

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Address Utility Cost and
Revenue Issues Associated with Greenhouse Gas
Emissions.

R. 11-03-012
(Filed March 24, 2011)

**INITIAL PROPOSAL OF THE NATURAL RESOURCES DEFENSE COUNCIL (NRDC)
SIERRA CLUB CALIFORNIA, THE GREENLINING INSTITUTE, UNION OF
CONCERNED SCIENTISTS (UCS), LOCAL GOVERNMENT SUSTAINABLE
ENERGY COALITION (LGSEC), NATIONAL CONSUMER LAW CENTER (NCLC),
CLIMATE PROTECTION CAMPAIGN (CPC), CALIFORNIA HOUSING
PARTNERSHIP CORPORATION (CHPC), AND COMMUNITY ENVIRONMENTAL
COUNCIL TO ALLOCATE GREENHOUSE GAS ALLOWANCE REVENUES**

October 5, 2011

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REVENUES**

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APPENDIX A

1 Introduction

Pursuant to Rule 1.1 and 1.10 of the California Public Utilities Commission's (Commission) Rules of Practice and Procedure, the Natural Resources Defense Council (NRDC), Sierra Club California (Sierra Club), Greenlining Institute, Union of Concerned Scientists (UCS), Local Government Sustainable Energy Coalition (LGSEC), National Consumer Law Center (NCLC), Climate Protection Campaign (CPC), California Housing Partnership Corporation (CHPC), and the Community Environmental Council (collectively "Joint Parties") respectfully submit this initial proposal based on the "Assigned Commissioner and Administrative Law Judges' Joint Scoping Memo and Ruling" (Scoping Memo) dated September 1, 2011 to allocate revenues generated from the sale of emission allowances by the three investor-owned electric utilities (Utilities) subject to the jurisdiction of the Commission.

NRDC is a non-profit membership organization with nearly 100,000 members in California and has a longstanding interest in minimizing the societal costs of the reliable energy services that Californians demand.

Sierra Club is a national, California-based non-profit membership organization with 150,000 members in California, with an interest in increasing energy efficiency and renewable energy to reduce greenhouse gas emissions.

The Greenlining Institute is a national policy, organizing, and leadership institute working for racial and economic justice. The organization's mission is to empower communities of color and other disadvantaged groups through multi-ethnic economic and leadership development, civil rights, and anti-redlining activities.

The Union of Concerned Scientists (UCS) is a national, non-profit, membership organization with over 14,000 members in California and is devoted to building a healthier environment and a safer world through the use of rigorous scientific analysis, innovative thinking and committed citizen advocacy.

The Local Government Sustainable Energy Coalition (LGSEC) is the only statewide organization that formally represents the interests of local governments before California's energy and environmental regulatory agencies. Members are leaders among local governments

in energy efficiency, renewable energy, climate action planning, sustainability and related issues.¹

The National Consumer Law Center (NCLC) was established in 1969 with the mission of advocating on behalf of low-income consumers in the economic marketplace. In addition to focusing on many other consumer issues, NCLC has long worked on a range of energy and utility issues, with the goal of ensuring that low-income households have access to essential utility services and to energy efficiency programs. NCLC actively participated in the public policy discussions around the Waxman-Markey bill and other climate change legislation that came before Congress, particularly on the issue of how to allocate sufficient revenues to low-income customers to address bill impacts and to mitigating the effects of climate change.

The Climate Protection Campaign (CPC) is a California-based non-profit organization which focuses on public policy that will significantly reduce greenhouse gas emissions through increasing energy efficiency, developing renewable energy and other means.

The California Housing Partnership Corporation (CHPC) is a statewide organization dedicated to assisting nonprofit and government housing agencies to create, acquire, green, and preserve housing affordable for lower-income households, while providing leadership on housing preservation policy and funding. CHPC is also the convener of the Green Rental Home Energy Efficiency Network (GREEN), a coalition of over 35 organizations committed to increasing access to energy efficiency resources for very low income residents of multifamily rental properties in California and ensuring that publicly assisted properties serving the state's lowest income households receive an equitable distribution of these resources.

The Community Environmental Council is a member-supported environmental non-profit organization formed in Santa Barbara in 1970 and is the leading environmental organization in the Central Coast region of California. In 2004, the Council shifted its primary focus to energy and transportation issues and is spearheading a regional effort to wean Central Coast communities from fossil fuels, on a net basis, during the next two decades. The Council is almost unique in combining on the ground work on a number of energy and climate change-related issues with concurrent work on state and federal policy issues. The Council's state policy

¹ The LGSEC is a statewide membership organization of cities, counties, associations and councils of government, special districts, and non-profit organizations that support government entities. Each of these organizations may have different views on elements of these comments, which were approved by the LGSEC's Board. A list of our members can be found at www.lgsec.org.

work is directly informed by experience with what has worked, or is likely to work, at the local level. More information on the Council and its energy programs may be found at www.cecsb.org.

The Joint Parties represent a wide and diverse array of interests pertinent to this proceeding, including a strong focus on environmental and consumer protection. We are mindful of the Commission's request for parties to work together to avoid duplication and leverage expertise in developing allocation proposals.² We are also mindful of the Commission's request for parties to submit proposals in sufficient detail to enable the proceeding to move forward productively.³ With those principles in mind, we note where consensus was not possible among the Joint Parties on a specific component of the proposal rather than avoid the issue entirely.

We urge the Commission to consider this proceeding in the broader context of California's plan to transition to clean energy under AB 32. Revenues generated from the sale of emission allowances present a unique opportunity to both unlock additional clean energy solutions in the power sector and cushion the impact of carbon mitigation policies on utility customers in a manner that retains strong incentives to conserve energy. While the cap-and-trade program is set to begin auctioning allowances in 2012, which will require the Commission to resolve this proceeding in a timely manner, we ask that the Commission consider allocation proposals with the long-term benefits of utility customers in mind. An approach focused exclusively on short-term viability will forego opportunities to maximize the benefits of allowance revenues for customers over the long-run.

Through a unique partnership among state agencies, local governments, the Utilities and the private sector, California's groundbreaking climate policies have positioned the state as a global leader in developing clean energy solutions, and provided the state a competitive advantage in fostering a vibrant clean energy economy and workforce. We encourage the Commission to apply the same forward-thinking in this proceeding.

² R.11-03-012, "Assigned Commissioner and Administrative Law Judges' Joint Scoping Memo and Ruling," (Scoping Memo) at 12 (Sept. 1, 2011).

³ Id.

2 Summary of Proposal

Our proposal is summarized as follows:

2.1 Policy Objectives

- We support the objectives the Commission has identified to guide parties' allocation proposals, and propose one additional objective that we believe rounds out the appropriate criteria on which to base allocation decisions –*proposals should facilitate customer understanding, engagement and support for California's climate programs.*
- We also encourage the Commission to assess proposals against the collective set of objectives identified in this proceeding, and ask the Commission to prioritize proposals that advance a greater number of objectives over those that address only a select few.

2.2 Overall Allocation

- We urge the Commission to devote a substantial share of allowance revenues to an investment fund (what we term a Carbon Trust) designed to target barriers in the market for low carbon solutions that pricing carbon will not overcome. To make good on California's long-term climate objectives at least cost, it will be imperative that we ramp up investments in programs and technologies that face market barriers, and which can substantially reduce energy costs for utility customers across sectors.
- We propose the Commission use the Auction Reserve Price ('floor price') schedule in the Air Resources Board's (ARB) proposed cap-and-trade rule as a benchmark to determine the minimum total amount of allowance revenues to allocate for investment.⁴ Following this apportionment, the Joint Proposal calls for the Commission to allocate all additional allowance revenues directly to customers (which we forecast will constitute the majority of revenues over the course of the program).

2.3 Direct Return to Customers

- Following the initial allocation for investments, which will provide substantial benefits to customers, we propose the Commission prioritize residential customers in returning allowance revenues directly to customers, and return allowance revenues to all residential customers (including low income households) in the form of an off-bill Carbon Credit that will afford customers the choice of how to apply their share of allowance revenues.
- We propose remaining revenues be returned to commercial and industrial customers in the form of rate credits or targeted subsidies for carbon reduction technologies, with priority given to energy-intensive and trade exposed (EITE) firms who are financially constrained and have received no allowance rebates or credits to prevent economic and emissions leakage.

2.4 Investment in Carbon Mitigation Activities

- We propose the Commission set aside allowance revenues in each year of the program to make targeted investments in clean energy programs and technologies designed to overcome existing

⁴ Sierra Club California proposes the Commission allocate additional allowance value to the Carbon Trust based on the market price.

market barriers to carbon mitigation solutions. We see investment opportunities in additional energy efficiency, renewable energy, innovative financing and other research and development (R&D) programs that can help achieve the targets set forth in AB 32 and California's long-term climate objectives. In collaboration with local governments and community based organizations, programs funded through the Carbon Trust would be made available to all utility customers, including Community Choice Aggregator (CCA), Direct Access (DA) and commercial/industrial customers.

- We recognize that considerably more work will be necessary to set up and administer an investment fund designed to achieve these objectives. At this stage, we focus on the rationale and range of benefits available from devoting allowance revenues for investment, and identify areas that warrant further consideration. As the proceeding progresses, we will provide more detailed comments on how the Commission can implement a Carbon Trust.

We present our proposal under the structure suggested by the Commission for the first track of this proceeding.⁵ Section 3 begins with a discussion of the policy objectives the Commission should consider when evaluating proposals, including how the Commission should evaluate and compare proposals against the relevant objectives. Section 4 then outlines the details of our proposal, including the apportionment of allowance revenues between investment and direct customer return (section 4.2), prioritization and form of direct return by customer class (section 4.3), overview and rationale for investing allowance revenues (section 4.4), and discussion of rate and bill impacts (section 4.5). Section 5 weighs our proposal against the Commission's policy objectives. Finally, Section 6 assesses how our proposal comports with guidance from ARB and past Commission decisions regarding allowance revenues.

3 Policy Objectives

3.1 The Commission should evaluate proposals to the extent they facilitate customer understanding, engagement and support for California's climate programs

We strongly support the seven objectives identified by the Commission, which we feel comprise essential criteria the Commission must consider in evaluating allocation proposals. In addition to the objectives identified by the Commission, we ask the Commission to consider one final objective: to compare and evaluate proposals to the extent they facilitate customer understanding, engagement and support for California's climate programs. We believe this objective encompasses two additional considerations that are not fully captured in the Commission's seven objectives.

⁵ Scoping Memo at 12-13.

First, including this objective would put greater emphasis on the degree to which an allocation proposal engages with and communicates to customers the role and benefits of allowances revenues as part of California's comprehensive package of policies to address climate change. The Commission has recognized the importance of communicating the challenges posed by climate change and the connection to customers' energy usage through the return of allowance revenue.⁶ We ask the Commission to go one step further and recognize the importance of communicating to customers the benefits of California's climate policies, both in the form of direct return of allowance revenues and investments funded through the Carbon Trust. As ARB Chair Mary Nichols has noted, the ultimate success of AB 32 is contingent on the extent to which consumers see and realize demonstrable benefits of the program.⁷

We see tremendous opportunity to communicate the benefits of the program to consumers through the return of allowance revenues, which will play an integral part in shaping public reaction to the program. For this to occur, however, the benefits must be visible and understandable. If allowance revenues are returned to customers through rate credits, as currently proposed by the Utilities, the vast majority of customers will be left entirely in the dark, both to the program writ large and the benefits of allowance revenues. Marketing efforts might help raise awareness, but if bill relief measures are detached from any requirement of customer action or any tangible benefit, we feel that such efforts would largely go unnoticed. On the other hand, engaging customers in the process by providing customers the choice of how to receive allowance revenues, matched up with educational materials explaining the program and identifying energy and conversation opportunities, will promote better understanding of climate change and how customers' energy choices can help reach the targets of AB 32.

To encourage broad public support and engagement with California's climate programs, we also submit that the benefits of allowance revenues must be distributed in an equitable manner. Returning allowance revenues to only certain customers will undermine the public's reception of the program, particularly when the Commission had identified (in Objective #3) the importance of recognizing that allowance revenues constitute a public asset. As described in

⁶ Scoping Memo, Appendix A, at A-10 (recognizing the unique "opportunity the use of allowance revenues offers to further general [public] understanding of the nature of climate change and the role of consumer' energy choices therein.").

