

Climate Protection Campaign

Background Materials for the Comment to CARB on the AB32 Scoping Plan

Submitted 11-30-07 by Mike Sandler, Climate Protection Campaign

The Climate Protection Campaign, based in Sonoma County, California, has submitted comments to the California Air Resources Board regarding the AB32 Scoping Plan. The following materials serve as background materials to accompany our comments. Although the comments focus on market mechanisms, we also support other regulatory means of achieving the cap set in AB32. These comments follow previously submitted comments to California's AB32 Market Advisory Committee, which are archived at www.carbonshare.org.

The Climate Campaign's main recommendations for a future carbon market are:

1) Regulate fuel and electricity *upstream*,

2) Auction 100% of the permits,

3) Return auction revenues to consumers as a per capita rebate/dividend/share:

- Helps consumers deal with fuel and electricity price increases.
- Helps low-income households particularly.
- A per capita approach is based on the principle that the sky is a commons we all share.
- Can easily be adopted by other states or countries

4) A price floor (through a carbon fee)

- The debate between carbon tax versus cap and trade can be resolved by using a carbon fee as a price floor in a cap and auction system. The combination improves both.
- The floor reduces low-end allowance (permit) price volatility, which allows businesses to make longterm investments, and the cap continues to guarantee reduced emissions.

The following pages describe:

- The Market Advisory Committee/WCI Guidelines
- Learning from RECLAIM and the ETS
- Upstream or Downstream
- Allocation of Allowances
- The Sky Trust
- How to Spend the Revenues from an Auction
- Two Types of Consumer Compensation
- The per capita framework
- How would you like your climate entitlement: Dividend, Rebate, or Share?

How to implement the Market Advisory Committee Guidelines

Market Design Guiding Principles

From the California Market Advisory Committee

1. Avoid localized and disproportionate impacts on low income and disadvantaged communities or communities already adversely impacted by air pollution.
2. Avoid interference with achievement of state and federal ambient air quality standards and toxic contaminant reductions.
3. Minimize the administrative burden and maximize the total benefits to California, including reductions in other air pollutants, diversification of energy sources, and other benefits to the economy, environment and public health.
4. Be simply designed, easily understood, easy to administer and easy to comply with.
5. Minimize transaction costs.
6. Minimize the potential for leakage.
7. Include as many sources or categories of sources as practical. Encourage participation beyond the capped sources.
8. Provide appropriate credit for early voluntary reductions.
9. Stimulate investment and reward innovation.
10. Inspire other states, the federal government, and other countries to take action, by serving as a robust effective model and offering mechanisms to facilitate linkage with regional, national and international GHG reduction programs. Be consistent with established international standards and build upon existing international programs.

Solutions from the Climate Protection Campaign:

Per capita consumer dividend, rebate, or share.

Regulate companies upstream.
Include transportation by regulating fossil fuels at the Terminal Rack.
Auction 100% of permits.

Load-based is less transparent than first-seller or source-based. Upstream is better than either.
Combine administration of auction and consumer compensation with state-level state tax system.

Auction 100% of permits. Companies that have made voluntary reductions would not need to buy as many permits, which is their reward. The price signal rewards downstream companies.
A price floor on allowances stimulates investment.

The per capita approach will be the new international standard. Do not emulate failed systems such as a giveaway.
100% auctioning will facilitate linkages.
Do not emulate weak voluntary programs, or depend on imported offsets.

Make our system the model.

Cap and Trade: RECLAIM and the ETS

In a cap and trade system, emissions are capped, rights are distributed, and the market sets a price for carbon. Two well-documented previous systems were RECLAIM and the ETS. Both offer lessons and experience in designing California's statewide cap.

RECLAIM

The Regional Clean Air Incentives Market (RECLAIM) was created by the Southern California South Coast Air Quality Management District in 1994 to allow companies to cap and trade criteria pollutants. Community groups such as HealthandCleanAir.org describe the following problems with RECLAIM:

- It gave away permits for free to historic large emitting companies
- Permits were given based on estimates, not actual emissions (the Air District was said to have inflated baselines and allowed imported credits from outside the area)
- too many loopholes and exemptions to the cap
- the frequent use of safety valves (the Air District was said to have pre-empted the market from functioning by allocating additional credits whenever companies complained of price increases)

ETS

The European Emissions Trading System (ETS) began operation in 2005. The ETS covers about 43% of European emissions in 6 sectors. Companies in certain sectors such as electricity and cement which emitted above a given threshold were allocated permits. However, the ETS has faced the following problems:

- The price of permits plummeted after it became known that too many permits had been allocated.
- Even though permits are allocated freely to companies, they still passed on costs to consumers
- Free allocation of permits to selected companies led to windfall profits for those companies.
- Since too many permits were allocated, few emissions reductions resulted.
- Free allocation to established firms prevented new, cleaner firms from entering the market.
- The choice to regulate mid-stream facilities forced some hospitals, who were not allocated permits, to buy permits from coal companies, who were.

