reductions.

2. *Annual Budget Appropriations:* Funding will be appropriated to State agencies by the Legislature, consistent with the three-year investment plan submitted by the Administration.

Prior to Finance's submittal of an investment plan (or updates) to the Legislature, ARB must hold at least two public workshops and a public hearing in coordination with Finance and the Climate Action Team. ARB must also consult with the California Public Utilities Commission (CPUC) to ensure the plan does not conflict with or unduly overlap with activities that are under the oversight or administration of the CPUC. ARB satisfied these requirements by hosting three workshops in February and a hearing in April 2013, along with CPUC consultations prior to the hearing.

Investment Categories and Goals

The implementing legislation specifies the general categories that are authorized to receive budget appropriations from the Fund, as summarized in Figure 1. Per statute, cap-and-trade auction proceeds must be used to further the purposes of AB 32.

Specifically, the statute establishes the following goals for the use of the proceeds:

- Maximize economic, environmental, and public health benefits to the state.
- Foster job creation by promoting in-state GHG emissions reduction projects carried out by California workers and businesses.
- Complement efforts to improve air quality.
- Direct investment toward the most disadvantaged communities and households in the state.
- Provide opportunities for businesses, public agencies, nonprofits, and other community institutions to participate in and benefit from statewide efforts to reduce greenhouse gas emissions.
- Lessen the impacts and effects of climate change on the state's communities, economy and environment.

Disadvantaged Communities

In enacting the implementing legislation statute, the Legislature stated its intent to direct resources to the State's most impacted and disadvantaged communities, in order to provide economic benefits as well as health benefits through additional emission reductions.

At least 25 percent of program funding must be allocated to projects that benefit disadvantaged communities and at least 10 percent of program funding must be allocated to projects located in disadvantaged communities.

CalEPA is responsible for identifying disadvantaged communities prior to submittal of the investment plan to the Legislature. Identification criteria may include, but are not limited to:

- Areas disproportionately affected by environmental pollution and other hazards that can lead to negative public health effects, exposure or environmental degradation.

- Areas with concentrations of people that are of low income, high unemployment, low levels of homeownership, high rent burden, sensitive populations, or low levels of educational attainment.

Figure 1
Eligible Investments Identified in Statute

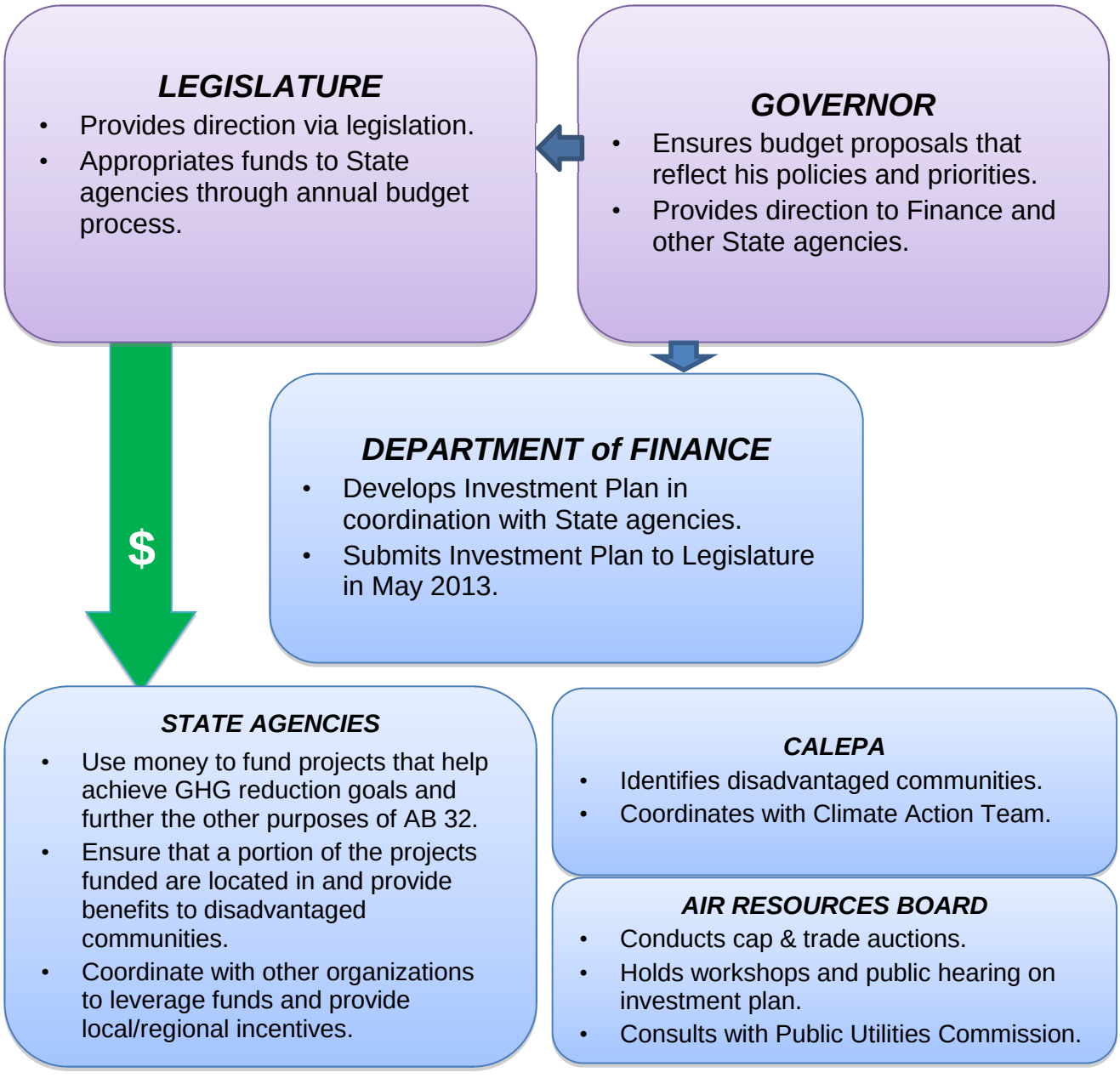
Eligible investments include, but are not limited to, those that do the following:

Low-Carbon Transportation and Infrastructure	• Reduce GHG emissions through the development of state-of-the-art systems to move goods and freight, advanced technology vehicles and vehicle infrastructure, advanced biofuels, and low-carbon and efficient public transportation.
Strategic Planning for Sustainable Infrastructure	• Reduce GHG emissions through strategic planning and development of sustainable infrastructure projects, including, but not limited to, transportation and housing.
Energy Efficiency and Clean Energy	• Reduce GHG emissions through energy efficiency, clean and renewable energy generation, distributed renewable energy generation, transmission and storage, and other related actions, including, but not limited to, at public universities, state and local public buildings, and industrial and manufacturing facilities.
Natural Resources and Solid Waste Diversion	• Reduce GHG emissions associated with water use and supply, land and natural resource conservation and management, forestry, and agriculture. • Reduce GHG emissions through increased in-state diversion of municipal solid waste from disposal through waste reduction, diversion, and reuse.
For all of the above categories -	• Programs implemented by State, local and regional agencies, local and regional collaboratives, and nonprofit organizations coordinating with local governments; and • Research, development, and deployment of innovative technologies, measures, and practices related to programs and projects funded by cap and trade auction proceeds.

State Government Roles and Responsibilities

Figure 2 illustrates the roles and responsibilities of the various entities that are involved in developing the investment plan, as well as allocation and implementation of the auction proceeds.

Figure 2:
Roles and Responsibilities



IV. Greenhouse Gas Emissions and Reduction Targets

This section provides the information required under statute on near-term and long-term greenhouse gas (GHG) emissions reduction goals and targets by sector (where applicable), as well as historic and projected GHG emissions levels by sector with existing programs. In addition to the AB 32 requirement to adopt limits and measures to cut GHG emissions to 1990 levels by 2020, the State has established numerous related goals to reduce California's contribution to climate change, cut conventional air pollution, improve energy security, support clean, renewable energy, and increase energy efficiency.

In March 2012, Governor Brown signed Executive Order B-16-2012 establishing zero emission vehicle (ZEV) benchmarks and affirming a long-range climate goal for California to reduce greenhouse gas emissions from transportation to 80 percent below 1990 levels by 2050. Figure 3 shows several key milestones and quantitative targets for California's climate change and energy programs.

Figure 3
Major Goals & Targets for Greenhouse Gas Reductions

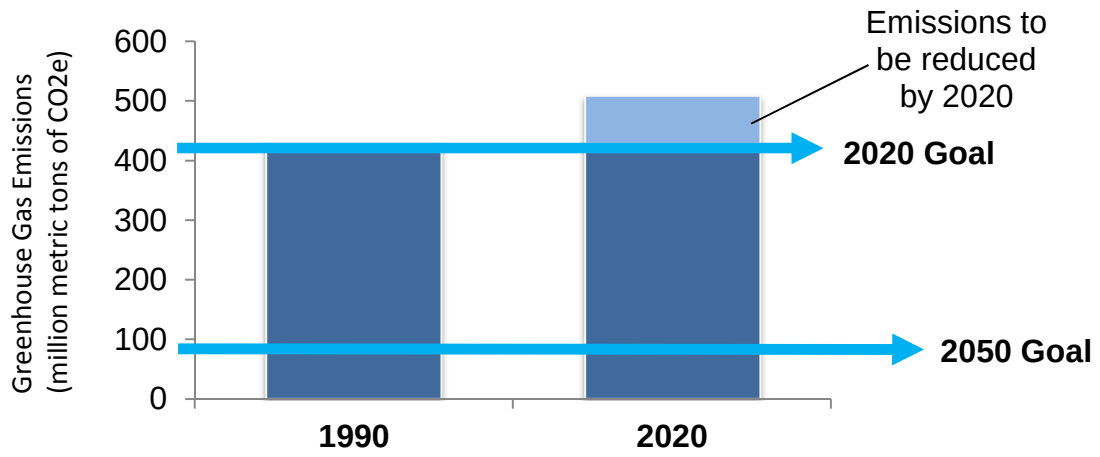
Global Warming	• 2020: GHGs will be reduced to 1990 levels[1] • 2050: GHGs will be 80% less than 1990 levels[2]
Sustainable Communities[3]	• 2010: ARB sets GHG reduction goals for metropolitan areas • 2020: Metropolitan areas meet 1st GHG reduction targets • 2035: Metropolitan areas meet 2nd GHG reduction targets
Zero Emission Vehicles[4]	• 2015: Metropolitan areas will have infrastructure plans for ZEVs • 2020: California infrastructure will support 1 million ZEVs • 2025: ARB requires that about 15% of new car sales are ZEVs • 2025: 1.5 million ZEVs will be operating in California • 2050: Transportation GHGs will be 80% less than 1990 levels
Renewable Electricity	• 2013: 20% of electricity from renewable sources[5] • 2020: 33% of electricity from renewable sources[5] • 2020: 12,000 megawatts of new distributed generation after 2010
Green State Buildings[6]	• 2018: State agency energy purchases will be 20% less than 2003 • 2020: State agency GHGs will be 20% less than 2010 levels • 2025: 50% of state buildings will be Zero Net Energy
Solid Waste Reduction[7]	• 2020: 75% recycling, composting or source reduction of solid waste

1. California Global Warming Solutions Act of 2006 (Assembly Bill 32 (AB 32); Stats. 2006 chapter 488) is available at:
http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf
2. Executive Order S-3-05 is available at:
http://www.dot.ca.gov/hq/energy/ExecOrderS-3-05.htm
3. Sustainable Communities and Climate Protection Act of 2008 (SB 375, Steinberg, Statutes of 2008) is available at:
http://www.leginfo.ca.gov/pub/07-08/bill/sen/sb_0351-0400/sb_375_bill_20080930_chaptered.pdf
4. Executive Order B-16-12 is available at:
http://gov.ca.gov/news.php?id=17472
5. California Renewable Energy Resources Act (SBX1 2, Simitian, Statutes of 2011) is available at:
http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_00010050/sbx1_2_bill_20110412_chaptered.html
6. Executive Order B-18-12 is available at:http://gov.ca.gov/news.php?id=17508
7. AB 341, Chesbro, Statutes of 2011
http://www.leginfo.ca.gov/pub/11-12/bill/asm/ab_0301-0350/ab_341_bill_20111006_chaptered.html

California GHG Emissions

AB 32 established 1990 as the baseline year for determining California's GHG emissions. According to ARB's emission inventory, in 1990 there were 427 million metric tons of carbon dioxide-equivalent (MMTCO2e) emitted. Figure 4 shows the 1990 and 2020 "business-as-usual" GHG inventories, along with the GHG emissions reduction goals for 2020 and 2050. Significant investments will be needed to support the transformative technologies that are essential to reach the 2050 goal**.**

Figure 4
California Greenhouse Gas Emissions and Reduction Goals

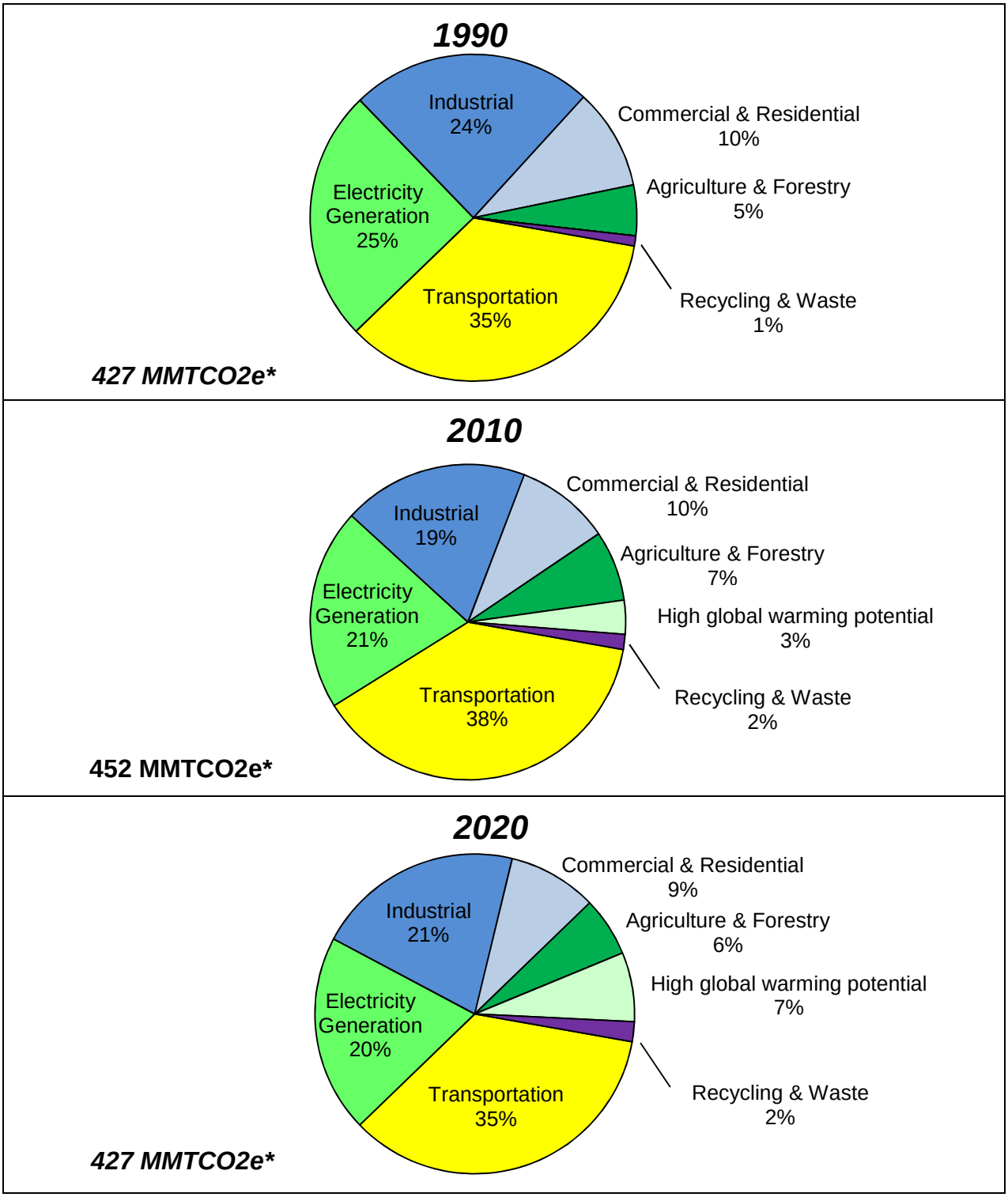


In Figure 5, GHG emissions by sector are presented for 1990, 2010 and 2020. The eight major sectors – transportation, electricity generation, industrial, commercial/residential, agriculture and forestry, high global warming potential gases, and recycling and waste – match the broad groups of emission sources identified in the 2008 *Climate Change Scoping Plan*. These sectors include the following types of emissions sources:

- Transportation- passenger vehicles; freight vehicles; buses; planes
- Electricity generation- electricity generated in and imported into California
- Industrial- fuel combustion for industrial processes; fugitive emissions
- Commercial/residential- fuel combustion (e.g. space heating, hot water, cooking) at commercial and residential facilities
- Agriculture and forestry- fuel combustion; crop growing and harvesting; livestock manure management; wildfires and controlled burns
- High global warming potential gases- air conditioner and refrigeration leaks; substitutes for ozone depleting substances
- Recycling and waste- landfills and waste management; composting

Emissions forecasts show that California is on track to meet the 2020 target of returning emissions to 1990 levels when factoring in the emissions benefits of adopted measures and programs. Figure 6 shows a more detailed breakdown of the measures and programs that are providing these benefits.

