**Response to ARB Request for Public Input**

**on**

**February 15, 2013 Draft Concept Paper:**

**Cap-and Trade Auction Proceeds Investment Plan**

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# Background

The February 15 Draft Concept Paper provides a useful status report on the development of the first Administration investment plan for cap-and-trade auction proceeds. The overall approach is sound and consistent with statutory guidance. Recognizing that the Draft Concept Paper is just the first step in an ongoing process, these comments lay out some additional considerations that should be taken into account as work proceeds, in particular with regard to the methodology to be used to evaluate competing proposals for the use of the funds.

# Comments

These comments are organized according to the categories outlined in the Draft Concept Paper. An attached issue paper provides additional detail on some of the points addressed in the comments, and also provides a suggested overall framework for the evaluation of proposed expenditures.

## Investments

The Draft Concept Paper correctly sets out several "investment phases". It is important to make a clear distinction between near-term and long-term investments. Although the Draft Concept Paper does not speak to how the various potential projects might be evaluated, near-term and long-term investments should be evaluated using different metrics and should not compete across categories. Rather, the Administration and the Legislature should determine from a policy perspective the amount of funds to be allocated to each investment phase, as well as to other possible uses of the funds. Near-term projects then should compete with each other on the basis of cost-effectiveness (dollars per ton reduced), and long-term projects should compete with each other on the basis of costs and benefits (return on investment). This separation is needed in order to ensure that near-term projects, which are likely to be more cost-effective, do not dominate the rankings and effectively rule out the use of auction proceeds for transformative investments.

## Examples of Potential Projects for Investment through 2020

Figure 9 in the Draft Concept Paper identifies a number of potential projects. This list is appropriate as far as it goes, but in addition to the project types outlined in Figure 9 the Administration and the Legislature should consider using the auction proceeds for two additional purposes:

* A return of allowance value to households, to mitigate any impacts from increased prices, and/or
* A reduction in distortionary business taxes.

Using auction proceeds for such purposes clearly would require a two-thirds vote of the legislature, but in the current legislative alignment it might be possible to achieve that result. This is worth considering because economic analysis suggests that using auction proceeds to reduce distortionary business taxes provides the most beneficial overall impact on the state's economy. Returning funds to consumers would help address equity issues and potential public concerns regarding energy price increases, in particular as fuels are added to the cap, and perhaps help reduce potential public opposition to the cap-and-trade program. Additional analysis is needed to fully explore the implications of such strategies, but they should be included in the list of possibilities under consideration.

Please note that the return of allowance value to households is consistent with the March 2010 recommendations of the Economic and Allocation Advisory Committee. Such an approach also could help meet the SB 535 requirement that the investment plan allocate a minimum of 25 percent of the available moneys to projects that provide benefits to disadvantaged communities and a minimum of 10 percent of the available moneys to projects located within such communities.

## Identification of Disadvantaged Communities

The CalEPA suggested methodology for identifying disadvantaged communities appears to be reasonable. But the Draft Concept Paper does not address how to apportion for SB 535 purposes the benefits of broad regional strategies. The benefits from long term strategies such as transport electrification, land use improvements or energy efficiency will be felt statewide or across wide areas as well as in disadvantaged communities. One way to apportion the cost of such expenditures from an SB 535 standpoint is to determine what fraction of the total benefit accrues to disadvantaged communities, and count the same fraction of the overall cost towards the SB 535 requirement.

## Draft Investment Principles

Principle 2 states:

2. Investments should focus on two broad project types with demonstrable GHG reductions:

* Projects that achieve near-term GHG emission reductions.
* Projects that support development of the transformative technologies/ approaches needed to achieve the State’s long-term GHG reduction goals.

Consistent with the discussion above, this principle should recognize two additional possible categories of expenditure: a return of allowance value to households, and a reduction in distortionary business taxes. Thus the principle should read (modifications in italics):

2. Investments should focus on two broad project types with demonstrable GHG reductions:

* Projects that achieve near-term GHG emission reductions, and
* Projects that support development of the transformative technologies/approaches needed to achieve the State’s long-term GHG reduction goals.

 *Auction proceeds may also be targeted to return allowance value to households, or to reduce distortionary business taxes*.