Sources from Deutsche Bank to Citigroup to The Economist (October 19, 2006), have stated that the ETS has had problems because "allowances were handed out free to companies, rather than being (as economists wanted) auctioned." In Phase 3 (2012-2017) the EU may increase the percentage of auction from a mere 5% to closer to 100%. Another option, described by a European group called Cap and Share, is initial allocation to consumers on a per capita basis.

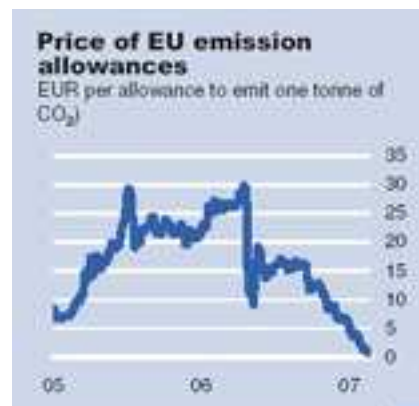
Lessons for the AB32 Scoping Plan:

Based on an evaluation of previous cap and trade systems, the Climate Protection Campaign has submitted a list of suggestions including:

- 1) Regulate fossil fuels and electricity upstream,
- 2) Auction (or sell) 100% of emission permits,
- 3) Use revenues for public goods and to compensate consumers for increased prices,
- 4) Use a carbon fee as a price floor in an cap and auction system to reduce low-end price volatility.

Additional aspects to consider:

- Conducting the auction and consumer compensation at the state level will allow for combined administration through State tax system.



Cap and Trade: Upstream or Downstream?

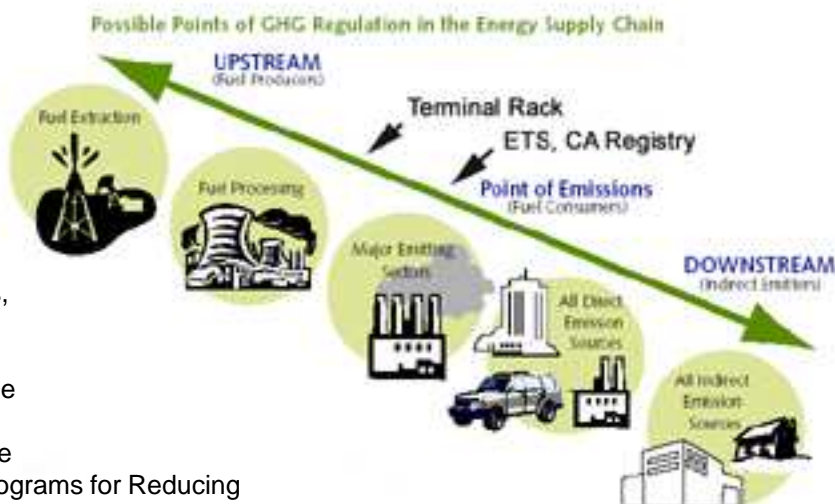
The terms **upstream and downstream**

refer to the location in the economy where the fossil fuels are regulated.

Upstream is where the fossil fuel first enters the economy. For example, an upstream system would require fossil fuel importers to hold permits for fossil fuel brought in at the dock when an oil tanker unloads, or at the pipeline.

Downstream is closer to consumer end uses, such as a gas station, or a retail business.

A major question in designing a cap and trade system is who gets regulated: upstream or downstream? A Congressional Budget Office study titled "Evaluation of Cap-and-Trade Programs for Reducing U.S. Carbon Emissions" states that "an upstream approach would be preferable according to several criteria, including administrative simplicity and consistent pricing of emissions throughout the economy, which would help achieve allocational efficiency."