Figure 5
Statewide Greenhouse Gas Emissions by Sector –
1990 and 2010 Inventories and 2020 Forecast

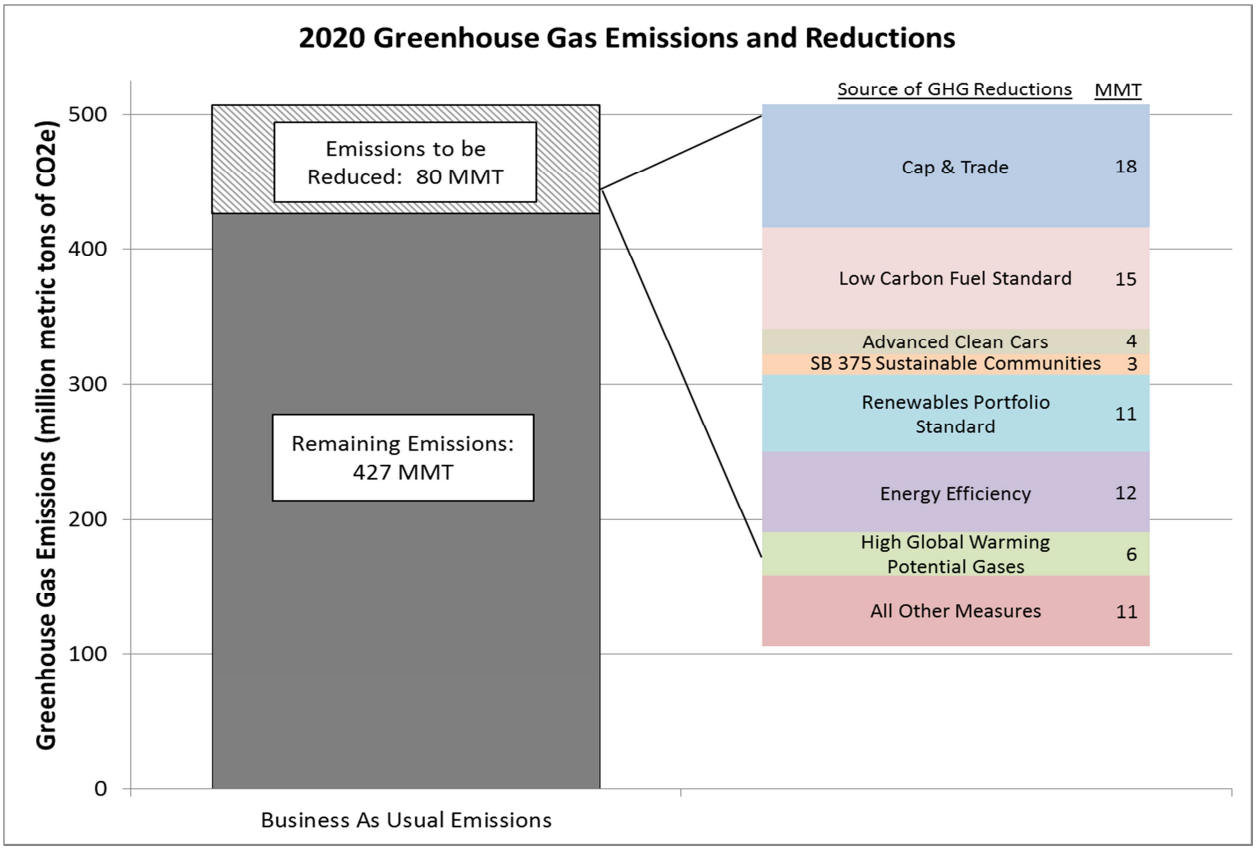


* MMTCO2e means "Million Metric Tons of Carbon Dioxide (CO2)-equivalent" emissions

GHG Emission Reduction Strategies

One of the requirements of AB 32 is that ARB must prepare and periodically update a Scoping Plan. The *2008 Scoping Plan* contains a comprehensive array of strategies, including the cap-and-trade program that is the source of the auction proceeds subject to this investment plan. These strategies are focused on the key sectors that account for most of the statewide GHG emissions inventory. Several key programs were adopted prior to passage of AB 32. These include the first greenhouse gas emission standards for cars, and the requirement that the percent of energy from renewable sources increase to 20 percent. These programs are delivering significant reductions in GHG emissions in California. However, because they existed prior to AB 32, ARB reflects them in the baseline of the GHG emissions inventory. Figure 6 shows the primary regulations and programs approved after AB 32 that are expected to deliver the GHG emissions reductions needed to the meet the 2020 mandate established by AB 32.

Figure 6



Note: the 427 MMT of remaining emissions has already been reduced to account for the benefits of baseline GHG reduction programs, like the first phase of GHG standards for cars, adopted by ARB prior to passage of AB 32.

V. Analysis of Gaps in Current Strategies to Meet Goals

As noted previously, the implementing legislation requires a gap analysis for the investment plan. Specifically, the investment plan shall –

> "*…analyze gaps, where applicable, in current state strategies to meeting the state's greenhouse gas emission reduction goals by sector…*"

To satisfy this requirement, we reviewed existing plans, programs and other State strategies that are designed to help achieve GHG emissions reductions in the various sectors. As illustrated by Figure 5, full implementation of existing State strategies will achieve the 2020 reduction target. However, extensive additional strategies are needed both to ensure ongoing maintenance of the 2020 limit – as population and related growth increase after 2020 – and to meet post-2020 goals.

Reaching the 2050 goal (80 percent below 1990 levels) will require far-reaching new approaches to how we plan our communities, how we move people and freight, how we power our State, how industries produce their products, how successful we are in treating waste as a source of energy, and how well we preserve California's lands and natural resources that sequester carbon.

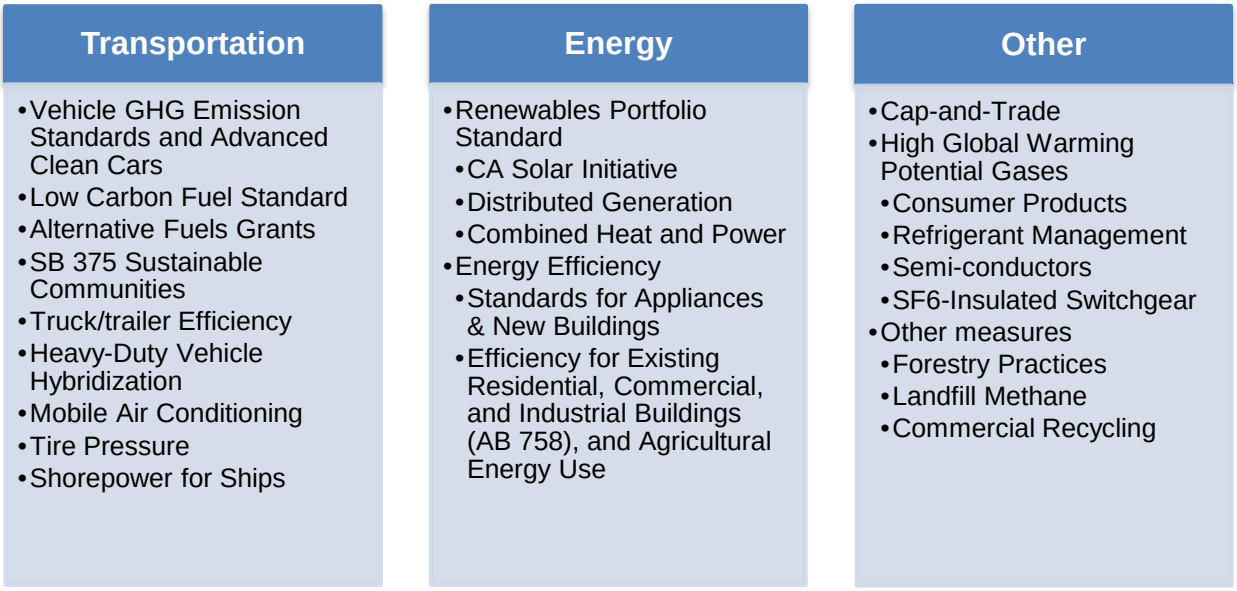
The conclusions from the gap analysis are reflected in the types of investment recommendations that are presented later in this document. Some project types are recommended for investment to support the current strategies for the 2020 GHG emissions limit, while other investments are vital to propel the changes that will enable us to meet post-2020 goals. For example, in the transportation sector, making investments now in zero-emission vehicles and equipment, improved infrastructure, and low-carbon fuels are essential to yield long-term GHG benefits and enable the post-2020 transformation to an integrated, efficient transportation system.

Strategies to Achieve 2020 GHG Emissions Reduction Target

Current strategies to achieve the 2020 GHG emissions reduction requirement are documented in the *2008 Scoping Plan*, including measures now being implemented throughout the Administration by many agencies. These measures are summarized below in Figure 7, focusing on the key sectors of transportation and energy. In addition, the State Agency Greenhouse Gas Reduction Report Card[1], published by CalEPA, details each agency's activities to reduce GHG emissions including estimates of actual GHG emissions reductions and a list/timetable for adoption of additional measures.

[1] The State Agency Greenhouse Gas Reduction Report Card is available at: http://www.climatechange.ca.gov/climate_action_team/reports/2013_CalEPA_Report_Card.pdf

Figure 7
Existing State Strategies to Meet 2020 Greenhouse Gas Emissions Reduction Target



In addition to the Scoping Plan, there are many other State documents that identify strategies to reduce GHG emissions, such as the following:

- Draft *California State Rail Plan* (2013)
- *Bioenergy Action Plan* (2012)[2]
- *Energy Efficiency Financing in California: Needs and Gaps* (2011)[3]
- *Complete Streets Implementation Action Plan* (2010)[4]
- *Long-Term Energy Efficiency Strategic Plan* (2008)[5]

While the Scoping Plan and these other documents map out strategies to meet the 2020 target, incentives and adequate program funding are critical for successful implementation, particularly during the early stages of technology development and deployment. Furthermore, these incentives and funding are critical to help ensure that the additional goals of AB 32, which are complementary to GHG emissions reductions, are also successfully met.

[2] The Bioenergy Action Plan is available at: http://www.resources.ca.gov/docs/2012_Bioenergy_Action_Plan.pdf
[3] Energy Efficiency Financing in California: Needs and Gaps is available at: http://www.cpuc.ca.gov/NR/rdonlyres/9A7637A9-BE7E-4762-B48F-93530D11DF8D/0/EEFinanceReport_final.pdf
[4] The Complete Streets Implementation Action Plan is available at: http://www.dot.ca.gov/hq/tpp/offices/ocp/complete_streets_files/CompleteStreets_IP03-10-10.pdf
[5] The Long-Term Energy Efficiency Strategic Plan is available at: http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency/eesp/

Strategies to Achieve Post-2020 GHG Emissions Reduction Goals

Many of the existing State strategies shown in Figure 7 will continue to deliver increasing benefits after 2020 (e.g., the Advanced Clean Cars regulations). Other actions identified in the *2008 Scoping Plan* will focus primarily on post-2020 GHG reductions, such as further development of the statewide rail modernization program, which will better integrate existing passenger rail and transit service with the future high-speed rail system, and act as an additional catalyst for transit-oriented and sustainable communities' development.

These existing and planned strategies alone will not be sufficient to achieve the necessary long-term GHG emissions reductions for the post-2020 goals. The *2013 Scoping Plan* update will begin the work to develop the blueprint for achieving long-term GHG reductions. The *2013 Scoping Plan* update process has already begun with a final document scheduled for ARB adoption in late 2013. The updated Plan will quantify progress towards the 2020 target, recognize regional and local climate initiatives, define climate priorities for the next five years, and begin the transition to post-2020 emissions reduction goals.

Where applicable, the Plan will highlight the need for new strategies and provide recommendations for a path forward (e.g., policies, research, infrastructure) to meet long-term targets. The Administration's proposal to begin the investments of auction proceeds in the 2014-15 budget year will allow time for ARB to complete the Scoping Plan update. The climate priorities and next steps in the Scoping Plan to meet the post-2020 goals will inform the recommendations for auction proceed expenditures in the 2014-15 budget cycle.

Additional analyses for post-2020 include, but are not limited to, the following:

- *Draft Vision for Clean Air: A Framework for Air Quality and Climate Planning* (2012)[6]
- *ZEV Action Plan* (2013)[7]

The *Vision for Clean Air* is a collaboration between ARB, the South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District that involves a coordinated look at future emissions projections and potential scenarios to meet California's long-term air quality and climate goals. Many of the technologies needed to meet GHG targets are the same technologies needed to attain health-based ambient air quality standards as required by federal and State law.

[6] The "Vision for Clean Air" document is available at: http://www.arb.ca.gov/planning/vision/docs/vision_for_clean_air_public_review_draft.pdf

[7] The "2013 ZEV Action Plan" is available at: http://opr.ca.gov/docs/Governor%27s_Office_ZEV_Action_Plan_%2802-13%29.pdf

For the transportation sector, the *Vision for Clean Air* analysis indicates that additional strategies will be needed to achieve post-2020 goals, including, but not limited to:

- **Technology Transformation:** Transformation and deployment of advanced, zero- and near-zero emission technologies, and renewable clean fuels.
- **Federal Action:** Federal actions, in addition to actions by state and local agencies and governments, to help clean up sources that travel nationally and internationally such as trucks, ships, locomotives and aircraft.
- **Efficiency Gains:** Greater system and operational efficiencies to mitigate the impacts of growth, especially in high-growth freight transport sectors and vehicle efficiency gains to reduce fuel usage and mitigate the cost of new technologies.
- **Energy Transformation:** Transformation of the upstream energy sector concurrent with the transformation to advanced technologies downstream.