The remaining portion of this section addresses the prioritization of near term investments targeted at achieving GHG reductions (as opposed to returning allowance value to households or businesses, or bringing about long-term transformational change).

Principle 3 states:

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

Principle 3 as written does not adequately take into account the impact of the cap on the reductions achieved by various investments and their cost-effectiveness. Working through the issues involved is complex but is necessary in order to achieve the desired result.

The first question to be addressed is what is the fundamental goal of the near term component of the investment plan--to achieve additional reductions beyond those outlined in the Scoping Plan, or to reduce the cost of reaching the planned reduction level? I recommend that the goal be to minimize the cost of meeting the Scoping Plan reduction level, in particular during the near term transition. This will minimize the impact on California consumers and businesses, while still achieving the AB 32 reduction target.

Given cost minimization as an overall goal, then the objective of the investment plan should be to identify and fund reductions that can be achieved at a cost lower than the allowance value and thereby lower the overall cost of compliance. The sectors involved and the relative need for future reductions are not relevant. Rather than targeting sectors with high GHG emissions and the need for future reductions, funds should be invested in projects that result in low cost reductions not achievable by the cap. Viewed in this fashion, such reductions can best be achieved from (1) sources not under the cap, and (2) sources under the cap that due to market imperfections or other constraints do not respond to the price signal imposed by the cap. Thus auction proceeds targeted at near term reductions should be limited to the two categories of sources identified above, prioritized based on cost-effectiveness (dollars per ton of greenhouse gases reduced). If these criteria are not applied, reductions from capped sources will "redistribute" the reductions achieved but will not result in additional reductions or a lower overall compliance cost.

Furthermore, funding should only be provided to projects that achieve the reductions at a cost per ton lower than the allowance value. If a project achieves reductions at a cost greater than the allowance value, it will actually increase the aggregate compliance cost.

Reductions from sources outside the cap should be treated as offsets, or alternatively additional allowances should be created within the cap in an amount equal to the reductions achieved from the uncapped sources. If this is not done the reductions achieved will be in addition to those identified under the Scoping Plan, and would not lower the compliance cost.

One exception to the above suggested criteria relates to the consideration of co-benefits accruing to disadvantaged communities. The sources that impact disadvantaged communities from a health perspective (e.g. ports, mobile source emissions, refineries, power plants) in general are or will be included under the cap, and typically will respond to the price signal imposed by the cap. Thus they would not be included in the two categories identified above. The cap and trade cost-effectiveness analysis conducted by such facilities, however, does not place a value on the co-benefits sought under SB 535. Therefore one way to approach the SB 535 requirement is to use auction proceeds to "buy" the co-benefits not considered under cap and trade and thus reduce the net project cost to a project sponsor such that the investment becomes economically attractive.

Taking the above discussion into account, Principle 3 should read (modifications in italics):

3. Investments *to achieve near term reductions* should be prioritized towards *projects that reduce the overall cost of compliance, such as projects aimed at:*

* *Sources not under the cap (provided that reductions from such sources are treated as offsets, or alternatively additional allowances are created within the cap in an amount equal to the reductions achieved from uncapped sources)*
* *Sources under the cap that due to market imperfections or other constraints do not respond to the price signal imposed by the cap.*

I also suggest the addition of a new principle, to read:

*4. Investments to achieve near term reductions should only be used to fund projects that achieve reductions at a cost per ton lower than the allowance value.*

**Evaluation of AB 32 Auction Proceed Expenditures**

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This paper outlines a framework for identifying and evaluating possible expenditures of AB 32 auction proceeds. This framework can provide a systematic basis for the development of the required auction proceeds investment plan.

# Statutory Background

## Chaptered Legislation

In the 2012 legislative session the Legislature passed and the Governor signed three bills that taken together govern certain aspects of the expenditure of auction proceeds. Chapter 807, Statutes of 2012 (AB 1532, John A. Perez) directs the Department of Finance[[1]](#footnote-1) to develop and submit to the Legislature a three-year investment plan for expenditure of auction proceeds. The investment plan must:

(1) Identify the state’s near-term and long-term greenhouse gas emissions reduction goals and targets by sector.

(2) Analyze gaps, where applicable, in current state strategies to meeting the state’s greenhouse gas emissions reduction goals by sector.

