Senate Select Committee on California Job Creation and Retention
Roderick D. Wright, Chair

Examining Economic Impact of the Cap and Trade Program Under Assembly Bill 32
State Capitol, Room 113
Tuesday, August 14, 2012

SENATOR RODERICK D. WRIGHT: We don't have to get a quorum so there will be people who will come in and out and that's okay as well.

THE COMMITTEE SECRETARY: We have agendas and handouts on the table outside.

SENATOR WRIGHT: Okay. The agendas and handouts are on the table outside. If anybody would like one, they're right over there by the door that you can't come in or not supposed to come in. I don't know him when I see him.

Mr. Corey, is he—Mr. Corey, I'm going to ask if you'd come up front.

A couple of things, again, as we just get going, what we're looking to do in this committee is on job creation and retention, so today is not the day that we're going to debate global warming; this isn't the day that we're going to debate whether or not there should be an ARB; this isn't the day that—what we're looking at is the policy that we're embarking on with respect to cap and trade and what impact we think that that will have on jobs and the economy of the state. So for all the people who came to hear the debate about global warming, that's another meeting. We ain't doing that one today. We may schedule that one at a later date but that isn't this hearing. We're going to pretty much stick to the agenda that we have. If people are here, we'll put them up. And if they're not, then we'll keep moving.

Mr. Corey, you're the deputy executive director of the California Air Resources Board, and I know you got late notice. I appreciate your coming at the last minute because a lot of people would have said *I ain't doing that*, and I appreciate you coming. And what we wanted to talk about is kind of the program for cap and trade as envisioned by CARB. And with that, you're up.

MR. RICHARD COREY: All right. Thank you, Senator and Members of the Committee. In my remarks, I plan to provide a brief overview of AB 32 and in particular the cap-and-trade regulation.

All right. Assembly Bill AB 32 was enacted in 2006 to reduce greenhouse gas emissions to 1990 levels by 2020 in order to mitigate climate change. ARB developed a scoping plan which described how we'll meet the 2020 goal. In addition to direct regulation of sources of greenhouse gas emissions, the scoping plan includes a cap-and-trade program. Cap and trade will achieve about 20 percent of the reductions necessary to meet the 2020 goal, and is an important part of the overall strategy. Cap and trade was selected because it encourages the market to create a price incentive for entities to reduce their emissions while simultaneously providing flexibility and how they choose to do so.

In the cap-and-trade program, the initial cap is set at the expected level of emissions in 2012 and declines over time to the 2020 target, about 2 to 3 percent per year. It's important to know that there is no facility, specific requirement, to reduce emissions under the program, nor is there a limit on emissions from any single facility. Each facility is free to choose how they meet their compliance obligation, but the overall cap declines steadily thus ensuring reductions and the achievement of the goal.

To comply with the program, covered facilities submit one compliance instrument, either allowances or offset credits for each metric ton of GHG emissions they produce. Entities can trade these allowances amongst each other which enables them to find the least expensive reductions and comply in a manner that makes most sense for them. The regulation sets the overall budget of allowances, but companies have the flexibility to figure out how to best spend those allowances on emissions.

Each year, ARB will issue allowances directly to regulated entities. Initially ARB will allocate most allowances for free to ease the transition into the program. ARB also provides allowances for free to utilities to protect electricity ratepayers from program costs. The remaining allowances are sold at quarterly auctions, and the resulting proceeds can be appropriated for programs and projects that further the goals of AB 32. At the same time, ARB recognizes that industrial entities may face a competitive disadvantage compared with businesses and regions that do not have a similar climate policy for this reason: The program is designed to limit the economic impacts on business. In designing the regulation, we conducted a thorough analysis of the risk that production would shift out of California or leakage. In order to minimize leakage, free allowances are provided to industry. At the outset of the program, industry will get virtually all of the allowances they need to comply with the regulation for free. As the program progresses, the amount of free allowances declines in proportion to the leakage risk that an industry faces.

Understanding the economic impacts of ARB's regulation, it is important to ARB and conducted as part of this an extensive economic analysis prior to the adoption of the regulation. This analysis took place over a period of a few years and is committed—we're committed—to continue our analysis through the implementation of the program and beyond.

The first analysis was performed in 2008 as part of the original scoping plan. The analysis was revisited with updated information in 2010 resulting in an increased understanding of how the program will affect California's economy and consumers. The information has been used to update aspects of the cap-and-trade regulation in its implementation. Macroeconomic studies have also been conducted by outside researchers examining the economic impact of the regulation in California's economy.

Six full-scale analyses have been conducted and have found that the cap-and-trade program will have a nearly imperceptible impact on the California economy as it continues to grow towards 2020. While the macroeconomic impacts of the cap-and-trade program will be small, we understand that it will have some costs as well as present opportunities. ARB continues to work with stakeholders to ensure a smooth transition to implementation of the program. The bottom line is that the California economy will continue to grow and flourish. This is consistent with all of the studies that have been conducted. With the implementation of the cap-and-trade program, that growth may be at a slightly different rate but California will benefit from clean growth, innovation, and a better future.

To minimize negative economic impacts of the program, we look to the experience of the greenhouse gas emissions trading programs as we developed the regulation, looked at other programs. One aspect of the regulation that affects the potential costs that businesses and consumers may bear is the allocation of allowances. The way that the regulation distributes allowances is the result of a collaboration effort between ARB, stakeholders, economic and financial and policy experts. AB 32 requires ARB to distribute emission allowances in a manner that is equitable, seeks to minimize costs, and maximize the total benefits to California and encourages early action to reduce greenhouse gas emissions as well as minimize leakage. This is a very important and something we've work with stakeholders for the past several years on.

ARB also received input on the allocation allowances and use of the value from the Economic and Allocation Advisory Committee, or EAAC. The 16-member committee—comprised of economic, financial, and policy experts— recommended the ARB rely principally on auctioning the rationale for relying on auctions as the mechanism for distribution is rooted in transparency and consumer protection. If allowances are freely issued, then the value goes to recipients of these free allowances. And when firms are able to pass regulatory costs through to consumers, as they are in most cases, free allowances can result in windfall profits. Experience in the EU has shown that companies not subject to leakage risk that receive free allowances passed on more costs than they needed to, reaping windfall profits at the expense of consumers. One advantage of an auction is that it reveals the market price for an allowance, providing a signal about the real costs and therefore appropriate to pass on. If allowances are auctioned, the value of the allowance flows to where the auction revenues are spent in California.

Auctions also reward innovation. For firms that are reducing emissions through long-term investments and lower carbon technologies may be in a position to sell surplus allowances and increase profits. While understanding the benefit of auctioning allowances or other allocations, ARB is also cognizant of the changes and challenges facing California industry and global economy and the learning curb associated with the new regulation. To that end, the majority of allowances are freely distributed at the start of the cap-and-trade program, distributing allowances, both freely and via auction, will aid in minimizing leakage while still ensuring consumer protection. As with all our regulations, we're committed to evaluating the program as it's implemented to ensure that things are going according to plan, that covered entities are able to procure allowances to comply with the regulation, that emission reductions are occurring, and that the price of allowances does not lead to leakage.

ARB is also taking additional steps to encourage or, rather, to ensure effective implementation of the program, including ongoing monitoring. For example, ARB is working in collaboration with leading economic researchers from the University of California, California State Universities, MIT, Yale, and Resources for the Future, among others. We think this work will be important to further inform a broader program with others in the future, and we're continuing to evaluate leakage, the distribution of free allowances, and the evolution of a program in future compliance periods.

ARB is committed to continuing to work with stakeholders as we transition into implementation of the program to ensure that it occurs in a way that it achieves the dual goals of protecting our environment and our economy. Thank you.

SENATOR WRIGHT: Thank you very much.

We're joined by Senator Emmerson. You may have a comment to start.

A question, and I guess the specific, I guess, get to you. In my current district, I have a number of oil refineries—Chevron is down the street from me; I have a BP refinery that was just sold; I have a Valero refinery; I have an Exxon Mobil refinery. But let's just take an oil refinery specifically. Just for purposes of discussion, let's assume that he does 100,000 tons. I don't know what they do. I'm just grabbing a number for discussion. How much will his emissions cost him at 100,000 emissions? So if I took my plant in Torrance—it's an Exxon Mobil plant—it emits 100,000 tons annually—how much will his credits cost him?

