Throughout California, regions have passed Sustainable Communities Strategies to promote transportation and housing choices, reduce greenhouse gas emissions, and contribute to strong, sustainable economic development. But these plans still need billions of dollars to be fully implemented.

With transportation as the single largest source of carbon pollution, it is essential that clean transportation and sustainable communities are at the forefront of investments for cap-and-trade auction proceeds.

That is why we support the core of the proposal put forward by Senate president pro Tem Steinberg on April 14, 2014, titled “A Long-Term Investment Strategy for Cap-and-Trade Revenue” (and anticipated to be introduced as SB 1156), which would also establish 2050 greenhouse gas reduction goals.

The proposal would allow millions of California’s residents to save money on transportation and breathe cleaner air while helping meet 2020 and 2050 climate goals.

Senator Steinberg’s proposal includes:

- **Affordable Housing and Sustainable Communities**
  With rents and housing prices rising to new highs in many areas, it is critical to ensure there are affordable homes near transit. Low and moderate income Californians have the highest propensity to walk, bike, and use public transportation when it is available. They are also the most likely to be displaced by rising land values around areas receiving greater transit investment. We applaud Senator Steinberg’s commitment to use at least half of the funds in this category for affordable homes.

- **Transit Capital and Operations**
  Affordable, accessible, frequent, and extensive public transportation is a fundamental backbone of sustainable communities. It is important this includes enough support for transit operations and transit passes to promote ridership and reduce costs, particularly
among lower-income residents, as well as students, seniors, and persons with disabilities.

- **Complete Streets**
  Caltrans’ recent survey showed that 18% of all trips are walking or bicycling. Funding from this category will maintain our roads while creating complete streets that enhance pedestrian and bicycle mobility and safety, as well as access to transit and destinations.

There is work to be done in the weeks ahead, and some aspects of the proposal need clarification. For example, many important issues are put into a single category that would get insufficient funding. This includes natural resource conservation, weatherization for low-income households, and funding to clean up the state’s buses, cars, and trucks. Clean transportation is essential to clear the air in communities exposed to a disproportionate share of dangerous pollution.

We are dedicated to ensuring that cap-and-trade proceeds play a major role in achieving our long-term greenhouse gas emissions targets. Through smart investments they can also provide substantial health and economic benefits to all Californians, especially to low-income and disadvantaged communities and people with disabilities that are most vulnerable to the present and future impacts of climate change.

Senator Steinberg’s proposal (as released at his press conference on April 14, 2014) is attached. If you would like additional information please contact Ryan Wiggins, TransForm’s Cap-and-Trade Manager at Ryan@TransFormCA.org

*The California Transportation Choices Summit is hosted by TransForm. For more information on TransForm and the summit, please visit www.TransFormCA.org.*
A Long-Term Investment Strategy for Cap-and-Trade Revenue

INTRODUCTION

California has long been an international leader on clean energy and climate efforts through energy efficiency requirements, renewable energy standards, natural resource conservation, and greenhouse gas emission standards for passenger vehicles.

In 2006, California established the nation’s benchmark for greenhouse gas emission reductions with the passage of AB32, the California Global Warming Solutions Act (Pavley). AB32 required the State Air Resources Board to develop a scoping plan, including direct regulations, performance-based standards, and market-based mechanisms to achieve this level of greenhouse gas emission reductions.

The State Air Resources Board has implemented a Cap-and-Trade program under the general authority granted under AB32 to implement market-based mechanisms. But full pollution reductions cannot be achieved without a long-term strategy for investing the program’s revenues effectively and affordably.

SB 535 (De Leon 2011) built upon the CA climate program by recognizing the disproportionate impacts of greenhouse gases on disadvantaged and low-income communities in California including, for example, higher rates of respiratory illness, hospitalizations, and premature death from inordinately substandard air quality. It requires that 25 percent of cap and trade revenues be allocated to disadvantaged communities to reduce pollution.

Through SB 375 of 2008 (Steinberg), the legislature recognized that without improved land use and transportation policy, California will not be able to achieve the goals of AB 32 because the transportation sector remained the single largest contributor of greenhouse gases of any sector in the State of California.

This long-term investment strategy of Cap-and-Trade revenue is deliberately designed to achieve the objectives of AB32: a significant reduction in greenhouse gas emissions while mitigating a disproportionate impact of policies’ strategy on California’s low-income and disadvantaged communities.