The *ZEV Action Plan* contains strategies that will require action by 2020 to support the longer-term goal of having more than 1.5 million zero-emission vehicles (ZEVs) on California roadways by 2025. The ZEV Plan establishes milestones for building infrastructure, conducting research and expanding market share for ZEVs. Reaching these milestones will require additional investment and will result in significant GHG emissions reductions from passenger vehicles throughout California.

While the *Vision for Clean Air* and the *ZEV Action Plan* focus on the transportation sector, which accounts for the largest share of the statewide GHG emissions inventory, all major GHG sectors will be addressed in the Scoping Plan update. ARB, in collaboration with the Climate Action Team, is investigating the six focus areas shown below to identify opportunities for achieving post-2020 GHG emissions reductions:

- Transportation (including fuels, infrastructure and land use)
- Energy generation (including transmission infrastructure and efficiency)
- Waste
- Water
- Agriculture
- Natural resources

In addition to the *Vision for Clean Air*, the *ZEV Action Plan*, and the *2013 Scoping Plan* update, several agencies have projects underway that will include strategies resulting in post-2020 GHG emissions reductions:

- Governor's Office of Planning and Research, Environmental Goals and Policy Report (scheduled to be completed in 2013): This report will outline the State's environmental goals and define a framework to align decision making with these goals. The project will also identify a series of metrics and indicators that can be used to help inform decision making throughout the State.

- ARB Sustainable Freight Strategy (scheduled to be finalized by December 2014): This effort will outline the needs and steps to transform California's freight transport system to one that is more efficient and sustainable, including use of zero- and near-zero emission technologies over the next several decades. This project will be a collaborative effort with key partners in the fields of air quality, transportation and energy.

- Caltrans "California Transportation Plan 2040" (scheduled to be finalized in December 2015) and the "California Interregional Blueprint" (December 2012): These documents integrate statewide long-term modal plans for: highway, freight, rail, transit, and aviation.[8]

- ARB State Implementation Plan Update (scheduled to be finalized in 2015): This update will document the new strategies needed to achieve federal ambient air quality standards in each region. While this document will focus on criteria pollutant reductions, there will be substantial co-benefits for GHG emissions reductions.

- CEC Energy Efficiency Program for Existing Buildings (implemented in three phases through 2015 and beyond): AB758 (Skinner, Chapter 470, Statutes of 2009) requires the CEC to develop and implement a comprehensive program to achieve greater energy savings in the State's existing residential and nonresidential building stock, especially those structures that fall significantly below the efficiency required by the current California Building Energy Efficiency Standards (Title 24, Part 6 of the California Code of Regulations). [9]

The results of these efforts will yield valuable information to inform the Legislature during the annual budget deliberations for this three-year investment planning cycle.

[8] Information on Caltrans planning efforts is available at: http://dot.ca.gov/hq/tpp/californiainterregionalblueprint/index.shtml

[9] Information on the California Energy Commission's implementation of AB 758 is available at: http://www.energy.ca.gov/ab758/

VI. Disadvantaged Communities

As noted earlier, SB 535 directs the Secretary for Environmental Protection at CalEPA to identify disadvantaged communities. To meet the direction in SB 535, CalEPA has identified disadvantaged communities for investment based on a new tool called CalEnviroScreen. The Office of Environmental Health Hazard Assessment developed and will continue to refine this tool under CalEPA's guidance to identify areas that are disproportionately affected by pollution and areas with socioeconomically disadvantaged populations.

CalEnviroScreen includes 18 indicators divided into two broad categories: "burden of pollution," which includes exposures as well as environmental effects, and "population characteristics," which includes sensitive populations and socioeconomic factors.

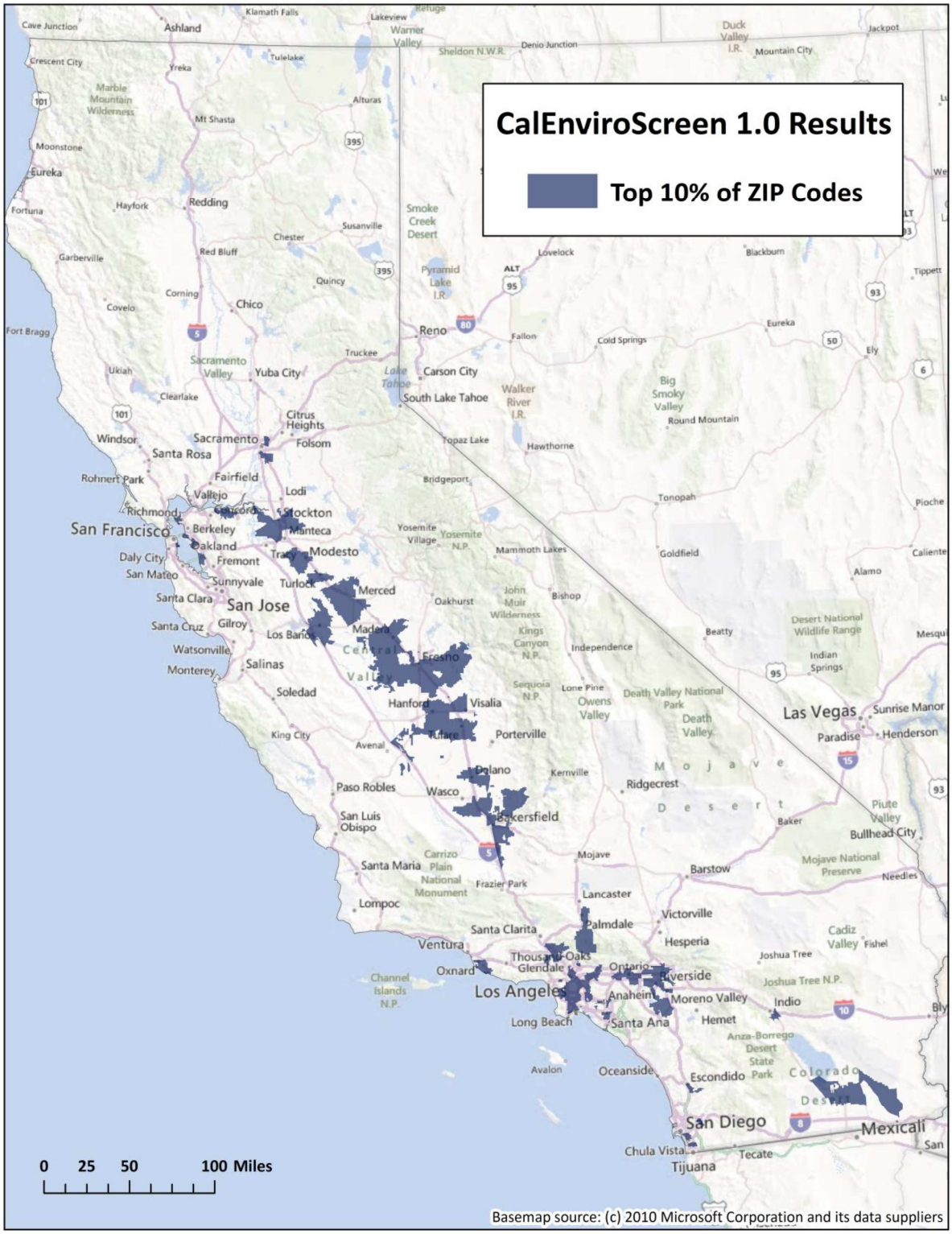
Each ZIP code in the state was assigned a value for each indicator relative to all other ZIP codes. The indicator scores were totaled to determine an overall CalEnviroScreen Score. The higher the score, the greater the impact.

Information on CalEnviroScreen can be found at: http://oehha.ca.gov/ej/index.html

CalEPA then identified the top 10 percent of the ZIP codes as "disadvantaged communities" for the purpose of investing auction proceeds. Those communities are shown in Figure 8 below. The population living in these ZIP codes is about 8 million, or about 21 percent of the 37 million people living in California. Appendix C provides greater visual resolution with regional maps of disadvantaged communities.

CalEnviroScreen is a screening tool that informs the identification of disadvantaged communities. As the tool evolves and community statistics change over time, CalEPA will periodically review and potentially update the maps of disadvantaged communities. The maps provided herein are from the April 23, 2013 CalEnviroScreen 1.0 version.

Figure 8
CALENVIROSCREEN VERSION 1.0 (APR 23 2013)
Top 10% Highest Scoring Census ZIP Codes - *Statewide*



VII. Governor's Budget Proposal

On January 10, 2013, the Governor released his proposed Budget for Fiscal Year 2013-14, which described his priorities for the investment of auction proceeds. Provided below is a brief description of the priorities and potential projects.

Transportation

"Transportation is the single largest contributor to GHGs in California (38 percent), and reducing transportation emissions should be a top priority…"

Examples of potential projects:

- Mass transit
- High speed rail
- Electrification of heavy-duty and light-duty vehicles
- Sustainable communities
- Electrification and energy projects that complement high speed rail

Electricity & Commercial/Residential Energy

"Electricity and commercial/residential energy is the second largest contributor of GHG emissions (30 percent) and the water sector is one of the largest users of electricity…"

Examples of potential projects:

- Home energy efficiency projects with financing incentives (Property Assessed Clean Energy - PACE program)
- Reduce energy used for water supply, conveyance, treatment

The Governor's proposal also noted other areas that should be examined during the planning process: sustainable agriculture practices (including the development of bioenergy), forest management and urban forestry, and the diversion of organic waste to bioenergy and composting.

In developing the investment plan, Finance coordinated with other State agencies to consider all of the areas addressed in the Governor's proposal as well as others that are potentially eligible under the implementing legislation described above.

VIII. Process for Identifying Priority Investments

To develop a list of recommended investments, we considered a large number of programs and projects that could potentially be funded, and then narrowed it down to a few key priority areas. The criteria for identifying investments were based on legislative direction, public comments, and Administration's efforts to prioritize and avoid duplication with other funding sources. We started with the transportation and energy priorities identified in the Governor's proposed State Budget for FY 2013-14, plus the objectives contained in AB 32 and the other implementing legislation described in this document:

- Maximize economic, environmental, and public health benefits.
- Create jobs.
- Improve air quality.
- Invest in projects that benefit disadvantaged communities.
- Provide opportunities for businesses, public agencies, nonprofits, and others to participate in efforts to reduce GHG emissions.
- Lessen the impacts and effects of climate change.

Consultation with Climate Action Team and State Agencies

Next, we consulted with members of the Climate Action Team and sought public input. The Climate Action Team (CAT) is chaired by Matt Rodriquez, California Secretary for Environmental Protection. Members include executive level representatives from the following State agencies, boards, and departments. Those marked with an asterisk "*" participated in the February 2013 public workshops and have been most actively involved in the development of the investment plan, along with executives from the Strategic Growth Council.

- *Air Resources Board
- *Business, Transportation and Housing Agency *(including the Department of Housing and Community Development, and the High Speed Rail Authority)*
- California Department of Fish and Wildlife
- California Department of Food and Agriculture
- *California Department of Transportation
- *California Department of Water Resources
- *California Energy Commission
- California Health and Human Services Agency
- California Natural Resources Agency
- *California Public Utilities Commission
- Department of Forestry and Fire Protection (CAL FIRE)
- Department of Resources Recycling and Recovery (CalRecycle)
- Department of Toxic Substances Control
- Governor's Office of Planning and Research
- State and Consumer Services Agency
- State Water Resources Control Board

The Labor and Workforce Development Agency (LWDA) and the Green Collar Jobs Council are also assisting CAT on the investment of auction proceeds. The LWDA's assistance included assessing the potential impact of the recommended priority investments on the State's labor market, in terms of both job creation and job-skill needs in the State's workforce. The recommended investments provide opportunities for workforce education and training programs that connect individuals in disadvantaged communities to good jobs that help reduce greenhouse gas emissions. The LWDA, through the Green Collar Jobs Council of the State Workforce Investment Board, will continue to work with the CAT, local agencies, and community stakeholders to identify effective workforce models and develop common principles to guide workforce education and training investments.

State agencies have worked closely together to develop the investment plan, holding nearly weekly meetings to develop the ideas presented in the Concept Paper and to take into account stakeholder comments from the public workshops, then refined those ideas for the Investment Plan.

The California Public Utilities Commission (CPUC) has participated in CAT discussions providing input on the scope of the investment plan and the recommendations for priority investments. ARB worked with the CPUC to ensure that the final Investment Plan is coordinated with, and does not conflict with or overlap with activities that CPUC oversees or administers to allocate the cap-and-trade proceeds generated from the sale of allowances consigned to auction by the Investor-Owned Utilities or other activities to facilitate GHG emissions reductions. In Decision D1212033 (Decision Adopting Cap-and-Trade Greenhouse Gas Allowance Revenue Allocation Methodology for the Investor-Owned Electric Utilities), the CPUC directed the utilities to distribute the auction proceeds to specified ratepayers as bill credits to ensure ratepayer benefits.

Public Process and Input.

In May 2012, Administration representatives held a public consultation meeting to hear advice from experts and input from the public about approaches to investment of auction proceeds. Written comments submitted following this meeting are posted at: http://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=investmentplan-ws

In February 2013, Finance and ARB released a draft Concept Paper on the investment of auction proceeds for public comment. High-level appointees from the Administration, including several representatives of the Climate Action Team then participated in three workshops in Fresno, Sacramento, and Los Angeles to obtain additional public input on the Concept Paper and supplemental material presented at the events. Written comments submitted following the workshops can be viewed at: http://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=2013investmentpln-ws

ARB held a public hearing on April 25, 2013 in Sacramento to obtain public input on a draft version of this investment plan. Written comments submitted for this hearing are posted at:
http://www.arb.ca.gov/lispub/comm/bccommlog.php?listname=ghgreductfund13

Commenters represented a broad array of different interests advocating for investment in a wide range of project areas including clean transportation, sustainable communities, energy efficiency, clean energy, natural resource management and preservation, agriculture, waste management and diversion, and disadvantaged community-focused projects. Appendix A includes a characterization of the project types recommended for investment by the workshop speakers.

Some organizations joined together to form coalitions and present coordinated comments, such as the SB 535 Coalition, Sustainable Communities for All, and the Transportation Coalition for Livable Communities. Appendix A includes a summary of the investment recommendations from these and other large coalitions.

IX. Recommendations for Priority Investments

The implementing legislation requires that the three-year investment plan identify programmatic investments that will achieve greenhouse gas reductions in furtherance of overall reduction goals and targets by sector. Potential investments with auction proceeds must support reductions in greenhouse gas emissions. These investments should also have the goal to deliver multiple co-benefits to protect our human and natural resources.

Introduction. This section provides recommended priority investments for consideration by the Legislature during their annual budget appropriation process. The intent is to provide information on potential investments that further the purposes of AB 32 and meet the requirements of the implementing legislation. Inclusion of a recommended investment in this plan does not guarantee funding. Ultimately, the Governor and Legislature will decide when funding will begin, which programs will be funded, and the level of funding, consistent with the final investment plan.

The draft investment plan encouraged agencies and the public to frame their suggestions for priority investments to enhance existing programs that could quickly expend additional funds. The public process and inter-agency discussions addressed existing programs, but also yielded a number of ideas about: (a) the opportunities to better integrate multiple existing programs with overarching guidance, (b) the potential to modify existing programs to better capture the intent of legislative direction (especially with regard to disadvantaged communities), and (c) the importance of considering creation of new programs for purposes where no current program exists.

Proposed Budgets. The Governor's January 2013 Budget had proposed investing $500 million from auction proceeds in programs furthering the purposes of AB 32 that were currently or could be funded by the General Fund. The Governor's May 2013 Budget proposes to provide a one-time loan of $500 million from the Greenhouse Gas Reduction Fund to the General Fund. This loan would include the auction proceeds for 2012-13 and 2013-14.