⁷ Mary Nichols, California Air Resources Board Chairman, "AB 32: Delivering on the Promise," prepared remarks at the California Independent System Operator Stakeholders Symposium (Sept. 7, 2011), available at: http://www.arb.ca.gov/newsrel/2011/11_9_7_nichols.pdf.

more detail below, the Commission must ensure all customers share in the benefits of allowance revenues to facilitate the successful rollout and implementation of the program and maintain support for California's efforts to tackle climate change.

Coupled with the seven objectives the Commission has already identified, we believe adding this additional objective will provide the Commission the right set of criteria on which to base allocation decisions.

3.2 The Commission Should Evaluate Proposals against the Full Set of Policy Objectives, With Priority Given to Proposals that Advance a Greater Number of Objectives

We submit that proposals should be evaluated against the full array of objectives identified by the Commission. In our view, many of the Commission-identified objectives represent prerequisites that any proposal must achieve to be considered by the Commission. These objectives reflect Commission precedent or are called out specifically in the language of AB 32 or ARB's cap-and-trade rule. Objective 1 (preserve the carbon price signal), for example, is the product of past Commission guidance on allowance revenues and mirrors the conclusion of every expert body that has considered the question of how to allocate allowance revenues from California's cap-and-trade program.⁸ Similarly, Objective 6 (maintain competitive neutrality across load serving entities) is required by ARB's proposed cap-and-trade rule,⁹ while Objective 2 (prevent economic leakage) and Objective 4 (reduce adverse impacts on low income households) are addressed specifically in the language of AB 32.¹⁰

The remaining three Commission-identified objectives – Objective 3 (distribute revenues equitably recognizing the public asset nature of the atmospheric carbon sink), Objective 5 (correct for market failures that lead to underinvestment in carbon mitigation activities and technologies), and Objective 7 (achieve administrative simplicity and understanding) – and the additional objective we propose (facilitate customer understanding, engagement and support for California's climate programs), while not required by law or prior Commission mandate, similarly embody key objectives that every allocation methodology should advance. As

⁸ See Section 5 below.

⁹ ARB, "Proposed California Cap On Greenhouse Gas Emissions And Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols," § 95892(d)(4), available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/2ndmodreg.pdf>.

¹⁰ Cal. Health & Safety Code §§ 38562(b)(2), 38562(b)(8). For these two objectives, however, we suggest the appropriate inquiry is not so much whether preventing economic leakage or reducing adverse impacts are important objectives, but whether leakage and/or adverse impacts are likely to occur.

discussed above, returning allowance revenues equitably and in a manner that facilitates customer understanding of the program (both the reasons behind it and the benefits from it), will be critical to the success of this proceeding and California's broader climate initiatives. Likewise, the ability of California to make good on its long-term climate objectives at least cost will be contingent on overcoming market barriers and market failures in carbon mitigation activities. As we discuss in detail in section 4.4, allowance revenues provide a unique opportunity to make strategic investments in programs and technologies to reduce emissions that pricing effects alone will not achieve, and which will be essential to provide enduring bill relief to customers in a carbon-constrained economy.

Accordingly, we urge the Commission to prioritize proposals that credibly advance each objective over proposals that address only a select few. In particular, we advise the Commission to reject proposals that achieve certain objectives at the expense of others. For example, we urge the Commission to reject relatively simple proposals that can maintain competitive neutrality across load serving entities, but which do not preserve the price signal, return allowance revenues to low income households, or correct for market failures. At this stage, it is premature for the Commission to conclude it must forsake certain objectives to accomplish others. Each objective reflects an important component of a well-designed plan to distribute allowance revenues. We ask the Commission to weigh and compare proposals to the extent they advance the collective set of objectives identified in this proceeding.

4 Joint Parties' Allocation Proposal

Our proposal is designed with the Commission's objectives squarely in mind. We propose that the Commission set aside a substantial portion of allowance revenues each year for strategic investments in carbon mitigation programs and technologies, and return remaining revenues directly to customers in a manner that is visible, equitable, and which respects the incidence of carbon pricing in the economy.

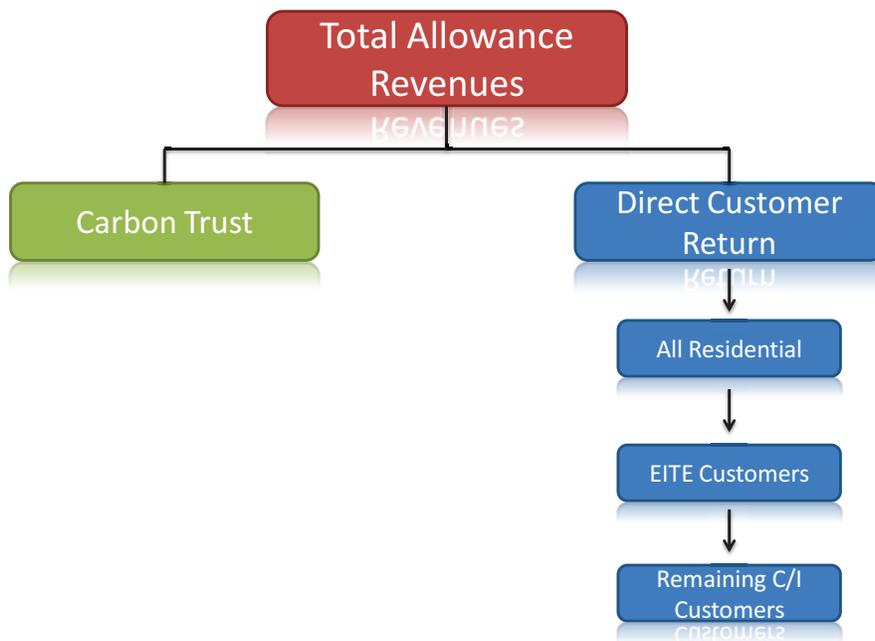
4.1 Proposal Overview

We propose that the Commission allocate allowance revenue according to the following general framework, described below and illustrated in Figure 1.

- First, allocate a portion of total allowance value each year to a Carbon Trust to make targeted investments in programs and technologies to overcome existing market barriers to carbon mitigation solutions (advancing Objective #5)
 - Programs would be available to DA and CCA customers (advancing Objective #6), as well as commercial, government, non-profit and industrial customers;
 - Program delivery would work in partnership with local governments and community-based groups; and
 - The Trust would include a focus on expanding current and developing new programs designed to address the unique set of barriers facing California’s low income population (advancing Objective #4).¹¹
- Second, prioritize residential customers in the allocation of allowance value directly to customers by setting aside sufficient revenue to offset the incremental rate impacts reasonably forecast by the Utilities on residential customers
 - Allowance revenues would be returned to residential customers (including CCA customers) through a separate Carbon Credit that would afford customers the option to cash, apply to an energy efficiency rebate/program targeted to their specific energy needs, put towards future bill payment, or put into the Carbon Trust (advancing Objectives #1, #5, #6); and
 - Allowance revenues would be returned to *all* residential customers, *independent* of energy usage and including low income households (advancing Objectives #3 and #4).
- Third, prioritize financially constrained EITE customers, who receive no (or minimal) free allocations under ARB’s proposed cap-and-trade program, in the return of allowance revenues to commercial and industrial customers through rate credits or targeted subsidies for carbon reduction measures to prevent economic and emissions leakage (advancing Objective #2); and apportion remaining revenues through rate credits to non-EITE commercial and industrial customers on a non-volumetric basis.

¹¹ These barriers are examined in detail in Appendix A.

Figure 1: Allocation Framework



4.2 Proposed Allocation of Allowance Revenues for Investment and Direct Return to Customers

This section outlines the methodology used to determine the initial allocation of allowance revenues dedicated for investment (through the Carbon Trust) and allowance revenues available for direct return to customers. Section 4.3 below, outlines our proposal for allocating allowance revenues directly to customers

At the outset, we propose that the Commission use the Auction Reserve Price schedule (commonly referred to as the “floor price”) in ARB’s proposed cap-and-trade regulation as the benchmark for apportioning allowance value between direct bill relief and investment. The floor price is predetermined in ARB’s proposed rule, starting at \$10/ton in 2013 and rising at 5% year plus inflation.¹² Accordingly, using the floor price as a benchmark will enable the Commission to know in advance the total amount of revenues that will be allocated to investment each year. It will provide a stable and predictable funding stream necessary to plan and make informed decisions on which programs to fund, and allow for a long-term planning horizon to build

¹² ARB, “Proposed California Cap On Greenhouse Gas Emissions And Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols,” § 95911(b)(6), available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/2ndmodreg.pdf>.

expertise in administering the fund and identifying the most cost-effective investment opportunities. Using the floor price also provides a built-in cost containment function to mitigate the direct impacts of carbon pricing in the power market. Should market prices rise above the floor price, the Joint Proposal calls for all additional allowance revenues to be returned directly to customers.¹³

Table 1 provides an overview and illustration of how this approach would work under a schedule of hypothetical market prices. As the table shows, if market prices deviate significantly from the floor price, the total percentage of allowance value directed towards bill rebates will rise accordingly. We believe this strikes the appropriate balance between dedicating a steady stream of funding for investment and ensuring sufficient allowance revenue is available to offset costs passed through to utility customers.

Table 1: Proposed Allocation of Allowance Revenue between Investment and Direct Customer Return

Proposed Allowance Value (AV) Allocation	(A) Total Allowances to Utilities (M)	(B) Floor Price (in ARB regulation)	(C) Market Price (Illustrative)	(D) Total AV (A) x (C) (\$M)	(E) Carbon Trust (% of AV at Floor Price)	(F) Carbon Trust (A) x (B) x (E) (\$M)*	(G) Direct Return (D)-(F) (\$M)	Total AV for Direct Return (G)/(D) (%)
2013	64.6	\$10.00	\$15.00	\$969.00	50%	\$323.00	\$646.00	67%
2014	63.1	\$10.70	\$20.00	\$1,262.00	50%	\$337.59	\$924.42	73%
2015	62.0	\$11.45	\$25.00	\$1,550.00	63%	\$443.69	\$1,106.31	71%
2016	59.8	\$12.25	\$30.00	\$1,794.00	63%	\$457.84	\$1,336.16	74%
2017	57.6	\$13.11	\$35.00	\$2,016.00	63%	\$471.96	\$1,544.04	77%
2018	55.7	\$14.03	\$40.00	\$2,228.00	75%	\$586.10	\$1,641.90	74%
2019	54.5	\$15.01	\$45.00	\$2,452.50	75%	\$613.53	\$1,838.97	75%
2020	53.7	\$16.06	\$50.00	\$2,685.00	75%	\$646.82	\$2,038.18	76%
TOTAL	471.0	--	--	\$14,956.50	--	\$3,880.53	\$11,075.97	74%

*Note: We propose that a marketing budget to communicate and administer the Carbon Credits program for residential customers come out of funds allocated to the Carbon Trust (expected to constitute a higher share in the early years).

While there is agreement amongst the Joint Parties on using the floor price as the mechanism to fix the apportionment of allowances between investment and direct customer return, there is a range of opinion among the parties on the percentage of revenues that should be

¹³ Sierra Club proposes that half of additional allowance revenues above the floor price be returned to customers, and half to the Carbon Trust.

dedicated to each end (in column (E)). NRDC, UCS, CHPC, LGSEC, the Community Environmental Council, and Sierra Club California support a higher percentage in favor of investment to support early and sustained investments in carbon mitigation solutions and other programs under the Carbon Trust, whereas NCLC, Greenlining, and CPC support a higher percentage towards direct customer return to ensure energy costs remain affordable, particularly for low-income customers, and to mitigate increases in the cost of other goods and services that will gradually occur as AB 32 is implemented. The proposed schedule in column (E) represents somewhat of a middle-ground; however, there is consensus that the percentage dedicated to investment should gradually ramp up over the course of the program. We agree it will take time to develop an investment infrastructure capable of handling allowance revenues, and we believe that returning more money directly to customers in the early years will help build broader public support for the entire AB 32 program.