Reasons to regulate Upstream:

- **Administrative ease:** Carbon entering into the economy equals carbon emitted. Administratively it is easier to limit carbon as it enters the economy in a few places (by boat or at the wellhead), than as it leaves through millions of tailpipes and smokestacks. Fossil fuel imports are already monitored closely, which facilitates data collection. Regulating the upstream companies greatly simplifies the reporting requirements, since there are fewer companies upstream, making emissions easier to track.
- **Comprehensive:** California's AB32 calls for a market that is comprehensive. The easiest way to ensure a comprehensive market is to regulate fossil fuels at the point at which they enter the economy. The system would regulate fossil fuel importers and producers.

The Terminal Rack: A convenient place to regulate motor fuels

The Terminal Rack is a point in the motor fuel distribution chain where tanker trucks are filled for distribution to gas stations. Federal motor fuels taxes are collected at this point, and there is an administrative system in place for monitoring the sale of fuels at this point. Since fossil fuels used for transportation accounts for about 50% of CA emissions, it is a very important place.

- For electricity, a load-based system will conflict with the California ISO's coming day-ahead market leading to reduced transparency. A first-seller or source-based system will fit better with a future national system, and is preferable to load-based, but still faces legal uncertainty. An upstream system is better than either.

In an upstream system, are downstream businesses or households off the hook?

Permits would be required to be held only by fossil fuel producers and importers. Other (downstream) businesses would still receive the price signal in proportion to their fuel use, but would not need to hold permits or participate in complex reporting and compliance. An important part of the program will be compensating consumers through a rebate, to ensure that poor and disadvantaged communities are not overly burdened.

Cap and Trade: Allocation of Allowances

The single most important market design issue in a new cap and trade system is how to allocate carbon allowances/permits. The 'who' and 'how' of allocation could determine the success or failure of a future cap and trade system.

Who gets the emissions rights?

Government?



Industry?



1) Auction (selling): The State could sell the rights to the highest bidder, then use the proceeds to fund public goods such as energy efficiency or renewable energy to reduce more greenhouse gases, or provide cash dividends to consumers.

Instead of a giveaway, the state auctions permits to companies for whatever the market will bear

- The state uses the auction revenue for:
 - Investment in new energy infrastructure and other public goods
 - Rebates or dividends to consumers
- Auctioning avoids windfalls for unregulated oil companies and large emitters.
- Auctioning avoids lobbying for preferential treatment. Every carbon emitter is treated equally.
- With auction revenue, the state can return money to consumers.

2) Giveaway (grandfathering): Emission permits are given to fossil fuel companies for free.

Studies show that even though fossil fuel companies are given permits for free, they raise prices anyway. This option has provided windfall profits to oil and coal companies in Europe.

- The more a corporation emitted in the past, the more permits it gets.
- Value created by scarcity is captured by shareholders of large corporations.
- Industry windfalls would be so large (and they'd rise as the cap declines) that public support for a carbon cap would collapse.
- The receiving corporations can sell their permits or raise their prices to capture the value of the permits.
- Result: windfall profits for the fossil fuel industry, and no public benefit.

The best allocation method for California will:

- Create a fair, equitable market,
- Achieve maximum reductions at the lowest possible cost,
- Shield the most vulnerable citizens from disproportionate economic impacts,
- Avoid the problems faced by the European Trading System (ETS) and RECLAIM.

All the economic literature states that an auction carries fewer social costs than a giveaway.

Each industry will claim "special circumstances." Economists have shown that many industries will benefit from a carbon cap, and most electricity generators have a fleet where some facilities will rise in value. All costs will be passed on to consumers (regulated utilities can provide on-bill rebates. A phased-in auction results in a giveaway of the public trust, and disadvantages companies that performed early action.

Note: Allocation could also go directly to consumers. For more information, check www.carbonshare.org.

The Sky Trust: A Carbon Fed by Peter Barnes

An 80 percent reduction in GHGs is challenging when our economic engine is so deeply addicted to fossil fuels. Encouraging efficiency and new technologies is not sufficient. We need *macro-economic tools* that drive down emissions steadily and promote private and public investment at all levels.

The first thing needed to achieve a steady 40-year decline in America's CO₂ emissions is a 'carbon valve' at the top of the economy that can be cranked down year after year. To make a crude but useful analogy, think of carbon as flowing through our economy the way water flows through a garden sprinkler system. To reduce the flow of water, we would turn the handle at the spigot, reducing the carbon flowing through the economy. This is what economists call an 'upstream cap.' All companies that bring burnable carbon into the economy — from coal mines, oil or gas wells, tankers, pipelines or biofuel refineries — would be required to buy permits for the carbon content of their fuels. Each year the number of permits would be reduced.



