AN ENERGY POLICY ESSAY

For California's AB 32

Cap-and-Trade-and–Cash Back, not Cap-and-Trade-and-Tax

by Jeremy Carl and David Fedor

Shultz-Stephenson Task Force on Energy Policy
www.hoover.org/taskforces/energy-policy

task force on energy policy

Executive Summary

The desire to protect the environment is a hallmark of the state and extends across the political spectrum. And given the environmental risk posed by global climate change, efforts to reduce the state's greenhouse gas (GHG) emissions and act as a model for jurisdictions elsewhere have now become a major part of California's energy policy agenda. This cause has driven the creation of new and potentially promising regulatory mechanisms, but it has also been used to justify a bureaucratic and regulatory expansion that may be only dimly related to the reduction of GHG emissions.

The question of whether California can undertake a robust and effective climate policy while simultaneously saying "no" to new public spending is clearly illustrated by its new cap-and-trade system. Commonly known by its legislative moniker "AB 32," the Global Warming Solutions Act requires actions by state agencies to limit California's GHG emissions to 1990 levels by the year 2020 through a platform of regulatory and market-based measures. The centerpiece of this program is a recently launched cap-and-trade system for reducing GHG emissions. After years of preparation, this system is finally operational, but it is not yet complete. Cap-and-trade allowance auctions conducted by the California Air Resources Board (CARB) have already collected hundreds of millions of dollars in new revenues from the state's largest GHG emitters, and billions more are set to be collected through 2020. Yet the fate of these funds remains unsettled.

The cap-and-trade program's design—creating a price for GHGs through the establishment of a hard statewide cap on total emissions—guarantees that the state's GHG emission-reduction goals will be met. The money the state collects through the process of distributing GHG emission allowances throughout the California economy is, however, simply a side effect of this. So California now faces a question: Will state

policymakers settle for a "cap-and-trade-and-tax," using this money to fund additional spending (climate-related or otherwise)? Or will the state demonstrate a true world first by returning that money to the people of California who ultimately foot the bill, in a "cap-and-trade-and–*cash back*"?

In this paper we argue that California's climate policies should be used to reduce GHG emissions—not to act as vehicles for potentially ineffective new public spending on politically favored programs—if we are to accomplish our stated goals that the state's climate efforts act as a policy model for other jurisdictions. Namely, to **reduce the fiscal drag on the California economy** of the costs of meeting GHG emission-reduction targets:

1. The legislature should refund all revenues raised by AB 32's cap-and-trade allowance auctions to California taxpayers to achieve net revenue neutrality. At the median of current estimates, per capita revenues being raised by cap-and-trade are $1,500 over eight years. If cap-and-trade covered substantially all of the emission reductions, rather than also relying on numerous technology mandates, the tax refund would total (as a median estimate) a minimum of $6,000 for every man, woman, and child in the state.[1]

2. If the legislature is unwilling or unable to make cap-and-trade revenue-neutral, it should require real-time web-based public transparency in the collection and competitive reverse auctioning of funds raised through the state's cap-and-trade allowance auctions.

3. Initiate an independent audit of public-sector—or private third-party—projects funded by cap-and-trade revenues to make sure funds are being spent efficiently and California's experiences in implementing cap-and-trade are effectively communicated to audiences both inside and outside the state.

In addition to these steps that could reduce the negative macroeconomic effect of reducing California's GHG emissions, a companion paper to this piece addresses how to **reduce the direct costs** of meeting AB 32's emission-reduction targets by relying *more* on this market-based cap-and-trade system and *less* on existing command-and-control regulatory mandates.[2]

In setting GHG abatement targets, did the 2006 legislature really intend that AB 32 raise tens of billions of dollars for additional spending by the state of California, often with little public input or accountability? Did the voters understand that this is what they signed up for when they were voting for it? We believe these are the central questions that must be answered. Achieving the legislated emission cap and the spending of AB 32 revenues are fundamentally separate issues and should not be treated as a package deal. Making the AB 32 cap-and-trade revenue-neutral would not affect the actual costs California businesses will face in reducing their GHG

emissions, and it would not affect the level of GHG emission reductions either up or down, but it would determine the mechanism's major side effect: namely, whether it is the state treasury or the household budget that comes out ahead in the process of improving our environment and modernizing our state economy.

A note on real vs. "ideal" GHG policy in California

While we continue to believe a broad-based revenue-neutral carbon tax shift combined with the elimination of all subsidies for energy production and consumption would be a preferable means to obtain many of the same goals that AB 32 and California's related emission reduction rules attempt to address, the fact remains that California's voters and legislators have chosen AB 32, not some hypothetical or academic ideal, as their preferred way of addressing the climate issue. With strong political support in both the governorship and a supermajority of the legislature, and with AB 32 having received a 61.5 percent endorsement from California voters, we believe policy concerns are best directed at an effort to reform rather than a futile attempt to start over from scratch, a prospect that offers neither obvious political nor policy gains.

With the right modifications, however, the AB 32 cap-and-trade framework now under way can act much more like a revenue-neutral carbon tax would—by returning the substantial revenues it will raise directly to California's taxpayers—all without affecting GHG reductions. Climate policy revenue neutrality is an available option regardless of initial instrument choice. But for California, this choice requires additional action, so it is important that we act now before it simply becomes another conduit for new state spending, "green" or otherwise.