(3) Identify priority programmatic investments of moneys that will facilitate the achievement of feasible and cost-effective greenhouse gas emissions reductions toward achievement of greenhouse gas reduction goals and targets by sector.

Moneys appropriated pursuant to the investment plan "shall be used to facilitate the achievement of reductions of greenhouse gas emissions in this state". The directive to "facilitate the achievement of reductions" is less restrictive than a straightforward requirement to "achieve reductions", and appears to authorize expenditures that do not directly result in greenhouse gas reductions. This interpretation is supported by subsequent bill language that identifies as an allowable use of the funds "Funding in research, development and deployment of innovative technologies, measures and practices related to programs and projects funded pursuant to this part", the research component of which would not directly result in emission reductions. The bill identifies a number of other allowable uses, but the language is permissive rather than mandatory so it does not require that the funds be used as specified, nor does it prohibit other possible uses. Thus in general the bill is suggestive but not prescriptive regarding how funds are to be expended.

Chapter 830, Statutes of 2012 (SB 535, De Leon) directs the California Environmental Protection Agency to identify disadvantaged communities in the state, and requires that the investment plan allocate a minimum of 25 percent of the available moneys to projects that provide benefits to such communities, and a minimum of 10 percent of the available moneys to projects located within such communities. The bill also states legislative intent that the auction proceeds "continue California's implementation of AB 32 by achieving additional emission reductions and mitigating direct health impacts on California's most impacted and disadvantaged communities".

Finally, Chapter 29, Statutes of 2012 (AB 1497, Committee on Budget) authorizes the Director of Finance to "allocate or otherwise use an amount of at least $500,000,000 from moneys derived from the sale of greenhouse gas emission allowances....and make commensurate reductions to General Fund expenditure authority." The funds shall be available "to support the regulatory purposes of the California Global Warming Solutions Act of 2006". Funds allocated pursuant to this provision will be used to offset existing expenditures, and the projects to be supported will be determined by the Department of Finance independent of the cost-effectiveness or cost-benefit tests discussed below. Therefore identification of specific candidate General Fund offset projects is not further addressed in this document, other than to note that the bill directs that for a period of two years no funds shall be used for the purpose of developing a high-speed rail system.

## Impact of Two-Thirds Legislative Supermajority

Proposed expenditures must also be evaluated from a legal standpoint, to determine if auction proceeds should be treated as fees or taxes. In brief, and greatly oversimplified, funds used to support activities that have a clear "nexus" with the purposes of AB 32 can be considered regulatory fees, whereas funds used to support activities without such a nexus may be considered proceeds of taxes and thus subject to a two-thirds vote. [[2]](#footnote-2) From that perspective, proposals primarily aimed at funding greenhouse gas reductions are considered less risky.

In the November 2012 election the Democrats gained a two-thirds majority in both houses of the Legislature. To the extent that a two-thirds majority could be assembled, this would allow funds to be expended for any purpose without regard to the nexus with AB 32. One possibility is that funds could be used to return allowance value to households or to offset so-called distortionary taxes.[[3]](#footnote-3) Some analyses have concluded that scenarios that incorporate such "revenue recycling" result in the most beneficial impact on the California economy.[[4]](#footnote-4) Such an approach would not be consistent with the statutory guidance noted above, but given the will of the Legislature to undertake revenue recycling the existing statutory language could be amended as needed.

# Discussion

The investment plan must identify near and long term goals and targets by sector, analyze gaps in current state strategies, and identify priority programmatic investments. It also must direct specified portions of the funds to projects that benefit or are located in disadvantaged communities, and take into account the use of funds to offset existing General Fund expenditures. The first step is to earmark funds to offset General Fund expenditures, which is an "off the top" exercise that should be addressed prior to other analyses, and identify the amount of auction proceeds to be returned via revenue recycling to households and/or businesses. After that the most logical approach is to first identify candidate near term and long term investments based on the "gaps" analysis, then adjust those results as needed in order to meet the SB 535 allocation requirements. This will ensure that to the extent possible projects that satisfy the SB 535 requirements also fit within and are consistent with the broader overall identification of funding priorities. The recommended flow is shown in Figure 1 below.