MR. COREY: There are a few variables in answering that question. The first is, the point that I made is regulated entities, first compliance period, get most of their allowances for free. So of those emissions, most of those allowances, they're getting for free. So the question is, Of the remaining allowances that they need, what is the response of that particular refinery? They may choose to reduce emissions; they may choose to purchase additional allowances; they may choose to purchase offsets; or they may choose to purchase a combination. So the first question is very unique to the individual entity and choices they make. The next question, if they choose to purchase allowances or offsets rather than specific reduction actions, it's the carbon market and the actual cost of an allowance, for instance, resulting from the auction; so although there's estimates of what a specific allowance will be—the first compliance period estimates range about $14 to $20 per allowance—the specific price will be a function of the auction, the first of which will be conducted in November.

SENATOR WRIGHT: Let me try it again. So of that 100,000 credits—I'm just using that as a number; I have no idea what they use at the Exxon Mobil refinery—but of this 100,000 credits, what percentage will be covered by the free allocation?

MR. COREY: Again, the actual number is a refinery-specific answer because it depends. The more efficient refineries would get a higher percent of their allowances free, so that's why you didn't get a number from me. It's a specific answer to a specific company.

SENATOR WRIGHT: Efficiency defined by what?

MR. COREY: Efficiency emissions per product produced, and the most efficient refinery would be receiving 90 percent-plus, over 90 percent of their allowances free.

SENATOR WRIGHT: So it's not based then on the emission but you would attempt to say that you have 100,000 and that produces X number of barrels of gasoline so you're—is that how you determine the emission numbers?

MR. COREY: The example you provided—and I'll try and be clear in my response—if the emissions, GHG emissions, for 100,000 tons in the compliance period, that's that refinery's obligation. They will turn in 100,000 ton of allowances. But to answer your question on the cost, it wasn't a function of how many of those allowances that they need to turn in were given freely and it's over 90 percent.

SENATOR WRIGHT: Okay. I mean, I guess, the thing, I guess that I look at businesses, and business people have talked to me, is uncertainty. And just as our discussion—as we're talking, if you can't tell me a number that this guy's going to pay to operators, I mean, because they can come back and say—I mean, I just picked those because I just happened to have the number of refineries in my district. But if the number is something that they can't plan for, it just makes it difficult to do business. I mean, see, my fear is that in the oil business, the last time CARB got involved, we lost almost 30 percent of our refining capacity.

Now no one cared at the time except that a fire in Richmond last week resulted in almost a 50-cent-a-gallon increase immediately in gasoline because you've got constrained markets, you know. Today we would probably pay to get some of those refineries that closed back. And particularly, given the fact that they closed on faulty research by CARB, if we hadn't required the change in the way that made the gasoline and if we hadn't done what we did that wasn't necessarily federally required, we went an extra step. They might have been in business, and some of them are still in business and they just don't sell California gas so they make it and ship it out. I'm just saying, certainty would be helpful, not just—I mean, I just picked that industry but that's clearly a thing that affects all industries is, they're looking at a November auction is, How much is this going to cost me? And, you know, 90 percent sounds good except that we don't know what the auction's going to be, so 90 percent of what? Ninety percent could result in, you know, a great deal of money, depending upon where the auction platform goes and how much it costs per credit. I mean, I get the 90 percent, but percentages, if I'm in business and you tell me, *I'm going to give you 90 percent credit at that refinery, but that 90 percent is going to cost you $20 million and the $20 million annually might result in a 30-cent-per-gallon increase in gasoline*. You know what I'm saying? I mean, at some point, it translates into something that you're trying to develop some certainty to, so I get that we don't have all of that today but that's how I tend to look at it because that becomes a challenge that we face.

MR. COREY: If I can respond, Senator.

SENATOR WRIGHT: Please.

MR. COREY: I understand your question, and the issue of certainty is absolutely critical. It's critical to any regulatory certainty, planning the business cycles that the entities, the facilities need to go through, a critical part of the program. And I want to be really clear in terms of this. The way I responded was, it was important an important way to respond because it was a facility-specific question. I wanted to make sure I was clear as I could be on that.

Does that facility know what specific emissions, the obligation that it will have under the program? It does. Do we know that in terms of the allowance because it will be based on the previous emissions year? That can be determined. Does that facility know if it's taken some specific actions to further reduce emissions? Yes. Does the facility know if it's likely to participate in the auction and/or purchase offsets and the amount that it'll choose to purchase? All those are knowns and are things that those facilities are currently going through.

Your comment, though, on the actual auction amount—will an allowance be at the auction? It is correct to say that's part of the market design or the element of the program, but it does have some cost controls in it in terms of containment elements to ensure that the prices stay within a ban/band ??, the estimates that we see. Again, these are estimates until we conduct that auction, have been, that allowances will probably be in the $15 to $20 metric ton timeframe—range—but again, that will play itself out at the auction.

SENATOR WRIGHT: At a macro level, I mean, we're embarking on something that no one else in the United States is doing right now, right?

MR. COREY: There are different cap-and-trade-type programs in the United States. In the East Coast, there's a RGGI program. It's smaller in terms of their range of entities that participate. And then for other gases—acid rain and others—there's been cap-and-trade-like programs and there certainly are out of this country.

SENATOR WRIGHT: On the acid rain, that was fairly specific. You had a clear causal relationship and substantially reduced—I mean, in that case, we put the people who were making steel out of business—they're gone—and we changed from heating oil and other things to produce electricity to natural gas, which is a lot lower. You know, those regions over that period of time lost 11 Congressional districts. So I'm not sure that I would take the acid-rain study as a success. It was successful at reducing the population and changing the economy of the region, but it's not like steel people were able to change. They just said *Adios*. And the people who were into the coal business just said, *Okay, we're out of here*.

MR. COREY: And, Senator, in responding to your question about other programs, it's one program that—I believe it's 11 states in the East Coast that participate in the regional Greenhouse Gas Initiative program, which is a cap-and-trade program for GHGs, and there's one in Europe as well. My point on that was that over the last few years, as we designed, worked with stakeholders to design, the cap-and-trade regulation, one of the things we wanted to do, and we got a lot of input from stakeholders on this, was learn from what's been done. Learn from mistakes that have been made in other programs, build a program that is flexible, that provides as much certainty as possible, that's responsive, and learns from those other programs. There's been a lot of effort doing that, and believe both in the design of the program—we've integrated those lessons learned—and in the ongoing monitoring that we're doing and will be doing with the stakeholders.

SENATOR WRIGHT: See, another concern I have—and I've got a macro concern that I'll go back to—but I mean, in the last budget year, we were actually preparing to spend money from the cap-and-trade program. So there is someone in the administration who believes that a certain dollar amount is coming out because we were preparing to spend it in this budget, so somebody got from somebody a perception that there was going to be X number of dollars available and that we could actually utilize it for something other than particular environmental questions. But another challenge that I would have is, that if we're embarking on this program as California—and, for all practical purposes, no one else is—China ain't; Canada ain't—I don't know how much the East Coast states are going to do—India ain't; Australia ain't; the British did a little bit—the last I checked, they were about to stop—what impact on the global climate is California's program going to have?

MR. COREY: First, I want to provide a broad response, Senator, and then I'll go directly to the question you asked.

In terms of other programs, there's the program, the Greenhouse Gas program on the East Coast, several states, a dozen states in the East coast, the European system; Australia's developing a system; China's developing a system. There's provinces in Canada as well that are different states of developing and pursuing systems as well. So globally and internationally, there are several programs either running or being established, several of which are in contact with us because it presented an opportunity to learn and consult. There are several states that we continue to speak with as well and are monitoring very carefully, the implementation of the program.

So I understand your point but it is a broader effort that's underway internationally and one that California, in implementing AB 32, is leading and one where there are, based on the analysis we've done, working with stakeholders presents opportunities for the state of California.