We wish to emphasize, however, that every party to this proposal urges the Commission to set aside revenues for uses other than direct bill relief (the only disagreement relates to the percentage). Sierra Club California also proposes that in addition to revenue at the floor price going to the Carbon Trust, at least 50 percent of the incremental revenue above the floor price be allocated to the Carbon Trust. Given that the Commission has previously recognized that utility allowance value should further the purposes of AB 32,¹⁴ Sierra Club California believes that limiting the Carbon Trust as proposed would underfund important additional investments in energy efficiency, emerging technologies and renewable energy, and environmental justice communities.

4.3 Proposed Methodology to Return Allowance Revenues Directly to Customers

Following the allocation of allowance revenues to the Carbon Trust, we propose the balance of revenues be directly returned to customers. From that remaining share, which we forecast will constitute the majority of allowance value over the course of the program (see Table 1 above), we propose that the Commission prioritize the return of allowance revenues by customer class as described below.

First, we propose the Commission set aside sufficient allowance revenues to offset the projected incremental costs of the cap-and-trade program on residential customers (calculated as

¹⁴ D.08-10-037 at OP 15.

the total projected incremental generation costs assigned to the residential sector under the Utilities' System Average Percentage Change (SAPC) methodology)¹⁵ (see Table 2, below). We believe it is appropriate to prioritize residential customers as the burden of carbon pricing will largely fall on households, and disproportionately on low-income households, who will bear the brunt of both the economic impacts of a carbon-constrained economy and the impacts of climate change (advancing Objective #4). As the customer class that represents the large majority of Californians, residential customers have the only credible claim to an ownership interest in the atmospheric commons, and rightfully deserve precedence over commercial interests in allocating public revenues (advancing Objective #3). Returning allowance revenues off-bill will also preserve the carbon price signal in retail rates and afford customers the choice of how to receive and apply their share of a public asset (advancing Objective #1 and #3). Finally, providing separate rebates through our proposed Carbon Credits program will afford the Commission a better opportunity to communicate the program to customers, and enable the Commission to leverage existing Demand Side Management (DSM) programs designed to overcome market barriers and provide sustainable bill relief to customers (advancing Objective #5).

Second, we propose the Commission set aside a portion of the remaining revenues for direct return to customers to commercial and industrial customers that can provide evidence of leakage risk under ARB's cap-and-trade regulation (advancing Objective #2). However, we urge the Commission not to overcompensate for leakage risk. We do not agree that indirect costs, in the form of higher electricity costs, warrant additional subsidy above and beyond what leakage-classified entities are already receiving under ARB's cap-and-trade rule.

Finally, we propose the Commission apportion remaining revenues to other commercial and industrial customers in proportion to their SAPC allocation factors (prorated following the allocations above), consistent with how the Utilities collect additional revenues in their Energy Resource Recovery Account (ERRA) forecast rate cases. To send the right incentives to encourage emission reductions, the carbon price should be reflected in higher prices for carbon-intensive goods and services. In most instances, providing substantial allowance revenue to commercial and industrial customers would either undercut that price signal (if the revenues were used to dampen prices) or result in windfall profit (if the revenues were retained).

¹⁵ "Joint Exhibit of Pacific Gas & Electric Company (U 39 E), Southern California Edison Company (U 338 E), and San Diego Gas & Electric Company (U 902 E) Pursuant to June 2, 2011 Administrative Law Judge's Ruling" (June 20, 2011).

Accordingly, we encourage the Commission to prioritize other uses of allowance revenues ahead of direct return to these customers.¹⁶

Table 2 and Table 3 illustrate this approach using the format offered by Pacific Gas & Electric Company (PG&E) in its June 20, 2011 Joint Exhibit.¹⁷

Table 2: PG&E Allocation in 2013

PG&E (2013)	Bundled SAP Allocation Factor	Additional Generation Costs	Total AV for Direct Customer Return
TOTAL AV: \$373,620,000 (A)		\$315,073,746 (B)	\$249,080,000 (C)
Residential	38.6%	\$121,618,466	\$121,618,466 (D)
Small	13.1%	\$41,274,661	tbd
Medium	15.3%	\$48,206,283	tbd
E-19	13.5%	\$42,534,956	tbd
Streetlights	0.5%	\$1,575,369	tbd
Standby	0.4%	\$1,260,295	tbd
Agriculture	5.8%	\$18,274,277	tbd
E-20	12.7%	\$40,014,366	tbd
System	99.9%	\$314,758,672	\$249,080,000

Table 3: Direct Customer Return Proposed Hierarchy (PG&E, 2013)

Total Allowance Value in 2013 (PG&E)	\$373,620,000 (A)
Total AV to Carbon Trust	\$124,540,000
Total AV Available for Direct Customer Return	\$249,080,000 (C)
<i>Residential</i>	
· Total revenue available for Carbon Credits	\$121,618,466 (D)
· Number of households	4,627,002
· Avg. household credit amount in 2013 ¹	\$26.28
<i>Energy Intensive Trade Exposed (EITE)</i>	
· Remaining revenue	\$127,461,534

¹⁶ However, LGSEC, Greenlining and NCLS oppose any return to other commercial and industrial customers. These parties note that in order to support the market mechanism, the funds should not be allocated based on the contribution of the customer class of funds caused by higher rates, rather the funds should be based on the impact on individuals as costs increase in the market place for all purchased goods and services. While businesses can pass on their higher costs to customers, individuals have nowhere else to turn except to reduce purchases, an undesired result for businesses, particularly small businesses that do not control non-discretionary consumer purchases. Business and building owners will benefit as individuals.

¹⁷ “Joint Exhibit of Pacific Gas & Electric Company (U 39 E), Southern California Edison Company (U 338 E), and San Diego Gas & Electric Company (U 902 E) Pursuant to June 2, 2011 Administrative Law Judge’s Ruling,” (June 20, 2011).

· Allocation to EITE customers (<i>illustrative</i>)	\$12,746,153 (E)
<i>Non-Residential, Non-EITE</i>	
· Remaining revenue	\$114,715,381
· Allocated to remaining customers in proportion to SAP factors (prorated)	\$114,715,381

¹This represents the avg. credit amount per household on an annual basis. Most of the Joint Parties propose the actual credit amounts vary to better account for legitimate variation in energy needs among households throughout California.

- (A) Denotes PG&E’s total allowance value (AV) in 2013, calculated from PG&E’s allowance allocation in 2013 under ARB’s cap-and-trade proposed regulation of 25M,¹⁸ multiplied by a hypothetical market price of \$15/ton.
- (B) Denotes the total forecasted incremental generation costs PG&E forecasts it will incur to procure generation on behalf of its customers as a result of the cap-and-trade program. The methodology we use is the same as that presented by the Utilities’ in their June 20, 2011 filing (including a 10% offset in forecast generation costs to account for PG&E’s DA and CCA customers), except in one respect. Under ARB’s methodology for allocating allowances to the Utilities, ARB forecasts that each Utility will receive allowances in excess of their anticipated customer cost burden in each year of the program.¹⁹ Through the sale of these allowances at auction, the Utilities will generate allowance value in excess of what they will require to fully offset any cost impacts on their retail customers. At a minimum, the Utilities should not include these allowances in computing their forecast generation costs, as they do not represent emissions that the Utilities will need to account for on behalf of their customers. Accordingly, our proposal subtracts each Utility’s excess allowance allocation before calculating forecast incremental generation costs from the program.
- (C) Denotes the total amount of allowance revenue available for direct customer return following the initial allocation to the Carbon Trust under the formula presented in Table 1 (note Tables 2-5 look only at costs and revenues from one Utility, PG&E, whereas Table 1 includes all three Utilities).
- (D) Denotes the amount of allowance revenue available for residential customers, which is calculated as the total additional generation costs forecast for the residential sector. Table 3 shows how the remaining revenue would be apportioned, in aggregate, for commercial and industrial customers.

¹⁸ ARB, “Proposed California Cap On Greenhouse Gas Emissions And Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols,” Table 9-3, available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/2ndmodreg.pdf>.

¹⁹ ARB, “Proposed California Cap On Greenhouse Gas Emissions And Market-Based Compliance Mechanisms Regulation, Including Compliance Offset Protocols,” Appendix A: Staff Proposal for Allocating Allowances to the Electric Sector, p.12 (July 27, 2011), available at: <http://www.arb.ca.gov/regact/2010/capandtrade10/candtappa2.pdf>.

- (E) Denotes the total amount of allowance revenues allocated to EITE customers, which is calculated as the aggregate sum of each eligible customer's allocation. As the aggregate total is unknown at this time, the allocation sum below is presented only by means of illustration.

The effect of using the floor price as the benchmark to allocate allowance revenues between investment and direct customer return is evident in comparing Tables 2 & 3 (which forecast costs/revenues in 2013) and Tables 4 & 5 (which forecast costs/revenues in 2015). As allowance prices rise over the course of the program, as we expect, allowance revenues will yield higher sums that can be made available for direct customer return.

Table 4: PG&E Allocation in 2015

PG&E (2015)	Bundled SAP Allocation Factor	Additional Generation Costs	Total AV for Direct Customer Return
TOTAL AV: \$599,300,000 (A)		\$525,993,624 (B)	\$420,888,390 (C)
Residential	38.6%	\$203,033,539	\$203,033,539 (D)
Small	13.1%	\$68,905,165	tbd
Medium	15.3%	\$80,477,024	tbd
E-19	13.5%	\$71,009,139	tbd
Streetlights	0.5%	\$2,629,968	tbd
Standby	0.4%	\$2,103,974	tbd
Agriculture	5.8%	\$30,507,630	tbd
E-20	12.7%	\$66,801,190	tbd
System	99.9%	\$525,467,630	\$420,888,390

Table 5: Direct Customer Return Proposed Hierarchy (PG&E, 2015)

Total Allowance Value in 2015 (PG&E)	\$599,300,000 (A)
Total AV to Carbon Trust	\$171,550,000
Total AV Available for Direct Customer Return	\$420,888,390 (C)
<i>Residential</i>	
· Total revenue available for Carbon Credits	\$203,033,539 (D)
· Number of households	4,627,002
· Avg. household credit in 2015 ¹	\$43.88
<i>Energy Intensive Trade Exposed (EITE)</i>	
· Remaining revenue	\$217,854,851
· Allocation to EITE customers (<i>illustrative</i>)	\$65,356,455 (E)
<i>Non-Residential, Non-EITE</i>	
· Remaining revenue	\$152,498,396

· Allocated to remaining customers in proportion to SAP factors (prorated)	\$152,498,396
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¹This represents the avg. credit amount per household on an annual basis. Most of the Joint Parties propose the actual credit amounts vary to better account for legitimate variation in energy needs among households throughout California.

4.3.1 Proposal for Returning Allowance Revenues to Residential Customers

Return allowance revenues through Carbon Credits

We propose that the Commission return allowance revenues to residential customers in the form of off-bill Carbon Credits, rather than through rates as proposed by the Utilities. Providing allowance revenue to customers outside of rates will preserve the carbon price signal at the retail level, advancing a fundamental objective of this proceeding (Objective #1) and in accordance with previous Commission policy on this issue (see section 6 below). The majority of the Joint Parties propose the Commission vary the credit amount per residential household in proportion to baseline allocations that can normalize for legitimate variation in energy usage (e.g., by climate zone). In accordance with Objective 3, however, CPC and LGSEC do not support this approach, as it is at odds with the per capita approach inherent in the equal ownership of the commons, and Sierra Club takes no position on the issue of adjustments by baseline or climate zone at this time.

Return allowance revenues to all residential customers, including CARE customers

We propose that the Commission provide rebates to all residential customers, including low income households enrolled in the California Alternate Rates for Energy (CARE) program. We recognize the limitations of apportioning costs from AB 32 programs in the residential sector imposed by SB 695 (Kehoe, 2009).²⁰ However, as we document in Appendix A, excluding CARE customers from allocation proposals ignores the indirect costs that low income households will disproportionately incur from carbon pricing in the general economy. In addition, by prioritizing the return of allowance value to residential customers, residential customers that will face direct costs from the program (i.e., non-CARE, usage above Tier 2) will have a substantial share of allowance value available for bill relief.