Figure

Flow Diagram for Identification of Priority Investments



## Additionality

One fundamental question that must be addressed is whether or not the funds should be used to achieve additional reductions, beyond those achieved under existing requirements. Reductions from sources outside the cap would be additional, provided that the source does not obtain an "offset" that can be used towards compliance. However a project that results in reductions from a covered source (a source subject to the cap) will not by itself result in additional reductions. Rather, because the cap sets the aggregate level of emissions, a reduction from a covered source will allow other sources to correspondingly increase their emissions, with no net change in the overall emission level. This results in lower compliance costs overall. From an implementation standpoint, if policymakers want projects to achieve additional reductions then it will be necessary to retire allowances in an amount equal to the emission reduction achieved by the projects.

The newly passed legislation does not provide consistent guidance as to whether the auction proceeds should result in additional reductions. AB 1532 states that the funds "shall be used to facilitate the achievement of reductions of greenhouse gas emissions in this state". This does not require that the reductions be in addition to those otherwise achieved. SB 535, on the other hand, states legislative intent that "funds deposited pursuant to [the Global Warming Solutions Act] continue California's implementation of AB 32 by achieving additional emission reductions" (emphasis added).

There is a tradeoff to be made between additional reductions versus lower costs. Taking into account the impact of AB 32 compliance on Californians and California businesses, in particular during the near term transition, I recommend that in general auction proceeds be used to reduce overall compliance costs rather than achieve additional reductions beyond those identified in the Scoping Plan. This may require modification of the SB 535 statutory language.

## Near Term Strategies

Given cost minimization as an overall goal, then the objective of the investment plan should be to identify and fund reductions that can be achieved at a cost lower than the allowance value. The sectors involved and the relative need for future reductions are not relevant. Rather than targeting sectors with high GHG emissions and the need for future reductions, funds should be invested in projects that result in low cost reductions not achievable by the cap. Viewed in this fashion, low cost reductions can best be achieved from:

1. Sources not under the cap (provided that reductions from such sources are treated as offsets, or alternatively additional allowances are created within the cap in an amount equal to the reductions achieved from the uncapped sources), and
2. Sources under the cap that due to market imperfections or other constraints do not respond to the price signal imposed by the cap[[5]](#footnote-5). (Note that additional reductions from capped sources that respond to the price signal will "reallocate" the reductions achieved but will not result in additional reductions or a lower overall compliance cost.)

This in turn implies that auction proceeds targeted at near term reductions should be limited to the two categories of sources identified above, prioritized based on cost-effectiveness (dollars per ton of greenhouse gases reduced). Furthermore, funding should only be provided to projects that achieve reductions at a cost per ton lower than the allowance value. If a project achieves reductions at a cost greater than the allowance value, it will actually increase the aggregate compliance cost.

Some might argue that auction proceeds should be used to facilitate compliance by certain categories of sources, for example publicly owned facilities of various sorts or facilities facing unique competitive pressures. To the extent that such support is desired, it is preferable to address it via the allowance allocation process (i.e. through granting free allowances) rather than via the auction proceeds distribution process. This will allow for greater clarity regarding the objectives to be achieved with the auction proceeds.

## Long Term Strategies

The separate identification of near term versus long term goals, as called for by AB 1532 and embodied in the ARB Draft Concept Paper, is important and useful. In previous comments to ARB I noted that transformative measures to achieve deep reductions are better judged in terms of the magnitude of the potential reduction, and long-term cost-effectiveness, rather than attempting to force them through the filter of near-term cost effectiveness.[[6]](#footnote-6) Having separate analyses of needed short term and long term strategies will facilitate such an approach.

The state's long term target is an 80 percent reduction in greenhouse gas emissions, as compared to 1990 levels, by 2050. The AB 32 Scoping Plan identified several strategies for the 2030 timeframe that would keep the state on a trajectory to meet the 2050 target:

* Achieving a 40 percent fleet-wide passenger vehicle reduction by 2030 (approximately double the almost 20 percent expected in 2020);
* Increasing California’s use of renewable energy;
* Reducing the carbon intensity of transportation fuels by 25 percent (a further decrease from the 10 percent level set for 2020);
* Increasing energy efficiency and green building efforts so that the savings achieved in the 2020 to 2030 timeframe are approximately double those accomplished in 2020;and
* Continuing to implement sound land use and transportation policies to lower VMT and shift travel modes.