SENATOR WRIGHT: Let me back up, and maybe my information is off. The British system was essentially commandeered by Goldman Sachs, and it didn't produce much of a reduction. The Australians said, *Go pound sand. We're not going to participate and damage our economy.* The New Zealanders said they're biggest problem was that goats and sheep were their biggest source, and they said they weren't making the change. The Chinese said, *We're not going to play anytime real soon but we'll continue to look at it*. No one else that I'm aware of is actually investing the kind of capital that we're investing. A number of people have talked about it. I would clearly be more comfortable if the United States as a whole had done it because one of the things that you described was leakage and that the concept of leakage would be far less of an issue if every state in the union was operating under the same set of rules. My experience in California has been, is that every time we have done a unilateral program, it was devastating to the economy. I mean, right now, if you're driving into California—absolute reality, not theory—if you're driving into California, every state highway that comes into California has a truck stop on the opposite side of the California border. Every truck that comes in here to pick up the terminals or TEUs from my port in Los Angeles, you fill up on the other side of the California border and you do everything you can to lose as little fuel as you possibly can. The avoided sales tax of those trucks is close to $600 million a year.

We attempted several years ago to see if the federal government would let us tax the mile that the truck drives. The federal government said, *Go pound sand*. That is a national highway. And no, California, you can't tax people for driving on it. So that's money that we lose, and those trucks still drive into California. If you're flying an airline, the largest air carrier into California is Southwest Airlines. If you ever read a Southwest Airlines schedule, you'll see that the planes dip in and out of California because they tanker fuel. Tankering fuel is their way of avoiding purchasing fuel in California. If you look at a United schedule, you'll see planes stop midway on transcontinental flights. The same difference happens. The avoided cost of fuel to California is a huge cost. Trucks and airplanes together, we lose a billion dollars. I'm not certain that we're getting the value on that billion dollars of lost sales tax.

My concern here again becomes we're embarking on a program that largely is going to be California only. The other people may do something at some point. But I feel like I'm the guy on the front end of the boat in *Saving Private Ryan*. I'd much rather be toward the back of the boat because what I've always found is that the first few cats in the front of the boat, there's always going to be somebody first. But he always is the guy who has the highest casualty rate.

It would be better for me, from my standpoint, if I'm looking at it and saying, I'm about to spend somewhere between $1 and $3 billion annually on a program that will have no demonstrable benefit to the environment in California. I mean, if I'm looking at air quality as a broad scope, that's a different dynamic, but that's not why we started the program. We started the program on greenhouse gas, on the greenhouse gas effects, since the greenhouse gas doesn't stay inside of California. That means that what happens in Nevada or what happens in all of those other places around the world impacts us. So we're going to spend $3 billion annually and I go back to the same question, What am I getting for the $3 billion that I'm going to spend? Because it's going to come out of an economy and go into something. What am I getting for it?

MR. COREY: Right. Let me go right at that. The concern and importance of evaluating and being mindful of potential economic impacts was a driving principal within AB 32 and consideration, careful consideration, of leakage, and the underlying analysis that _______, and stakeholders over the last several years. This has been a critical driving factor in terms of ensuring an effective program, effective that's good for California.

Directly to your point, the program, as we touched on, is designed to provide flexibility in terms of how industry responds but…

SENATOR WRIGHT: Let me introduce Senator Rubio who joined us and Senator Emmerson is coming back. We're talking—this is the gentleman from CARB. I just wanted to get him up to speed.

Go.

MR. COREY: Very good, Senator.

Those investments that the regulated entities make, so they have some choices to make in terms of why, what are their allowances that they need based on what, less the free allowances to specific onsite actions. Specific onsite actions are energy efficiency and improvements. Those energy efficiency improvements can lead to co-benefits at the community level—criteria pollutant, toxic pollutant co-benefits. That may be a way that makes sense for a given facility. It may also choose to support offset projects. So from an energy efficiency standpoint, from an investment technology, from investment renewables, there's a range of responses, many of which benefit California in terms of the technologies, the installation of those technologies, the support and maintenance of those technologies, to ultimately promote emission reductions. But at its core, it's how does the individual business choose to respond in terms of the obligation? And it's fully expected that part of that portfolio response are some energy efficiency improvements.

SENATOR WRIGHT: But again, we started a program whose basic concept was the reduction in greenhouse gas. Again, let me try it on a macro level. Let's assume that we achieve the 1990 level that's called for in AB 32, you know, and I'll discount the fact that AB 32 is called Global Warming. And since that, we've now known that that was bogus and so we're at climate change. So we might want to upgrade the call of it from global warming to climate change because that's the new mantra. But leaving it at global warming for the time being, let's assume that you achieve the 1990 level and let's assume on the positive side, because I am the prince of skeptics—that's just who I am—and I believe that if you get to the 1990 level, you're going to get there because business says *Adios*, and you're just going to see negative low growth in those industries, and you'll get to 1990 because there simply won't be the business to hold it up and people simply won't play. But that notwithstanding, let's assume that that didn't occur and you got to 1990 levels of GHG reductions. So what? What does that do for the environment and the economy if you were to achieve the 1990 level?

MR. COREY: What you see in terms of a response, as you look around the economy, not only do you see the reduction in GHG emissions, you see the result of energy efficiency improvements; you see more efficient structures; you see reduction in per capita, reduction in fuel—liquid fuel, gaseous-based fuels—due to more efficient technology. You see the benefits of employing and supporting those technologies around the state. You'll also see others outside of the state and abroad that are monitoring the program and are likely to follow California's lead.

SENATOR WRIGHT: And I won't burden you because a little bit different. But again, we've decided to go this path, and I think that there were a number of things that we could have looked at. One of the things I hope that CARB will do is step back and say, Are we doing this program as efficiently as we possibly can? We're going to spend somewhere between $1 (billion) and $3 billion depending on whose numbers you take. Could we have achieved this for half a billion dollars and still come out?

I mean, given that the reduction to 1990, by everything that I'm able to read scientifically, ain't going to matter anyway. Could I spend half a billion dollars rather than $3 billion and come away with the same or much of the same result at much less cost? The other challenge becomes again is, businesses, as you've described, have options. One option is, I can buy offsets. One option is, I can look at energy efficiencies. Another option is, I can leave. I mean, and one of the challenges that we have in California is that too many businesses have taken the latter projection and just said, I'm out of here. Again, I'm an old guy; but when I grew up in Southern California—I've told this story to a number of people—we used to make one in every four passenger car tires in the United States in LA County. Today we don't make anything.

Now the Goodyear Tire plant that was on the corner of Florence and Central Avenue used to employ roughly 15,000 people. Today it's a post office that transferred from Downtown Los Angeles, and now the post office is about to go. So you ended up with a net loss of 15,000 jobs at the Goodyear plant. I'm old enough to remember there used to be a car called the GTO. The young people don't know nothing about the GTO.

MR. COREY: I remember.

SENATOR WRIGHT: The GTO was made by Pontiac. Now Pontiac is gone. But not only is Pontiac gone, but the thing that I used to remember about the GTO was that it had a tire that was called the tiger paw. The tiger paw was made by Uniroyal, and the Uniroyal plant is now The Citadel. It's an outlet mall on the 110 Freeway in Commerce. That was where the tiger paw came from, gone. If you're driving down Manchester Boulevard, when you cross Central, if you're going east, it becomes Firestone Boulevard. Firestone Boulevard was the largest Firestone Tire manufacturing west of the Mississippi River. It's gone. The Goodrich plant was down the street from where the space shuttle was made in Downey.

The point I'm making is, that the last time I saw this effort made, the response of most of the business was to say adios. In that same period of time that I've lost some 70,000 jobs making tires, the other thing I lost was my airplane industry. Again, I'm from Southern California. When I was growing up, I always remembered that one of every three jetliners that flew in the world was made in Los Angeles County, whether it was at Lockheed, whether it was at Northrup Grumman, where all the 747 fuselages were made, whether it was in Long Beach where the DC-3 and the DC-10 and the DC-8 and the DC-9 were all made. Today we don't make no airplanes.