Introduction

California voters have sent a message of support for addressing climate change at the legislative level, when AB 32, the Global Warming Solutions Act, was first passed, and then in direct democracy, when an initiative to suspend it was solidly defeated after a referendum that saw support from a broad swath of Californians: almost 40 percent support from the state's Republicans, over 60 percent support overall, and endorsements from both the Republican and Democratic candidates for governor. In a recent Hoover Institution Golden State Poll, 60 percent of Californians, across demographics, described climate change as either a very or a somewhat serious problem, four times as many as those who named it as not at all serious.[3]

The broad extent and technical nature of California's climate policies, however, has meant that significant regulatory decisions are being made largely unbeknownst to the general public. For example, AB 32 implementation "details" settled in the years since 2006—such as the fate of billions of dollars of funds set to be collected through the state auctions of AB 32 cap-and-trade allowances—have enormous economic implications, but the public is largely ignorant of choices being made on its behalf. This public ignorance has opened the door to the program becoming an umbrella for regulatory expansion and potentially wasteful use of public money.

It sets up an environment that is primed for regulatory capture as regulated industries will end up using the regulator for their own ends rather than the public's.

While California's use of the flexible cap-and-trade market mechanism could improve upon existing conventional environmental regulatory measures in terms of effectiveness of emission reductions, cost, and fairness, the real costs of California's climate policy agenda as enacted today are still uncertain and remain little understood by California's voters.

Fortunately the cap-and-trade mechanism offers another key advantage over conventional environmental regulations, *but only if the state chooses to allow it*: cap-and-trade is able to take the costs of reducing GHG emissions and return that money directly to the people of California so that they can better cope with the real prices they will face in doing their part to avert climate change. The fiscal drag that is set to saddle the California economy, barring intervention, is entirely avoidable and is completely independent of achieving California's climate goals.

More broadly, recognizing that California's GHG emissions are only a small sliver of the rapidly growing global total, the biggest value of the state's "early mover" approach to reducing emissions will not be those marginal reductions made at home but rather the guidance we can give to interested jurisdictions elsewhere around the United States or globally. This is actually a clearly stated goal of the AB 32 legislation. As such, it is particularly important that AB 32—its design, its institutions, and its implementation—be completely transparent. Proactive transparency and accountability should be elevated to become central pillars of AB 32. As an intended global regulatory model, even if the behavior of Californian bureaucracy is beyond reproach, it is nevertheless important to implement the structural safeguards here that might truly be needed for similar undertakings elsewhere across the world.

Specifically, the collection and use of proceeds from cap-and-trade allowance auctions—if not fully rebated directly to the Californian residents ultimately paying for them—should be set aside and publicly reported through a dedicated website in real time and adhere to detailed balance sheet conventions to make sure that these funds are not wasted or diverted. Allowing outside competitive bidding for the use of such funds to creatively reduce GHG emissions, with third-party vetting, could offer a natural structural safeguard of transparency and accountability for this key facet of AB 32. Furthermore, an independent monitor should be charged with the task of publicly disseminating the findings from ongoing comprehensive research into the formation and implementation of the entire AB 32 program, ensuring that California's experiences—positive and negative—are available, accurate, and accessible to those outside of Sacramento. This knowledge building is a key part of what Californians signed up for in their support of AB 32, and it has not yet been seriously addressed.

California's Technocratic Climate Policy and Public Accountability

AB 32's broad GHG-reduction mandate and related legislation has given major new responsibilities to state regulatory agencies. **But while Californians have shown their strong support for reducing GHG emissions, they have very low visibility on or understanding of the significant environmental regulatory decisions being made on their behalf.**

The AB 32 legislation itself was notable for being quite general: it specified the basic target and rationale for GHG abatement but then left detailed market mechanism regulatory design and implementation up to CARB and other agencies. Through public processes and the creation of scoping plans with various supplements in the years since, actual regulations have taken form and been revised. For example, the existence of the cap-and-trade program itself was decided on by CARB, not the legislature. On the one hand, this flexible approach has meant that agencies have not been bound by particular legislative missteps in a changing environment years after the fact; on the other hand, the on-the-fly nature and rapid pace of such agency-driven decision making have meant that staying abreast of new changes has become a full-time job and thus dominated by special interests and other particularly motivated actors. A side effect of this technocratic approach is that is reduces accountability in making what are becoming fundamental changes across the California economy.

One recent example is the state government's enthusiasm for a particular "charismatic" technology: electric vehicles. State regulatory agencies, assisted in some areas by supporting legislation, have coordinated to strongly promote hydrogen and electric car deployment. Guidance for this expansive action comes in part from an executive order of former Governor Schwarzenegger, which in 2005 laid out GHG emission-reduction goals of 1990 levels by 2020 and 80 percent below 1990 levels by 2050.[4] Though subsequent AB 32 legislation codified the 2020 goal, it is the far more ambitious and transformational 2050 goal that now motivates much of the agency action in support of the electric vehicle industry.

Reducing the state's GHG emission by over 80 percent would be a major challenge, one that almost seems impossible given currently available technologies at any reasonable cost. Since then, as part of the effort to understand the feasibility of the 2005 Executive Order's goal for 2050, scientists and modelers in independent studies have suggested that transportation system electrification—among other measures including radical decarbonization of the electric power system—could be one technological pathway towards meeting the target. This electrification scenario is at the core of related regulatory strategies. At the same time, that 2050 limit, and the overall strategy of transportation electrification along with it, has never been put to a vote of the California public.

Despite our best efforts, history has generally shown that our ability to predict the future of technology development is extremely poor. Therefore it is concerning to base

a long-term policy direction on attempting to intuit technology development several decades hence. (Think back to the early 1970s and the level of technology available then—how well would you have predicted an iPhone world at a time in which the personal computer did not yet exist?) Agencies have nonetheless embraced the cross-cutting electric vehicle technology pathway with zeal. Recent action has included the following:

- The California Public Utility Commission's (CPUC) use of $100 million out of an approximately $400 million total Dynegy/NRG legal settlement stemming from the firm's price-gouging for long-term contracts signed during the California electricity crisis to fund a commercial network of electric vehicle charging stations, stubs, and EV car-sharing programs.[5]

- The California Energy Commission's awarding of a $10 million grant to Tesla Motors—a publicly traded company—for development of its Model X electric SUV; this money comes from a $90 million Alternative and Renewable Fuel and Vehicle Technology Program funded through a surcharge on vehicle registration fees, authorized by AB 118.[6]

- Interagency coordinated actions by the Department of Motor Vehicles, CARB, and governor's office to "promote consumer awareness of [zero-emission vehicles, ZEVs] through public education, outreach and direct driving experiences" in support of Governor Brown's 2012 executive order that targets 1.5 million ZEVs on California roads by 2025.[7] This is notable because it seems to go beyond conventional state governance responsibilities—for example, to "ensure that hydrogen and electricity can legally be sold as a retail transportation fuel," a very reasonable part of the same interagency action plan—and into actually trying to create consumer demand for a product that many may not want.