The entity empowered to control the valve would be mandated to move as rapidly as possible to a safe emissions level, as determined by scientific consensus. Let's call this entity the Carbon Fed. (Its formal name might be the U.S. Atmospheric Trust.) The Carbon Fed would be to the carbon supply what the Federal Reserve Board is to the money supply. Obviously, it would be a body of great importance, and we would want its members to be of the utmost competence and integrity. We would also want them to be insulated from political pressure, as are the members of the Fed.

Permits Auctioned and Dividends Distributed

The permits issued by the Carbon Fed would be tradable, and because of their scarcity (relative to demand) would have considerable economic value. The permits would therefore not be given away free, as in older cap-and-trade systems, but auctioned in competitive markets, much like Treasury bills. The ultimate owners would be companies that bring carbon into the U.S. During the course of a year these companies would have to own permits equal to the carbon content of the fuels they bring in. Once a year they would 'true up' with the Carbon Fed and pay a substantial penalty if they don't own sufficient permits. Revenue from the sale of these permits would be placed in a fund. Money in the fund would be used for dividends and public investments.



A portion of permit revenue would be set aside for equal yearly dividends to legal residents of the U.S. The Alaska Permanent Fund pays equal dividends to all Alaskans based on revenue from state oil leases. Equal dividends create the right micro-economic incentives. Thus, when energy prices rise, people who drive Hummers (or otherwise burn more carbon than average) will pay more into the fund than people who ride the bus (or otherwise conserve carbon). If all receive equal dividends, carbon gluttons will lose while carbon conservers gain. Ultimately, the carbon absorption capacity of the atmosphere is a gift of creation to all living beings. If that gift has economic value, a portion of that value belongs to everyone. Note that as the carbon supply is cranked down, carbon dividends would rise along with carbon prices. The rising dividends would be a tangible reward for Americans as we make progress on emission reductions.

Advantages of a Carbon Fed

- Creates a politically shielded entity to make hard decisions on emission limits
- Assures timely emission reductions and political viability of continued reductions
- Covers every sector of the economy
- Offsets higher energy prices faced by consumers
- Avoids unfair burden on low-income households
- Avoids political battles over who should receive free permits (and unfair windfalls)
- Generates revenue for public investments
- Provides correct 'micro' incentives (because higher prices for carbon encourage conservation, efficiency and investment in low-carbon technologies)
- Provides correct 'macro' incentives (because a declining cap generates higher dividends)

How to spend the revenues from an auction?

If the Western States create a carbon market and auction permits to companies, it could generate a steady income stream of over \$2.5 billion per year. How should we spend it? Because the climate is a public trust resource, any income derived from its use should be used in the public interest. The revenues from an auction can be used to provide additional emission reductions to meet the Western State's climate goals, and to compensate disproportionately impacted communities. In other words, revenues can be spent on public goods, and to compensate consumers.

Energy/Environment

Revenues can be used for the administration and enforcement of the cap. Also, they can fund additional Energy and Environmental projects that help the State achieve its climate protection goals.

In general, these projects could fall into the following categories:

- Energy efficiency,
- Public transit
- Research and development



Within those categories, revenues could be spent on:

- Big ticket items (trains, transit, infrastructure)
- Small ticket items (decentralized solar incentives, Energy Star appliance retrofits)
- Research and development for new technology
- Adaptation (levees, dams, emergency preparedness for climate events)



Equity

A high priority is compensating citizens for higher energy prices, and reducing impacts on specific communities including environmental justice. Limiting carbon emissions will necessarily raise fossil fuel prices. These higher prices can be offset by distributing 'dividends' or 'carbon shares.' Failure to offset higher prices will harm the economy and low-income households particularly.



Equity goals can be achieved through any or all of the following methods:

- Expanding the Earned Income Tax Credit
- A Per capita cash rebate/dividend
- An earmarked rebate (a coupon, "climate-friendly food stamps" which can only be used to purchase Energy Star appliances, transit passes, hybrid vehicles,)
- Set-asides for specific communities ("good green jobs in the inner city"?)

Two Types of Consumer Compensation

Consumer compensation acts as a rebate for the higher fuel or energy prices which may result from a carbon cap. Equal per capita compensation addresses the regressive impacts of fuel price increases. Consumer compensation may be key to maintain political support for the cap over time.

Auction/Dividend

In Auction with Dividends, the State auctions emission rights to the highest bidder, then uses the proceeds to provide cash dividends to people on a per capita basis.