So if I'm giving up airplanes, if I'm giving up refrigerators, if I'm giving up tires, I'm giving up jobs that provide what was the bedrock of the economy. And in each of those instances, having talked with Goodyear, they just said, we can't afford to be in California, given the dynamics of how you all do business, and we've made business even more difficult. My fear is that this will make business even more difficult because, as you know, 90 percent of something is good, but that still leaves 10 percent that that businessman has to calculate against what he does.

And finally, I'll leave you with this and see if my colleagues want to add something: You have to be careful how you measure fuel. Again, as you look at gasoline and you say, we'll use less gasoline; therefore there will be less cost. That's not true either because gasoline is a commodity spread against the volume that's produced. So I take the fixed cost of the gasoline, the property taxes, dum-ta-dum-ta-dum, and then I spread that against the volume used. And so what you end up happening is that, if you use substantially less, your per-unit cost goes up. I mean, you almost have to be—I mean, as cars get more efficient, and you say, wow, we'll save money because we use less gas, well, not quite. Doesn't quite work out that day because the fixed costs now become a greater portion of the output that you have. This is like Econ 101. And so simply because you're more efficient doesn't mean you save money. It means you use less and there would be fewer GHGs produced. On that note, you'd be correct. But we'll even have to look at the gasoline and see how you achieve the GHG savings.

If you achieve the GHG savings, for example, by going to Ethanol 15, there's consequences to that. Ethanol is corrosive. You can't pipe it. Most of the gasoline in California is piped to remote locations from the refineries. You have to truck the ethanol and mix it at the terminal. So I'm just saying, there are a number of things that I think we have to look at, at a macro level, and I hope what we'll do is work with the oil company and work with the different industries and see how it works. But I've talked way too much, and let me recognize Senator Dutton, my colleague from the Inland Empire, who came in while I was running my mouth and you might want to have a comment, Senator.

SENATOR BOB DUTTON: I'll just be brief. The problem we've got right now—I remember when this whole AB 32 thing came up and it was pretty much agreed that it had to be implemented in a way that made economic sense because the only way you're going to demonstrate to the world that this is the way to go is if it does make economic sense. Unfortunately, with all due respect to everybody, that isn't what's happened. And I think CARB itself has, frankly, hasn't been a very good steward of the money that they've been given. You can't get an accounting how their money's been spent. There's a lack of credibility within the industry of the various companies that are being affected. They feel like there are things that, to go on within CARB as an organization, you may say it's not fact, that it's perception, but that even makes it worse because, if it's perception, it's hard to disprove that, a fact you can disprove.

But until we restore credibility, until we show that AB 32 and the way it's going about implementing it is credible, then even if it's a good thing, it's not going to be accepted and we need to understand that. Cap and trades specifically, you know, I kind of go along with some of my environmental friends. I haven't figured out, on the cap and trade, if global warming is such an evil thing, then just because you switch it from California over to someplace else, you haven't really done anything because that's a global issue with regards to greenhouse gases.

So one of my questions I hope you would answer at some point, an hour later, but I don't understand with cap and trade, how that really achieves global warming reduction. I mean, because you're really just trading. You're not doing it in California so you're going to go do it someplace else. But it doesn't seem like that really has the right effect. And that's the problem I think I have with cap and trade.

And the other thing too, I'd like you to comment now on the recent developments with regards to cap and trade, the Delaware Corporation that was formed, a not for profit, that it's going to—somehow originally I was told that it was actually going to be the recipient of the dollars and they would determine how it gets spent, but also now I understand they're going to be the trustee of some trust account or something that's going to somehow be in charge of this money, and I still have a lot of questions as to why that—I mean, why didn't we just have it go through our regular funding sources, and how much is Quebec going to get out of this? Because I understand they're one of the members of the foundation for the not-for-profit corporations. I've got a whole bunch of questions about that. I'm not sure how that benefits Californians who are actually paying the price so if you could—that will probably be the main question I have.

I hope we get this right. It could be a good thing if we do it right. So far, to be honest with you, it doesn't appear it's going in that direction.

MR. COREY: All right. Senator, a few questions there, so let me see if I can knock these down in order. The first was questions that you have posed over the last year over that concerning the program, concerning accounting, and so on. We made a specific effort. In fact, I personally have oversaw a response to every one of those questions in writing, a stack of responses, a stack of documents that we provided and are prepared to discuss those at any point, any time if they're not clear and happy to do so. And if there's additional questions, we'll answer every one as well. There's an openness to do that and there's going to continue to be.

With respect to leakage, and this is really what you were asking, a basic question about. And Senator Wright and I were speaking about the importance of a robust economic program. A program protects businesses; and at its core, is protecting against leakage and that is the scenario you describe. If you reduce GHG, if you have a program that reduces GHGs in California, it just leads to an increase elsewhere, you haven't achieved anything. You're correct. That's right on the point. So the fundamental design of the program and the work with stakeholders over the last few years is to design a program where leakage doesn't take place. That speaks to how allowances are allocated, that speaks of the flexibility provided under the program. It also speaks to very close work with stakeholders and ongoing monitoring. We believe we designed it where that will not be an issue and it was a fundamental driving principle, a design of the regulations, something very important and something specifically that AB 32 calls out that needs to be addressed as part of a design of any _____ regulation.

SENATOR DUTTON: Just one clarification. I realize that you have responded to everything, but it's only been about 40 to 50 percent of the documentation needed to substantiate everything. We recently just had a hearing in JLAC and even Director Nichols admitted that they just don't have the information I was requesting from the early expenditures. So I appreciate what you're saying. You have responded but it's been incomplete, and actually your responses have actually resulted into more questions and others, but we can have that debate another time.

MR. COREY: Absolutely.

SENATOR DUTTON: Right now, what I'm concerned about, I don't recall, would you again go over what you were talking about, the not-for-profit corporation and how that fits into this?

MR. COREY: Oh, you're asking about WCI Inc, which basically is a nonprofit, receives no auction proceeds, is administrative, assists, will assist, with the ultimate contracts, certain contracts, that need to be ultimately put in place to implement a program tracking software and so on. So there is work going on with this which includes representatives from California and Quebec. And in fact, there is specific direction to the ARB in SB 1018 that the legislature approved as part of a trailer bill that provide, identified some legislative representatives that will be participating on WCI Inc and provide a specific direction to the ARB to take in a filing to the governor and ultimate findings prior to any future linkage. So the WCI Inc issue was spelled out in that trailer bill with respect to specific expectations.

SENATOR DUTTON: But not prior to that?

MR. COREY: There were several discussions with you and anyone else that want to talk about WCI Inc because there were misunderstandings honestly about what its role was and what it wasn't, and I'd be the first to say that we need to do better in terms of a communication standpoint because it really is a—I see it as nothing other than a contract, an administrative tool, and I think we could have been more effective at communicating that.

SENATOR DUTTON: Okay, because keep in mind, I've been on the budget for four years, three years as the vice-chair, been on Rules, a vice-chair of Rules. It wasn't until I was interviewing the new director for the EPA that I actually found out about this. So I've been really engaged, both in our Appropriations budget and everything else. That leads to the credibility issue that I'm talking about with regards to the way CARB operates. You know, you might want to voluntarily agree to some kind of an audit or something so you can eliminate any doubt that you have been credible, that you are spending the money right, and it's actually going to benefit the economy because that's where parts of the problem that I've got with this right now, is that I just don't see—I see CARB and the way you're operating to be more of a deterrent to restoring the economy and so that's the big concern I've got now. It can be a perception on my part, but you've got to do something to try to restore confidence. That's my only suggestion.

MR. COREY: And, Senator, I understood your comments, and the point that I made—and I very much meant it—any questions ___ happy to discuss those. And following from the budget process, we also talked about how we can be more responsive to the legislature from a communications standpoint. We will be doing biannual filings in terms of the overall climate program, actions taken, planned, and so on, that we think will also help to improve communication.

SENATOR WRIGHT: Senator Rubio?