- CARB's AB 32 Cap-and-Trade Auction Proceeds Investment Plan[8] includes proposed grants and rebates for the purchase of both electric vehicles and the installation of charging stations. This cost would ultimately be passed on to California businesses and the general public through the AB 32 cap-and-trade program.

Our concern here is not that agencies are attempting to effectively coordinate their activities—given the state's broader regulatory maze, this should generally be commended. Further, the issue is not even that electric vehicles are a risky single technology bet for the state to be favoring—there does appear to be substantive, if not exclusive, technical merit. Rather, the worry is that these regulatory strategies seem to be driven more by the pursuit of a "charismatic" technical solution rather than the stated intent of California's electorate. Just because Californians have shown their strong support for addressing climate change does not necessarily mean that they also support these proscriptive activities that are actually only tangential

to that cause. Doing so will ultimately incur real costs on Californians, both in the aggregate and very tangibly in terms of the choices available to consumers. To the extent that reducing GHG emissions requires changes in California's transportation system, a comprehensive understanding of what is needed, the most cost-effective way to engage private investment, and public outreach should be the first steps, with ultimately a law or proposition passed (or not), after public debate, supporting a viable soup-to-nuts program.

California's Choice: AB 32 Cap-and-Trade Revenues

Substantial proceeds are already accruing to the state through the auction of carbon emission allowances under AB 32's cap-and-trade program—about $385 million from November 2012 through August 2013 and set to grow at an increasing rate. While the state's current proposed approach is likely to result in inefficient and politically unaccountable spending, a simpler, better solution exists.

Program Background

AB 32's 1990 by 2020 emission level target is equal to an annual total GHG emission level of about 341 MMTCO2e by 2020 for regulated sectors in California. The cap-and-trade program (whether the cap itself is "binding" or not given the extensive sector-specific "complementary" measures discussed in our companion paper[9]) is structured so that an emitter must surrender a carbon allowance for every unit of GHG released between now and 2020. These allowances are like a currency, in which CARB acts as a treasury that "prints" and injects allowances into the California carbon economy. Individual emitters can either acquire the allowances they need to emit GHGs directly from CARB (through free allocation or at auction) or trade with someone else who already has them (or, in some cases, by purchasing or generating limited offsets). All told, between 2013 and 2020, CARB estimates that it will "print" a total of about 2.7 billion allowances, roughly half of them distributed for free and the remaining half auctioned.[10]

The actual amount of allowances released in any one year depends on which sectors of the economy are subject to the cap-and-trade program in that year and the economy-wide carbon emission cap glide path. This expansion may be added to by the birth of trading with non-California jurisdictions. California has signed an agreement to this effect with Australia and Quebec, and it is considering a similar approach with other Canadian provinces.[11]

The creation of a cap-and-trade system can be seen as the creation of a set of property rights—in this case the right to pollute. The key policy question then is what to do with this asset: cap-and-trade-and-*what*? Freely allocate that asset at its creation to existing emitters: cap-and-trade-and-*windfall profit*? Transfer that asset to the general public: cap-and-trade-and–*cash back*? Or auction that asset and keep the money in the hands of the government: cap-and-trade-and-*tax*? With AB 32's cap-and-trade program, California has chosen a bit of all three, but unfortunately it

is increasingly moving toward the latter, and worst, option: cap-and-trade-and-tax. But it does not have to be this way—increasing state government revenues is not a forgone conclusion of a successful cap-and-trade program, nor are we convinced that government spending of the allocation revenues is needed to make AB 32 successful.

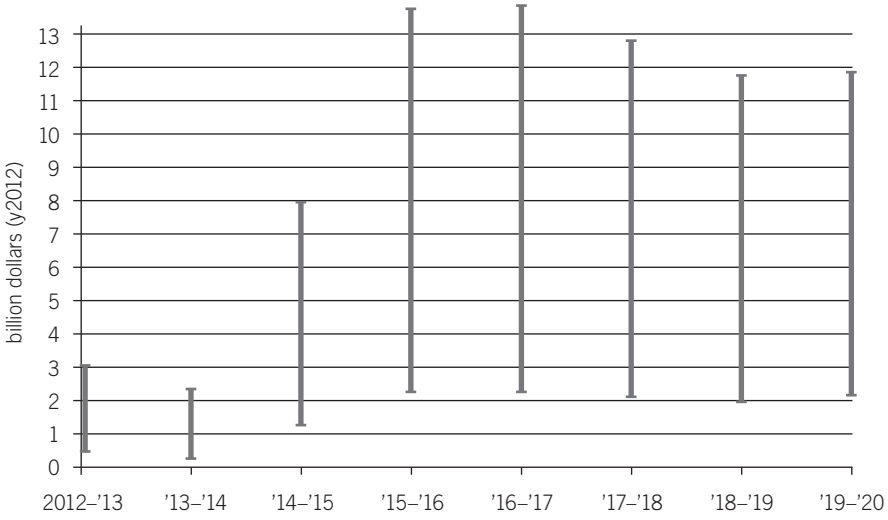
Though not actually settled by the 2006 AB 32 legislation itself, recent developments show how state agencies are now gearing up to spend $14 billion to $70 billion in cap-and-trade auction revenues cash transfusions over the next eight years.[12] Despite the enormous amount of money involved, many significant aspects of the issue are just now being addressed, with allowance auctions already well under way. There is reasonable concern of course that with this issue far from constituents' radars, such revenues—derived entirely from real costs imposed on Californian businesses and consumers—will be seen as "free money" and handled outside the normal budgetary debate. In fact, a July 2012 PPIC statewide survey indicated that 57 percent of Californians have heard "nothing at all" about the cap-and-trade program and a further 30 percent only "a little." Moreover, regarding cap-and-trade program revenues, 34 percent of Californians have "very little" and a further 31 percent "no" confidence in the state government "to use this money wisely."