²⁰ Codified at Cal. Pub. Util. Code §§ 739.1, 739.9.

Allow residential customers to choose how to receive allowance revenues through Carbon Credits

We propose the Commission present residential customers with a choice of how they would like to receive the benefit of allowance revenue through issuance of Carbon Credits. An initial communication should describe the nature of the program, the projected credit amounts, and lay out the options for how customers can apply their Carbon Credit. We propose these options include a cash rebate (through separate check or Electronic Funds Transfer (EFT) cards, discussed below),²¹ application to DSM programs matched up to the energy needs of that customer (discussed below), transfer to the Carbon Trust, and application to future/outstanding utility bills.

We recognize that communicating and marketing a Carbon Credits program to customers will take both time and money, yet as described above, this education is critical to the long term success of this program and California's overall climate goals. As noted in Table 1, we propose the budget to market and implement the program come out of the portion of allowance revenues set aside for the Carbon Trust. We also propose the Commission work with the Utilities and stakeholders to work out an appropriate implementation schedule. We reiterate, however, that California has designed its climate programs with a long-term focus, and the Commission will have ample time to phase-in any aspects of a Carbon Credits program that requires additional time to market or develop. For example, the Commission could expand the range of options to customers year-to-year as they become available, or pilot certain options among a smaller customer segment before making them broadly available.

We also recognize there is a cost associated with providing cash rebates. To the extent other options are selected, however, providing customers the option of how to receive their share of allowance revenue will cut down on this expense.²² And as the Economic and Allocation Advisory Committee (EAAC) noted, providing direct rebates through EFT cards, similar to those used today to access Social Security payments (customers could view their allowance revenue deposits at any ATM and withdraw available funds at their convenience), would lower

²¹ Should customers opt for the cash rebate option, they could also have the option of how frequently they would like to receive their rebate (i.e., monthly, quarterly, annually).

²² The Commission may also consider applying Carbon Credits to a customer's future/outstanding utility bill as the default option to further limit administrative costs and account for customers who do not respond. Alternatively, the default option could proportionately follow the split of funds between bill return, and investment in the Carbon Trust that the Commission adopts.

administrative costs.²³ Finally, we recognize that customers move in and out of Utility service territories, and providing periodic returns of allowance revenues may create difficulties for the Utilities in matching customer benefits and costs. While we hope to engage with the Utilities on productive ways to mitigate these concerns, we do not find these concerns insurmountable.²⁴

Ultimately, we see tremendous opportunity to communicate the nature and benefits of this program through the return of allowance revenues. Returning allowance value through rate reductions masks the design, intention and benefits of pricing carbon in the electricity sector, and fails to meet the Commission's objectives in this proceeding. Customers rightly deserve the option of how to receive their share of a public asset.

Leverage DSM programs through the return of allowance revenues

We also see tremendous potential to leverage existing and new DSM programs designed to provide enduring customer bill relief. We propose that the Commission package customers' Carbon Credits with information identifying energy efficiency opportunities available in the geographic region of the household that are administered by their Utility or any other third party, including local governments.

4.3.2 Proposal for Returning Allowance Revenues to EITE and Other Commercial and Industrial Customers

Following the set-aside of revenues to residential customers, we propose the Commission allocate revenues to commercial and industrial customers that can demonstrate leakage risk under ARB's cap-and-trade regulation. Unlike most commercial entities, leakage risk firms arguably may not be able to fully pass on the indirect costs of carbon pricing in the power market (in the form of higher electricity rates) that their out-of-state competitors will not face.²⁵ As preventing economic and emissions leakage is a core objective of AB 32, we propose leakage-

²³ Economic and Allocation Advisory Committee (EAAC), "Allocating Emissions Allowances Under a California Cap-and-Trade Program: Recommendations to the California Air Resources Board and California Environmental Protection Agency," ("EAAC Report") p.58 (March 2010) (noting that "EFT is widely used by state and federal agencies to distribute recurring payments to individuals"), available at: http://www.climatechange.ca.gov/eaac/documents/eaac_reports/2010-03-22_EAAC_Allocation_Report_Final.pdf.

²⁴ For example, for customers that provide a forwarding address, the Utilities could provide a rebate check for any outstanding value that had accrued; for customers who do not, outstanding revenue could be transferred to the Carbon Trust (similar to the doctrine of *cy pres* in the context of class action settlements).

²⁵ We also acknowledge that other utility customers, such as schools and other public and non-profit sector entities, may be constrained in their ability to pass on carbon costs. The Commission should treat these customers like EITE customers, and prioritize them ahead of other, less constrained customers.

exposed utility customers warrant consideration before other commercial and industrial customers. We urge the Commission not to overcompensate for leakage risk, however. Customers classified as leakage-exposed under ARB's rule will already receive free allowances in far greater proportion than will be necessary to address competitiveness concerns alone. Any leakage risk assessment should evaluate the relative costs of producing goods for the California market, and must therefore take into account transportation costs and the costs of meeting California specifications.

Finally, we propose the Commission apportion the remaining revenues to all other commercial and industrial customers in proportion to the SAPC allocation factor of their customer class, consistent with how the Utilities adjust for any other change in their generation revenue requirement in their ERRRA forecast rate cases. The amount of revenues available for commercial and industrial customers will depend on the amount of revenues remaining from the initial allocations to the Carbon Trust, residential customers, and EITE customers. We propose the Commission prorate the remaining share by the SAPC factors per customer class, which will generate the rate credit applicable to each individual customer under that rate classification. In determining the specific mechanism, however, we recommend the Commission consider and prioritize allocations for small businesses. We propose non-EITE, commercial/industrial customers should remain subordinate to other customer classes as we expect these customers to be able to fully pass on carbon costs, in which case the incidence of carbon pricing in those sectors would fall elsewhere in the economy (chiefly on consumers).

4.4 The Commission Should Devote Allowance Revenues to Make Targeted Investments in Carbon Mitigation Activities Through a Carbon Trust

It is imperative that California maintain a steady, reliable, and expanded funding stream to address systemic market barriers to implementing low-cost carbon mitigation strategies. Although the state has a long and successful track record in investing in energy R&D, emerging technologies, renewable energy and energy efficiency, significant barriers remain to achieving even greater energy and utility bill savings that carbon pricing alone will not accomplish. The Economic and Technology Advancement Advisory Committee (ETAAC), for instance, an expert body convened under AB 32 to advise ARB on clean energy investment and R&D opportunities, documented in its final report the many barriers facing commercialization and deployment of

low and zero greenhouse gas technologies (including cost and market barriers, information barriers, government barriers and industry structure and infrastructure barriers).²⁶

In administering a carbon investment fund, however, the Commission must ensure that investments in carbon mitigation activities such as efficiency and renewables are additional to existing legal and regulatory requirements. The Commission previously decided that “all auction revenues should be used for purposes related to AB 32.”²⁷ The Air Resources Board also included in its resolution adopting the cap-and-trade regulation that these purposes “could include investment in energy efficiency programs *beyond those already required by California law* and in renewable energy projects that achieve environmental and public health co-benefits for Californians.”²⁸ Allowance value should not be applied toward energy efficiency programs unless they clearly exceed the requirements of existing law, regulatory requirements, and regulatory planning framework including the Energy Efficiency Portfolio Standard, and can be evaluated and verified against the performance measures claimed. Similarly, allowance value applied toward renewable energy programs must be above and beyond requirements in existing law, particularly the limitation for each Utility on procurement expenditures for the Renewable Portfolio Standard (RPS).²⁹

Based on the funding allocation methodology described above, we propose allocating funds for the key investment strategies described in the ETAAC report for the power sector, which target market barriers holding back clean energy solutions for utility customers. These strategies include expanding energy efficiency programs beyond the Commission’s current portfolio, enabling better integration and support for renewables, and developing innovative financing strategies to support emerging clean energy technologies and implementation strategies. We also propose the Commission partner with local governments to deliver additional clean energy programs and more effectively communicate with customers, and include a focus on directing investments to California’s disadvantaged communities, consistent with AB 32.

²⁶ “Recommendation of the Economic and Technology Advancement and Advisory Committee (ETAAC): Final Report,” (February 14, 2008), available at: <http://www.arb.ca.gov/cc/etaac/ETAACFinalReport2-11-08.pdf>.

²⁷ D.08-10-037 Section 5.5.

²⁸ ARB Resolution 10-42, December 16, 2010, at 13 (emphasis added).

²⁹ Public Utilities Code Section 399.15(b)(9)(c).

4.4.1 Energy Efficiency Strategies under a Carbon Mitigation (AB 32) Framework

California's energy efficiency programs are underfunded relative to what is needed to meet AB 32's emission reduction goals. The Commission has adopted the California Energy Commission's mid-case scenario for uncommitted efficiency savings, and the low-case for the "Big Bold Energy Efficiency Strategies" over the next decade as required planning assumptions in the Long-Term Procurement Proceeding.³⁰ All three scenarios demonstrate a significant shortfall in the energy efficiency programs achieving the emission reduction targets adopted by the ARB in the Scoping Plan.³¹ The Scoping Plan targeted a reduction of 32,000 GWh of savings. The CEC Report reduced the statewide uncommitted efficiency target to 22,000 GWh statewide, of which the Utilities' share is 16,500 GWh, reflecting that they represent 75 percent of statewide electricity consumption.³² The mid-case scenario for the Utilities, 12,200 GWh, is in turn, 74 percent of the 16,500 GWh share of the reduced target. Given this 4,300 GWh or higher annual shortfall, a greater level of investment to expand existing and develop new programs is needed to achieve the targeted reductions for energy efficiency.

In addition, although the Utilities currently operate a large and comprehensive portfolio of energy efficiency programs, the current programs are designed under a resource procurement framework – i.e., the current funding levels and cost-effectiveness parameters are structured in comparison to the avoided cost of acquiring the marginal supply side alternative. We propose the Commission allocate allowance revenues to efficiency programs under a carbon mitigation framework, consistent with AB 32, which will shift emphasis to programs designed to achieve energy savings over a longer payback period (i.e., greater than the 20 year procurement time horizon), and compare opportunities to the marginal abatement cost of other emission reduction opportunities needed to meet the emissions reduction goals of AB 32.

³⁰CPUC, "Assigned Commissioner and Administrative Law Judge's Joint Scoping Memo and Ruling," R.10-05-006, Attachment 1, Standardized Planning Assumptions for System Resource Plans, Load and Resource Tables (December 3, 2010); CPUC, "Corrections to December 3, 2010 LTPP Scoping Memo," R.10-05-006, p. 10 (February 10, 2011).

³¹ Electricity and Natural Gas Committee. *Incremental Impacts of Energy Policy Initiatives Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast*. CEC-200-2009-001-CTF, page 4.

³² When CARB developed the Scoping Plan, CARB relied on the 2007 IEPR demand forecast, whereas the CEC report relies on the 2009 IEPR demand forecast, which was subsequent to the current economic downturn. This resulted in a downward revision of the 2020 forecast less than the original by 10,000 GWh, which was credited toward the Scoping Plan's efficiency target, but the assumption that demand reductions from a down economy are true efficiency reductions, is flawed.

Existing Utility Energy Efficiency Programs

California's investor-owned utilities (IOUs) currently administer efficiency program portfolios funded at roughly \$1 billion/year through 2012. There is an ongoing general efficiency proceeding at the Commission designed to address remaining policy issues and to provide program planning guidance for the next portfolio cycle, as well as a low income efficiency proceeding to address the particular needs of that customer segment.³³ The low income and general efficiency proceedings (in which many parties to this Joint Proposal are active) will require close coordination to ensure that the potential programs allowed under our proposal are not duplicative of current programs, but rather expand programs beyond the constraints faced by the guiding policy rules in those proceedings. Long term procurement planning³⁴ will also need a modest level of coordination, as the potential energy savings achieved by the expanded efficiency offerings through our proposal will need to be integrated into future utility procurement plans.