SENATOR MICHAEL J. RUBIO: Building upon the communication aspect, I'll preface my comments and questions with I'm perhaps the only guy up here that believes in global warming and thinks that we ought to do something on this particular front. But the path for which we achieve it, I think, is critical. We've got to do it right for the sake of this state and the economy, and I appreciate the chair bringing up this hearing today.

Here's your chance to communicate what exactly WCI—is it?—what role will it play? What accountability measures will be in it? Tell me in a very layman-terms way what its function is.

MR. COREY: Its function, WCI Inc's function, is administrative. It'll oversee…

SENATOR RUBIO: What is that? What does that mean?

MR. COREY: Contracts. For instance, under a cap-and-trade program, you'd put contracts in place for software, for instance, to register under the program, so registration tools that are ongoing implementation of the program. It allows for funding of that tool by both us and any entity that we link with, so it provided that there's linkage with Quebec. It provides an avenue for shared funding so a more cost-effective approach so we aren't paying in full for that registration tool. I'm really glad you brought this up because I think again it's one of communication. It is strictly administrative. It doesn't receive auction revenue. It makes no policy decisions. California has its regulation. California Air Resources Board, under your administration, legislative oversight is fully responsible for its regulation, reporting on its regulation, and the implementation of its regulation. No authority in any way acceded. WCI Inc is administrative.

SENATOR RUBIO: Tell me, if you didn't, if you're not going to have any policy function, you're not going to collect any money, why couldn't it have been accomplished with a simple JPA of some sort?

MR. COREY: As part of looking at future linkage opportunities—and this goes back years; this goes back several years—where folks looked at how did entities, for instance—I talked a little bit earlier about the greenhouse gas program that's on the East Coast, the Regional Greenhouse Gas initiative. We talked to those folks. We talked to other programs on how do you effectively partner with different entities when you need to ultimately establish a common framework like a registration tool? How do you support it? How do fund it? What you don't want, and this is something that happened in the EU, is each of the states established their own registration tool. And what ended up happening is they couldn't account for allowances. They're a double county. It created problems from a gaming standpoint. What you want is one common tool and you want an efficient means by which to support and fund that tool. And by working with WCI Inc, it allows both ARB and other partners to support, for instance, a registration package.

SENATOR RUBIO: So if California develops a policy that is in conflict with Quebec, how do you reconcile that within this board? I would imagine there's a board, people sit on it. How do you reconcile the differences?

MR. COREY: Because WCI Inc is just administrative. They would have not any role in the policy. But at the core of your question, if we linked with Quebec, if there were findings from the governor and that moved forward from a linkage standpoint—and this is really clear in the SB 1018 language—we don't link…

SENATOR RUBIO: ___ support that but okay.

MR. COREY: We don't link if the program is not at least astringent and rigorous as California's program so that that test, that threshold, has to be cleared…

SENATOR RUBIO: Thank you.

MR. COREY: ...before you ever step forward and execute on a linkage agreement.

SENATOR RUBIO: Okay. I appreciate that. You mentioned something to Senator Dutton with respect to the importance of reducing or limited the amount of, limiting the amount of, linkage—leakage—from this state and primarily looking at—I wrote down the two first things you stated—how allowances are issued and having flexibility into the program.

Tell me, give me an example, of how you might change or do something should you find the economy is still sluggish, staying stubborn, but we can point to some areas where perhaps because of this program it's not working as well. Where do you, a particular area, give me an example of how you might have changed how the allowances are issued. I mean, there's recent articles here recently about some adjustments. What might that be?

MR. COREY: Yeah, and very speculative. I need to be very careful on this. But clearly, if you look at the staff report, when we did the original regulation, regulation that the board adopted, there's behind that, you know, thousands of pages of analysis and underlying characterizations, and that includes looking at alternative approaches, including alternative approaches, in terms of allocation allowances, so that report does talk about other options. But with any option—and I think you're getting at this—there are tradeoffs and that need to be thought about very, very carefully.

So the point that I would make in response to your comment is, first, the fundamental design of the program, we've been very mindful of concerns about economic impacts, mindful concerns about leakage and designed in considerations. But the scenario you described, in spite of all that, there's an issue.

First, the ability to do ongoing monitoring, which we're doing very carefully in working with the UCs and other institutions and stakeholders, how the programs are playing out and to make sure that it plays out as effectively as was intended. To the extent that there are issues or adjustments over time, we're doing a few things where we work with stakeholders on some follow-on work on benchmarking. We're doing some follow-on work on leakage. We are convinced we've designed a program correctly. It's always smart to continue to explore options and to be ready or mindful in light of a scenario such as you described, so there is work continuing to go on, on that, as it should.

SENATOR RUBIO: Flexibility was in the program. Would you think, I mean, having the tracking, measuring, and monitoring, if there's any leakage, do you feel comfortable that that's enough flexibility? I mean, that's just an oversight mechanism. What type of flexibility is in the current system to be able to move? For example, if the legislature passes a bill for which, prescribes how you're going to spend some of the revenue from the auction, how does that provide flexibility to you?

MR. COREY: A few things. The legislature, when it ultimately considers an expenditure plan, I think we look at what opportunities are out there to further the goals and benefits of AB 32. Those options could take a range of approaches. It could be a further energy efficiency improvement; it could be assistance to industry, for instance, that's making energy efficiency investments; it could be community-based support. So the debate and discussion takes place through this body when the use of proceeds comes out, when that discussion takes place. I think there are a range of opportunities that will be discussed that one can complement the overall program, the overall goals, under AB 32.

SENATOR RUBIO: So as the legislature wrestles with this spending plan, what type of language would you like to see in it that would provide you the flexibility to achieve the goals and benefits of AB 32?

MR. COREY: That's one I will have to defer to other folks.

SENATOR RUBIO: Okay. Fair enough. The goals and benefits of AB 32—AB 32 is actually a quite simple piece of legislation, very important; I support it. The goal is very honorable, and that is, let's—and it's simple. It's straight forward; would you not agree?

MR. COREY: It's very clear in terms of the goals, no doubt.

SENATOR RUBIO: So the goal is what?

MR. COREY: The goal is to reduce GHG emissions, but to do so, in consideration of specific factors, factors concerning impact on business, communities, leakage, and reductions that can ultimately provide benefits and co-benefits to the state.

SENATOR RUBIO: And that's to reach GHG levels, of 1990 levels, by 2020?

MR. COREY: That's correct.

SENATOR RUBIO: The vast majority of folks I talked to, both in the environmental and in the private-sector communities, believe, because cap and trade is but one of the instruments the state has to achieve that worthy goal, that because of all the other instruments, that we very well could, in combination of those instruments and simply establishing the cap, could achieve our goal. If that achieves the goal, why the rush to move forward with the trade side where I feel, to a certain degree, we're vulnerable for a number of reasons? Primarily, there's a downturn in the economy right now. So it impacts the economy. We don't know, will it increase jobs or decrease jobs? There's a lot of debates on both sides. We know it's going to cost a great deal of money.

Furthermore, if you look at the state's general fund right now, there's a significant hole. We saw it this year in the budget where we scored certain dollars from the auction built into our budget. So given these circumstances that we find ourselves in, have you at CARB given any consideration to moving forward with just the cap side and postponing the trading side, given, we could literally meet the goal and benefit of AB 32 with all the other instruments and the cap without the trade?

MR. COREY: All right. And you touched on something that I didn't give but a brief mention to but I think it's really important.

Cap and trade, as you noted, is part of a suite of strategies.

SENATOR RUBIO: Right.

MR. COREY: So we have traditional regulations that range from a motor vehicle side, refrigerants, a range of strategies to reduce GHG emissions. That's absolutely correct.

But as we looked at establishing a firm cap—and the rationale for that, and you're touching on that—and then one of the questions was, How do we design a program and achieve the reductions but do so in the most cost-effective manner possible and provide the certainty? So as we looked at the programs and we consulted with stakeholders and consulted with experts throughout the country on these issues, the need to couple the trading element and the need to—thank you very much—the need to provide flexibility to industry in terms of options on how they reduce their emissions and options for those that might go further—and there are several that will, that they could turn around—and if they reduce emissions beyond their obligation, have an obligation to trade, make those allowances available—we believe—I mean, I'm just trying to be as clear as I can—that the trading element is a key element to the cap-and-trade program. We think it provides a necessary flexibility; we think it retains certainty; and we think it allows for the most cost-effective approach to the program.