All of these involve strategic transformations to business as usual, and for none of them can it be said that a strategy is in place that will achieve the desired end. Thus there are clearly "gaps" in the state's current approach. The auction proceeds provide an opportunity to help support such transformations and set California on a path to achieve ongoing reductions. Consistent with the Scoping Plan, I suggest that the investment plan seek to enable strategic transformations in the following areas that can achieve future deep GHG reductions:

* Transport electrification
* VMT reduction/land use
* Energy efficiency/renewables[[7]](#footnote-7)

Projects to enable such strategic transformations should be evaluated in terms of "return on investment"--what is the cost and what are the private and societal benefits, taking into account the value of greenhouse gas reduction, petroleum reduction, ancillary health benefits, and other factors as appropriate. Note that this cost/benefit perspective is broader than the cost-effectiveness criterion to be applied to short term measures. The former takes into account the benefits accrued, while the latter looks only at the relative cost of achieving the reduction.

## SB 535 Priorities

SB 535 requires that the investment plan allocate a minimum of 25 percent of the available moneys to projects that provide benefits to disadvantaged communities and a minimum of 10 percent of the available moneys to projects located within such communities, and states legislative intent that the projects achieve additional emission reductions and mitigate direct health impacts. This guidance suggests that priority projects are those that achieve greenhouse gas reductions and also provide co-benefits (reductions in health-damaging criteria or toxic air pollutants) that enhance public health in the identified communities.

### Treatment of General Fund Offsets

Turning first to funds used to offset General Fund expenditures, any such expenditures will support existing activities rather than achieve additional benefits. Therefore the General Fund offset portion of the investment plan should not be counted towards meeting the SB 535 percentage requirements, even if the funded activities provide benefits to disadvantaged communities.

### Treatment of Revenue Recycling

Auction proceeds directed to households and/or businesses should count towards the SB 535 requirements in direct proportion to the amount of funds that accrue to households and/or businesses in the defined communities.

### Short Term Strategies

Identifying and funding short term projects that meet the SB 535 goals will require a modification to the short-term project prioritization approach recommended above (i.e. target sources outside the cap and sources within the cap that do not respond to the price signal). The sources that impact disadvantaged communities from a health perspective (ports, mobile sources, refineries, power plants) in general are or will be included under the cap[[8]](#footnote-8), and typically will respond to the price signal imposed by the cap[[9]](#footnote-9). Thus they would not be targets from a "gaps" analysis. The cap and trade cost-effectiveness analysis conducted by such facilities, however, does not place a value on the co-benefits sought under SB 535. Therefore one way to approach the SB 535 requirement is to use auction proceeds to "buy" co-benefits not considered under cap and trade and thus reduce the net project cost to a project sponsor such that it becomes economically attractive. This would involve identifying greenhouse gas reduction projects in or benefiting disadvantaged communities that are not cost-effective when evaluated solely on the basis of greenhouse gas reductions (i.e. the cost per ton is greater than the allowance value) but which become cost-effective when a value is placed on the criteria pollutant co-benefits. If the project sponsor then undertakes the project, funds would be provided in an amount equal to (or some fraction of) the value of the co-benefits.

Detailed information that could support such an analysis for industrial sources is being developed as part of an AB 32 measure entitled Energy Efficiency and Co-Benefits Assessment for Large Industrial Sources. This regulation "requires the largest industrial facilities in California to conduct a one-time energy efficiency assessment of sources of greenhouse gases to determine the potential emissions reduction opportunities, including those for criteria pollutants and toxic air contaminants".[[10]](#footnote-10) The initial audits by facilities have been completed and are under review by ARB. When work is complete ARB will issue a report summarizing the results. The information developed could be used to identify projects that would meet SB 535 objectives. Based on discussions with ARB staff it is likely that the information will be publicly available in time to contribute to the development of the investment plan. To the extent that data is available a similar analysis could be conducted for greenhouse gas reduction projects at other facilities such as ports, and also for land use related proposals.

The concept of providing an "adder" for benefits to disadvantaged communities could also be extended to projects that that provide economic rather than health co-benefits. For example, additional projects involving energy efficiency improvements to rental housing may become cost-effective if the economic benefit to the renter is factored into the evaluation. Short term projects that provide benefits in disadvantaged communities should count towards the SB 535 percentage requirements in proportion to the share of overall benefits that accrue to such communities.