Furthermore, it is clear that a cap-and-trade-and–cash back solution is more popular with the public. In a recent poll conducted by one of the co-authors with a leading national polling firm, returning California cap-and-trade revenues to taxpayers was as popular as all three of the other spending options combined—six times as popular as Governor Brown's desire to spend revenues on high-speed rail and more than twice as popular as spending the money on renewables and efficiency or for general purposes (e.g., health or education).[13] Once stories of poorly timed or mismanaged spending projects come in, these numbers supporting spending are likely to sink further.

The amounts of money at stake are substantial. The *Governor's Budget Summary (2012–2013)* anticipated revenue of approximately $1 billion in the 2012–2013-budget year alone from the quarterly CARB-administered allowance auctions.[14] The Legislative Analyst's Office (LAO) has estimated a range of auction revenues from approximately $2 billion to $12 billion annually through 2020, depending on the market price of emission allowances, and moving toward the higher end of that range in 2015, when natural gas and motor fuel distributors first become subject to cap-and-trade.

Part of the reason for a lack of public debate on how to handle AB 32 cap-and-trade auction revenues is another obscure California legal precedent. State legal precedent would suggest that AB 32 allowance auction revenues technically qualify as environmental mitigation "fees" and not "taxes." As such, many legal commentators have suggested that the California Supreme Court's 1997 *Sinclair Paint v. State Board of Equalization* decision likely applies: essentially, this would mean that the cap-and-trade auction revenues could not be used for purposes unrelated to

FIGURE 1: Range of potential AB 32 allowance auction revenues



Source: Adapted from LAO, February 2012, "Evaluating the policy trade-offs in ARB's cap-and-trade program." LAO notes that its analysis of potential revenues reflects the (largely fixed) quantity of allowances that are set to be auctioned in each year and the upper and lower price ranges that ARB has targeted for them.

the implementation or purpose of AB 32.[15] As the primary purpose of AB 32 is the reduction of California GHG emissions, revenue-spending proposals that further this goal are thought to be least likely to incur legal challenge. In that sense, despite the huge scale of this issue, it behooves those in the government who would like to spend these revenues on favored green expenditures to preemptively comply with the Sinclair Paint precedent (and not enter into a broader value-based discussion of how to handle the cap-and-trade property right asset for fear of triggering a legal review). **AB 32 was not passed with a two-thirds legislative majority that would make it immune to the "tax" test, and it is unclear if it would be able to pass again with a two-thirds majority that might be required today if its costs to the California economy were interpreted as "taxes" rather than "fees"—though of course, to those paying them, the designation is meaningless.**

Recent Revenue Proposals

Against this backdrop, and with the assumption that the California legislature does not intervene to enact superseding legislation to redirect auction allowance revenues toward another purpose, "green" spending proposals and guidelines have proliferated in the past year. Governor Brown proposed in his *Budget for 2012–2013* that expected allowance auction revenues be directed toward funding emission reductions through: (1) "energy efficiency, clean and renewable distributed energy generation, and other related actions"; (2) low-carbon transportation, including freight, advanced technology vehicles and vehicle infrastructure, advanced biofuels, and mass transit;

(3) water use and supply, land management, resource conservation, and sustainable agriculture, and; (4) "strategic planning and development of major infrastructure including transportation and housing." **Of the $1 billion in expected auction revenues, half were proposed to fund emission-reduction-related programs that already exist and which currently draw funding from the state General Fund**, while the remaining half (if available) would fund new or expansion of existing emission-reduction-related programs. Presumably, in coming years when auction revenues are expected to substantially increase, a much larger share would be directed toward such new or expanded programs. It is important to note that using any share of these revenues for general fund spending would, in and of itself, seem likely to fall afoul of the Sinclair Paint test if that test is fairly applied by the courts.

Following the governor's budget proposal, of a number of related bills before the California legislature in the summer of 2012 that sought to provide a framework for spending cap-and-trade auction revenues, three passed. AB 1532 (Pérez), SB 535 (De León), and SB 1018 established a Greenhouse Gas Reduction Fund to house various auction revenues and fund expanded AB 32 cap-and-trade administrative costs; mandated that 25 percent of cap-and-trade auction revenues be allocated to projects that benefit "disadvantaged communities" (as defined by CARB); and established broad spending guidelines related to GHG abatement, air quality, job creation, and global warming adaptation. Again, it is hard to see how, strictly interpreted, a legislative mandate to spend funds in particular communities (rather than specifically send the funds to where they are most needed to reduce GHG emissions) would survive a legal challenge. In particular, AB 1532 directed CARB to develop a detailed series of three-year "investment plans" to be submitted for approval by the legislature's budget committees through the Department of Finance along with annual reporting to the governor. The vagueness of these mandates is set to lead to potentially billions of dollars of inefficient spending.