SENATOR RUBIO: The most cost-effective component to the program?

MR. COREY: As opposed to a straight cap.

SENATOR RUBIO: Okay. I'd like to further that conversation with you later on.

Here's my final question: If the state is going to be able to take some of the auction funds and backfill programs that can be defined as reducing greenhouse gases, yet after hearing after hearing we find that many of those programs are significantly heavy on the admin side, meaning—I've seen some programs with anywhere from 20 to 30 percent of the revenue going to administrative overhead expenses rather than directly reducing or directly having an impact on greenhouse gases—how do you prevent that to bring about the efficiencies for which you just said is in the cap-and-trade model?

MR. COREY: Right. I think that's really important. I think part of that is going to be criteria. What are guidelines? What are the criteria for ultimately awarding proceeds and recommended to this body?

SENATOR RUBIO: Have you established that criteria yet?

MR. COREY: No, no.

SENATOR RUBIO: So here's my question as to the rush to move forward with the option: This November you're issuing the auction, correct?

MR. COREY: That will be the first auction; that's correct.

SENATOR RUBIO: That's right. You're doing that without establishing the criteria to bring about the efficiencies which you just shared with this committee, is built into the program.

MR. COREY: I want to be clear on this. The response, I was just responding to you on the expenditure plan.

SENATOR RUBIO: On the expenditure plan.

MR. COREY: There's a process for that. I was trying to be…

SENATOR RUBIO: Okay. Thanks for that.

MR. COREY: …careful in saying there's a whole process with…

SENATOR RUBIO: That's fair.

MR. COREY: …dealing with the legislature in saying that that hasn't. It has not played itself out.

SENATOR RUBIO: This is a good question. Do we know, colleagues—and I have not heard of this—is there going to be an expenditure plan passed by this legislature before the end of this month?

MR. COREY: I do not know.

SENATOR RUBIO: Somebody should be working with your office to establish that. I mean, you've answered my question. Thank you very much.

SENATOR WRIGHT: Mr. Corey, thank you, and you've been very gracious with your time.

MR. COREY: Thank you.

SENATOR WRIGHT: I think a couple of challenges you have, as I look at the work of this committee, if it's $1 to $3 billion, if there was an economist who said that that would have an minimal impact on the state's economy, I don't know who that is or where he could—how he could—fix his mouth to say that. A $3 billion cost will be huge. How it's dispersed is hard to say. But one of the things I've learned, for example, in the utility business is that, again, you have a business where everybody kind of pays a pro rata share. If people leave, it doesn't necessarily reduce the cost of the utility. You simply raise the cost to the people who remain within that system and it becomes scary. So $3 billion is a lot of money. Another challenge I think I have—and I'm here going to where Senator Rubio was going—when I get the credits, there are potentially two types of credits that you've described. One would be a free credit that was given to, say, the refinery as a part of their business, and the other would be an auction credit that they needed to buy to cover the difference between what they needed to continue doing what they were doing, the other side, because, see, one of the things that scares me, for example, is that particularly to businesses that are in the manufacturing end, there's another dynamic that they can choose. They can reduce their output.

For example, let's say I'm an oil company and I produce 100,000 barrels a day for X number of dollars. There's a point at which I can produce 90,000 barrels a day and raise the price, and I can still make the same amount of money producing a lower volume of product by raising the price to the consumer on the other end. The question I would have then to that context would be whether it's the free credit or the auction credit; does the credit bring with it a property right? That means, if you gave me the credit and I'm the tire guy down the street, if I reduce my volume, can I sell my credits that I didn't pay any money for?

MR. COREY: That's a legal question. I know it's been fully worked out with AG, but I'm not going to respond because I want to make sure I am correct, so that's one we can follow.

SENATOR WRIGHT: I can appreciate it. But you understand the challenge, right? Because, if I got the credit for free because of whatever my allocation was and then I decide to reduce and/or—this is what I saw in the '70s: Companies, when they did the math, found that it was more efficient to leave California and sell or rip the credits than it was to remain in California and continue to do business. It was easier to say, I'll leave because the credits suddenly became more valuable than the business that you had in California. And so as the value of the credits increased, suddenly I'm a small factory. I've got credits that have substantial value, and I can do the business over here, sell the credits. And if the state that's trying to get me to move is helping to pay my moving costs, as was the case in the state of Tennessee with Goodyear, it was a business decision that was implemented because of trading schemes that was an unintended consequence.

But let me do this. If you can say, Mr. Corey. I know you've been very gracious with your time and this is probably an eclectic group because, as he mentioned, he believes in global warming, the two of us probably, he's probably almost there—I don't. But that makes it a good group because, as I said at the outset, this isn't a hearing about global warming because from a policy standpoint, we've already made the decision that that's where we're going. So now the question is, As we implement the policy, is the policy ultimately going to have the value to the citizens of California? That's what this hearing is trying to get at. That's why the other people you see are business people and other folk that we look at.

But I'm going to ask Tiffany from the Legislative Analyst's Office who's been gracious—but if you can stay or if you have to go, I understand but you've given an hour and you've sat at—I mean, I brought water because, and I appreciate the responses but I'll also give you the last word if there's something that we didn't raise that you want to leave with the committee.

MR. COREY: And thank you very much, Senator, and I really appreciate the water as well as the opportunity to speak with you all. And I met my response to Dutton and others. If there are follow-up questions, information, one on ones, any forum, we'll avail ourselves to that, are always open to do that. We'll continue to do that with stakeholders as well, so I want to thank you again. My plan is to stay for a few minutes, but I do have a conflict that I'll be running up against so I'm going to talk to my folks about that.

SENATOR WRIGHT: And I appreciate that. Thank you so much for the time that you spent. I'm sure we'll bug you again…

MR. COREY: Absolutely.

SENATOR WRIGHT: …in the near future.

MR. COREY: Yes, sir. Thank you.

SENATOR WRIGHT: Thank you.

MR. COREY: Ms. Tiffany from the LAO's office, why don't you give us kind of an opening on some of the review that you've done? I know and Senator Rubio have had some discussions and other things. So as much as you feel comfortable in the discussion with, we'll go from there.

MS. TIFFANY ROBERTS: Thank you, Mr. Chair. Tiffany Roberts, Legislative Analyst's Office. So you've heard a description of the cap-and-trade program from the ARB and I won't get into of those details. Instead, my testimony today is going to focus on three questions that you'll want to keep in mind when thinking about cap and trade. And that first question is, number one, how does cap and trade actually work to reduce greenhouse gas emissions? And again the primary goal of AB 32 is to reduce the state's greenhouse gas emissions to 1990 levels by 2020, so you'll want to think about, How does this actually work? The second question is, In terms of reducing greenhouse gas emissions to 1990 levels, does it matter how allowances are introduced into the market? In other words, does it matter if they're auctioned or if they're given away for free? Then the third question that you'll want to think about is, Does the risk of economic leakage outweigh the potential disadvantages of freely allocating allowances?

So let's go to the first question. How does cap and trade reduce greenhouse gas emissions? The aspect that is most central to this question is the cap itself and understanding how the cap works. So what do we mean when we say the *cap*?

What that means is, it's the amount of aggregate annual emissions allowed from all covered entities collectively. And so over time, the cap will gradually decline from just over 400 million tons of C02e allowed—carbon dioxide equivalent—down to 341 million tons of C02e by 2020. So as the cap declines, the number of allowances that ARB makes available will decline proportionately. And in order to comply with the cap, as you know, covered entities must possess one allowance or the equivalent thereof for every ton of GHG emissions that it emits in a given period. As the cap declines and allowance become more scarce over time, allowance prices will likely increase which in turn creates a greater incentive for covered entities to look for ways to reduce their emissions in order to avoid the need to purchase relatively more expensive allowances. As such, it's the declining cap that forces the reduction in the state's greenhouse gas emissions.