Fundamentally, this long-term investment strategy embodies the objectives of Cap-and-Trade by ensuring that all expenditures are used to achieve maximum reductions in greenhouse gases. This long-term investment strategy is designed to curb human-induced global warming by reducing pollution from traffic and vehicle trips through retrofitting our communities with more affordable and efficient transit, housing, and land uses. In doing so, this long term investment strategy will improve public health
and help Californians save money with convenient and affordable alternatives to spending more of their family budgets on ever-increasing fuel costs at the pump.

The objectives of this strategy will not be met overnight. It will take time and a long term commitment to witness the environmental dividends of these investments. That is why it is imperative to act now.

###
FRAMEWORK

All investments must:

- Lead to reductions in greenhouse gas emissions, consistent with AB32 (Pavley) of 2006;

- Be subject to a competitive ranking process to ensure those projects providing maximum feasible reductions in greenhouse gases are funded;

- Meet all existing constitutional and statutory requirements for use and allocation of Cap-and-Trade funds, including, but not limited to:
  - California Constitution Article XIII,
  - SB375 (Steinberg) – The Sustainable Communities and Climate Protection Act of 2008, relating to transit-oriented development,
  - SB535 (De Leon) – The California Communities Healthy Air Revitalization Trust of 2011, relating to ensuring disadvantaged communities receive at least 25% of funds,
  - SB1018 (Budget Committee) of 2012, relating to agencies carefully reporting, documenting and justifying expenditures of funds to protect against lawsuits.

INVESTMENT STRATEGY

I. A Permanent Source of Funding for Affordable Housing and Sustainable Communities (40%)

a. **Purpose:** Support regional sustainable communities strategies including investments in affordable housing, transit-oriented development, land use planning, active transportation, high density mixed use development, transportation efficiency and demand management projects.

b. **Parameters:** At least half of these funds (equivalent to at least 20% of total allocations) shall be used for affordable housing, centered in transit-oriented development and consistent with GHG reduction strategies.

c. **Allocation method:** Distributed through SGC to regions and/or state agencies. Projects selected based on competitive GHG performance.
II. A Permanent Source of Funding for Transit (30%)
   a. **Purpose:** Transit construction and operations.
   b. **Parameters:**
      i. At least 5% of the transit amount would have to be used for transit connectivity projects.
      ii. At least 5% of the transit amount would have to be used for direct transit assistance to consumers (could be in the form of passes, additional access, etc.).
   c. **Allocation method:** Distributed based on GHG performance criteria

III. A Permanent Source of Funding for High Speed Rail (20%)
   a. **Purpose:** Ongoing source for construction of HSR.
   b. **Allocation method:** Continuously appropriated. Could be securitized.

IV. A Permanent Source of Funding for State Highway and Road Rehabilitation and for Complete Streets (10%)
   a. **Purpose:** Traffic management, repair, deferred maintenance, bikeways, and retrofits of roads and highways.
   b. **Allocation method:** Distributed based on competitive GHG performance criteria.

V. Natural resource, water, and waste ($200 million annually)
   a. **Purpose:** Water efficiency infrastructure projects, forestry and landscape issues, wetland development, waste diversion and recycling, energy efficiency, clean vehicles, and “black carbon” reduction.
   b. **Allocation method:** Subject to annual appropriation in the Budget Act.

VI. Climate dividend for transportation fuel consumers ($200 million annually)
   a. **Purpose:** To use portion of cap-and-trade funds to show consumers that California’s climate policies are generating new dollars for them.
b. **Allocation method:** Several options, for example, a rebate check on monthly fuel bills; once per year rebate with motor vehicle registrations.

**VII. “Charge Ahead” Electric Vehicle Deployment Program** ($200 million annually)

**Purpose:** Funding a comprehensive vision for cleaning up the state’s cars, trucks, buses, and freight movement to meet federally mandated clean air requirements and California’s long-term GHG goals.


**VIII. Green Bank Funding (not less than $10 million annually)**

a. **Purpose:** A state fund to assist the financing of clean energy and other environmentally sustainable projects.

b. **Allocation method:** Appropriated annually in the Budget Act.
VISUAL SUMMARY

- $200 million for natural resource, water, and waste.
- $200 million for climate dividend for consumers.
- $200 million for electric vehicle deployment
- $10 million for green bank funding

Remaining balance distributed as follows:

*Of Transit amount, at least 5% shall be used for transit connectivity projects and at least 5% shall be used for direct transit assistance to consumers.