CARB's first Draft Cap-and-Trade Investment Plan,[16] developed in response to this legislation, identified a list of recommended near term "priority investments" in three categories:

1. *Sustainable communities and clean transportation*, which identified three project areas: "sustainable communities strategies implementation," "develop[ing] plans for sustainable communities strategies," and "low-carbon freight transport and zero-emission passenger transportation";

2. *Energy efficiency and clean energy*, which identified three additional project areas: "energy efficiency and residential weatherization," "public energy efficiency and renewable energy," and "industrial/agricultural energy efficiency,"; and

3. *Natural resources and waste diversion*, which identified projects including "forest and ecosystem management" and "waste diversion."

Each project area within each category further identified a number of relevant subprograms through which to direct spending, identified related state agencies and existing state programs, suggested spending recipients, considered tactics on how to actually distribute money among subprograms and recipients, and described that project area's "disadvantaged communities approach." The overall list reads as one might expect a budget-crunched state government to act when offered billions in unexpected funding. The *smorgasbord* includes spending from new road pavement to transit-oriented housing development, from wastewater-to-energy cost-sharing to replacing diesel irrigation pumps with electric ones, from grants for agricultural land conservation easements to urban forestry and composting programs.

Some of the proposed funding may actually be needed or useful, other spending may not be. Some is earmarked to be funneled through existing spending mechanisms, while other spending would require the development of entirely new programs and infrastructures. Some of the spending might directly help reduce California's GHG emissions by 2020, while much of it would not provide verified or quantifiable global warming benefit. All of the spending is effectively an appropriation of carbon property rights by the state upon their creation. And of particular concern is the inclusion on this list of what is perhaps the state's most controversial spending program: high-speed rail (HSR).

> *Cap and trade funds are available as needed, upon appropriation, as a backstop against federal and local support to complete the [initial operating segment].*
> —The California High-Speed Rail Authority's April 2012 Revised Business Plan

Both CARB's Investment Plan[17] and the governor's recent budgets identified the San Francisco-Los Angeles HSR project as a potential recipient of cap-and-trade auction revenues. This project, partly funded by a voter-approved $9 billion in bonds in 2008, now faces an estimated budget shortfall of $55 billion out of a $68 billion total expected cost. Recent independent reports have found pervasive problems with the current structure of HSR, which is dramatically out of kilter with its proposal as to almost certainly be in violation of its enacting proposition.[18] The state HSR Authority expects this funding shortfall to be met by a combination of federal government grants and private investment over the project construction period but adds that cap-and-trade revenues could be used in the near term to fund the project's initial operating segment in the California Central Valley, scheduled for completion by 2021 (the entire HSR project is not scheduled to be completed until at least 2029).[19]

The LAO has questioned the legality of such spending by pointing out that HSR construction would actually increase GHG emissions through AB 32's 2020 target period, because only construction (and no operation) would occur—thus failing the Sinclair Paint "fee" test.[20] CARB has nevertheless included proposed spending on HSR within the state's "sustainable communities strategy" transit-oriented development goals.[21]

Furthermore, existing independent academic analyses have suggested that HSR may not generate energy and GHG emission savings as compared to other substitute travel modes even once fully constructed and operating: HSR savings would require high average train occupancies, high overall ridership levels, and a lower-GHG California electricity grid, all of which are uncertain. For example, Chester and Horvath (2010)[22] suggest that even once fully operational, the proposed California HSR system would require an energy "payback period" of 28 years (and a potentially longer GHG-emission payback period) relative to other transport modes at midlevel occupancies, given life-cycle energy costs. To say nothing of the 2020 AB 32 GHG emission-reduction limit, this would put any potential GHG reductions from HSR well after even the state's 2050 GHG emission goals.

With the magnitude of the expected HSR funding shortfall and the small likelihood of receiving significant federal funding over the short-to-medium term amid the current US political and fiscal environment, it is distinctly possible that the currently unallocated AB 32 auction revenue will be looked to as a major HSR funding source going forward.

Given this extensive list of potential cap-and-trade revenue spending proposals from all corners of the state government, the governor's May 2013 proposed budget was particularly ironic. As described above, the governor's original proposed budget accounting jujitsu would have effectively freed up $500 million in the General Fund through the use of AB 32 revenues for existing state spending programs. **The final adopted budget actually took creative accounting a step forward, appropriating essentially all 2013 cap-and-trade auction revenues before a single "green" dollar could be spent through a preemptive "one-time" $500 million loan "to be repaid with interest" from the cap-and-trade Greenhouse Gas Reduction Fund to the state's General Fund.**[23] Though the California EPA and CARB made statements supporting this fund transfer, a spokesman for the Sierra Club described it as "extraordinarily disappointing."[24]

Solutions to Wasteful Spending and Fiscal Drag under AB 32

In setting GHG abatement targets, did the 2006 legislature really intend that AB 32 raise tens of billions of dollars for additional green spending? Did the voters understand that this is what they signed up for when they were voting for it? We believe these are the central questions that must be answered resolving cap-and-trade's revenue-generating "side effect."

As we have discussed, it is as important that California effectively uses its climate policy agenda as a global cookbook for how to reduce GHG emissions in a complex economy as it is that California meet its 2020 targets. And though we are on track to achieve the latter, the former is proving challenging. **If AB 32 becomes a symbol of regulatory favoritism and wasteful spending, it will fail in its broader efforts to win over global converts—and the first-of-a-kind costs that**

Californian voters have taken on as part of reaching that goal will have been squandered.

To seriously address the concerns we raise in this paper and to ensure continuing support for California's GHG emission-reduction goals, it is critical that if cap-and-trade revenues are not refunded to the taxpayer, as we would strongly prefer, that, as an absolute minimum step, an independent monitor chosen by a bipartisan commission should begin monitoring, compiling, and publicly reporting on what is working—and what is not—across AB 32. The magnitude of this effort is likely beyond the resources or perspective of any one state agency, and moreover it is important to maintain the legitimacy and potential sensitivity of any such record keeping, and so we believe that this should be performed by a trusted and impartial outside group.