Rationale for Additional Investment in Energy Efficiency

Our proposal represents an enhanced efficiency strategy as it is based on a different policy objective that requires additional programs and expanded policy rules with a modified policy framework. The current policy objective of integrating all cost-effective energy efficiency into the utilities procurement process (as carried out by these and other proceedings at the Commission and guided by the current policy rules) is intended to level the playing field of procurement options by encouraging the Utilities' to procure efficiency similar to other resource options. This ensures that efficiency is used as a resource consistent with the state's loading order, and avoids investments in more costly and dirtier conventional generation and infrastructure. However, when looking forward to meeting our ambitious AB 32 climate goals in 2050, deciding how best to invest in efficiency requires a much longer time horizon than the current procurement practices allow for and the current policy rules are set up to support (the cost-effectiveness methodology in particular).³⁵ Long-term, enduring solutions also depend

³³ Post 2008 efficiency planning proceeding: R.09-11-014 <http://docs.Commission.ca.gov/proceedings/R0911014.htm> and A.11-05-017 et al. <http://docs.cpuc.ca.gov/published/proceedings/A1105017.htm>

³⁴ Current LTPP proceeding: R.10-05-006 <http://docs.Commission.ca.gov/Published/proceedings/R1005006.htm>

³⁵ CPUC, "Energy Efficiency Policy Rules Version 4.0," (August 2008), available at: <http://docs.Commission.ca.gov/efile/RULINGS/86262.htm>.

heavily upon the awareness, engagement and culture of community and individual behavior. While it is critical to maintain ongoing and consistent policies to integrate energy efficiency into the Utilities' procurement process, additional programs (including expanding local municipal and county governments and community-based programs) and modified policy rules are needed to reach energy savings beyond those achieved by the current efficiency programs.

Because our proposal is based on using a source of funding derived from AB 32 regulations, not procurement funding, we propose allowance value revenues be directed towards investments in energy efficiency under a significantly expanded cost-effectiveness construct and policy framework that better aligns efficiency efforts with California's long-term climate objectives. These proposed programs should still be integrated into the existing portfolio of programs to ensure they complement and leverage each other and so the customer perceives one easily accessible package of options. Furthermore, as noted above, the savings from these programs should also be incorporated into the integrated resource planning process to avoid unnecessary infrastructure investments.

The Commission should expand energy efficiency programs using allowance revenues based on modified policy rules

Modifying the policy rules and cost-effectiveness metrics for this source of funding will ensure that programs (existing and new) that move markets, build demand and workforce, serve underserved communities, and explore new and innovative ways of achieving energy savings can do so on a much larger scale than they are able to do under current rules and will be better valued for their long term carbon reduction impacts than is currently the case. Although the majority of parties agree that these programs are extremely valuable, some worthwhile programs are not cost-effective when measured by the current methodology. While the efficiency portfolio cost-effectiveness test is conducted for the entire portfolio, programs with low cost-effectiveness values reduce the overall cost-effectiveness of the portfolio. If too many of these types of programs are included, they often must be run on a smaller scale to maintain a cost-effective portfolio on aggregate.³⁶

³⁶ LGSEC proposes that implementation of Carbon Trust funds for additional energy efficiency should not include use of the Total Resource Cost test (TRC) currently used for IOU administrated programs to evaluate energy efficiency measures, noting that dropping this test will allow programs to support measures where the customer invests in part due to non-energy benefits such as comfort, improved indoor air quality, etc.

Adjusting the current methodology to be based on a longer term horizon will support significantly expanded efforts to invest in efficiency programs that have value on a longer time horizon.³⁷ Furthermore, because the current portfolio is constrained in its ability to invest in these longer term programs, our proposal will ensure that programs are additive and complementary to the current general and low-income energy efficiency approaches. All energy efficiency programs should be fully integrated from the customer's perspective, but programs funded through AB 32 allowance value revenue should be designed to make the deep and long term reductions in energy consumption necessary to achieve California's commitment of 80-90% emissions reductions by 2050.

Accordingly, we recommend that all programs funded by greenhouse gas (GHG) revenues be evaluated and approved based on updated policy rules as suggested below. In order to ensure that the investments support distinct efficiency programs that are either not feasible or very limited under current cost-effectiveness methodologies, input assumptions must explicitly value the benefit of future avoided energy use and accurately estimate the value of program contributions to the longer term goal of reducing energy consumption. While we are concurrently advocating for modifications to the cost-effectiveness methodology in the general and low income efficiency proceedings, our recommendations below are slightly different to address the necessary longer term time horizon. We propose the following modifications to the current policy rules and the cost-effectiveness assumptions for programs funded specifically through allowance revenues that go beyond the design of the current efficiency programs.

Policy Rules

- 1) Modify all relevant policy rules to sufficiently emphasize and target investment for programs that are key to achieve long term, deep emissions reductions (e.g., programs that build longer term demand for energy efficiency, more fully develop an energy efficiency workforce and infrastructure, support more comprehensive approaches, further address customer attitude and behavior, and have more freedom to focus on innovations - both technologies and implementation approaches);
- 2) Reevaluate policy rules that limit rebates for early retirement of inefficient equipment and prioritize measures with the longest estimated useful lives;

³⁷ Note: NRDC is an active participant in R.09-11-014 where the current cost-effectiveness methodology will be reviewed, evaluated, and potentially updated. NRDC plans to propose various recommendations to ensure that the cost-effective methodology accurately represents all of the benefits of energy efficiency in addition to the costs. LGSEC is also an active participant in this proceeding.

Cost Effectiveness Inputs for Energy Efficiency

- 1) Use the societal discount rate (rather than the Weighted Average Cost of Capital (WACC), which is currently used to compare procurement resources) to sufficiently encourage and value – rather than heavily discount – future savings from efficiency programs;
- 2) Update the avoided cost of renewables beyond a 33% RPS in 2020, through a larger RPS goal in 2050;³⁸
- 3) Escalate GHG avoided costs through 2050;³⁹
- 4) Expand the current scenario analysis for key inputs to avoided costs (especially natural gas prices) out to 2050. The avoided costs for regular efficiency programs are highly dependent on current natural gas price forecasts, and those prices vary significantly over time. The fairly low natural gas price forecasts currently in place make it much less cost-effective to pursue some of the comprehensive long-term strategies that will be critical to reach long-term GHG reduction goals.

Recommended programs to invest in under modified policy rules

Based on an updated policy structure suggested above, we suggest that investments be focused in the following areas: (1) increased innovation, (2) more comprehensive approaches to existing building audits and upgrades, and (3) expansion of low and moderate income and hard to reach customer programs. Within each category, we propose examples of programs that would benefit from additional investment than currently available under the Commission’s existing portfolio of programs.

(1) Increased Innovation

To ensure a robust pipeline of cost-effective energy efficiency measures through 2020 and beyond, we need consistent investments in emerging technologies, pilot and demonstration projects, and later-stage research and development. These types of investments have uncertain short-term benefits, but are critical to enabling long term innovation, savings, and market transformation. Furthermore, they are significantly constrained by the current policy rules as many of these efforts have uncertain savings estimates and therefore could potentially bring down the cost-effectiveness of the overall portfolio. To encourage sufficient innovation, reasonable risks must be encouraged and investments made in programs that have value in pushing efficiency markets forward.

³⁸ The general proceeding is evaluating the need to update the avoided cost of renewable energy through 2020.

³⁹ Currently, the GHG avoided costs are escalated only out to procurement time horizons.

- Example 1 - Zero Net Energy (ZNE): Achieving Zero Net Energy Buildings is a consensus goal of the Commission and CEC. However, because the state has yet to determine what the needed savings are to achieve this goal and the current code update is constrained by traditional policy rules, the success of this goal is uncertain. The state must first determine the savings needed to reach the ZNE goal and “work backwards” to invest in programs that specifically advance both innovative efficient technologies and new implementation approaches.
- Example 2- Staying ahead of technological change: California’s end-uses of energy (especially electricity) are constantly expanding, and it will be ever more important to stay ahead of these trends to meet AB 32 goals. Efforts to mitigate the trend of growing energy usage are often constrained in regular efficiency programs because of shorter-term view and lower near-term cost-effectiveness. For example, consumer electronics are consuming an ever increasing amount (and percentage) of electricity use. Less expensive models and expanded applications for air conditioning units are also causing a growth in energy use throughout California. Investments in programs and new technologies that target these types of end-uses and maximize efficiency to stay ahead of the growth trend are critical to meet long term emissions reductions goals.

(2) More Comprehensive Approaches to Existing Building Upgrades:

In order to achieve targeted emissions reductions, significantly deeper efficiency improvements to existing buildings and equipment will be needed, using comprehensive approaches that achieve deep savings on each individual site. While the current low income and general energy efficiency programs are starting to address the changes necessary to achieve these reductions through program design that focuses on ‘whole building’ and performance based approaches, they are again limited by the policy rules of those proceedings. The result is that these programs are not yet building the demand needed, reaching enough buildings, or achieving the level of savings necessary to reach California’s long term emissions reductions targets.

It is harder and costlier to make efficiency upgrades to existing buildings and old equipment, much of which is quite inefficient, because owners do not often upgrade or replace inefficient building equipment, windows, insulation or HVAC equipment until they completely fail. An expanded effort to do comprehensive whole building retrofits and early retirement of equipment (e.g. prioritizing measures with long effective useful lives) is necessary and requires significant investment. Programs that ensure comprehensive approaches to achieve deep building energy savings, and are based on the lessons learned and progress made in the general efficiency proceedings, should be prioritized for investments from AB 32 revenues.

Furthermore, the Commission should set out interim goals for the Utilities to achieve penetration into existing building stock by working backwards from a goal of having 100% of the building stock currently in existence retrofitted by 2050.⁴⁰ Each AB 32 compliance period could serve as an opportunity to check compliance with the building stock retrofit timeline, and to adjust programs funded by the Carbon Trust in order to stay on path to 100% retrofit by 2050. We offer the following suggestions of programs that should be targeted.

- *Example 1-Energy Upgrade California (EUC)*: EUC is a great start to the larger effort required to address the challenges of implementing comprehensive whole home retrofits. However, it is not cost-effective on its own because of the relatively short-term view of the current efficiency program policy rules and cost-effectiveness test inputs. To make the necessary emissions reductions to achieve AB 32 and long term mandates, expanding this effort to get on a path to upgrade a very large portion of existing homes by 2050 will be key. Similarly, efficiency program policy rules do not encourage early retirement of long-lived existing equipment (e.g. furnaces in homes) because they usually assume that the energy savings achieved when equipment is replaced is only the difference between the new unit and either current code or standard market practice (not the old existing unit).
- *Example 2 - Financing*: The Commission recently released a report on opportunities for expanded financing for energy efficiency.⁴¹ The report outlined a number of ways that financing opportunities could be leveraged, expanded and improved through appropriate market intervention, proving concepts, and access to low-interest capital. While some of these approaches build on existing programs, these programs are also not necessarily cost-effective under the currently limited constructs. Funding from greenhouse gas revenues could potentially provide initial capital to significantly expand this market and attract third party financiers to the market.
- *Example 3 – Energy Audits*: The vast majority of both single and multi-family residences have never had a comprehensive energy efficiency audit. Such audits are essential to show households where their current energy leakages are and what are the cost-effective ways to reduce both their electricity and gas consumption. A primary objective of the Carbon Trust could be to subsidize comprehensive energy efficiency audits - beyond what is currently available - for every residence in California. These audits should be provided at no cost for low-income families and at market-tested sliding scale subsidies for higher incomes households. These audits are essential to inform consumers of the

⁴⁰ The Energy Efficiency Strategic Plan sets the following targets: 25% of existing homes have a 70% decrease in purchased energy from 2008 levels; 75% of existing homes have a 30% decrease in purchased energy from 2008 levels; 100% of existing multi-family homes have a 40% decrease in purchased energy from 2008 levels. In the commercial sector the Strategic plan set a goal of 250 million square feet (1/20th of existing space) per year through 2030 reach deep levels of energy efficiency improvements and clean, distributed generation through whole building approaches.