### Long Term Strategies

With regard to long term strategies, the recommended evaluation approach is cost-benefit analysis, which already takes into account the value of health co-benefits. Long term projects that provide benefits in disadvantaged communities likewise should count towards the SB 535 percentage requirements in proportion to the share of overall benefits that accrue to such communities.[[11]](#footnote-11)

### Other Considerations

This framework prioritizes SB 535 funding based on cost effectiveness and cost benefit criteria. Residents of the affected communities may have other priorities for expenditure of the funds that should be identified and considered in the eventual allocation.

## Relationship to Allowance Value

For near-term projects, aside from those undertaken to meet the SB 535 requirement, funding should only be provided to projects that achieve reductions at a cost per ton lower than the allowance price. Otherwise, the funds will be used to purchase reductions that are more costly than the marginal reductions that could be achieved elsewhere. This would increase the overall cost of the program. For SB 535 short term projects, funding should only be provided to projects that achieve reductions at a cost per ton lower than the allowance price, taking into account the assigned value of co-benefits. illustrates the relationship between allowance value and project type for short term projects eligible for funding.

Figure

Relationship Between Allowance Value and Project Type

Long-term projects should be evaluated from a return on investment standpoint and have no direct relationship to the allowance value. However from an SB 535 perspective projects that achieve co-benefits in disadvantaged communities could receive an "adder" in the form of additional weighting of the co-benefits achieved.

# Allocation Across Funding Categories

The legislative guidance is silent on the relative emphasis to be provided to near term versus long term priorities. It is difficult to know at the outset how many projects will meet the recommended criteria for short term funding (i.e. sources outside the cap or not reached by the allowance price; cost per ton less than the allowance price, plus additional projects that qualify under SB 535). Meanwhile almost any amount of funds could be used to support the long term transitions.

The statutes do not contemplate the return of auction proceeds to households or businesses, so they likewise do not provide any guidance on the relative priority of any such uses. It is worthy of note that the report[[12]](#footnote-12) of the Economic and Allocation Advisory Committee established to provide input on the design of the California cap and trade program provides some guidance on this point:

"The (substantial) portion of allowance value that is not devoted to the earmarked purposes above[[13]](#footnote-13) should be allocated to two major uses: (1) returning allowance value to households, and (2) financing investments to reduce emissions and other public expenditures. Roughly 75% of this value should be devoted to the first of these uses, and roughly 25% to the latter. Because the amount of allowance value is expected to be lower in early years than in later years, it is appropriate to allow these ratios to change over time. A share in excess of 25% might be devoted to investment in earlier years, when total allowance value is lower, so that high-priority investment needs can be financed.

No recommendation regarding the appropriate level of funding in each category is made at this time.

# Conclusion

The investment plan should incorporate the following:

1. The Governor and the Legislature should establish on a policy basis the aggregate amount of funds to be allocated to short term projects, long term projects, and the return of auction proceeds to households and/or to offset business taxes.
2. To minimize the potential for legal challenge all funded projects (other than the return of funds to households or businesses) should result in greenhouse gas reductions.
3. The investment plan should first identify appropriate General Fund expenditures to be offset, then earmark funding for the return of auction funding to households or businesses, then identify candidate short term and long term investments based on the "gaps" analysis, and then adjust results as needed in order to meet the SB 535 allocation requirements.
4. In general auction proceeds should be used to reduce overall compliance costs rather than achieve additional reductions beyond those identified in the Scoping Plan.
5. Funding to support near-term reductions (a) should only address emissions from sources not covered under the cap, or sources under the cap that do not respond to the price signal imposed by the cap, (b) should be prioritized based on cost-effectiveness, and (c) should only be provided to projects that achieve reductions at a cost per ton lower than the allowance value (except as modified for SB 535 purposes as noted below). Reductions from sources not under the cap should be treated as offsets, or alternatively additional allowances should be created within the cap in an amount equal to the reductions achieved from the uncapped sources.
6. If policymakers wish to facilitate compliance by certain categories of sources, relief should be provided through the allowance allocation process rather than through distribution of auction proceeds.
7. Funding to meet SB 535 requirements could be used to buy down the cost of greenhouse gas reduction projects in or benefiting disadvantaged communities, based on the value of co-benefits generated. Funding for short term projects should only go to projects that achieve reductions at a cost per ton lower than the allowance value, taking into account the value of the co-benefits.
8. The return of auction proceeds to households or businesses, and strategies that provide benefits in disadvantaged communities should count towards the SB 535 percentage requirements in proportion to the share of overall benefits that accrue to such communities.
9. Long term strategies should focus on transport electrification, VMT reduction/land use, and energy efficiency/renewables, and should be evaluated on the basis of return on investment (cost/benefit analysis), taking into account the full range of societal and private benefits accrued.