Now turning to the second question, in terms of reducing our emissions, does it matter how allowances are distributed? Generally speaking, allowances could be distributed in one of three ways. Number one, all available allowances could be given away for free up to the level of the cap, and that's referred commonly to 100 percent allocation, free allocation. Secondly, all available allowances could be auctioned. And then third, some portion could be allocated while the other could be auctioned, and that is the method that ARB is going to be using.

I will point out that in the beginning of the program, as Mr. Corey pointed out, most of those allowances will be given away for free. But over the life of the program, which we're actually looking at, is about 50 percent that will be freely allocated while the other half is auctioned. So as we move through the program, there will be fewer freely allocated. Now all these approaches will achieve the required GHG reductions set by the declining cap, again, because it's the declining cap on emissions that reduces the state's overall level of GHG emissions, not the manner in which the allowances are distributed. So to reiterate, there is no need for the state to actually raise revenue in order to achieve our GHG emission goals.

There's an important point that I need to clarify here too. When we talk about 100 percent free allocation, we don't mean that covered entities will receive 100 percent of the allowances they need to comply with the program for 2020. Instead, what we mean by that is that all available allowances are distributed freely. So keeping in mind that available allowances are only equal to the cap, as the cap declines, so too will the number of available allowances decline. And as such, even with 100 percent free allocation, covered entities must still find a way to reduce their emissions or purchase allowances from someone else who's figured out how to reduce their emissions and thus has excess allowances. So questions one and two are integrally related and are very important to keep in mind.

In hearing today, you're going to hear about the merits of doing an auction and the merits of doing a free allocation. And while we are currently looking at what these merits are and can talk to you more about that in the future, for now, I would encourage you to ask participants in today's hearing, the third and final question, which is this: If you weigh the potential for economic leakage and the economic impacts associated with it against the potential disadvantages of freely allocating allowances, which has the potential to be more harmful, our office has yet to answer this question but we are looking into it and we're again happy to share that information with you once we've arrived at our conclusions. But for the time being, we would encourage you to ask participants that very question here today.

So with that, I'll conclude my remarks and I'm happy to take questions.

SENATOR WRIGHT: Senator Dutton.

SENATOR DUTTON: I'm kind of curious about the acid rain program we had. Can you kind of maybe compare that to what we're doing now with, you know, with the cap and trade, we're doing for the greenhouse gas reduction?

MS. ROBERTS: Okay. I can share with you what I know, my understanding. With the acid rain program, you did have a large majority of the allowances that were freely allocated. You also had some portion that were auctioned. And the primary reason for doing that auction was to provide some type of price signal to covered entities. The way that the acid rain program had that auction structured, they did it in a way so that it would be revenue neutral. So in other words, once the auction was complete, the proceeds were proportionately redistributed back to covered entities again so that you would not raise revenues.

SENATOR DUTTON: So a model like that, I mean, how did that work? Did it seem to be a positive influence on the economy? Did it achieve the objectives or do you know that?

MS. ROBERTS: You may want to ask other folks, their input on this, but from what we've seen, it was a very successful program.

SENATOR DUTTON: Okay. Thank you.

MS. ROBERTS: It was successful on reducing…

SENATOR DUTTON: So in other words, you know, giving something back, okay. Thank you.

SENATOR WRIGHT: I think the challenge becomes, that I hope we would look at in the LAO, becomes kind of a cost-benefit analysis because so often in many of these things it's—if we're going to spend, for example, $3 billion a year, what did you get for it? It's clear, notwithstanding what you believe about global warming, that if California went to zero GHG, it wouldn't have any impact on the climate, and we're not even going to zero. But if we went to zero, it would have no demonstrable impact on the climate. So what are we getting? I mean, this was one of the questions I was posing to Mr. Corey. What are we buying for $3 billion a year? What did I get?

Now if you say, well, we'll be more efficient and there'll be benefits to cleaner air, but that's not what this program was designed to do. The program was design to do GHG. If you're saying, well, I'm also going to get the benefit of less sulfur or less nitrogen or less whatever in the air, well, that's a separate program. But the measurement of this program should be, How much GHG did I reduce and what benefit did I achieve in so doing and how much did I pay for it? And the thing that I'm mindful of is, I don't want someone to say to me—I mean, what becomes a common response is, well, we spent $3 billion a year. We prevented 42 million asthma cases; and therefore the $3 billion was offset by the reduction. The goal of the program wasn't to reduce asthma cases, you know, and what will happen is often, it's kind of a slight of hand. You got this. It's true, we didn't achieve this or we did achieve it and it didn't matter, but we spent $3 billion. I was taken—and I'm not trying to---I mean, I said it to him. I mean, I don't know what economist could say that you could spend $3 billion a year over eight years, that you spent $25 billion and that would have no impact on the economy of California—I mean, that economist ought it'd be fired because—I mean, and again, where the money goes could have a dynamic—I mean, you know, by the same token, in my view, where we have to be careful, and it might be the LAO evaluation, if I raised a lady in Compton's light bill $7 a month so that I could hire a guy to do an energy audit of her house, did I create a job? No, I raised her light bill $7 a month and that comes out of something else that we're going to spend and I think we again have to be particularly careful in those things that reallocate money that was already there and claiming that there's some benefit.

Again, if we extract $3 billion a year, that's $3 billion a year that won't do something else, whether it was buy tickets to Disneyland or buy a refrigerator or buy a house or pay for healthcare. That $3 billion is coming from the current pool of money. The other thing, I mean, that I would look at is that CARB concludes that the economy in California is going to grow. CARB is the only entity that I know that has that view. I mean, we'll hear from later panels, but no one else shares that view. I'm not sure what's going to grow. We clearly aren't going to grow in the manufacturing sector. We'll hear from them later, but we've lost damn near a million manufacturing jobs. We're not growing in the agriculture sector because we're driving that away. I'm not sure what business is going to grow that's going to create the kind of jobs, you know, that we're looking at. But again, as you evaluate the program, I think those three that you raise, coupled with, what did you get for the money at the end of the day?

You know, Ms. Roberts, I just think we have to look at it in total and say, What'd you get? Your $3 billion will be gone. Now what?

MS. ROBERTS: If I may, Senator, you're absolutely right. Global warming and climate change is a global problem, and I think that's one of the reasons that the legislature will keenly want to look at the potential for economic leakage because, if you have a covered entity in California that closes its doors and moves to Nevada, those emissions don't go away. They've just moved to Nevada. And so what you have with economic leakage is carbon leakage as well. And from a global perspective, you're not achieving your overall climate goals so you're absolutely right. It's something that the legislature will want to think very long and hard about.

SENATOR WRIGHT: Yeah. See, the scary part for me is, again, when I look at the reality of, like I was mentioning in the truck business, a guy driving a truck from Sears in Chicago to California—and he would come to Fontana to pick up a TEU, he's still driving his Illinois diesel into California and we can't stop him, except we're not getting sales tax because our diesel fuel costs too much. You know, if Southwest is flying into California and our jet fuel costs too much, then they'll buy it someplace else and figure out a way around that and you end up where not only do you get the leakage of the economic benefit of selling your product but you also end up with the same environmental impact that comes by the fact that nobody's using the one that you have. So it's a challenge we have going forward.

Senator Emmerson, did you have a question for Ms. Roberts in the LAO's office?

MS. ROBERTS: And, Senator, I'm happy to stay around and answer questions, if you have them later. I'm here.

SENATOR WRIGHT: Thank you much.

SENATOR DUTTON: Have you actually taken a look at the WIC [sic] and its role in the cap and trade?

MS. ROBERTS: We have, kind of, at a superficial level, looked into WCI and WCI Inc and what its role is associated with the cap and trade and the ARB in general.

SENATOR DUTTON: Have you taken a look at the funding for the WIC [sic] where it's coming from right now? I mean you obviously have operational expenses, things of that nature.

MS. ROBERTS: And ARB can correct me if I'm wrong here, but I believe that one of the ways that WCI activities are funded is through the AB 32 cost-of-implementation fee. Again, it's administrative in nature.

SENATOR DUTTON: So it comes out of there, out of CARB's budget, that they currently have?