Timing. This short-term loan approach allows further time for agencies to design, develop, integrate, and/or modify their programs in a way that maximizes long-term greenhouse gas reductions. In addition, it will provide ARB time to complete the statutorily required update of the AB32 Scoping Plan due at the end of 2013, which can help inform better investment decisions. This approach is also fiscally prudent, particularly during this initial stage of program implementation, as the amount of auction proceeds that will be generated in 2013-14 is unknown.

Loaning the proceeds will not interfere with the objectives of the three year investment plan or AB 32 because it is short-term and the monies will be repaid with interest when necessary to meet the needs of the Fund. It is assumed that proceeds from the sale of allowances from 2014-15 forward will be available in the budget year to support the investment plan.

Recommended Priorities for Future Investment

Based on the consultation with representatives from the Governor's Office and members of the Climate Action Team, and in consideration of public input, we have narrowed the options down to recommend that investment priorities be focused on three key sectors, shown in Figure 9.

Figure 9
Investment Priorities –Recommendations

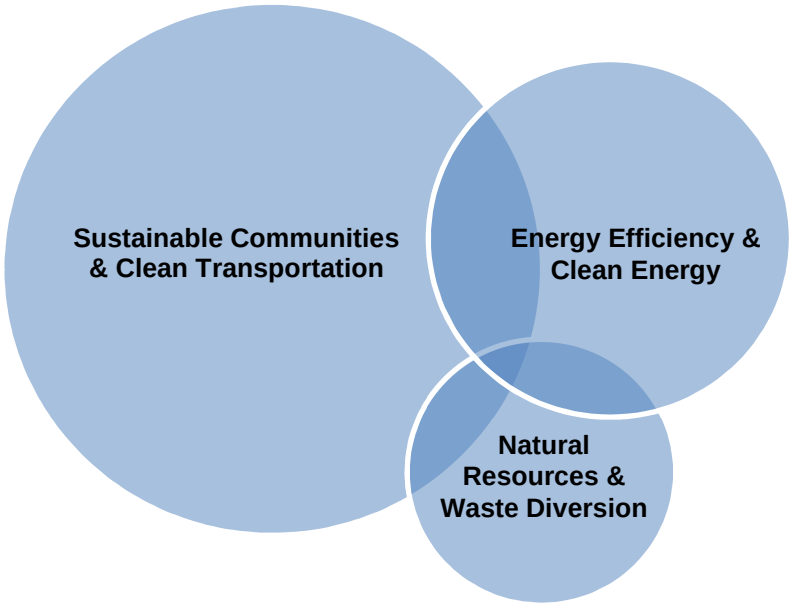


Figure 10 provides examples of projects recommended for consideration in subsequent years covered by this investment plan that support the purposes of AB 32 and are consistent with the priorities described above. We anticipate that a subset of these examples could be funded in the subsequent years of this investment plan.

SB 1018 sets forth the process by which agencies may seek appropriation of those funds (Gov. Code, § 16428.9(a)). This process would include describing:

(1) the proposed expenditure;
(2) how it will further the regulatory purposes of AB 32;
(3) how a proposed expenditure will contribute to reducing GHG emissions;
(4) how the agency considered the applicability and feasibility of other non-GHG objectives of AB 32; and
(5) how the agency will document results to comply with AB 32.

The amount of funding for projects located in and projects benefitting disadvantaged communities may vary between different programs. The detailed descriptions in Appendix B of investments recommended for consideration include target levels of funding to benefit disadvantaged communities to complement the minimum investments in projects located within those communities. Agencies that receive funding will be

responsible for ensuring that the overall requirements for investments in, and investments benefitting, disadvantaged communities are met.

Figure 10:
Example Projects that are Consistent with Recommended Investment Priorities for First Three-Year Investment Plan

Investment Priority	*Example Projects*
Sustainable Communities & Clean Transportation	• Sustainable Communities Strategies Implementation*, such as: rail modernization and system integration (including high speed rail); public transit with connectivity to rail; expanded transit and ridership programs; infrastructure; livable communities and transit-oriented development; active transportation • Development and implementation of plans for Sustainable Communities Strategies* (e.g., local SCS, general and specific plans to implement SCS) • Low-carbon freight equipment and zero-emission passenger transportation; plus necessary fueling/charging infrastructure
Energy Efficiency and Clean Energy	• Residential: Energy efficiency/clean energy financing and weatherization retrofits for low-income households • Public: Water system and use efficiency, such as energy efficiency in water pumping/conveyance, and use of biogas from wastewater treatment plants to generate energy or fuels • Industrial/Agricultural: Energy efficiency improvements
Natural Resources & Waste Diversion	• Forests and Ecosystem Management: Management, restoration and conservation easements; and other practices to sequester carbon and reduce black carbon (e.g., urban forestry, fire suppression) • Agricultural Management: Conservation easements for agricultural land; practices to reduce GHG emissions (e.g., fertilizing materials, dairy digesters) • Waste Diversion: Reduction, recycling and other diversion

* *These projects should focus on regions and communities that have done the coordinated planning to develop a Sustainable Communities Strategy – if the region is required to do so by SB 375, the Strategy must also be approved by ARB as meeting the assigned GHG emissions reduction targets.*

Rationale for Recommendations

The recommended investments shown above all support the purposes of AB 32 and will help achieve significant GHG emissions reductions. Appendix B contains additional information on the recommended projects highlighted below, along with descriptions of existing incentive programs and the State agencies that administer those programs (for implementation directly, through contractors, or through regional/local agencies).

Sustainable communities and clean transportation

It is recommended that this investment category receive the largest allocation. The transportation sector is the largest contributor of both GHGs and criteria air pollutants, and it is clear that California's transportation system will need to be transformed to achieve GHG emissions reduction targets and air quality standards. We must transition to cleaner, renewable fuels, cleaner vehicles, and a more efficient infrastructure to meet clean air goals.

The State must look to invest new funding in rail modernization, including expanded transit, passenger rail, and high-speed rail service, as well as programs that encourage a change in land-use patterns and mode shift by contributing to transit-oriented development, sustainable communities, and active transportation programs. In addition, the state needs to fund programs that modernize existing road systems to promote efficient use, such as complete streets and traffic management technologies.

This section recognizes the need to address both clean transportation and the communities connected by our transportation networks.

Sustainable communities. SB 375 (Steinberg, Chapter 728, Statutes of 2008) directs regions to integrate development patterns and transportation networks in a way that achieves passenger vehicle GHG emissions reductions while addressing housing needs and other regional planning objectives. SB 375 requires ARB to develop regional reduction targets for GHG emissions from passenger vehicles (see Table 1 for the regional targets). Each of California's metropolitan planning organizations (MPOs) must prepare a "Sustainable Communities Strategy" (SCS) that demonstrates how the region will meet its GHG targets for 2020 and 2035 through integrated land use, housing, and transportation planning. The adopted SCS plans to date show an increased focus on more sustainable land use and development patterns to reduce GHG emissions, cut air pollution and provide better mobility options.

Investment in land use planning and transportation infrastructure and operations is needed to implement the goals of SCS plans and support sustainable development efforts at the regional and local level. In particular, several activities are essential. These include: support of the SCS development process at the regional level, development of local planning efforts to reflect each regional Strategy, and implementation of specific projects at the local and regional levels to support development of sustainable communities.

Table 1
ARB Greenhouse Gas Emission Reduction Targets
for Major Regions under SB 375

Metropolitan Planning Organization (MPO) Region	Targets *	
	2020	2035
Southern California Association of Governments (SCAG)	-8	-13
Metropolitan Transportation Commission (MTC)	-7	-15
San Diego Association of Governments (SANDAG)	-7	-13
Sacramento Area Council of Governments (SACOG)	-7	-16
8 San Joaquin Valley Councils of Governments	-5	-10
Tahoe Metropolitan Planning Organization	-7	-5
Shasta Regional Transportation Agency	0	0
Butte County Association of Governments	+1	+1
San Luis Obispo Council of Governments	-8	-8
Santa Barbara County Association of Governments	0	0
Association of Monterey Bay Area Governments	0	-5

* Targets are expressed as percent change in per capita GHG emissions relative to 2005.

Coordinating investments to implement Sustainable Communities Strategies and related projects will support more cost-effective implementation of SB 375 and AB 32. The Strategic Growth Council is best suited for this role. In February 2013, the Strategic Growth Council directed staff to work with member agencies and departments to develop a set of self-review criteria to guide their internal infrastructure investments in a manner consistent with the State Planning Priorities and the State's Environmental Goals and Policy Report. It is expected that this effort will result in a proposal for Council consideration in late 2013.

Once the Council representatives approve final criteria, the agencies should then consider the criteria when making subsequent discretionary allocations to fund infrastructure investments, including Sustainable Communities Strategies implementation and related local plans. A related staff report is available at: http://www.sgc.ca.gov/meetings/20130215/feb2013-infrastructure-revised.pdf.

Clean transportation. While there are many successful existing programs that provide incentives for transportation projects, the current level of funding is not sufficient to meet the existing demand and support the large-scale deployment of alternative technologies in the long-term. The recommended investments in clean transportation support the purposes of AB 32 and provide substantial co-benefits by reducing criteria and toxic air pollutants, thereby improving public health and helping us achieve air quality standards. Reductions in diesel soot not only lower the localized health risk, but also cut the black carbon that acts as a powerful, short-lived climate forcing pollutant. Low-carbon freight strategies would be particularly beneficial for disadvantaged communities located near ports, rail yards, freeways, and distribution centers. Other key advantages include

availability of match/leveraged funding, opportunities for local/regional programs, and consistency with Scoping Plan measures.

Energy efficiency and clean energy

It is also recommended that the energy efficiency and clean energy sector receive a significant allocation of auction proceeds. The energy sector represents the second largest portion of GHG emissions and California will need to improve energy efficiency and increase the use of clean renewable energy to achieve GHG reduction targets. There are other programs and funding sources that provide incentives for energy projects beyond the auction proceeds covered in this investment plan (e.g., the Proposition 39 Clean Energy Job Creation Fund; the Electric Program Investment Charge (EPIC); the proceeds from the consignment of Investor Owned Utility allowances to auction; etc.) This plan is designed to avoid duplication of funding with these programs.

In addition, the recommended energy investments offer significant opportunities to provide jobs, including jobs in small businesses, and to be located in disadvantaged communities. Other key advantages include reduced energy costs for consumers, energy independence/diversity, reduced criteria pollutants, and consistency with Scoping Plan priorities.

Natural resources and waste diversion

Projects in the natural resources and waste diversion category are also recommended for funding consideration. While this combined category represents less than ten percent of GHG emissions, there is potential for achieving greater reductions and realizing significant co-benefits to human health and the environment. For example, fuels treatments to reduce catastrophic wildfire provide co-benefits for public health and safety, property protection, and natural resources. Globally, this category represents a major source of GHG emissions. Innovative sequestration or emissions reduction projects in this sector provide a significant leadership opportunity for California. These projects offer many opportunities to be located in and benefit disadvantaged communities (e.g., urban forestry, agricultural land conservation), and waste diversion efforts would support California's statewide 75 percent recycling goal.

Co-Benefits of Investment Priorities

In addition to achieving GHG emissions reductions, the recommended investments in all three categories would provide substantial co-benefits, such as reducing air pollution, improving public health and helping achieve air quality standards. These investments also offer significant opportunities to provide jobs (e.g., energy efficiency upgrades; weatherization retrofits; renewable energy installations; infrastructure construction, urban forestry, etc.). Other key advantages include reduced energy costs for consumers, reduced water costs from conservation efforts, and increased support for local/regional programs. For all of the recommended areas, investments may provide opportunities for

small businesses to be involved in implementing projects and to improve their own operations.

Ability of Investment Priorities to Benefit Disadvantaged Communities

Almost all of the recommended projects could either be located in disadvantaged communities (e.g., active transportation, urban forestry, weatherization retrofits, affordable housing) or could benefit disadvantaged communities (e.g., low-carbon freight; improved transit). The amount of funding for projects located in disadvantaged communities may vary among different programs. For example, certain types of projects naturally lend themselves to having a greater benefit to disadvantaged communities. It is likely that those projects, such as weatherization or urban forestry, will exceed the minimum requirements established in SB 535 with a high percentage of funds expended in disadvantaged communities. Other projects will need to direct the deployment of funds in order to meet the targets. Overall, the percentage of funding in these areas will need to be high enough to satisfy the requirements of the implementing legislation.

To determine a benefit, agencies could include any combination of economic, environmental, emissions or health benefits to the identified disadvantaged communities. It is important that agencies use a consistent approach to identify investments in and benefits to disadvantaged communities. Further guidance will be developed for the implementation of the SB 535 requirements that agencies receiving funding will be responsible to meet.

Process for Accessing Funds

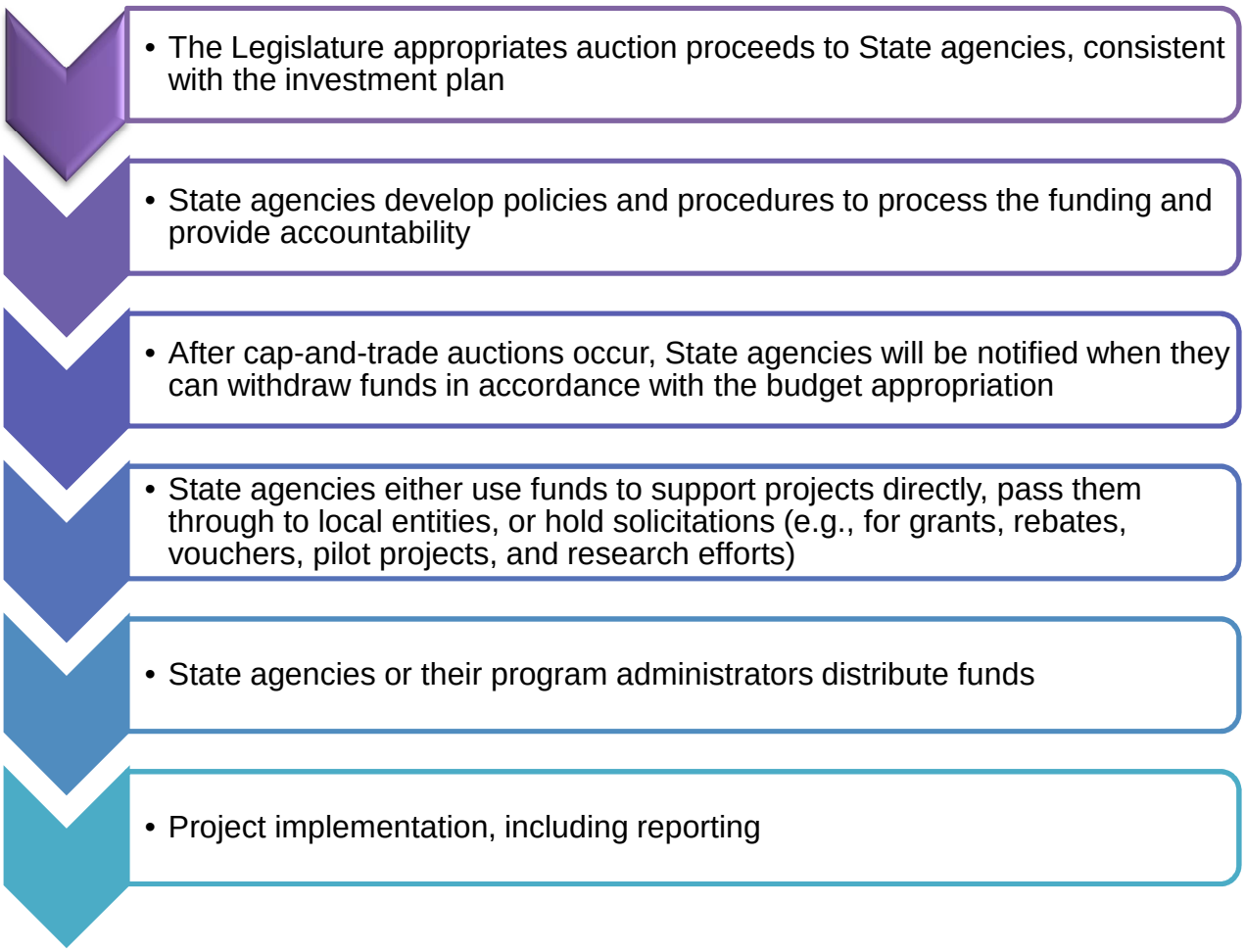
SB 1018 set forth several requirements that need to be met to access funding, which are described earlier in this chapter of the investment plan. Demonstrating how a proposed project meets the requirements of AB 32, AB 1532, and SB 535 is crucial to provide strong accountability for each project that receives proceeds.