Figure 3 below illustrates the overall recommended approach.

Figure

Recommended Approach



1. The Department of Finance is to act "on behalf of the Governor, and in consultation with the state board [ARB] and any other relevant state entity". [↑](#footnote-ref-1)
2. Horowitz, C., Enion, M. Rhead, Hecht, Sean B., and Carlson, Ann, *Spending California’s Cap-and-Trade Auction Revenue: Understanding the Sinclair Paint Risk Spectrum*, Emmett Center on Climate Change and the Environment, UCLA School of Law, March 2012. [↑](#footnote-ref-2)
3. Parry, I., *Revenue Recycling and the Costs of Reducing Carbon Emissions*, Resources for the Future, June 1997. [↑](#footnote-ref-3)
4. See Schatzki, T., and Stavins, R., *Using the Value of Allowances From California’s GHG Cap-and-Trade System,* August 27, 2012, p. 14, and Rose, A., Wei, D. and Prager, F., *Impacts of Climate Policy on the California Economy*, Next 10, December 2010 [↑](#footnote-ref-4)
5. Rental housing provides one such example. Because utility bills are paid by the renter, the owner of the facility does not have an incentive to invest in cost-effective measures to reduce energy consumption. Other possible candidates include sources with financing issues, federally regulated sources, and activities related to land use improvements. [↑](#footnote-ref-5)
6. Shulock, Chuck, *Response to ARB Request for Public Input on Investment of Cap-and-Trade Auction Proceeds*, Shulock Consulting, June 21, 2012 [↑](#footnote-ref-6)
7. These strategies fall within the purview of the Public Utilities Commission, such that further consideration must include close coordination with PUC activities. [↑](#footnote-ref-7)
8. Mobile source emissions will be included under the cap when transportation fuels are added in 2015. Emissions from combustion of agricultural fuels are not included. [↑](#footnote-ref-8)
9. Land use projects that can reduce transportation emissions face market barriers in the form of zoning rules, local finance constraints, mortgage financing that does not consider transportation costs, and federal transportation funding that has heavily subsidized and incentivized road construction. Such projects may therefore be "reachable" under the recommended framework. [↑](#footnote-ref-9)
10. http://www.arb.ca.gov/cc/energyaudits/energyaudits.htm [↑](#footnote-ref-10)
11. The benefits from long term strategies such as transport electrification, land use improvements or energy efficiency will be felt statewide or across wide areas as well as in disadvantaged communities. One way to apportion the cost of such expenditures from an SB 535 standpoint is to determine what fraction of the total benefit accrues to disadvantaged communities, and count the same fraction of the overall cost towards the SB 535 requirement. [↑](#footnote-ref-11)
12. Allocating Emissions Allowances Under a California Cap-and-Trade Program: Recommendations to the California Air Resources Board and California Environmental Protection Agency from the Economic and Allocation Advisory Committee, March 2010, p. 4 [↑](#footnote-ref-12)
13. The committee recommended that "sufficient allowance value should be earmarked for the purposes of (1) addressing emissions leakage (when other mechanisms cannot easily or effectively be engaged for this purpose), (2) avoiding disproportionate adverse economic impact of AB 32 on low income households, and (3) creating a contingency fund to be devoted to any communities eventually found to be experiencing increased exposure to co-pollutants as a result of possible fossil-fuel burning stemming from AB 32 implementation. It is anticipated that a relatively small share of the state’s total allowance value would be needed for these purposes." (ibid. p. 3) [↑](#footnote-ref-13)