⁴¹ See “Release of CPUC Consultant Report on Energy Efficiency Financing in California,” (July 13, 2011), available at: http://www.cpuc.ca.gov/NR/rdonlyres/B0EBFCA6-22B5-408D-96B8-6490A5A38939/0/EEFinanceReport_final.pdf.

most cost effective ways they can improve their comfort, while reducing energy expenses. The audits are also essential to inform consumers of the most cost-effective ways to spend their Carbon Credits. Similar audits, especially for small businesses, should also be prioritized for the business portion of the Carbon Trust expenses.

- *Example 4- Expand Multifamily Residential Programs:* The largest market for energy efficiency with significant potential is multifamily residences. Since the building owners typically do not pay the electric or gas bills in the residential units, they have no incentives to install energy efficiency technologies. This economic barrier has long been identified as a “split incentive” problem. A program should be established to increase penetration of multifamily residences

(3) Low and Moderate Income Energy Efficiency

Investing auction revenue to expand the Utilities’ low income energy efficiency program (Energy Savings Assistance Program, or ESA Program) as well as moderate income energy efficiency efforts will provide greater energy and bill savings to participating customers without compromising the ability of the ESA Program to ensure all of California’s low income customers receive the benefits of energy efficiency. The ESA Program provides efficiency measures such as efficient refrigerators and weatherization services at no cost to qualified customers with incomes at or below 200 percent of the federal poverty guidelines.⁴² The Commission’s twin goals for the ESA Program are to provide a durable energy resource for the state, while affording all willing and eligible low income customers the opportunity to participate by 2020.⁴³ As currently structured, however, the ESA Program is struggling to meet both objectives. With limited funding, expanding the reach of the ESA Program to serve an increasing eligible population has compromised the ability of the Program to deliver meaningful energy and bill savings for participating customers.⁴⁴ Supplementing the ESA Program with allowance revenues

⁴² See generally the ESAP homepage at <http://www.cpuc.ca.gov/PUC/energy/Low+Income/liee.htm>.

⁴³ CPUC, D.07-12-051 in R.07-01-042, “Decision Providing Direction for Low-Income Energy Efficiency Policy Objectives, Program Goals, Strategic Planning and the 2009-2011 Program Portfolio and Addressing Renter Access and Assembly Bill 2140 Implementation,” (Dec. 2007), at 3, available at: http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/77082.pdf; CPUC, “California Long Term Energy Efficiency Strategic Plan,” at 25 (Sept. 2008), available at: <http://www.cpuc.ca.gov/NR/rdonlyres/D4321448-208C-48F9-9F62-1BBB14A8D717/0/EEStrategicPlan.pdf> and Jan. 2011 update, at 23, available at: http://www.cpuc.ca.gov/NR/rdonlyres/A54B59C2-D571-440D-9477-3363726F573A/0/CAEnergyEfficiencyStrategicPlan_Jan2011.pdf.

⁴⁴ See “Response of the Natural Resources Defense Council (NRDC) to Pacific Gas and Electric Company, Southern California Gas Company, Southern California Edison Company, and San Diego Gas and Electric Company’s Applications for Approval of their 2012-2014 Energy Savings Assistance and California Alternate Rates for Energy Programs and Budgets” (June 20, 2011), available at: <http://docs.cpuc.ca.gov/efile/RESP/137889.pdf>.

can ensure that the program sustains its penetration targets while providing durable bill savings to customers.

There is also a gap between customers who qualify for low income efficiency and those who could afford upgrades based on the general efficiency rebates. This ‘moderate-income’ segment requires unique program design to ensure that all customers are able to participate in programs if they choose. Currently there is a pilot in the general energy efficiency portfolios that attempts to address this segment.⁴⁵ As with the low income programs, there is insufficient funding to address these customers as the payments by utilities are often significantly higher than traditional general efficiency and therefore reduce the cost-effectiveness of the overall portfolio. Carrying out these types of programs within the modified policy framework would not only provide additional resources for such programs, but also enable deeper savings to be captured from these segments to help meet our 2050 AB 32 goals.

- *Example 1- Expand ESA Program and other low income energy efficiency programs* : Supplementing the ESA Program with additional funding from allowance revenues will enable the Program to achieve greater energy savings and produce long-term, sustainable bill relief to low income customers. Additional funding can be used to expand the suite of efficiency measures available to all participating customers and explore pilots to reach customer segments currently underserved by the ESA Program, including low income tenants in multi-family housing.
- *Example 2- Expand Moderate Income Programs*: Expanding the moderate income program would both address the concerns of certain customers bearing the majority of impact from additional climate strategies and ensure that the savings available in these buildings are fully captured.

Industrial Audit Measure

The Commission should also work closely with ARB in the further development of the Industrial Energy Audit regulation. This regulation will require facilities to implement the measures of an energy audit that are deemed to be cost-effective.⁴⁶ In the interest of ensuring that allowance value investments are additional to measures already required, any industrial energy efficiency programs should be carefully coordinated with ARB and current utility industrial efficiency programs to prevent redundancy and duplication. However, if an additional

⁴⁵ See: <http://www.cpuc.ca.gov/NR/rdonlyres/E29398ED-75C5-406E-AAA4-350C49284ACD/0/EE5GovernmentPartnershipProgram0710.pdf> , p.2.

⁴⁶ ARB, “Energy Efficiency and Co-Benefits Assessment for Large Industrial Sources - Regulatory Activities,” available at: <http://www.arb.ca.gov/cc/energyaudits/energyaudits.htm>.

grant or loan program could boost certain measures that provide significant energy savings and air pollution and greenhouse gas co-benefits, but would otherwise not qualify as cost-effective, such opportunities should be carefully considered in cooperation with ARB.

In sum, energy efficiency is not only the first resource in the state's loading order to procure energy, but is also a critical strategy to ensure California minimizes the cost of compliance with AB 32. Expanding efficiency efforts will achieve low-cost emissions reductions that pricing carbon alone will not unlock, and lay the groundwork for long-lasting utility customer bill relief through sustained demand reductions.

4.4.2 Renewable Energy & Distributed Generation

Allowance revenues create an extraordinary opportunity to reduce the cost and expand the market sectors for renewable energy in California. The benefits of this program could support distributed generation and extend to other renewable energy supporting technologies that have high initial cost that could be brought down over time by expanding the market.⁴⁷

Distributed Generation

Increased distributed generation with smaller size projects can allow the economic benefits of the tens of billions of dollars in infrastructure investment that will be made by the state's RPS program to flow into many communities around the state. In particular, installing large amounts of distributed generation could be coordinated with efficiency upgrades and targeted to low income communities in urban and rural areas that desperately need jobs and cleaner air.

The Governor has proposed a policy target of building 12,000 megawatts of new renewable distributed generation by 2020, and the state already has policies to support nearly 6,000 megawatts of renewable distributed generation including 3,000 megawatts in the GoSolar program, the 1000 megawatt Renewables Auction Mechanism (RAM), roughly 1000 megawatts for the Utilities' solar program, and a 750 megawatt feed-in tariff program under SB 32. A significant objection to implementing large amounts of distributed generation is that the cost could be excessive, although the recent trend has been a faster than expected decline in the cost

⁴⁷ For instance, a recent report by Pike Research shows that small scale wind can be brought down in cost from \$5.40 per watt today to \$4.10 per watt by 2015 if the market size in the global market increases from 50 megawatts to 152 megawatts per year. See <http://www.renewableenergyworld.com/rea/news/article/2011/09/small-wind-industry-set-to-triple-by-2015-with-u-s-dominating-two-thirds-of-the-market>.

of solar PV. Indeed, the RPS Calculator shows that under base assumptions a High Distributed Generation implementation of the 33% RPS would result in 14% higher rates in 2020 than a 20% RPS. The size of the incremental cost in the High Distributed Generation Case is due primarily to solar energy which is assumed to cost \$6584 per kilowatt to install. Today this high cost assumption may be true of smaller scale solar PV systems in an untransformed solar market, but is not true of larger distributed generation solar PV.

Recent dramatic reductions in the cost of solar panels have also brought down the cost of full installed systems of all sizes. However, smaller solar PV systems are significantly more expensive in California—closer to the high cost assumption in the RPS model. This high cost small scale solar is not a necessary market condition, but is due primarily to the fact that California’s small scale solar PV market has only been partially transformed compared to what is possible today. This is in part due to the current policy tools that are focused on indirect reduction of cost through building market volume; another factor is that the volume itself in California is only about 150 megawatts of solar PV per year.

The ability to reduce the cost of small scale solar, compared to what Californians pay today, to where it can compete with larger scale solar and provide savings for the RPS program, is dependent on transforming the market through steady investment. California’s solar programs have made major progress in this to date, by reducing installed cost of small scale (less than 10 kW) solar PV systems by about 1/3 over since 1998.⁴⁸ But there is much further room for cost reduction and market growth. A significant investment over the next decade to cover transitional above market costs, could build upon the progress of the California Solar Initiative, and become a successor to that program, to further transform the small scale distributed solar PV market.

We urge the Commission to consider substantial investments that can benefit communities around the state with the RPS program, while expanding participation in the RPS program, and establishing well-designed programs that can reduce the cost of small scale distributed renewable generation and energy storage. This could also complement the efficiency measures the allowances can fund with small scale distributed generation that can achieve ZNE homes and commercial buildings that will be essential to meeting high greenhouse gas reduction goals, and to fulfill the state’s policies and commitments to ZNE buildings.

⁴⁸ See <http://newscenter.lbl.gov/news-releases/2011/09/15/tracking-the-sun-iv/>.

Renewable Energy and Grid Integration Technologies

Investments in smart grid, smart inverters, and energy storage facilities are examples of technology innovations which could be financed from utility allowance auction revenues. In addition, given remaining methane as a high global warming potential GHG, and the various sources of methane throughout the state (including landfills, agricultural lands, wastewater treatment plants, and food processing facilities), technologies that turn waste gas into electricity with significantly lower emissions are ripe for funding. To use bio-methane cleanly requires cleaning up the gas, which entails significant costs. Fuel cells and thermal oxidation are two strategies for accomplishing this that hold particular promise, though there are others.

Additional renewable technology and grid integration programs may eventually make sense to fund through the use of allowance revenues, and the coalition would like to suggest that the Commission include consideration of additional programs as technologies mature and as the state moves forward with implementation of the RPS and a number of other renewable energy programs which will bring GHG benefits to the state.

4.4.3 Innovative Financing Strategies

Allowance Revenues could provide finance for development of a state-wide emerging technology plan. This would include identifying and testing emerging technologies, building of demonstration facilities and addressing other research and development implementation issues. Also some portion of these funds could be used to finance programs for customers (e.g. residential, commercial, industrial, etc.) and municipalities, to lower the upfront costs of deployment of energy efficiency, renewable energy and advanced transportation technologies.

4.4.4 Partner With Local Governments

A portion of the allowance revenues placed in the Carbon Trust should be set aside for local governments for programs, implementation of climate action plans and other uses that

further the goals of AB 32. The propriety of this allocation is based on ARB policy,⁴⁹ the legislative history of AB 32 and expert reports.⁵⁰

As California implements AB 32, local governments have the most direct connection to residential and business constituencies and the most experience with implementing programs and policies at the grass-roots level. Discrete characteristics that often drive community choices, behavior and culture are best known to local governments. As a result, local agencies are uniquely situated to develop, implement and communicate successful movements for lasting change in community conduct, specifically, patterns of energy consumption. The role of local governments in this regard singles them out as essential designers and implementers of programs that also seek to foster an overarching goal of the state's Strategic Plan, namely, successful market transformation that does not depend upon publicly-funded incentives.