One of the planning challenges is preparing an investment plan when the amount of auction proceeds to the State each year is unknown until after the last auction that takes place during the budget year itself, and the amount raised at each auction will vary. The Administration's decision to propose the short-term loan to the General Fund allows agencies further time to design and develop their programs in a way that maximizes long term greenhouse gas reductions. This approach is fiscally prudent, particularly during this early stage of program implementation, as the amount of auction proceeds that will be generated in 2013-14 is unknown.

Project implementation will require a multi-stage effort and the involvement of several agencies as illustrated in Figure 11. It is assumed that proceeds from the sale of allowances from 2014-15 forward will be available in that budget year to support the investment plan. In that funding cycle, we expect a focus on enhancing existing programs because agencies with established programs will then be ready to get projects

started. Subsequently, there will likely be more opportunities for new or revised programs that need more time to ramp up.

Figure 11
Overall Process for Project Implementation



Distribution of Funds by State Agencies

The implementing legislation does not specify how proceeds will be distributed throughout California. During workshops, some commenters suggested that funds should be distributed based on population, while others thought funds should be returned to the sectors that generated auction revenue (e.g., if allowances for the transportation sector raised half of the total revenue, half of the proceeds should go to transportation projects).

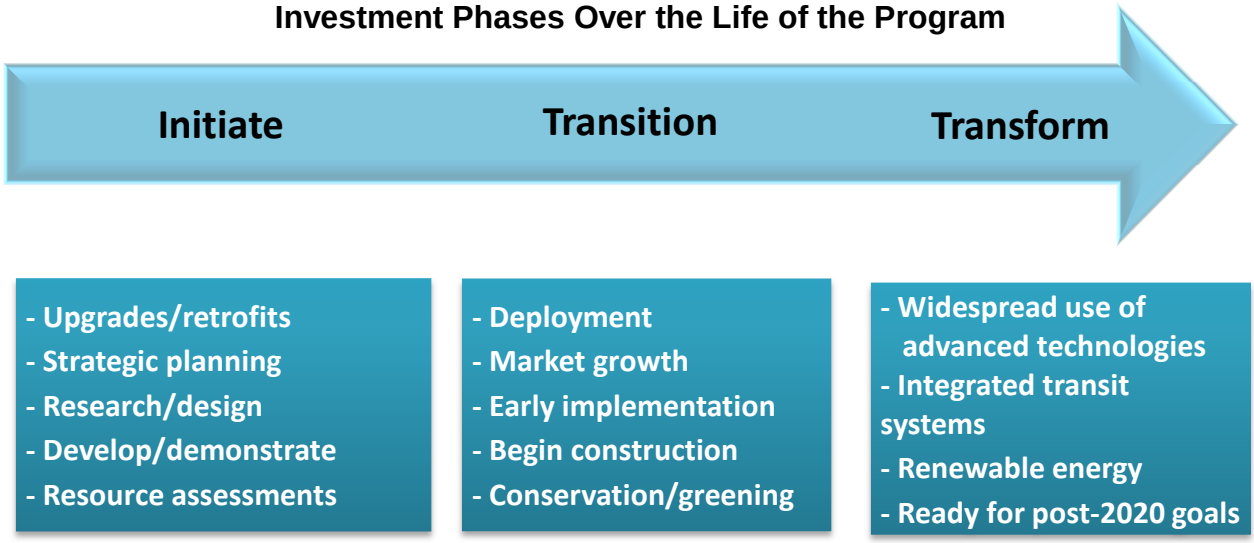
This investment plan does not recommend a uniform distribution method. Due to the wide variety of programs that could potentially be funded and the uncertainty of the revenue that will be raised, program design will determine how funding is allocated. The detailed descriptions in Appendix B provide additional information on potential distribution methods for different project types.

Investment Phases

Although the legislation requires the development of a three-year investment plan, it may be useful to consider investments throughout the life of the program (beyond the first three years) in a few phases, as illustrated in Figure 12. The initial funds would be used as a short-term loan to the General Fund. For subsequent phases, investments could primarily focus on enhancing existing programs that can be expanded to support further GHG emissions reduction projects, data collection for resource assessments, as well as long-range planning to guide infrastructure development for sustainable communities. During the transitional period, investments could target deployment of advanced technologies, market growth for low-carbon equipment, urban greening and land conservation. In the long-term, investments could help implement the transformational changes that will be needed to attain widespread use of advanced technologies, development of renewable energy, and reach our long-term GHG emissions reduction goals.

It is expected that future investment plans will reflect programs and projects that may not be included in this investment plan, but will be needed as we progress through the various phases shown below.

Figure 12
Investment Phases Over the Life of the Program



X. Accountability for Administering Agencies

An important element of this investment plan is to ensure accountability and provide direction to agencies that will be responsible for the programming, allocation and/or expenditure of the State portion of cap-and-trade auction proceeds. Agencies that receive Fund appropriations are considered "administering agencies" that will be responsible for developing policies and procedures to ensure fiscal and program accountability. With Legislative oversight, administering agencies will expend cap-and-trade auction proceeds in a responsible and legal manner, consistent with purposes of AB 32.

All administering agencies need to have accountability plans that address the guiding principles for investment and implementation provided below, as well as additional requirements. These plans will need to be submitted to Finance for review and approval. Once approved, the plans are to be posted on the program website.

This is similar to the bond accountability approach developed by Finance for State agencies implementing Propositions 84 and 1B-1E approved by the voters in 2006. For auction proceeds, State agency accountability plans will need to address front-end accountability, in-progress accountability, and follow-up accountability as defined for this new program. Some agencies can meet the accountability plan requirement by using existing plans that include all of necessary elements. For other agencies, it may be necessary to modify their existing policies and procedures or develop new plans to ensure accountability and transparency.

Investment Principles

1. Investments must further the purposes of AB 32. All investment proposals must show how proposed expenditures will further the purposes of AB 32, to be eligible to receive potential funding. Specifically, to comply with SB 1018 (Government Code section 16428.9(a)), this should include a description of:

    - The proposed expenditure;
    - How it will further the regulatory purposes of AB 32;
    - How a proposed expenditure will contribute to achieving and maintaining GHG emissions;
    - How the agency considered the applicability and feasibility of other non-GHG objectives of AB 32; and
    - How the agency will document results to comply with AB 32.

2. Investments should focus on two broad project types:

    - Projects that achieve near-term GHG emissions reduction.
    - Projects that support development of the transformative technologies/approaches needed to achieve the State's long-term GHG emissions reduction goals and maximize air quality co-benefits.

3. Investments should be prioritized toward sectors with both the highest GHG emissions and the greatest need for future reductions to meet GHG goals.

4. State agencies should seek to maximize investments in and benefits to disadvantaged communities wherever possible.

5. Investments should foster job creation, including opportunities for training to amplify investment benefits, and maximize economic benefits for California wherever possible.

6. Investments should consider the State's planning principles as set forth in AB 857 (Government Code section 65041.1) to promote infill development and equity; to protect environmental and agricultural resources; and to encourage efficient development patterns.

7. Investments should be coordinated with other local, state, and federal funding programs and avoid duplicative efforts. The State should coordinate its clean energy, transportation, and climate change investments to maximize their impacts and, where possible, utilize existing programs and processes.

8. Funding should leverage private and other government investment to the maximum extent possible.

Implementation Principles

Complementing the investment principles are implementation principles that guide how the State agencies that receive appropriations for auction proceeds will administer their programs. Each agency will need to provide for accountability and transparency in the implementation process as noted in the four principles below:

1. State agencies should maximize transparency in program implementation.

    - Ensure information on funding opportunities is easily accessible to potential applicants, including those in disadvantaged communities.

    - Ensure that any funding solicitations, requests for proposals, notices of funding availability, etc. provide clear description of project requirements, timelines, deliverables, and the criteria that the State agency will use to evaluate proposals.

    - Ensure that information about the funding is readily accessible to the public. This may involve creation of a website to track agency/department expenditures of auction proceeds.

- Ensure information on program status and outcomes is reported annually to Finance and is easily accessible to the public, including but not limited to:

    - Estimated GHG emissions reduction benefits and the basis for these estimates (*where quantifiable);*
    - Other quantifiable metrics for the program (*e.g., number of zero-emission vehicles funded, gallons of fuel reduced, megawatts of solar power installed, megawatts of reduced energy use for energy efficiency upgrades, number of homes weatherized, number of jobs created through expenditure of funds , etc.*)
    - Percentage of funding for projects located in disadvantaged communities; and
    - Percentage of funding for projects providing benefits to disadvantaged communities and description of how the projects benefit disadvantaged communities without being located in them.

2. State agencies should maximize accountability in program implementation.

    - Establish or confirm that policies and procedures are in place before expending funds to ensure efficient and timely implementation in accordance with statutory requirements. These should include procedures for monitoring and evaluating projects in progress and ensuring the availability of a trained workforce to implement programs.

    - If any agency utilizes funding award agreements, include the necessary components for accountability (e.g., measureable objectives, recordkeeping provisions, provided State access to documents for program reviews and audits, and consequences for non-performance).

3. State agencies should provide support to disadvantaged communities to ensure potential project recipients in these communities are able to access funds and that the statutory investment requirements for disadvantaged communities are met.

4. State agency funding proposals should specify the agency's costs for administering projects, as well as the administrative/overhead costs for funding recipients, as appropriate, in order to provide the full accounting of administrative costs.

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Appendix A

February – April 2013
Public Input on Investment of Cap-and-Trade Auction Proceeds

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Appendix A

Part 1:
Funding Recommendations from Speakers at Public Workshops and Hearing

In this section, we summarize the project types recommended for funding by commenters who spoke in February 2013 at the three public workshops or at the April 2013 public hearing on the investment of auction proceeds. Most speakers also submitted written comments. To view all of the written comments, please see the program website at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm

FRESNO PUBLIC WORKSHOP – February 19, 2013

Clean Transportation & Sustainable Community Planning

- Active transportation (bike lanes, pedestrian access)
- Clean transportation
- Expand public transit and provide transit assistance
- Infill housing
- Smart growth/transit-oriented development
- Near-zero, rather than zero-emission vehicles (what works in Los Angeles may not work in the Valley)

Energy Efficiency/Clean Energy

- Residential energy efficiency programs
- California solar initiative programs, particularly for low-income households
    - MASH: Multifamily Affordable Solar Homes
    - SASH: Single Family Affordable Solar Homes

Natural Resources/Waste Diversion

- Urban forestry
- Preservation/conservation of agricultural land

Coalitions (mentioned by multiple speakers)

- SB 535 Coalition
- Sustainable Communities for All

General theme: Focus on rural areas and disadvantaged communities.

SACRAMENTO PUBLIC WORKSHOP – February 25, 2013

Sustainable Community Planning and Clean Transportation

- Expand public transit and provide transit assistance
- Affordable housing and infill housing
- Active transportation (bike lanes, pedestrian access)
- Clean transportation (ZEVs, near-ZEVs)
- Transit-oriented development
- All fuels proceeds should go to transportation projects

Energy Efficiency/Clean Energy

- Residential energy efficiency programs
    - e.g., PACE, on-bill repayment, pay as you save
- Renewable/Solar energy programs (e.g., CA Solar Initiative), particularly for low-income households
    - MASH: Multifamily Affordable Solar Homes
    - SASH: Single Family Affordable Solar Homes

Natural Resources/Waste Diversion

- Forest conservation and restoration
- Urban forestry and parks
- Preservation/conservation of agricultural land and open spaces
- Delta wetlands restoration
- Water conservation, capture and storage
- Composting/waste diversion (yard & food waste)

Coalitions (mentioned by multiple speakers)

- SB 535 Coalition
- Sustainable Communities for All
- Transportation Coalition for Livable Communities
- Santa Monica Mountains Conservancy
- Consortium of natural resource and working lands groups

General theme: Partner with local agencies and non-profits to expand existing programs (energy/water efficiency) and for outreach to disadvantaged communities.

LOS ANGELES PUBLIC WORKSHOP – February 27, 2013

Sustainable Community Planning and Clean Transportation

- Active transportation (bike lanes, pedestrian access)
- Expand public transit and provide transit assistance
- Affordable housing and retrofit housing
- Transit-oriented development
- Improved maintenance of existing infrastructure
- Zero and near-zero freight transportation

Energy Efficiency/Clean Energy

- Solar energy

Natural Resources/Waste Diversion

- Urban forestry
- Composting/waste diversion
- Preservation/conservation of agricultural land and open spaces
- Water conservation
- Recycling

Coalitions (mentioned by multiple speakers)

- Southern California Association of Governments
- SB 535 Coalition
- Transportation Coalition for Livable Communities

General theme: Focus on active transportation that will improve health for people living in disadvantaged communities. Utilize local resources for outreach to people living in communities of opportunity.

SACRAMENTO PUBLIC HEARING – April 25, 2013

General Comments

- Strong local/regional role for project implementation
- Ensure accountability
- Include small businesses

Sustainable Communities and Clean Transportation

- Transit-oriented development
- Affordable housing near transit
- Support transit operations, expand public transit, provide transit assistance
- Zero and near-zero emission vehicles and equipment
- Include local air districts
- Coordinate transportation and land use
- Active transportation (bike lanes, pedestrian access)
- Vessel speed reduction

Energy Efficiency/Clean Energy

- Low-income energy efficiency and solar energy
- Energy efficiency and financing assistance

Natural Resources/Waste Diversion

- Urban forestry and community parks
- Forest management and conservation
- Preservation/conservation of agricultural land, wetlands, fish/wildlife habitat
- Prevent urban sprawl
- Waste diversion (e.g., generate bioenergy, produce low-carbon fuels)
- Preservation/conservation of agricultural land, wetlands, fish/wildlife habitat

Coalitions (mentioned by multiple speakers)

- SB 535 Coalition
- Sustainable Communities for All
- Transportation Coalition for Livable Communities

General theme: Widespread overall support for the proposed priorities in the draft investment plan with some recommendations for improvement.

Appendix A

Part 2:
Characterization of Investments Recommended by Coalitions

In this section, we highlight the types of investments recommended by several coalitions of groups and individuals who spoke at the public workshops, provided testimony at the public hearing, and/or submitted written comments on behalf of large groups. To view all of the written comments, please see the program website at: http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/auctionproceeds.htm

- **Transportation Coalition for Livable Communities**. They request that the investment plan provide a uniform framework and competitive grant-funding process for Metropolitan Planning Organizations (MPOs) or Transportation Agencies (if outside an MPO) to implement neighborhood-scale development projects consistent with their approved Sustainable Communities Strategy/Alternative Planning Strategy or Regional Transportation Plan (if outside a MPO). Specifically, they request that the investment plan should:

  1. Allocate auction revenue from fuels to implement the AB 32 regulatory program to reduce GHG emissions from transportation.
  2. Favor cost-effective and integrated transportation and land use strategies.
  3. Allow flexibility at the regional and local level to develop most cost effective projects.
  4. Assist local governments in meeting regional GHG reduction goals.
  5. Create performance-based approach to maximize regional flexibility with improved modeling and verification systems to ensure effective results.
  6. Promote innovation, collaboration, economic development and rural sustainability.
  7. Support co-benefits: air quality, public health, resource protection, equity, affordable housing, agriculture, and safety.