The particular complexity of AB 32's many facets, its outsized financial aspects, the many interest groups across the political spectrum, and the need to expand the conversation beyond Sacramento mean that normal channels of accountability are not sufficient. Transparency and knowledge building is a key part of what the legislature directed—and what individual Californians signed up for in their support of AB 32—and so it should be made an explicit part of the program.

In regard to the AB 32 cap-and-trade auction revenues in particular, the most important framing for the issue is to recognize that it is not free money. The creation of property rights around GHG emissions included valuation of both potential benefits and social costs. To this end, the funds that have been collected through the cap-and-trade auction process are an appropriation of many of the benefits by the state. These are paid for by California businesses and consumers who—apart from the climate change mitigation benefits that will accrue globally as other jurisdictions similarly reduce GHG emissions—now face primarily the "costs" side of the equation.

At the very minimum, to ensure basic good governance, the collection and use of proceeds from cap-and-trade allowance auctions should be isolated in a lockbox fund with its contents publicly reported through a dedicated website, in real time. A public line-item balance sheet should be maintained at all times to help prevent these funds from being squandered, agency funding requests should be publicly released, and the results of any spending should be evaluated and quantified by independent third parties. An even more promising approach would be to have proposals to use such funds open to competitive bidding from third-party private or not-for-profit groups outside the public sector. Anticipated GHG reductions per dollar spent within any proposal should be determined by an expert outside group, publicly reported, and awarded through a reverse auction mechanism similar to the methods currently employed by CPUC in the power sector. To the extent that these funds are intended to help California reach its long-term GHG reduction goals rather than short-term 2020 targets, spending should reflect that.

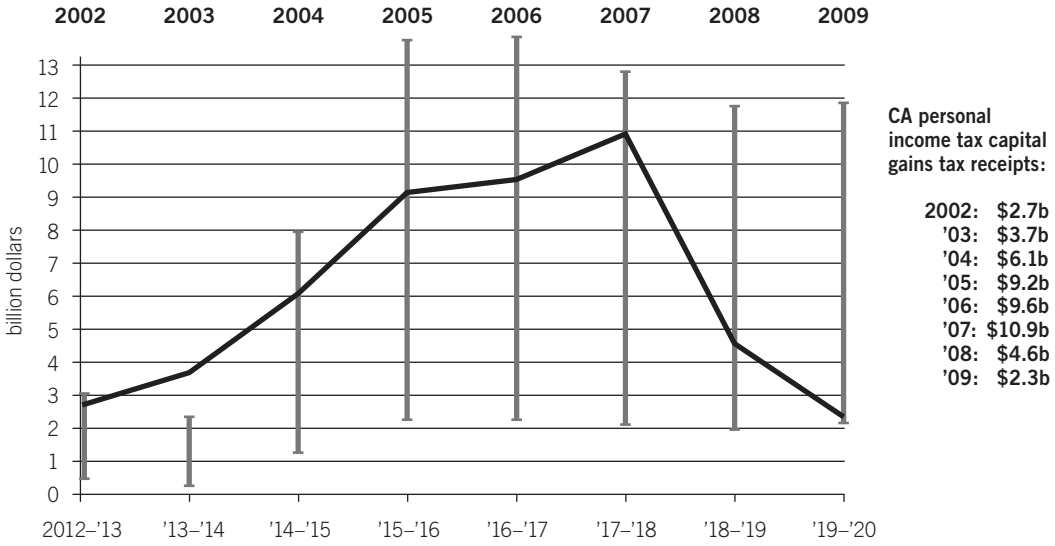
The part about the cap-and-trade program that is reducing greenhouse gas emissions, it's the cap, it's the lowering of the cap. It's not the revenue that we get from the allowances.
—Mary Nichols, CARB Chair[25]

As the above quote from the CARB chair illustrates, spending dollars on mitigation (rather than refunding funds to taxpayers) is not really the core stated purpose of California's climate legislation as it was developed. Moreover, cap-and-trade auction funds allocation offers a great opportunity for California to demonstrate that pricing (and quantifiably reducing) GHG pollution externalities and raising new government revenues does not have to go hand in hand. In fact, the cap-and-trade pricing mechanism itself offers an excellent platform to reduce the fiscal drag of having ambitious emission-reduction targets.

And actually, because of the way AB 32 cap-and-trade allowance auctions have been implemented, *cap-and-trade-and-tax-and-spend* is not the only way that California is handling these new property rights today. This is because not all emission allowances are being auctioned by CARB. Some—about half—are being given away for free to existing emitters (and potential new entrants): this is the *cap-and-trade-and-windfall-profit* model mentioned earlier. More interesting, however, is what the California Public Utilities Commission (CPUC) has done in the state's electricity sector: here, abut 475 million total allowances over the 2013–2020 period (about 55 million to 65 million per year and roughly 18 percent of all emission allowances set to be "printed") will be "consigned" for auction by the state's investor-owned utilities. This means that these allowances are given to the electric utilities, but then the utilities are required to turn around and immediately auction them off to other parties (e.g., the generators from whom they actually buy electricity for distribution and retail).