**Of the Housing and Sustainable Communities amount, at least half shall be used for affordable housing.
**FISCAL ILLUSTRATION**

Distribution of Cap-and-Trade, assuming revenue of $5 billion annually:

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Affordable Housing and Sustainable Communities</strong></td>
<td>$1,756</td>
</tr>
<tr>
<td><strong>II. Transit</strong></td>
<td>$1,317</td>
</tr>
<tr>
<td><strong>III. High Speed Rail</strong></td>
<td>$878</td>
</tr>
<tr>
<td><strong>IV. Complete Streets</strong></td>
<td>$439</td>
</tr>
<tr>
<td><strong>V. Natural Resource, Water, Waste</strong></td>
<td>$200</td>
</tr>
<tr>
<td><strong>VI. Climate Dividend</strong></td>
<td>$200</td>
</tr>
<tr>
<td><strong>VII. Electric Vehicle Deployment</strong></td>
<td>$200</td>
</tr>
<tr>
<td><strong>VIII. Green Bank Funding</strong></td>
<td>$10</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$5,000</strong></td>
</tr>
</tbody>
</table>
**Summary:** SB 1204 creates the California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program to incentivize the deployment of zero and near-zero emission heavy-duty trucks, public transit buses, and off-road equipment specifically in highly-polluted transportation corridors.

**Background:** In 2006, the Legislature approved the Global Warming Solutions Act (AB 32), which seeks to reduce greenhouse gas (GHG) emissions to the 1990 levels by 2020. The state has made great strides since the passage of AB 32 – the pollution that has been cut is equal to 72 million barrels of oil. California is a leader in climate policy, but more work must be done to meet air quality goals.

Air quality regulations require significant reductions in greenhouse gas emissions and criteria air pollutants. Cleaning up our transportation system is critical to meeting the goals of AB 32 and ensuring healthier communities. Currently, 70% of the criteria air pollution and 40% of the state’s contribution to climate pollution comes from transportation. In order to meet federal and state clean air mandates, California must reduce emissions by 90% by the mid-2030s.

**Problem:** Medium and heavy-duty trucks, buses, and off-road equipment are a major source of air quality problems and greenhouse gas emissions in California. The freight sector is an especially pressing problem. Freight is a critical part of the state and national economy, with 40% of national imports coming through the ports of Los Angeles and Long Beach.

However, freight is also the largest source of diesel particulate pollution and ozone-causing nitrogen oxide emissions in the state. Trucks, buses and off-road equipment are also responsible for a large and growing share of greenhouse gas emissions.

The I-710 Freeway corridor, a 17 mile stretch from the Port of Long Beach to East Los Angeles, is ranked number one for the dirtiest air in the country. Communities adjacent to heavy transportation corridors, such as the I-710, have higher rates of asthma, cancer and birth defects – a direct result of poor air quality.

Cleaner trucks, buses, and off-road equipment would provide significant benefits for the state and for the communities in which they are used. However, cleaner technologies for this sector lag behind the passenger car market and many clean options are still in the early stages of demonstration and commercialization. The lack of commercially available options is impeding the transition to zero-emission trucks and buses and stifling the health benefits to disadvantaged communities.

**Solution:** SB 1204 will provide the additional investments that are needed to deploy clean technologies for medium and heavy duty vehicles. The bill will specifically target projects in disadvantaged communities, which are directly impacted by poor air quality.

SB 1204 will foster the development of technology that will allow every Californian to breathe cleaner air while reducing the financial burden to transition to zero emission trucks, buses and off-road equipment.