- **Sustainable Communities for All**. They request that the investment plan provide opportunities for improved transportation, energy conservation, and transit-oriented development, especially for lower-income individuals, in ways that allow all Californians to drive less and reduce household costs while realizing better air quality and reduced GHG. Specifically they want the investment plan to:

  1. Expand or improve public transit service, with significant funding for operations to quickly expand service and increase ridership.
  2. Support unmet transit capital maintenance needs.
  3. Develop and rehabilitate transit-oriented residential development that is affordable to low-income households and provides trip reduction strategies such as transit passes and car share.

4. Expand bicycle and pedestrian networks, facilities and programs that promote additional use and safety and provide access to transit, schools, colleges, shopping and other destinations.
5. Expand vanpool, car share and carpool promotion programs.
6. Implement transportation demand management strategies and incentives that reduce both vehicle travel and ownership, such as discounted transit passes in transit priority zones.
7. Invest in energy efficiency improvement in existing multifamily rental homes affordable to low-income households.
8. Modify and/or maintain roadways in a way that creates complete streets and/or provides dedicated transit lanes.

- **SB 535 Coalition**. They request that the investment plan produce an inclusive, transparent and accountable funding process that invests in high priority needs where benefits must outweigh burdens. This group is supportive of OEHHA's CalEnviroScreen tool. Specific opportunities for investment identified by this group cover both near-term and long-term priorities.

  1. Near-term priorities include: Community Greening and urban forestry (CAL FIRE Urban and Community Forestry Program), low-income energy efficiency & weatherization assistance programs, renewable energy programs (e.g. SASH/MASH), transit operations (State Transit Assistance), and Transit-Oriented Development (affordable housing program).
  2. Long-term priorities include investments to: develop active transportation infrastructure and transportation hubs, ZEV goods movement/freight, strategic planning for sustainable infrastructure, e.g. Transit-Oriented Development, energy efficiency and clean energy retrofits financed through on-bill refinancing, zero interest loans, etc. They would like to see a pilot project of microgrid infrastructure developed in disadvantaged communities.

- **California Air Pollution Control Officers Association**. Their overarching goals for the investment plan are to maximize reductions in co-pollutants (criteria and toxic air pollutants) and to maximize the use of existing program structures and processes. They request that available tools be enhanced, specifically OEHHA's CalEnviroScreen. Specific opportunities for investment were identified by sector and then by both near- and long-term strategies. They include:

  1. Low carbon transportation and infrastructure. Near-term investments such as increasing turnover of gross polluting on- and off- road engines, incentives and infrastructure for ZEV, and incentives for voluntary decrease in ocean going vessel speed. Long-term investments include ZEV freight and goods movement and advancement of technology for mobile sources.
  2. Strategic planning for sustainable infrastructure. Support development and implementation of Sustainable Communities Strategies and Local Climate Action Plans.

3. Energy Efficiency and Clean Energy. Near-term investments include incentives for retrofits in residential and industrial applications. Incentives and development of distributed generation and clean renewables and technology for waste-heat reuse. Long-term investments include research and development for energy storage and distributed generation for grid reliance especially as it relates to mobile sources.
4. Natural Resources and Solid Waste Diversion. Near-term investments in urban forestry with co-benefit of creating jobs, incentives to reduce residential wood burning, and electrification of agricultural internal combustion engines. Long-term investments to demonstrate and develop waste-to-fuel technologies.

- **Southern California Council of Governments (SCAG).** This coalition of SCAG members and supporters endorse the Transportation Coalition for Livable Communities proposal and SB 535. They request that the investment plan consider the statutory requirements of SB 375 including the cost effectiveness of sustainable transportation investments when determining priority for funding. Specifically, they propose that the investment plan include the following:

  - Funding for the development of statewide models, data sharing; and analytical tools used to demonstrate emission reductions.
  - Funding for: Active Transportation, Transportation Demand Management Strategies, Transportation Systems Management Strategies, Land Use, Public Transit, Goods Movement Systems, Regional Strategic Planning and Performance Monitoring, and Zero Emission Vehicle infrastructure planning and development.

- **State Water Project /State Water Contractors**. This group requests funding opportunities for the Department of Water Resources to enhance pumping plant and generation plant efficiencies, add renewable energy sources to help power the State Water Project pumps, and remove barriers to pump-back operation at the Oroville hydropower facility. Specific proposals include:

  1. Funding to Department of Water Resources for solar and other renewable projects; refurbishment and replacement of pumps and generators to improve energy efficiency; and implementation of water resource programs (such as recycled water, water conservation, and urban storm water capture and use).
  2. Funding for a study on improving pump-back capabilities for the Hyatt-Thermalito Complex. The goal of this study is to increase the potential for energy storage while maintaining cold water habitat needed to protect endangered salmon habitat in the Feather River below the Oroville facilities.

- **Working Lands Coalition**. This Coalition's overarching goal is to preserve open space and agricultural lands in a way that promotes compact development in existing urban/suburban areas. They request funding to enhance existing conservation easement and farmland mapping programs, such as the California Farmland Conservancy Program, the Rangeland, Grazing Land and Grassland Protection Program and the California Farmland Mapping and Monitoring Program. Specific funding mechanisms include:

  1. Williamson Act subvention program.
  2. Linking Williamson Act subvention incentives for counties, and planning money for cities and counties, to the adoption of strong agricultural and open space protection programs that support the regional Sustainable Communities Strategies.

- A consortium of California's environmental, health, and community organizations provided an *AB 32 Program Investment Statement*. As a threshold requirement, they believe all investments should support AB 32 goals to reduce greenhouse gas emissions and that the use of auction revenues should also take into account other dedicated funding sources to reduce GHG emissions. They believe the funding process should be coordinated across state agencies, monitored, and reported. This group proposes that appropriate AB 32 program investments in quantifiable GHG reductions:

  1. Support sustainable land use, affordable transit-oriented housing, clean passenger vehicles, transit and freight transportation.
  2. Increase biological carbon sequestration on and reduce emissions from natural and working landscapes and urban forests through restoration and conservation.
  3. Reduce waste while increasing California-based manufacturing associated with low-carbon recycled content goods.
  4. Advance renewable energy and energy efficiency technologies, including water efficiency.
  5. Protect and prepare communities most vulnerable to public health impacts related to climate change.
  6. Ensure investments in identified disadvantaged communities.

- **Compost Coalition**. This coalition recommends that the investment plan support the diversion of organic waste to bioenergy and composting. Specific funding opportunities they identified include:

  1. Promoting the use of compost by agriculture.
  2. Developing compost facilities including those that accept green waste using BACT, biomethane and waste-to-fuel technologies.
  3. Reauthorization of AB 118 to fund the production and use of carbon negative fuels from organic waste, and incentivize heavy-duty fleet transition from diesel to CNG.

- **California Association of Sanitation Agencies**. This group of municipalities and special districts supports resource recovery (waste-to-fuel) and bioenergy development at existing wastewater treatment plants. This group identified several specific funding opportunities that include:

    1. Construction of organic waste receiving and handling facilities.
    2. Construction of additional digester capacity.
    3. Purchase of BACT to comply with emission limits placed on internal combustion engines or turbines utilizing biogas.
    4. Purchase of new technology and units such as microturbines, fuel cells, and others.

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Appendix B

Detail on Investments Recommended for Consideration

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Detailed Descriptions of Investments Recommended for Consideration by Category

The tables on the following pages provide more detailed descriptions of the recommended investments and existing State programs that could be used to fund projects directly or distribute funds to the local level and/or end recipient. We've also identified the State agencies that currently administer these programs and provided a brief description of how these programs could be used or modified to allocate and expend funds for each type of project. The following tables also note a preliminary target percentage of funds from each program area that could benefit disadvantaged communities. Inclusion of a recommended investment in this plan does not guarantee funding nor are these potential investments listed in any priority order.

We had focused on enhancing existing programs because it is expected that agencies with established programs could be ready to get projects started earlier than agencies needing to create or revise programs. In addition to the programs described on the following pages, we expect there will be new or revised programs that could be funded in future years of this investment planning cycle to implement the types of programs and projects described. As noted in Chapter IX, the proposed short-term loan of $500 million from the Greenhouse Gas Reduction Fund to the General Fund allows further time for agencies to design, develop, integrate, and/or modify their programs in a way that maximizes long-term greenhouse gas reductions.

Sustainable Communities and Clean Transportation

Sustainable Communities Strategies (SCS) Implementation* (Subset to benefit disadvantaged communities – 25%)	
Page 1 of 2 for this program area	
Description:	Provide funding to: 1. *Livable Communities* (SB 375): Funding to increase transit mode share through focused transit expansion and ridership programs, transit-oriented development, and complete streets investments. Investments will achieve mode shift through focus on achieving SB 375 land-use strategies and similar outcomes in rural areas of the State not covered by SB 375 plans. Funding allocated to regions for sub-allocation according to State guidelines and performance criteria. 2. *Rail Modernization*: Funding for infrastructure investments in high-speed rail, conventional passenger rail, and local mass transit that maximize system integration and increase rail and transit trips. 3. *Infrastructure* (SB 391): Funding for infrastructure for smooth/GHG pavements, complete streets, ramp meters/traffic management. 4. *Active Transportation*: Competitive programs at the State and regional level to increase bike and pedestrian trips, including supporting infrastructure.
State Agencies:	Strategic Growth Council (SGC) Business, Transportation and Housing (BTH): California Department of Transportation (Caltrans), California Department of Housing & Community Development (HCD), High-Speed Rail Authority (HSRA) California Transportation Commission (CTC)
Existing Programs (Agencies):	Intercity Rail Program (CTC/Caltrans) High-Speed Rail Program (HSRA) State Transportation Improvement Program (CTC) State Transit Assistance Program (Caltrans) Bicycle Transportation Account and Safe Routes to School (Caltrans) Transit Oriented Development Housing Program (HCD) Sustainable Communities Planning Grant & Incentive Program (SGC)
Recipients:	Public Transit: Local governments, Transit operators Transit-oriented development: Private and non-profit developers; Local governments and transit agencies Rail Modernization: Public operators, Rail owners (public and private) Infrastructure (SB 391): Caltrans Active Transportation: Local governments

* These projects should be funded in regions and communities that have done the coordinated planning to develop a Sustainable Communities Strategy – if the region is required to do so by SB 375, the Strategy must also be approved by ARB as meeting the assigned GHG reduction targets.

Sustainable Communities and Clean Transportation

Sustainable Communities Strategies (SCS) Implementation* (Subset to benefit disadvantaged communities – 25%)	
Page 2 of 2 for this program area	
How Funding Could be Used:	To support this coordinated investment package, agencies and departments will consider criteria being developed by SGC for sustainable infrastructure investments in making subsequent discretionary allocations after the criteria are finalized. *Livable Communities*: CTC, SGC, Caltrans, and HCD would coordinate to provide program oversight and develop program criteria. The program criteria will include qualification requirements, eligible projects, funding distribution formula, etc. Once the program is developed, the CTC would act as administering agency programming and allocating funds with program oversight by Caltrans and HCD as implementing agencies, and program evaluation including local land use analysis through the SGC. HCD would act as the implementing agency for low-income TOD housing projects. Regions would have to demonstrate adherence to SB 375 plan or funding would be redistributed to others. *Rail Modernization*: In consultation with BTH, CTC and HSRA would act as administering agencies. They would coordinate to provide program oversight and develop program criteria, and each would act as an administering agency and approve related programs as applicable. *Infrastructure*: CTC would act as the administering agency and would coordinate with Caltrans to provide program oversight and develop program criteria, determine funding distributions, and allocate funds to projects. Caltrans would act as implementing agency. *Active Transportation*: CTC would act as the administering agency and would provide program oversight. Caltrans would act as implementing agency for the program. Half of the funding could be distributed through a population-based formula to regions and half through statewide competitive programs.
Disadvantaged Communities Approach:	The current transit-oriented development housing program already requires that a minimum percentage of units be restricted for low-income households and HCD could modify their criteria to incorporate a scoring preference for projects located in disadvantaged communities. For other programs, at a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities.

* These projects should be funded in regions and communities that have done the coordinated planning to develop a Sustainable Communities Strategy – if the region is required to do so by SB 375, the Strategy must also be approved by ARB as meeting the assigned GHG reduction targets.

Sustainable Communities and Clean Transportation (continued)

Develop Plans for Sustainable Communities Strategies* (Subset to benefit disadvantaged communities – 50%)	
Description of Potential Investment:	Provide competitive grants to help local agencies (e.g., cities, counties, MPOs) develop and implement local Sustainable Communities Strategies plans.
State Agencies:	Strategic Growth Council (SGC) and California Department of Conservation (DOC)
Existing Programs (Agencies):	Sustainable Communities Planning Grant and Incentive Program (or SCPGI), (SGC/DOC)
Recipients:	Local/regional agencies (e.g., cities, counties)
How Funding Could be Used:	SGC would provide oversight and develop program criteria to distribute competitive grants through the existing SCPGI program, while DOC would continue acting as the implementing agency. Grants could either be issued from the State directly to local and/or regional governments or through State-managed block grants to regional entities. Regional collaboration between multiple MPOs (for example, the San Joaquin Valley) could receive additional consideration.
Disadvantaged Communities Approach:	The current SCPGI program requires a dedicated set aside for projects that serve economically disadvantaged communities, which has resulted in 29% of grants being awarded to those communities. SGC could modify their criteria to ensure that set aside funds meet the SB 535 requirements for disadvantaged communities. Based on prior experience, SGC expects to exceed the minimum SB 535 percentages for projects located in disadvantaged communities. At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities.

* These projects should be funded in regions and communities that have done the coordinated planning to develop a Sustainable Communities Strategy – if the region is required to do so by SB 375, the Strategy must also be approved by ARB as meeting the assigned GHG reduction targets.

Sustainable Communities and Clean Transportation (continued)

Low-Carbon Freight Transport and Zero-Emission Passenger Transportation (Subset to benefit disadvantaged communities – 50%)	
Description of Potential Investment:	Provide funding to: 1. *Freight*: Provide competitive grants, vouchers, rebates, or loan assistance to support the development, demonstration, and/or deployment of zero-emission and near-zero-emission heavy-duty vehicles and equipment for low-carbon freight transport (e.g., trucks, locomotives, ships-at-berth, harbor craft, cargo handling equipment, transport refrigeration units) 2. *Passenger vehicles*: Provide first-come, first-served rebates or vouchers to assist with the purchase of zero-emission and near-zero-emission passenger cars and transit buses 3. *Charging/fueling infrastructure*: Provide competitive grants or other financial assistance to fund infrastructure to support low-carbon freight transport and zero-emission passenger transportation
State Agencies:	Air Resources Board (ARB) California Energy Commission (CEC)
Existing Programs (Agencies):	AB 118 Air Quality Improvement Program (ARB) AB 118 Alternative and Renewable Fuel and Vehicle Technology Program (CEC);
Recipients:	Individuals; public fleet owners (e.g., State, counties, cities, school districts); Non-profit organizations; Private fleets or entities (e.g., distribution center operators, fuel vendors); Ports; Railroads; Air districts
How Funding Could be Used:	ARB or CEC could provide oversight and develop criteria to distribute incentives through the AB 118 program or a program modeled after AB 118. ARB, CEC, or the project administrator could process the rebates, vouchers, grants, and loans. Recipients and contractors could implement projects
Disadvantaged Communities Approach:	At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities.