Since California's utilities have divested many of their own power plants and instead buy power on the wholesale market, much of their GHG abatement costs are indirect. Wholesale power costs rise alongside generators' need to buy emission allowances or as utilities sign new power purchase agreements to meet the separate 33 percent Renewables Portfolio Standard (RPS). Both costs are passed on to customers through regulated rates. The net result of the consigned allowance process therefore is that the utilities generate huge revenues from these sales—tens of billions of dollars. CPUC, their regulator, in accordance with the AB 32 Final Rule's[26] specification that such funds "must be used exclusively for the benefit of retail ratepayers . . . consistent with the goals of AB 32, and may not be used for the benefit of entities or persons other than such ratepayers" has decided that revenues will be 85 percent returned directly to ratepayers through the creation of a "climate dividend." Twice a year, California investor-owned utility customers will receive a bill credit of about $30 to help offset the higher costs of less GHG-intensive power. This is precisely the *cap-and-trade-and–cash back* model that allocates at least some of the new GHG property right to the citizenry. And it does so *without* compromising AB 32's GHG price signal or

FIGURE 2: Capital gains tax receipts vs. AB 32 auction revenues



Source: Capital gains data in current year dollars as reported by the CA Franchise Tax Board, April 2011, Exhibit A-6 page 4 of 5, https://ftb.ca.gov/aboutFTB/Tax_Statistics/Rev_Est_Exhibits_0511.pdf; AB 32 revenues adapted from LAO, February 2012, "Evaluating the policy trade-offs in ARB's cap-and-trade program." Ranges are in year 2012 dollars. LAO notes that its analysis of potential revenues reflects the (largely fixed) quantity of allowances that are set to be auctioned in each year and the upper and lower price ranges that ARB has targeted for them.

effectiveness.[27] (Though it is important to note that there are negative distributional implications of doing such a refund on a per capita basis with no adjustment for income or other relevant attributes.)

But 18 percent is not enough. The CPUC's climate dividend model should be expanded to cover the rest of the CARB cap-and-trade auction revenues as well. Another alternative to a direct dividend that would also allocate GHG property rights to the general public, and which might have even more desirable macroeconomic benefits, would be to permanently zero out an existing state tax such that the resulting net revenue flows to the state are neutral.[28] We must first lead by being honest, however. Cap-and-trade is a *tax* (or "fee" from a legal perspective), and if our primary concern is climate change, then the revenues generated from that tax should be returned to the taxpayers and not spent on the governor's, legislature's, or agency pet projects. For example, as Figure 2 shows, the Legislative Analyst's Office cap-and-trade auction revenue estimates through 2020 are within the range of California's capital gains tax receipts over the past decade.

One of the main challenges that has been cited in opposition to our suggested *cap-and-trade-and–cash back* approach is the Sinclair Paint "fee" legal precedent. The argument here is that returning a cash dividend payment (or a tax offset program) would face high risk of legal challenge unless it could be argued that doing so contributed to

AB 32's GHG emission-reduction goals (or, potentially, that such payments served as a form of climate change adaptation).[29] Given the enormous revenues at hand and the potential for transformational socioeconomic effects from AB 32 overall, we believe, however, that this is an issue important enough for the legislature to review and address directly. If the legislature wants to return AB 32's money to taxpayers, it can do so. If the funds are to be directed elsewhere, it should not be done under the guise of a legal ruling.[30]

Ultimately, if legal challenges failed, the legislature could reenact the substance of AB 32 while making it explicitly clear that all funds need to be returned to taxpayers on a revenue-neutral basis. While some Republicans might prove less than enthusiastic about seeming to sign on to the Democrats' climate agenda, it may present a more attractive prospect than functionally allowing what amounts to a huge tax increase to take effect.

We recognize that many California policymakers already share our frustration that the existing legal landscape could result in billions of dollars in new wasteful spending, even if they may not agree on what should instead be done with those funds. And we also recognize that new legislative action to address this problem may require a supermajority vote, whereas AB 32 itself passed in 2006 with only a slim majority.[31] There is concern then in Sacramento that it is not worth legislatively revisiting—or potentially imperiling—the otherwise generally constructive cap-and-trade endeavor in order to right the auction revenues wrong.

But this returns to the key question of AB 32: is it enough to simply reduce California's GHG emissions, or must it be done well enough that others will want to follow—even jurisdictions whose electorate may not share all of California's environmental values? If the actual goal is only the former, then almost any policy decision will do—as the Great Recession showed, GHG emissions can be reduced in more ways than one, among them solutions quite inelegant or undesirable. If it is the latter, however, then California faces a choice: continue with the status quo and tie a new fiscal experiment alongside the fate of the existing climate one—tens of billions of dollars in new, mandatory public spending—or intervene to streamline cap-and-trade so that it can focus on what the Californian people already expect it to do—reduce emissions without hurting the economy. In either case, the world will be watching.

Notes

1 We are aware of the potential legal challenges to the cash-back approach and discuss ways to address these challenges in the main body of the paper. The $1,500 figure is based on the state legislative analyst's estimated revenues generated by AB 32 in its first eight years.

2 See Carl and Fedor (2014), "More Simplicity, Less Charisma: Improving the Effectiveness, Cost, and Fairness of California's Climate Agenda."

3 Bruno and Carl (September 2013), "What California Comeback," the Hoover Institution. http://www.hoover.org/publications/defining-ideas/article/157351.

4 Executive Order S-03-05.

5 April 27, 2012, settlement documents filed with FERC.

6 CEC (October 10, 2012) "Energy Commission Awards More Than $20 million for Clean Transportation Projects." http://www.energy.ca.gov/releases/2012_releases/2012-10-10_energy_commission_awards_nr.html.

7 Executive Order B-16-12; see the 2013 California ZEV Action Plan (Interagency).

8 Draft investment plan first issued April 16, 2013; see discussion below.

9 Carl and Fedor (2014), "More Simplicity, Less Charisma: Improving the Effectiveness, Cost, and Fairness of California's Climate Agenda."

10 See, for example, CARB (December 16, 2010) Draft Resolution 10-42.

11 CARB (April 19, 2013) Board Resolution 13-7; CARB and Australia Clean Energy Regulator (July 30, 2013) MoU Reference 1.

12 Actual revenues will depend on the final allowance auction prices year-to-year. An August 28, 2013, tentative court ruling concluded that CARB has the legal authority to auction and distribute carbon allowances under AB 32 and determined that post-AB 32 legislation addressing the use of auction proceeds served to "confirm (or ratify) the Legislature's intent to allow distribution of allowances through auctions and reserve sales." Our concern, however, is not with CARB's legal ability to hold the auctions but rather on what will be done with the funds collected in doing so.