**Staff Contact:** Cameron Valderrama, (916) 651-4033
SB 1204:加速零排放和近零排放中型和重型车辆在加利福尼亚的开发和部署

零排放和近零排放技术的开发和部署在M-HDVs方面与LDVs相比落后于几个年份。天然气和替代燃料在某些中等和重型车辆应用中取得了一些市场地位，但其在全国的总量非常低。电池电动技术在一些有限的中型车辆应用中出现了，但全国的总数量仍然非常低。零排放技术在更重的‘大卡车’中使用是不可行的，尽管早期部署的零排放公交车正在证明这项技术是可行的。公交车处于领先地位，而越野车辆则停滞不前。

增加投资，超越并扩大现有计划的规模和范围，以加快进度。现有的计划是必要的，但并不足够。这些资金太少，而且现有的计划未涵盖所有需求，如图所示。

**Clean M-HDV Technology Investment Needs**

<table>
<thead>
<tr>
<th>Studies and Standards</th>
<th>Technology Development</th>
<th>Small Early-Stage Demos</th>
<th>Larger Pre-Commercial Demos</th>
<th>Deployment Incentives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies including advanced tech business case studies, tech feasibility studies, and work needed to develop standards</td>
<td>Funding to develop components, subsystems, and complex drivetrain systems, with focus on performance improvements and cost reduction</td>
<td>Funding to integrate new truck and bus tech into 1-5 vehicles to evaluate tech performance and integration and to identify needed improvements</td>
<td>Support for larger scale demos of up to 50 vehicles to evaluate real world performance in the field at commercial scale</td>
<td>Long-term vehicle buy-down incentive programs to increase market penetration</td>
</tr>
<tr>
<td>Not addressed by existing programs</td>
<td>Not addressed by existing programs to date, CEC ARFVTP has some authority</td>
<td>Partially addressed by CEC ARFVTP; need more funding, statutory guidance, and coordination</td>
<td>Not addressed by existing programs</td>
<td>Fuel infrastructure funding tied to vehicle incentives</td>
</tr>
<tr>
<td>Supporting larger scale demos of up to 50 vehicles to evaluate real world performance in the field at commercial scale</td>
<td></td>
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</tbody>
</table>

As illustrated above, California’s existing incentive programs are an important part of the solution and are already addressing a subset of the funding needs for this sector. However, California still lacks an overarching program with the necessary authority and funding to address all of the outstanding gaps and barriers. A targeted program such as the one outlined in SB 1204 (Lara/Pavley) is needed for medium- and heavy duty vehicles. This sector differs from the light duty vehicle sector in key ways that highlight the importance of state investments:

- **The market is fragmented and the manufacturers and suppliers have limited resources.** The major OEMs are not vertically integrated and are often not the ones investing in advanced technologies. Zero emissions drivelines or hybrid systems may be integrated into vehicles by late-stage technology integrators or after-market up-fitters. Many of these are start-up companies with limited budgets.

- **Economic constraints for fleets are a major barrier.** Fleets tend to look for payback on new technologies in three years at most, meaning that high incremental costs can be an insurmountable barrier without incentives.
Existing programs are addressing some, but not all, of the outstanding funding needs. Below is a summary of existing programs, limitations, and gaps:

- **ARB Air Quality Improvement Program (AQIP):** This program, recently extended by AB 8, provides point-of-sale voucher incentives for hybrid and zero emission trucks and buses through the HVIP program. Vehicle incentives are limited to electric, hybrid, and plug-in hybrid, and ARB does not have statutory authority through AQIP to fund infrastructure deployment. AB 8 placed new cost effectiveness requirements on all AQIP funds with a criteria emissions focus.

- **CEC Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP):** This program, also extended by AB 8, allows CEC to make a variety of investments in a broad suite of clean transportation technologies including light, medium, and heavy duty vehicles and fuels. Investments to date in the M-HDV space have been extremely valuable but they have narrowly focused on small scale vehicle demonstrations, as well as deployment funding through ARB’s HVIP program. CEC has not invested in early-stage studies, market and technology development, or larger pre-commercial demonstrations. AB 8 placed new GHG cost effectiveness requirements on all ARFVTP funds.

Via their respective programs, ARB and CEC have been making valuable investments in cleaner M-HDV technologies. They have also increased coordination in recent years by participating in investment plan processes. However, several key gaps remain, including (a) early stage studies and standards, (b) early-stage technology and market development, and (c) larger pre-commercial demonstrations. Additionally, the state has not had a clear overarching investment strategy or a process for formally planning, prioritizing, and coordinating investments across the relevant agencies.

The California **Clean Truck, Bus, and Off-Road Technology Program** (SB 1204, Lara and Pavley) would ensure that all of the relevant funding needs are met in a coordinated and efficient manner.