Energy Efficiency and Clean Energy

Energy Efficiency and Residential Weatherization (Subset to benefit disadvantaged communities – 50%)	
Page 1 of 2 for this program area	
Description of Potential Investment:	Provide funding to: 1. *Energy efficiency financing*: Provide first-come, first-served financing assistance for energy efficiency projects through PACE (Property Assessed Clean Energy) and other mechanisms 2. *Weatherization*: Expand funding for free weatherization retrofits for low-income households 3. *Clean renewable energy*: Provide first-come, first-served cost subsidies as incentives for clean renewable energy projects directed at low-income households
State Agencies:	California Alternative Energy & Advanced Transportation Financing Authority (CAETFA) and California Debt Limit Committee (CDLAC), both in State Treasurer's Office (STO); California Energy Commission (CEC); California Public Utilities Commission (CPUC); California Department of Community Services & Development (CSD)
Existing Programs (Agencies):	Property Assessed Clean Energy (or PACE), (CAETFA, CEC and CPUC through cities, counties and special purpose districts) Clean Energy Upgrade Financing Program (ABX1-14), a loan loss reserve program (CAETFA) Weatherization Assistance Program for low-income households (CSD); Energy Savings Assistance Program for low-income households (CPUC) California Solar Initiative for low-income households (CPUC): Multifamily Affordable Solar Housing (MASH) Single Family Affordable Solar Housing (SASH)
Recipients:	Low income homeowners and households; home builders/developers

Energy Efficiency and Residential Weatherization (Subset to benefit disadvantaged communities – 50%)	
Page 2 of 2 for this program area	
How Funding Could be Used:	*Energy efficiency financing*: CAETFA, in consultation with CEC and CPUC, could act as program administrator and provide financing assistance from a central funding pool for all three mechanisms described below. Recipients and contractors could implement projects. CAETFA, CEC and CPUC could provide oversight and develop criteria to distribute funding through mechanisms that include: • PACE Insurance or Guarantees – PACE allows energy retrofits to be repaid as a property tax assessment, but the program has been put on hold due to lien and valuation concerns raised by the Federal Housing Finance Agency (FHFA). Funding a PACE insurance program would help mitigate risk, resolve FHFA lien concerns, and could make it possible for the PACE program to resume. The PACE insurance program could be a pilot project or a statewide effort, depending on funding availability. • Loan Loss Reserve – This would minimize lender risk in making residential energy loans and could be an expansion of the existing ABX1-14 program (now funded via $25 million one-time allocation of Renewable Energy Trust Funds). • Mortgage Credit Certificates – This would allow homeowners to claim a credit on federal tax returns for interest paid on loans for energy efficiency projects, for a period of up to 15 years. *Weatherization*: CSD and CPUC could provide oversight and develop program criteria to distribute funding through the existing programs or one modeled after these programs. CSD and CPUC could provide funding while local utilities and local agencies could act as program administrators. Recipients and contractors could implement projects *Clean renewable energy:* CPUC could provide oversight and distribute funding through the existing programs or one modeled after these programs. CPUC could provide funding, while local utilities, local agencies, or non-profit organizations could act as program administrators. Recipients and contractors could implement projects.
Disadvantaged Communities Approach:	At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities. In addition, financing mechanisms could be structured to provide different credit support levels to encourage lending to homeowners in disadvantaged communities. Existing programs (e.g., weatherization and solar) that already target low-income households could be modified to require that projects be located in disadvantaged communities.

Energy Efficiency and Clean Energy (continued)

Public Energy Efficiency and Renewable Energy (Subset to benefit disadvantaged communities – 50%)	
Page 1 of 2 for this program area	
Description of Potential Investment:	Provide funding to: 1. *Water efficiency*: competitive grants or direct funding to reduce GHG emissions related to water supply, use, and conveyance (e.g., renewable energy, more efficient pumps, water use efficiency/conservation). 2. *Wastewater-to-energy*: competitive grants for pilot projects (e.g., use biogas from wastewater treatment plants to generate renewable energy or create biomethane for transportation fuels).
State Agencies:	California Department of Water Resources (DWR); State Water Resources Control Board (SWRCB); California Energy Commission (CEC)
Existing Programs (Agencies):	State Water Project (or SWP) (DWR); Metropolitan Water District (MWD) energy (DWR); Public Interest Energy Research (or PIER) Natural Gas Program (CEC)
Recipients:	State/regional/local water agencies; Non-profit organizations; Universities that conduct studies on renewable fuels; Local air districts; Sanitation districts or individual wastewater treatment plants (WWTPs)

Energy Efficiency and Clean Energy (continued)

Public Energy Efficiency and Renewable Energy (Subset to benefit disadvantaged communities – 50%)	
Page 2 of 2 for this program area	
How Funding Could be Used:	*Water efficiency*: DWR could provide oversight and develop program criteria to directly fund capital projects for renewable energy and improved energy efficiency at pumping and generating plants for SWP (owned/operated by DWR) and MWD (funded by contract)), or for other water use efficiency projects and activities. *Wastewater-to-energy*: CEC in coordination with SWRCB could provide oversight and develop program criteria to distribute grants. CEC could act as program administrator and process grants. This could be a two-phase program, with a smaller portion of funding for Phase One research and testing, and the bulk of funding focused on Phase Two technology demonstration. • Phase One - provide incentives for installation, testing, and determination of financial feasibility for operating biogas cleanup technologies at various WWTPs throughout the state. Could be implemented by a university research center that would choose appropriate WWTPs and implement the pilot projects. Funding could be distributed to projects that cover at least one small, one medium, and one large WWTP, based on SWRCB criteria. • Phase Two - provide cost-sharing to help install on-site generation technologies for: power production using biogas; and conversion of biogas to transportation fuel. CEC could provide funding to local air districts that would award grants to sanitation districts or individual WWTPs. Projects could be targeted for air districts that recently adopted rules to cover biogas power generation at WWTPs (San Joaquin Valley, South Coast, San Diego). Funding could be distributed on a per capita basis between WWTPs in these air districts.
Disadvantaged Communities Approach:	At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities.

Energy Efficiency and Clean Energy (continued)

Industrial/Agricultural Energy Efficiency (Subset to benefit disadvantaged communities – 50%)	
Description of Potential Investment:	Provide funding to: 1. Energy efficiency, clean energy, and distributed generation at industrial sources that are covered entities under Cap-and-Trade. 2. Replace diesel irrigation pumps with electric pumps, including the supporting infrastructure.
State Agencies:	California Energy Commission (CEC); California Public Utilities Commission (CPUC); Air Resources Board (ARB)
Existing Programs (Agencies):	Self-Generation Incentive Program (or SGIP) (CPUC); Carl Moyer Program (ARB)
Recipients:	Industrial businesses; agricultural and commercial businesses
How Funding Could be Used:	For distributed generation projects, CPUC could provide oversight and develop program criteria, while the program could be administered by utility companies and other project administrators. The SGIP currently offers first-come, first-served incentives for distributed generation technologies that reduce GHGs (e.g., combined heat and power or CHP, fuel cells, advanced energy storage) with incentives ranging from $0.50 - $2/Watt. For combined heat and power, CPUC could modify the program to provide incentives for larger systems (up to 20 MW) and allow more efficient deployment of this technology. For other industrial energy efficiency projects, CEC and CPUC could provide oversight and modify or develop program criteria to distribute additional grants or other financial incentives. For diesel irrigation pump replacement, ARB could provide oversight and develop program criteria to distribute grants through a program modeled after the Carl Moyer program. Local agencies (e.g., air districts) could process grants. For all projects, recipients and contractors could implement projects.
Disadvantaged Communities Approach:	At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities. Industrial energy efficiency/ renewable energy projects could be further targeted for a 75% benefit for disadvantaged communities

Natural Resources and Waste Diversion

Forests and Ecosystem Management (Subset to benefit disadvantaged communities – <25%)	
Page 1 of 2 for this program area	
Description of Potential Investment:	Provide funding to: 1. *Forests*: competitive grants or other mechanisms for forest management, restoration, forest conservation easements to sequester carbon; fuels reduction treatments; fire protection; and biomass energy production. 2. *Urban forestry and greening*: competitive grants or other mechanisms to plant trees in parks and urban forests. 3. *Other ecosystems, including wetlands and rangelands:* - inventory of fish and wildlife resources to identify most threatened by climate change and prioritize areas for land preservation and carbon sequestration; - develop baseline GHG emission inventories for wetlands areas including the Delta; - pilot projects for restoration of wetlands areas, including the Delta, to increase carbon sequestration and provide co-benefits such as increased native species populations and water quality improvement; - develop and implement Natural Community Conservation Plans (NCCPs) to maximize conservation and carbon sequestration benefits, while accommodating compatible land use especially proximate to areas with Sustainable Community Strategies*.
State Agencies:	California Department of Forestry and Fire Protection (CAL FIRE); Strategic Growth Council (SGC) California Natural Resources Agency (CNRA) and its departments and conservancies including, but not limited to: – California Energy Commission (CEC); – California Department of Fish and Wildlife (CDFW); – California Wildlife Conservation Board (CWCB); – Department of Water Resources (DWR); – Delta Conservancy (DC)

* If the region is required to complete a Sustainable Community Strategy by SB 375, the Strategy must also be approved by ARB as meeting the assigned GHG reduction targets.

Natural Resources and Waste Diversion (continued)

Forests and Ecosystem Management (Subset to benefit disadvantaged communities – <25%)	
Page 2 of 2 for this program area	
Existing Programs (Agencies):	Forest Improvement Program, Fire Protection Program, Urban Forestry and Urban Greening Grant Programs, and Forest Legacy Program (CAL FIRE); Urban Greening Planning Grant and Urban Greening Project Grant Programs (SGC/CNRA) AB 118 Alternative and Renewable Fuel Vehicle Technology Program, for bioenergy (CEC); Research programs (CDFW); Ecosystem Restoration Program (CDFW); Natural Community Conservation Planning Local Assistance Grant Program (CDFW)
Recipients:	State/regional/local agencies, Bioenergy companies, School districts, Non-profit organizations, Universities (UC/CSU) that conduct research and pilot projects, Landowners of areas for restoration pilot projects.
How Funding Could be Used:	*Forests:* CAL FIRE and CEC could provide oversight and develop program criteria to distribute funds through existing programs or one modeled after these programs. State agencies could process grants. *Urban forestry and greening:* CAL FIRE could provide oversight and develop program criteria to distribute funds through existing programs or one modeled after these programs. CAL FIRE could continue administering their urban forestry/greening grants. *Other ecosystems:* CDFW in coordination with CWCB,DWR and DC could provide oversight and develop program criteria to distribute funding through existing programs shown above or one modeled after these programs. CDFW could act as program administrator to manage research contracts and process grants. Project implementation could be a collaborative effort among State agencies, local agencies, and private partners that provide co-funding.
Disadvantaged Communities Approach:	At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities. For forest projects, the grant solicitation process could add extra points for, or direct funds to, projects located in disadvantaged communities. Urban forestry projects should have a minimum of 75% of funds benefit disadvantaged communities.

Natural Resources and Waste Diversion (continued)

Agricultural Management (Subset to benefit disadvantaged communities – <25%)	
Description of Potential Investment:	1. Provide competitive grants for agricultural land conservation or easements (e.g., limit low-density development, avoid land conversion of agricultural lands); 2. Provide competitive grants for bioenergy production; 3. Provide funding for agricultural practices and fertilizing materials application practices that reduce GHG emissions, improve water quality and provide other co-benefits.
State Agencies:	California Department of Conservation (DOC); California Department of Food and Agriculture (CDFA); California Energy Commission (CEC)
Existing Programs (Agencies):	California Land Conservation Act (Williamson Act) or alternative land conservation/easement program (DOC); Research programs (CDFA); AB 118 Alternative and Renewable Fuel Vehicle Technology Program, for bioenergy (CEC)
Recipients:	Regional/local agencies, Bioenergy companies, Universities/institutes that conduct research and pilot projects
How Funding Could be Used:	DOC, CDFA and CEC could provide oversight and develop program criteria to distribute grants and funding through the existing programs shown above or one modeled after these programs. State agencies could manage research contracts and process grants. For land conservation and easements, local agencies that receive grants could enter into contracts with private landowners for the purpose of restricting land to agricultural use. In return, landowners could receive lower property tax assessments. For research, bioenergy production, and nitrogen reduction**,** state agencies could provide grant funding and recipients could implement projects.
Disadvantaged Communities Approach:	At a minimum, 10% of the funds could be set aside for projects located in disadvantaged communities.

Natural Resources and Waste Diversion (continued)

Waste Diversion (Subset to benefit disadvantaged communities – 75%)	
Page 1 of 2 for this program area	
Description of Potential Investment:	1. Provide competitive grants to local agencies and businesses to expand and improve waste diversion and recycling (e.g., composting, anaerobic digestion). 2. Provide loans or first-come, first-served production incentive payments to businesses that divert organic waste from landfills to produce compost, biogas, or low-carbon fuel.
State Agencies:	California Department of Resources Recycling and Recovery (CalRecycle) California Department of Food and Agriculture (CDFA); California Energy Commission (CEC)
Existing Programs (Agencies):	Organics Materials Management Program (CalRecycle); Beverage Container Recycling - Plastic Market Development Payment Program (CalRecycle); Recycling Market Development Zones or RMDZ (CalRecycle) Public Interest Energy Research Natural Gas program (CEC) AB 118 Alternative and Renewable Fuel and Vehicle Technology Program (CEC) Electric Program Investment Charge Program (or EPIC) (CEC) Dairy Marketing/Environmental Program (CDFA)
Recipients:	Businesses, Regional/local agencies, Non-profit organizations, Universities (UC/CSU) that conduct solid waste research; research institutions

Waste Diversion (Subset to benefit disadvantaged communities – 75%)	
Page 2 of 2 for this program area	
How Funding Could be Used:	CalRecycle could provide oversight and act as program administrator. Competitive grants and production incentives payments could be distributed, using long-established procedures for grants and modifying established procedures from their plastics and tire incentives program to fit an organics program. Loans could be issued through the RMDZ program, modified to allow for some loans outside of zones. CalRecycle could process grants/loans for new/expanded composting and anaerobic digestion facilities and manage research contracts. Subsequently, CalRecycle could provide production incentive payments to verified operations, and continue processing grants/loans. CEC offers three potential funding mechanisms: *PIER Natural Gas program:* Funding could be is provided through competitive solicitation and used for research. Projects must be "directed towards developing science or technology, and 1) the benefits of which accrue to California citizens and 2) are not adequately addressed by "competitive or regulated entities." *AB 118:* Funding could be provided for dairy digester projects provided there is a clear nexus to transportation fuel use. *EPIC:* Funding could be provided through grants for innovative dairy digester projects. In addition, funding could be provided for applied research activities and market facilitation (to support bio-energy development. CDFA could provide funding for research education through the Dairy Marketing and Environmental Program. The Dairy CARES Board of Directors would review and recommend projects for funding. Recipients could implement projects and conduct research.
Disadvantaged Communities Approach:	The grant solicitation process could add extra points for, or direct funds to, projects that directly benefit disadvantaged communities.