13 November 5, 2012, "Hoover Institution California Poll Released." http://www.advancingafreesociety.org/uncategorized/hoover-institution-california-poll-released.

14 Lower-than-expected cap-and-trade auction prices in late 2012 ultimately reduced these "available" funds by about half.

15 See, for example, Horowitz et al. (March 2012), "Spending California's Cap-and-Trade Auction Revenue: Understanding the Sinclair Paint risk spectrum."

16 Released April 2013; this was followed by issuance of CARB's "Final Investment Plan" for FY13/15 through FY15/16 in May 2013. http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/final_investment_plan.pdf.

17 CARB's "Final Cap-and-Trade Auction Proceeds Investment Plan" was released May 2013.

18 Recent analyses point to the current HSR's design failing to meet the San Francisco-to-Los Angeles travel times described in 2008's Prop 1A, in which the public approved bonds to partly fund the project, and of the current business plan failing to adequately describe how the HSR system will be operated on an ongoing basis without state budgetary support. In fact, the former head of the HSR Authority has now publicly turned against the current iteration of the project, "because it betrays the representations to the voters in November 2008." [*Los Angeles Times* (April 16, 2013), "Quentin Kopp, no longer on board this bullet train"].

19 California High-Speed Rail Authority (April 2012), "Revised Business Plan."

20 LAO (April 17, 2012), "The 2012–13 Budget: Funding Requests for High-Speed Rail."

21 CARB (May 2013), "Final Cap-and-Trade Auction Proceeds Investment Plan."

22 "Life-cycle assessment of high-speed rail: the case of California," Environmental Research Letters. A 2012 update of this study offered similar conclusions: Chester and Horvath, 2012, "High-speed rail with emerging automobiles and aircraft can reduce environmental impacts in California's future," Environmental Research Letters.

23 California State Budget 2013–2014 (June 2013).

24 EENews (May 15, 2013), "Gov. Brown proposes to borrow $500M from cap-and-trade revenue."

25 Ibid.

26 December 2011.

27 The remaining 15 percent of these utility consigned allowance revenues has been designated to compensate small business and leakage-exposed industrial utility customers, as well as providing some residential rate relief, as outlined in 2012's SB 1018. See CPUC (December 20, 2012), "Decision adopting cap-and-trade greenhouse gas allowance revenue allocation methodology for the investor-owned electric utilities," rulemaking 11-03-012.

28 Apart from the capital gains tax (shown in Figure 2), "cap-and-tax" revenues could alternately be used to roll back state income or sales taxes. Of course, there are many other "cap-and-tax hit list" candidates that could help achieve other economic or social benefits.

29 See Mac Taylor, Legislative Analyst's Office (February 16, 2012), "The 2012–13 Budget: Cap-and-Trade Auction Revenues" and Horowitz et al. (March 2012), "Spending California's Cap-and-Trade Auction Revenue: Understanding the Sinclair Paint risk spectrum." For an alternate legal interpretation of the use of cap-and-trade auction proceeds as a general rebate, see also Lambe and Farber, UC Berkeley Center for Law, Energy, and the Environment (May 2012), "California's Cap-and-Trade Auction Proceeds: Taxes, Fees, or Something Else?"

30 If, for example, the revenues generated from allowances "consigned" to the utilities were able to be classified as neither "fees" nor "taxes" but instead technically "private" funds owned by electricity distributors, then ideally such a mechanism could be adopted for the rest of the cap-and-trade auctioned allowances. The CPUC's special regulatory powers over utilities might have made this process more straightforward in their case, but here is surely a case where if additional legislation action is needed, the scale of the problem at hand makes it worthwhile to try.

31 Because, as discussed above, returning the money to the California people rather than putting it toward new green spending would, quite ironically in this case, likely legally classify the original collection of funds as a "tax" and hence require a two-thirds majority to pass the legislature.

First printing 2014
20 19 18 17 16 15 14 7 6 5 4 3 2 1

Jeremy Carl
Jeremy Carl is a research fellow at the Hoover Institution and director of research for the Shultz-Stephenson Task Force on Energy Policy. His work focuses on energy and environmental policy, with an emphasis on energy security, climate policy, and global fossil fuel markets. In addition, he writes extensively from his experience on US-India relations and Indian politics. He holds degrees in history and public policy from Yale and Harvard Universities.

David Fedor
David Fedor is a research analyst for the Hoover Institution's Shultz-Stephenson Task Force on Energy Policy. He has worked in energy and the environment across China, Japan, and the United States. Formerly at APEC's Asia Pacific Energy Research Center, Fedor has also consulted for WWF China, the Asian Development Bank, and the Korea Energy Economics Institute. He holds degrees in earth systems from Stanford University.

Shultz-Stephenson Task Force on Energy Policy

The Hoover Institution's Shultz-Stephenson Task Force on Energy Policy addresses energy policy in the United States and its effects on our domestic and international political priorities, particularly our national security.

As a result of volatile and rising energy prices and increasing global concern about climate change, two related and compelling issues—threats to national security and adverse effects of energy usage on global climate—have emerged as key adjuncts to America's energy policy; the task force will explore these subjects in detail. The task force's goals are to gather comprehensive information on current scientific and technological developments, survey the contingent policy actions, and offer a range of prescriptive policies to address our varied energy challenges. The task force will focus on public policy at all levels, from individual to global. It will then recommend policy initiatives, large and small, that can be undertaken to the advantage of both private enterprises and governments acting individually and in concert.

For more information about this Hoover Institution Task Force, please visit us online at www.hoover.org/taskforces/energy-policy.

HOOVER INSTITUTION
STANFORD UNIVERSITY