Carbon Share

In Carbon Share, emissions permits are allocated directly to households on a per capita basis. People cash the share at a bank or brokerage. The bank or broker sells the share to carbon importers and producers on the open market.



What's the difference?

Government runs the auction.
Brokers may represent companies, but most commercial banks are not involved.
Dividends can be wired directly to bank accounts.

Government regulates a private market.
Financial services industry is involved.
Consumers can choose to withhold their share, or "play the market."
People may feel greater sense of ownership but require financial acumen.

Benefits of both the Dividend and Carbon Share:

- State citizens would have a stake in climate protection
- The share or dividend offsets higher energy prices residents may pay
- The share or dividend helps low-income people, who typically emit less carbon.
- If Auction/Dividend and Carbon Share are both adopted, companies would have two sources for permits: the government auction and a private market
- Per capita framework can be easily explained when other states create similar systems

Auction (sell) permits, then include per capita compensation:

The Climate Protection Campaign recommends that the State auctions (sells) 100% of carbon emission permits. Use revenues for public goods and per capita compensation. Consider the Dividend, Carbon Share and other forms of household per capita compensation in the design of a state or regional carbon market.

Carbon Rebates for Everyone

The Social Security Act of 1935 exemplifies a universal program. Everyone pays in, everyone gets something out. The rules are understandable and apply to everyone. The inclusiveness of the Act has helped it endure for over 65 years. Reducing greenhouse gases (carbon) is a 50 year project, and must include everyone.

A Per Capita framework:

- is based on equity.
- is universal, not divisive.
- is the basis of our country: "All men are created equal."
- is easy to understand and other states may adopt it.
- avoids complicated or subjective set-asides (for low-income, or special groups) but accomplishes the same goal: equity across disparate communities.

Universal Principles can be applied to Carbon Rebates:

A cap and trade program must last for decades. If emission permits are auctioned to companies, the use of the revenues will determine the fairness, economic efficiency, and political support of the program over time. Most cap and trade design principles state that the costs should not disproportionately fall on low-income communities. Auction revenues may be used to compensate low-income or impacted communities. This could be accomplished through a per capita rebate, a dividend, or a share.

A per capita rebate, dividend, or share provides a net gain to lower-emission households in comparison with high-emission households who spend more on fuel than they receive in compensation.

The distribution of per capita rebate, dividend, or share goes beyond the idea of mitigating the impact or burden of changing to a low-carbon economy to specific groups. The per capita framework institutionalizes the idea that we all share ownership of the commons together, and that wealth should be shared with everyone. It enshrines inclusiveness and equality, some of America's highest values, into our economy.

How it could work:

1) A check box on your state tax form asks how you wish to receive your annual climate entitlement.

2) Your dividend, rebate, or share is administered by the State tax authorities.

3) As prices rise, low-emitting consumers come out ahead, while large-emitters spend more back into the system.

4) The cap is reduced each year, which increases the value of each dividend.



The Social Security Act of 1935 was based on universal principles, helping it survive for over 65 years.



Ida May Fuller was the first recipient of a Social Security check on January 31, 1940.

Tax Form
How will you accept your Climate entitlement this year?
<input type="checkbox"/> Dividend. Send me a cash dividend.
<input type="checkbox"/> Share. Send me my Share, denominated in CO ₂ .
<input type="checkbox"/> Tax credit. Apply my entitlement to my Earned Income Tax Credit.

California Climate Trust Office of Dividend Distribution Sacramento, California	Date: April 16, 2012	1101
Pay to the Order of: Ms. Jane Smith-Consumer	\$	
	Dollars.	
For This year's Climate Dividend.	<i>Michael J. Friedman</i>	State Treasurer



Questions about a Per Capita Dividend

Why give money to rich people who don't need it? Won't rich people spend their dividend on Hummers or plane tickets, causing more emissions?

The Commons belongs to everyone, even wealthy people. The increased price of fossil fuels will make inefficient products more expensive. Some people suggest issuing wealthy people a dividend as a coupon redeemable only for compact fluorescent lightbulbs, hybrid cars, or Energy Star rated appliances. We believe that this may decrease the political support for the rebate. Instead, local government agencies could offer special incentives to redeem dividends or shares for transit passes or other public goods, which would encourage that behavior.

• Wouldn't rebates shield consumers from price increases in fossil fuels? Isn't making fuel expensive the best way to change consumer behavior?