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Appendix C

Regional Maps Showing
Disadvantaged Communities for Purposes of Investment

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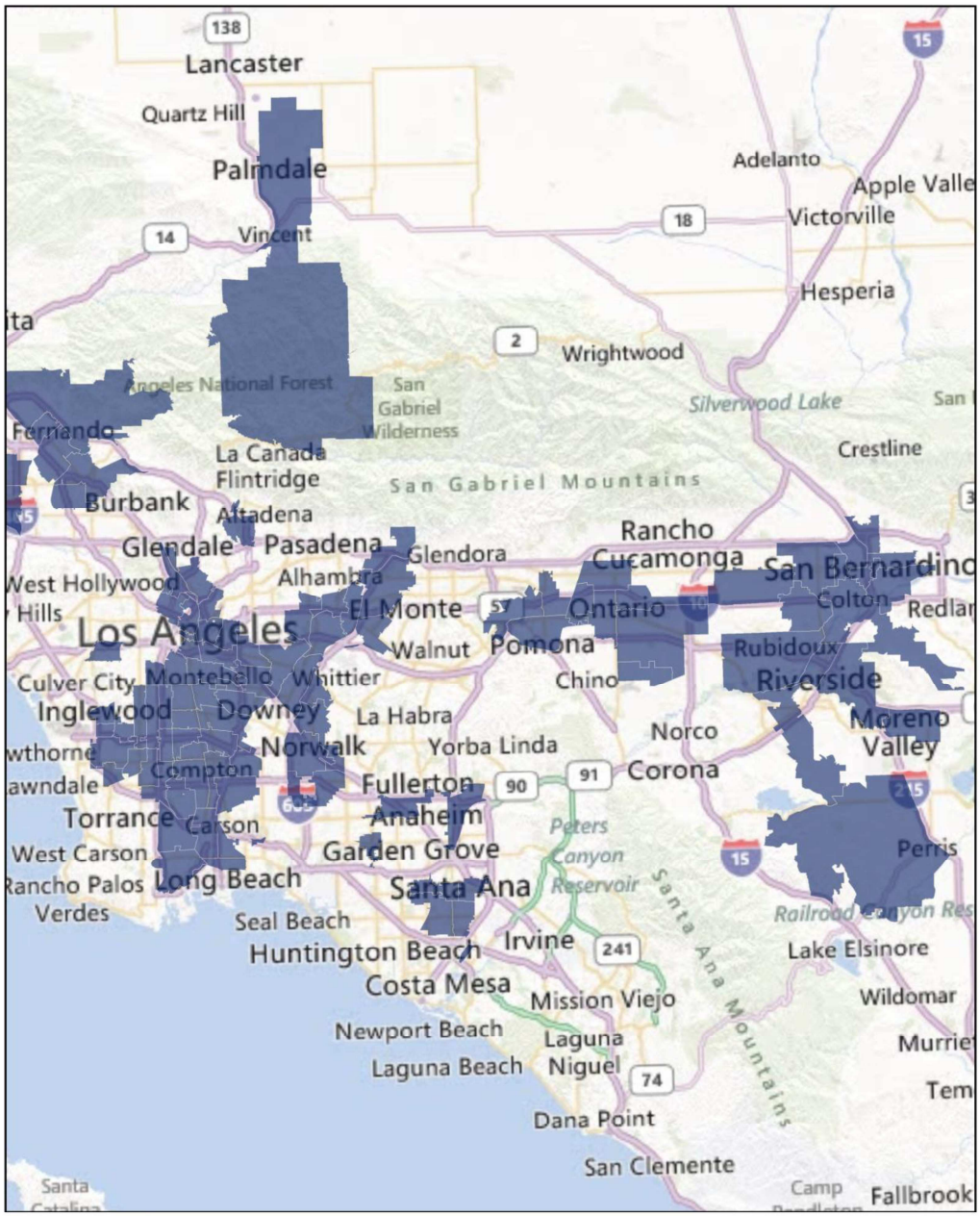
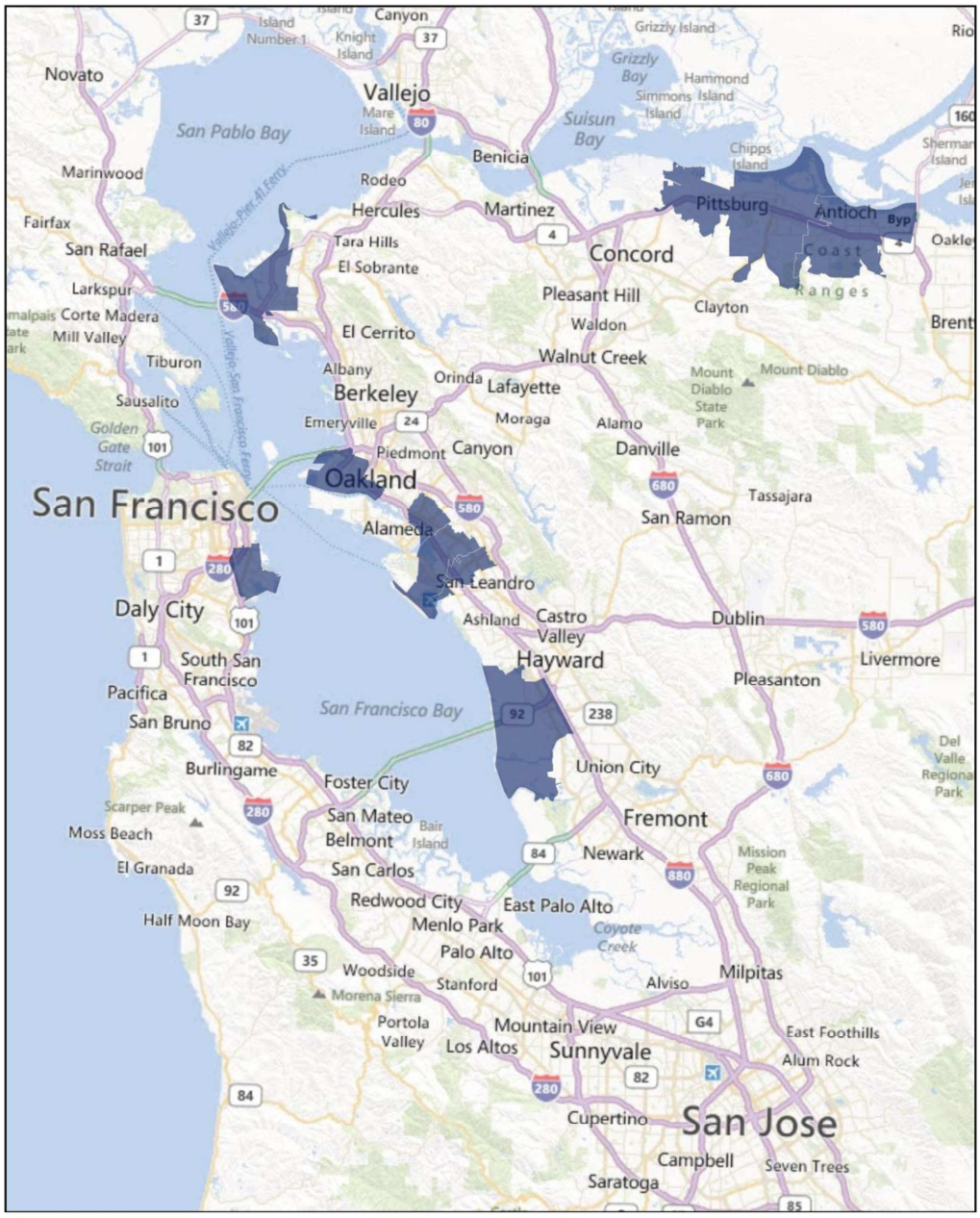
Figure C-1
CALENVIROSCREEN VERSION 1.0 (APR 23, 2013)
Top 10% Highest Scoring Census ZIP Codes – *Los Angeles Area*



Basemap source: (c) 2010 Microsoft Corporation and its data suppliers

Figure C-2
CALENVIROSCREEN VERSION 1.0 (APR 23, 2013)
Top 10% Highest Scoring Census ZIP Codes – *San Francisco Area*



San Francisco Area

Basemap source: (c) 2010 Microsoft Corporation and its data suppliers

Figure C-3
CALENVIROSCREEN VERSION 1.0 (APR 23, 2013)
Top 10% Highest Scoring Census ZIP Codes – *San Diego Area*

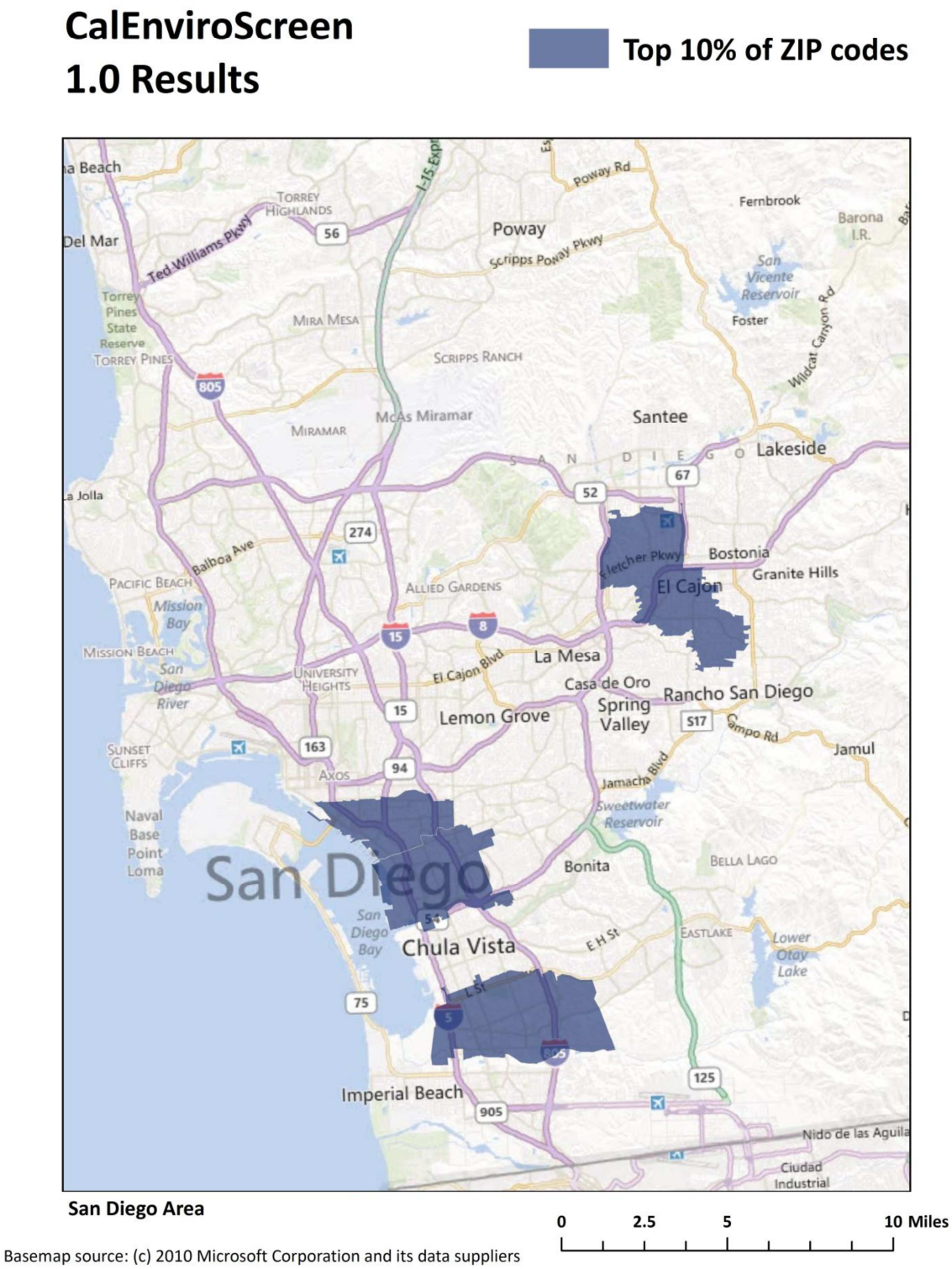
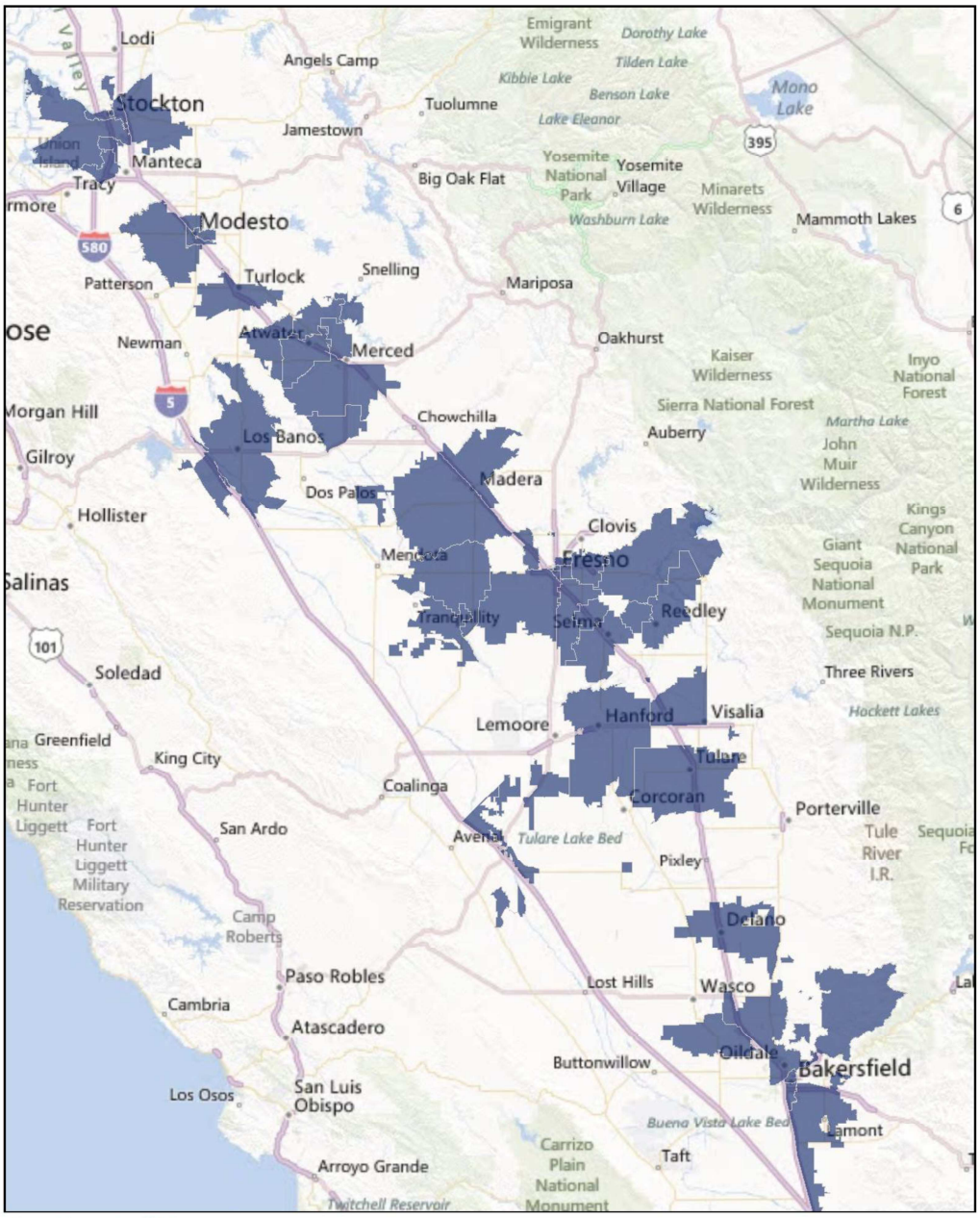


Figure C-4
CALENVIROSCREEN VERSION 1.0 (APR 23, 2013)
Top 10% Highest Scoring Census ZIP Codes – *San Joaquin Area*



Basemap source: (c) 2010 Microsoft Corporation and its data suppliers

Figure C-5
CALENVIROSCREEN VERSION 1.0 (APR 23, 2013)
Top 10% Highest Scoring Census ZIP Codes – *Sacramento Area*