All residents also benefit from local public programs, regardless of whether they are a homeowner, low income tenant or large energy user. Programs that are currently underway in many jurisdictions, and could be implemented with additional funds, include education and outreach, technical assistance, financing, local policy development and implementation. Failure to partner with local governments and community organizations in GHG reductions would perpetuate a system in which disenfranchised and vulnerable communities continue to be dependent upon utility and state funded programs to mitigate the increased costs of energy. Further, these same counties will not realize the local environmental benefits of direct investment in strategies that reduce greenhouse gas emissions. It is at the local level, and under the operation of local governments and community-based organizations that problems and challenges from energy and resource use and conservation are first identified, and where lasting and accountable solutions are developed. Local governments must be part of the solution to

⁴⁹ *Climate Change Scoping Plan Appendices, Volume 1*, p.49 : "Local governments are essential partners in achieving California's goals to reduce greenhouse gas emissions. They have broad influence and, in some cases, exclusive authority over activities that contribute to significant direct and indirect greenhouse gas emissions through their planning and permitting processes, local ordinances, outreach and education efforts, and municipal operations. Many of the proposed measures to reduce greenhouse gas emissions rely on local government actions."

⁵⁰ "Disadvantaged communities face especially pressing investment needs. To assist [these communities], allowance value can be used to reduce greenhouse gas emissions, minimize health impacts caused by climate change, and improve environmental quality[;] the allowance value could be channeled through a Community Benefits Fund or a similarly tasked entity t local governments...." (*Allocating Emissions Allowances Under a Cap-and-Trade Program; Recommendations to the California Air Resources Board and Allocation Advisory Committee* (March 2010), at p 69.

continue to employ innovative programs, ordinances and investments that will reduce GHG emissions and provide resources for addressing the consequences of climate change.

Allowance revenues should also be allocated to local governments to educate customers about climate change, California's climate programs, behavior change and other information related to AB 32. It is important that there is public outreach, including in-person contact and events, telephone follow up and other effective efforts to communicate with the public. Many local municipalities have existing education and outreach departments. However, to achieve effective and lasting change, sufficient resources are necessary at the local government level to allow for merging and/or cross-support of programs, and the forum to share successes, outcomes, lessons learned, efficiencies, best management practices and innovation.

4.4.5 Target Investments in California's Most Impacted and Disadvantaged Communities

AB 32 directs that public and private investments be devoted "where applicable and when feasible ... toward the most disadvantaged communities in CA."⁵¹ Programs funded under the Carbon Trust should therefore attempt to address the needs of disadvantaged communities. Allowance value can be used to help communities reduce greenhouse gas emissions, minimize health impacts through improved efficiency, and improve environmental quality. Programmatic efforts should focus on planning and intervention in poor and minority neighborhoods. Such intervention should prioritize communities at risk of heat island effects, poor housing quality, and lack of access to transportation. Investments should also be directed to communities in close proximity to highways, ports, power plants, and other geographic locales where air quality is the worst in the state. The Commission should consider prioritizing communities using maps overlaid with vulnerability models that demonstrate geographical vulnerability to impacts such as excessive heat, particulate matter and ambient ozone, and socioeconomic data. This kind of research, planning, and intervention will maximize GHG reductions and mitigation of localized impacts of climate change and climate policy.

4.5 Rate and Bill Impacts

Using the information and format provided by the Utilities in their joint June 20, 2011 filing, we provide a snapshot of potential rate impacts from implementing our proposal. We

⁵¹ Cal Health & Safety Code § 38565.

note, however, that the impacts below do not account for any additional efficiency and conservation efforts spurred through the carbon price signal or achieved through programs funded by the Carbon Trust. As numerous macroeconomic models of the impacts of carbon pricing confirm, any additional costs in the form of higher generation costs can be more than offset through stimulated demand-side reductions.⁵² We also note that rate trends over the long-run will ultimately be determined by a host of factors. Transitioning to lower carbon generation will decrease our vulnerability to swings in fossil fuel prices, for example, that put significant upward pressure on rates. Maintaining the carbon price signal and investing in additional energy efficiency programs will also spur additional demand-side reductions that avoid rate increases otherwise necessary to finance new generation.

To provide some illustration, however, we incorporate our proposal into the framework presented by the Utilities. The range of impacts below use data provided by Southern California Edison (SCE) in its June 20, 2011 Joint Exhibit.

Table 6: Incremental Tier 3-Tier 5 Residential Rate Impact: SCE (2013)

SCE's Non-CARE T3-T5 sales as portion of res sales	40.00%
Joint Proposal incremental T3-T5 rate impact	\$0.01481

Because we propose to return allowance revenues outside of rates, and to all residential customers (not just customers outside the scope of SB 695), residential customers whose usage exceeds Tier 2 will experience an incremental rate impact under our proposal (as seen in Table 6). From a customer welfare perspective, however, we propose to set aside the same amount of allowance revenue for the residential sector that the Utilities' propose (see Table 2 and discussion above). As seen in table 7 below, applying rebates will mitigate the overall impacts of carbon pricing – both direct and indirect – on residential customers from our proposal. We also reiterate that the forecasted impacts below do not account for any bill reductions from improved conservation and efficiency, which is a cornerstone of our proposal.

⁵² See, e.g., EAAC Report; ARB, "Updated Economic Analysis of California's Climate Change Scoping Plan: Staff Report to the Air Resources Board," (March 24, 2010), available at: http://www.arb.ca.gov/cc/scopingplan/economics-sp/updated-analysis/updated_sp_analysis.pdf; Center for Resource Solutions, "Climate Policy and Economic Growth in California: A Comparative Analysis of Different Economic Impact Projections," (Dec. 3, 2009), available at: http://www.resource-solutions.org/pub_pdfs/Climate%20Policy%20and%20Economic%20Growth%20in%20California.pdf. David Roland-Holst, "Energy Efficiency, Innovation, and Job Creation in California," (October 2008), available at: http://www.next10.org/next10/pdf/report_eijc/UCB_Energy_Innovation_and_Job_Creation_10-20-08.pdf.

Table 7: Illustrative bill impacts for residential and small commercial customers

SCE (2013) Forecast Bill Impacts (using summer baselines)	Monthly Usage (in kWh)	Incremental Bill Impact	Annual Bill Impact	Bill Impact After Rebate^{1,2}
Example 1: low usage				
Tier 1	310	--	--	
Tier 2	93	--	--	
Tier 3	97	\$1.44	\$17.23	
Tier 4	0	--	--	
Tier 5	0	--	--	
TOTAL	500	\$1.44	\$17.23	\$(23)
Example 2: medium usage				
Tier 1	310	--	--	
Tier 2	93	--	--	
Tier 3	217	\$3.21	\$38.56	
Tier 4	310	\$4.59	\$55.08	
Tier 5	70	\$1.04	\$12.44	
TOTAL	1000	\$8.84	\$106.07	\$66
Example 3: high usage				
Tier 1	310	--	--	
Tier 2	93	--	--	
Tier 3	217	\$3.21	\$38.56	
Tier 4	310	\$4.59	\$55.08	
Tier 5	570	\$8.44	\$101.28	
TOTAL	1500	\$16.24	\$194.91	\$155
Small Commercial				
	750	\$4.47	\$53.60	Tbd
	1500	\$8.93	\$107.21	Tbd
	3000	\$17.87	\$214.41	Tbd

¹Avg. annual rebate under our proposal per residential household in 2013 would be \$40.22

²Assuming flat rebate per household, and all revenues available for rebate

4.6 Need for Commission-Approved Accounts

To set aside allowance revenues for investment through the Carbon Trust, as proposed, the Commission will need to establish accounts for allowance revenues to accrue in following each quarterly auction planned under ARB’s cap-and-trade rule. We do not foresee any significant obstacles in the Commission authorizing and creating such accounts.

4.7 Existing Statutory or Commission Mandates that May Affect/Limit Implementation of the Joint Proposal

We likewise do not foresee any statutory or Commission mandates that would inhibit the Commission from adopting our proposal. Rather, as discussed in section 6 below, our proposal is designed to advance existing Commission policy on this issue.

5 Our Proposal Advances the Commission’s Objectives

5.1 Objective 1: Our Proposal Preserves the Price Signal to Encourage Customer End-Use Efficiency and Conservation and Low Carbon Production Practices

Our proposal ensures the carbon price signal embedded in retail rates is fully passed through to retail electricity customers. Our proposed return of allowance value will make residential customers whole from a welfare perspective (through lump-sum transfers), but will not undercut the incentive for efficiency and conservation measures provided through the carbon price signal. Similarly, by prioritizing residential customers, our proposal ensures non-EITE commercial and industrial customers do not receive excessive allowance revenues to dampen the price for carbon-intensive goods and services.

5.2 Objective 2: Our Proposal Prevents Economic and Emission Leakage Without Overcompensating for Leakage Risk at the Expense of Other Important Objectives

Our proposal recognizes the importance of designing the allocation of allowance revenues to prevent economic leakage by giving priority status to commercial and industrial customers with legitimate status as energy intensive and trade exposed. Following the allocation of revenues to residential customers, individual customers that are leakage exposed are eligible to receive allowance revenues to offset any indirect leakage risk in the form of higher electricity rates. However, while we fully support the objective of preventing leakage – from both an economic and environmental performance standpoint – we ask that the Commission tread lightly in compensating for any leakage exposure above and beyond the free allocation of allowances and other measures that ARB is already proposing under the cap-and-trade rule.

5.3 Objective 3: Our Proposal Ensures All Customers Share in the Benefits of Allowance Revenues, Independent of Energy Consumption

Our proposal advances this foundational objective in three key respects. First, our proposal prioritizes residential customers in the allocation of allowance revenue directly to customers. Commercial and industrial customers have no credible claim to ownership in the commons, and should not take precedence over individual households. Second, our proposal allocates allowance revenue to residential customers through a separate lump-sum transfer, which is not tied exclusively on a particular household's energy usage, to ensure high usage households do not receive a disproportionate share of a public asset based solely on their energy consumption. Third, our proposal allocates allowance revenue to *all* residential households, not only those non-CARE customers whose usage exceeds Tier 2.

5.4 Objective 4: Our Proposal Addresses the Disproportionate Impacts of Carbon Pricing and Climate Change on California's Most Vulnerable Households

Our proposal ensures low income households are included in the allocation of allowance revenue. Although CARE households will not face direct costs resulting from the cap-and-trade program due to SB 695, low income households will still face indirect costs in the form of higher prices for certain goods and services from the imposition of carbon pricing throughout the economy (see discussion in Appendix A). In addition, although the Utilities report historic CARE participation rates, not all low income households are enrolled in the program and will therefore be exposed to direct costs. Accordingly, our proposal includes low income households in the class of residential customers eligible for direct return of allowance revenues.

5.5 Objective 5: Our Proposal Devotes Substantial Allowance Revenues to Fund Programs to Correct for Market Failures Holding Back Carbon Mitigation Activities and Technologies

Our proposal is designed with this critical objective squarely in mind. By setting aside a portion of total allowance revenues each year to a Carbon Trust, our proposal provides a stable, reliable and predictable funding stream to make additional and expanded investments in programs and technologies targeted at overcoming market barriers that are holding back low-cost carbon abatement solutions.

5.6 Objective 6: Our Proposal Ensures Direct Access and Community Choice Aggregator Customers Share Proportionately in the Benefits of Allowance Revenues

Our proposal ensures DA and CCA customers are not disadvantaged in how the Commission allocates allowance revenue. As with bundled customers, residential CCA customers will be eligible for rebates under our proposed methodology. Similarly, commercial and industrial DA or CCA customers will be eligible for programs funded through the Carbon Trust, and DA or CCA customers classified as EITE under ARB's cap-and-trade regulation will be eligible for priority status in the allocation methodology for non-residential customers. We agree with the Utilities that the appropriate mechanism to return allowance value for these customers is through credits on distribution rates.

5.7 Objective 7: Our Proposal Fosters Customer Engagement and Understanding and Embraces California's Leadership in Pioneering Climate and Clean Energy Programs

We do not dispute that our proposal will require more work to implement than proposals that rely chiefly, if not exclusively, on returning allowance revenues through rate credits. The Scoping Memo wisely recognizes, however, the unique "opportunity the use of allowance revenues offers to further general [public] understanding of the nature of climate change and the role of consumer' energy choices therein."⁵³ This conclusion was echoed by the EAAC, which found that "[i]n terms of simplicity, dividends are an exceptionally transparent use of allowance value; transparency meaning that the allocation of the allowance value is relatively easy to describe and thus easily comprehended by the general public."⁵⁴

Accordingly, we propose to return allowance revenues in a manner that will be easier for most customers to understand, and which will facilitate more effective opportunities to engage customers as part of the solution. We also encourage the Commission to apply the same leadership in this proceeding that California has applied to its climate policies writ large. New programs take time to develop, market and implement, but we are confident the Commission can appropriately phase in any aspect of our proposal that may require additional development. The

⁵³ Scoping Memo, Appendix A at A10.