An increase in fuel or electricity prices is regressive, meaning that it impacts poor people more than rich people. We suggest social policy to make the impacts more even. A per capita rebate, such as Carbon Share, would alleviate some of the impact. High carbon emitters would still pay more.

Table 7: Distributional Impact of a Cap-and-Rebate Policy
(based on a carbon charge of \$200/tC, with 100% recycling to individuals)

Per capita expenditure decile	Per capita expenditure (\$)	Average household size	Per capita incidence (\$)			As percentage of expenditures		
			Charge	Rebate	Net benefit	Charge	Rebate	Net benefit
1	1927	3.4	215	678	463	11.2%	35.2%	24.0%
2	3521	3.3	338	678	341	9.6%	19.3%	9.7%
3	4736	3.2	424	678	254	9.0%	14.3%	5.4%
4	5991	2.7	514	678	164	8.6%	11.3%	2.7%
5	7380	2.6	576	678	102	7.8%	9.2%	1.4%
6	8847	2.5	649	678	30	7.3%	7.7%	0.3%
7	10711	2.3	732	678	-53	6.8%	6.3%	-0.5%
8	13228	2.1	837	678	-158	6.3%	5.1%	-1.2%
9	17178	2.0	1024	678	-346	6.0%	3.9%	-2.0%
10	29943	1.8	1475	678	-797	4.9%	2.3%	-2.7%

This Table estimates that if fuel and electricity prices rise when GHGs are reduced by 15%, low income people (decile 1) benefit from a \$678 annual rebate. The wealthiest group (decile 10) spends \$797 more than they receive. Per capita alleviates the regressivity of fuel and electricity price increases. **Source: James Boyce and Matthew Riddle. "Cap and Rebate" PERI, Amherst, MA, Oct 2007.**

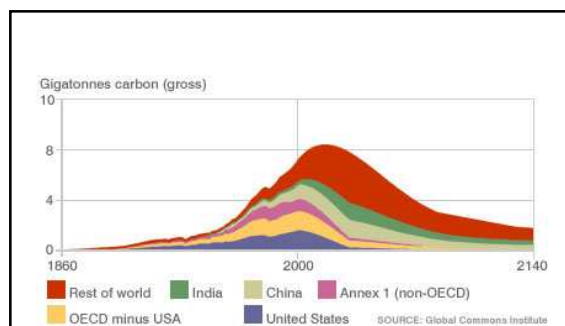
A Per Capita International Climate Treaty

The per capita framework can also be the basis of a post-Kyoto international climate treaty.

The Kyoto Protocol divided countries into "Annexes" based on the historic disparity of emissions between developed and developing countries. By contrast, a per capita framework for greenhouse gas emission reduction assigns allowances to countries (or states) according to their population.

The long term goal is global per capita equity at the level of the scientific imperative, a reduction in total global GHGs of 80% by 2050. The fairest distribution of the emissions under the cap is equally to all people.

California and the Western States can help advance this goal by incorporating per capita elements in their design of a carbon market. A per capita consumer rebate, dividend, or share is a step in this direction.



This graph illustrates a per capita framework for international GHG emissions called Contraction and Convergence. Developed by the Global Commons Institute in the UK, it proposes a **goal of per capita equity**. To get there, the developed countries **contract** their per capita emissions toward the global per capita average, and the developing countries **converge** toward the global average.

How would you like your Climate Entitlement: Dividend, Tax Credit, or Share?

Who owns the Sky? Either no one does, or we all do, equally.
A cap and trade system should compensate consumers as the sky becomes more valuable.
Then you choose on your tax form how to receive your annual climate entitlement.

Auction/Dividend or Tax Credit:

1) Government agency auctions permits to companies.

2) Agency sends revenues to consumers as dividend.

You receive: Cash Dividend/Tax Cut

Deposit the check in your bank account.

Carbon Share:

1) California sets a statewide emissions cap.

2) Citizens receive a per capita share of the cap in the mail.

3) They cash the share at banks or brokerages.

4) The bank or broker sells the share on the open market to fuel importers or producers.

5) A regulated company buys the share, and returns it to the government agency.

You receive: A Carbon Share

Deposit the share in your brokerage account to sell later on private market.

An Auction/Dividend and Carbon Share can co-exist, and parallel markets may benefit both. In both, low-income and low-emitting consumers come out ahead. Per capita consumer compensation can make climate protection feasible and popular. For more information, check www.carbonshare.org.