⁵⁴ EAAC Report at 58.

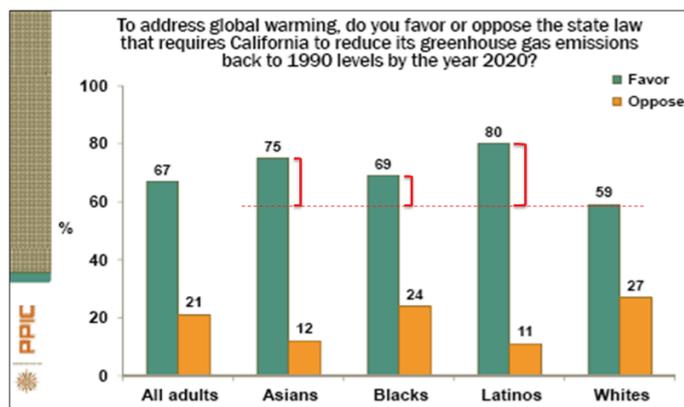
cap-and-trade program is designed to extend well beyond 2020. We ask the Commission to consider allocation proposals under the same long-term perspective.

5.8 Objective 8 (proposed): Our Proposal Facilitates Customer Understanding, Engagement and Support for California's Climate Programs

We are concerned that allocating revenues to only certain customers (who will be predominantly wealthier under the Utilities' proposal), will undermine the rollout of the cap-and-trade program and jeopardize its long-term viability. Similarly, we are concerned that returning allowance revenue through an incremental rate credit will leave the vast majority of customers entirely unaware of the benefit. We do not think keeping customers in the dark is conducive to the enduring success of the program. Rather, the long-term success of the program is contingent on customers understanding why California is taking steps to reduce carbon pollution, and how state regulators are designing those programs to ensure utility customers are part of the solution.

Consequently, we propose that the Commission engage customers in the return of allowance revenues through programs funded through the Carbon Trust, and a Carbon Credits program that elevates the visibility of allowances revenues and affords customers the option of how to receive their share. We also propose all customers share in the benefits of allowance revenues. As carbon pricing is introduced in the economy, it is important to anticipate public reaction, and the Commission must be mindful of crafting a policy that creates customer buy-in. The Carbon Trust would target clean energy programs in all sectors and provide long-term bill relief to residential and customer/industrial customers alike. The Carbon Credits program would similarly be available to all residential customers, including low income households and CCA customers, to broaden support for and engagement in California's climate initiatives. To win broad public support, however, the Commission must pay particular attention to communities of color and other disproportionately vulnerable groups. Polling data reflects great and growing support for AB 32 among communities of color.

Support for California's Global Warming Solutions Act



Source: Public Policy Institute of California (July 2010)⁵⁵

To maintain this commitment, the Commission must ensure that AB 32 implementation does not leave out these critical constituencies.

6 Our Proposal Supports Previous Commission and ARB Guidance on How to Allocate Allowance Revenues

Our proposal is designed to reflect the expert judgment of the Commission, ARB and various committees commissioned by ARB to advise on the question of how to allocate allowance revenue. In particular, our proposal advances three consensus recommendations of the Commission and ARB: (1) that the return of allowance revenues to utility customers should preserve the carbon price signal in retail rates; (2) that allowance revenues should be used to finance investments in carbon mitigation activities and technologies; and (3) that allowance revenues should mitigate the disproportionate impacts of carbon pricing and climate change on low income households.

6.1 Allowance Revenues Should Not Undermine the Incentive, Reflected in the Carbon Price Embedded in Retail Rates, to Promote Customer End-Use Efficiency and Conservation

The issue of how to allocate revenue generated from a California cap-and-trade program has been analyzed extensively by a host of expert bodies, including the ETAAC, EAAC, CEC,

⁵⁵ PPIC Statewide Survey, "Californians and the Environment," (July 2010), available at: http://www.ppic.org/content/pubs/survey/S_710MBS.pdf. See also Louis Sahagun, "Latinos, Asians More Worried About Environment than Whites, Poll Finds," Los Angeles Times (November 20, 2010), available at <http://articles.latimes.com/2010/nov/20/local/la-me-poll-environment-20101120>.

the Commission and ARB. While the recommendations from these various entities on the most appropriate uses of allowance value have not been uniform, one aspect of them has remained constant – that any return of allowance value to electricity customers to offset bill impacts associated with the program should not undermine the incentive, reflected in the carbon price embedded in retail rates, to promote customer end-use efficiency and conservation.⁵⁶

The joint CEC-CPUC proceeding that addressed this very question, for example, with the support of many parties (including, at the time, PG&E)⁵⁷ concluded that it is “imperative” that any mechanism providing bill relief through auction revenue be designed “so as to not dampen the carbon price signal” reflected in retail rates.⁵⁸ This conclusion was echoed by the EAAC, a blue-ribbon panel of economists convened by ARB to provide advice on this very question, which recommended bill relief to customers be served through lump sum transfers, as preventing rate increases “would undercut a main purpose of AB 32: to provide incentives for reduced electricity consumption (and associated emissions reductions).”⁵⁹ While the Utilities will face a price signal to the extent that the carbon price is reflected in wholesale electricity rates, we agree with the Commission and ARB that there is additional value in passing through the full carbon price to customers (and providing bill relief in other forms).⁶⁰

Accordingly, we propose the Commission return allowance revenues to customers outside of bills, unless a customer so chooses. The Commission has already recognized that separate transfers “preserve the price signal for consumers to reduce their energy use, since by reducing energy use they would decrease their costs without affecting their dividend.”⁶¹ The EAAC likewise recommended that “conferral [of allowance value] should be accomplished through financial transfers rather than through subsidized energy prices.”⁶² Following this guidance, we propose the Commission return allowance revenues to customers outside of rates,

⁵⁶ CPUC, D.08-10-037 at 227; EAAC, “Allocating Emissions Allowances Under a California Cap-and-Trade Program:

Recommendations to the California Air Resources Board and California Environmental Protection Agency,” p.66 (March 2010); ARB, “Allowance Allocation” (Appendix J), at J-61.

⁵⁷ CPUC, D.08-10-037 at 224.

⁵⁸ Id. at 227.

⁵⁹ EAAC Report at 66.

⁶⁰ CPUC D.08-10-037 at 227; ARB, “Allowance Allocation” (Appendix J), at J-15 (noting “the creation of the cap-and-trade program is intended to embed a carbon price in *both* retail and wholesale rates of electricity,” because “[i]nserting the carbon price in retail rates will drive increased conservation and energy-efficiency.”).

⁶¹ D.8-10-037 at 229.

⁶² EAAC Report at 65.

to preserve the carbon price signal at the retail level and maintain appropriate incentives for additional efficiency and conservation.

6.2 Allowance Revenues Should Finance Investments in Carbon Mitigation Activities

Our proposal is likewise designed to advance the consensus conclusion of the Commission, ARB, and expert advisory panels that allowance value should be used to finance investments in carbon mitigation activities. As the Commission has recognized, allowance revenues represent a critical funding stream to invest in emission reduction solutions like energy efficiency and renewable energy that further the goals of AB 32.⁶³ ARB's Resolution accompanying the initial adoption of California's cap-and-trade program last December envisions a similar framework.⁶⁴ Specific to the electricity sector, ARB directed its Executive Officer to work with the Commission to evaluate investing auction revenue in additional energy efficiency programs, renewable energy projects that achieve environmental and public health co-benefits, and programs to ensure benefits flow to low income customers and our state's most disadvantaged communities.⁶⁵ In carving out a significant role for investment, the Resolution heeded recommendations from both EAAC and ETAAC that investing a substantial share of allowance value will be necessary to overcome market barriers holding back energy efficiency and clean technology solutions.⁶⁶

Investing allowance revenues from California's cap-and-trade program would also follow the successful track record of clean energy investments spurred by the Regional Greenhouse Gas Initiative (RGGI). The ten northeast states that participate in RGGI collectively invest more than half of all auction revenues in clean energy programs,⁶⁷ which as of May 2011 had already generated over \$1 billion in energy savings for customers and contributed \$2.6 billion to economic growth in the region.⁶⁸ In California, allowance revenue provide the same opportunity

⁶³ D.08-10-037 at OP 15.

⁶⁴ ARB Resolution 10-42 at 13.

⁶⁵ Id.

⁶⁶ EAAC Report at 67, 70; ETAAC Report.

⁶⁷ RGGI, Inc., "Investment of Proceeds from RGGI CO2 Allowances," p.4 (Feb. 2011), available at: http://www.rggi.org/docs/Investment_of_RGGI_Allowance_Proceeds.pdf.

⁶⁸ Environment America, "A Program that Works: How the Regional Greenhouse Gas Initiative Is Helping the Northeast Shift to Clean Energy and Reduce Pollution from Fossil Fuels," available at: <http://www.environmentamerica.org/uploads/ff/d3/ffd365c8418b89320de77bbb09fd99c1/A-Program-that-Works-vUS.pdf>.

to invest in deeper energy savings and carbon mitigation activities that will be required to achieve California’s long-term climate objectives.⁶⁹

6.3 Allowance Revenues Should Reduce Adverse Impacts on Low Income Households

Finally, our proposal is designed to ensure low income customers share in the return of allowance revenues to mitigate the disproportionate impacts of carbon pricing and climate change on low income households (for a more comprehensive discussion of these impacts, see Appendix A). The Commission has explicitly recognized the importance of providing bill relief for low income customers.⁷⁰ Likewise, the Scoping Memo directs parties to explain “the degree to which the anticipated costs to low income households resulting from cap-and-trade *and climate change* are recognized and addressed, given the state’s and the Commission’s longstanding commitment to protect vulnerable communities from adverse outcomes.”⁷¹ As the Commission notes, “[j]ust as the costs of mitigation may disproportionately affect low-income households and communities, the costs of adaptation in response to the climate change that is likely to occur as a result of anthropogenic emissions will also be disproportionately felt by these groups, given their relatively limited access to capital.”⁷² These directives echo requirements in AB 32, which directs state agencies to design regulations “in a manner that is *equitable*” and to “[e]nsure that activities undertaken to comply with the regulations do not disproportionately impact low-income communities.”⁷³

We do not foresee any jurisdictional limitations that would inhibit the Commission from implementing our proposal. However, we recommend for the Commission to consult with Parties and the California Energy Commission in a subsequent phase to determine the specific aspects of program design and allocations within the Carbon Trust.

⁶⁹ See, e.g., Gov. Schwarzenegger Executive Order S-3-05.

⁷⁰ D.08-10-037, Ordering Paragraph 15 (noting “we recommend that ARB require that all allowance auction revenues be used for purposes related to Assembly Bill (AB) 32, and that ARB require all auction revenues from allowances allocated to the electricity sector be used to finance investments in energy efficiency and renewable energy or for bill relief, *especially for low income customers*”) (emphasis added).

⁷¹ Scoping Memo, Appendix A at A7 (emphasis added).

⁷² Id. at A8.

⁷³ Id. (emphasis added).

7 Conclusion

For the reasons discussed above, we request that the Commission adopt the proposal of the Joint Parties for allocating allowance revenues generated from the sale of emission allowances by the Utilities under ARB's cap-and-trade program. Our proposal simultaneously creates incentives for consumers to lessen their carbon footprint, invests in programs that reduce greenhouse gas emissions and co-pollutants, protects economically vulnerable families, and advances California's long-term vision to foster a vibrant and sustainable low carbon economy.

Dated: October 5, 2011

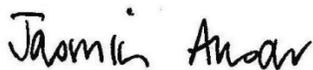
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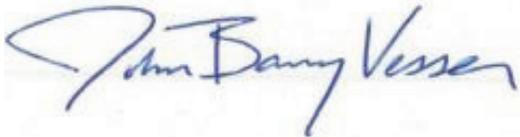


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