MS. ROBERTS: Well, to the extent that AB 32 cost-of-implementation fee flows into the air pollution control fund and is used for the purposes of administrating AB 32, yes.

SENATOR DUTTON: Well, that would be in the future. I'm talking about—they had some organizational cost, to get set up. I was just curious. Did you ever take a look at the, how it's going to operate or what its effect was going to be or its impact, what its function is with regards to how we're conducting the cap and trade?

MS. ROBERTS: Well, like I said, we looked at it at a pretty superficial level. We're happy to follow up with your office if you have further questions on that.

SENATOR DUTTON: Could you, please? I'd appreciate it. I'm just curious, if you ever looked at what its function was going to be and how it was formed. I'm actually on their website right now taking a look at some prior minutes. I find it kind of interesting. So I'd be interested in any work that the LAO did. I'd appreciate it.

MS. ROBERTS: Thank you.

SENATOR WRIGHT: Thank you.

I've got four chairs and five people, so Mr. Anderson, I'm going to kind of call you up last. But I'm going to ask, Is Ryan Modin [sic} available and Mona Shulman and Rob Joyce and Angus Crane—Mr. Anderson if you'll take a seat right over in the corner, we'll get you up as quickly as we can.

MR. MIKE ROBESON ??: Thanks, Senator. I appreciate this. Mike Robeson—Edelstein, Gover (sp?), Ropes (sp?) and Smith. We represent the Glass Packaging Institute, and Ryan Modlin from Owens, Illinois, is a member of the Glass Packaging Institute, and I just wanted a quick overview for the glass industry, if I could, before Ryan talks about Owens.

The glass container industry in California, there's five remaining glass manufacturing plants in the state. There's 2,600 employees, union jobs, good benefits. Working in this industry is a highly competitive, price-competitive industry on a worldwide basis and this industry is very concerned with, you know, economic leakage, with leakage, and Ryan's going to speak more to that. He's going to offer some ideas that we think that right now CARB has failed to recognize to minimize leakage and the requirement to recognize the early actions this industry's taken to reduce emissions in California and I'll just leave it to Ryan.

SENATOR WRIGHT: Okay. And Mr. Anderson is—okay. Why don't you take a seat over there and we'll get—you know, as a matter of fact, we'll work this differently. Why don't you just take the seat right there on the end, if you would, sir.

Mr. Modlin—is that—did I pronounce it…

MR. RYAN MODLIN: Modlin, yes, sir.

SENATOR WRIGHT: Modlin, okay. You're up, sir, having already been introduced. Now you have pressure to be really good. Otherwise—yes, right—if you don't perform, we're kicking you to the curb.

MR. MODLIN: I feel like a celebrity to sit up here in the big chairs too. Great.

Mr. Chairman, Members of the Committee, thank you for the opportunity to share Owens, Illinois', comments on AB 32 implementation. This is a serious matter and issue for the glass container industry as well as Owens, Illinois. We're a global company. We have 81 plants around the world, 24,000 employees. We understand the challenges of meeting both the regional, a state, a national, and a global market and the regulatory schemes that are put into place around the world.

As already indicated in Australia and Canada, the East Coast, United States, and Europe, there are various forms of cap-and-trade and climate-change initiatives and regulatory measures in place. Of course, we deal with all of them. This measure, AB 32, is unique to California and that's why we're here, just to offer a couple of comments this morning.

Let me start with making three points that the glass industry wants to highlight and we're hopeful that the legislature and the ARB will be mindful of going forward. Recognition for the early actions taken by manufacturers is an important step. The costs and pressures placed on instate class container manufacturers should be taken into consideration. The baseline or the benchmark for the glass container industry should be developed from appropriate and representative benchmarking criteria.

To that point, in March 2009, Owens, Illinois, initiated and implemented into our global footprint, our 81 plants from around the world, a plan for 50 percent reduction in energy consumption; 65 percent reduction in C02 emissions, and doubling the amount of recycling material we use in a glass container. Currently on average, we use between 30 and 40 percent recycling material in a glass container.

We have three plants in California—one in Vernon, one in Oakland, and one in Tracy. We employ over a thousand men and women. Many of them are unionized. The average salary is about $75,000. If you throw in training, health benefits, et cetera, many of our men and women can earn six figures easily. The glass industry is a little unique. We have a lot of multigenerational employees in our plants. Later on this morning, you'll hear from Charles McIntyre, one of our competitors but friends from Gallo Glass. He's a third generation. His sons are also working in a plant. That's not unheard of in the glass industry. So when our men and women who work in our plants hear about measures that the state of California or ARB are taking, they're concerned. Of course, they want clean air, clean water. They'll be the first to admit that they want those measures that help clean the air. But they'll also follow up with, but we also want a job so we can send our kid to school, so we can buy the car that's made, maybe two, maybe a house up in Lake Arrowhead. These are all factors that our employees have on our minds as we start talking about leakage.

From our point of view, leakage means jobs, jobs moved out of the state of California. There's been a lot of discussion this morning on whether or not you can go to Nevada, you can ship something in from Chicago, et cetera. Ten years ago, it was almost unheard of to ship empty glass containers from one segment of the world to another. For example, in China, it's almost cheaper to send a boatload of empty containers from China than it is for us to ship it from across the United States. Currently the California market, 15 percent of that is represented by imports, imports from China, Mexico, and other parts of the world, South America being a big importer of glass. Now when AB 32 was enacted…

UNIDENTIFIED SPEAKER: ________?

MR. MODLIN: Those are imports; those are imports.

Now if you go to wine country, everybody is looking to supply the nice Cabernet or Pinot bottle. It looks nice. It's a little heavy. The Chinese can make that bottle cheaper than we can make it here.

SENATOR WRIGHT: We're importing from them?

MR. MODLIN: Yeah, the imports currently are 15 percent of the market.

Owens, Illinois, 30 percent of our global market is North America; 40 percent being Europe, and then the rest being South Asia and Australia. And it's growing. It's not stagnant at 15 percent. We fully forecast that imports will continue to rise as cost measures in different regions continue to rise at the same time. It's just the manner of how manufacturing is done. And as better transportation technology has come online, it's just easier to ship.

Under the Global Warming Solutions Act, AB 32, there are three points that again that I point to that I think legislators and that the ARB should take into consideration. Encourage early action to reduce greenhouse gas emissions. Two, ensure entities receive the appropriate credit for voluntary early actions. And three, minimize job leakage, again, the ship, the production, and jobs outside the state of California.

The glass industry, we're a pretty good partner with the state. Last year alone, Owens, Illinois, used tens of thousands of tons of recycled glass that came out of the CRV program. That's important. That's an important fact or figure to understand because, for every 10 percent increment of recycled glass that we use, our energy usage dropped 2 to 3 percent. For every 10 percent of recycled material we use, we can see a reduction of 4 to 10 percent in greenhouse gas emissions. So as we use innovation to figure out how we can use more recycled material out of the CRB and work with Cal Recycle to figure out new incentives and new ways to use it, those are important points. So it's not like we're being stagnant here. We're trying to meet our internal goals that we've set out as well as meet the state of California's goals in reducing greenhouse gas emissions. But what we're looking for is flexibility.

It's really an easy concept—the flexibility of partnership in figuring out how to implement this. We've got to start from the best place, otherwise we are going to start putting unnecessary competitiveness factors on our plants. The cost of doing business in California isn't a lot. I have a colleague here from our headquarters and we were talking about this morning. It is 30 percent more, it costs us 30 percent more, to do business in California than anywhere else in the United States. That's today.

Now under this program, it will add a couple million dollars to our bottom line at $20 a ton. We don't know how many factors that will grow but we're manufacturers. We plan; we try to figure out how much is it going to cost us to do business in a certain location. These are all factors that I think need to be taken into consideration so flexibility is a huge issue.

To sum up, I return to the three points—recognition of early action taken by those entities in the state, the cost pressures of doing business in the state, and also setting the best benchmark or baseline for manufacturers as we go forward in the implementation in order to minimize the jobs leakage. When we say jobs leakage, you know, emissions leakage, the conversation is well documented today that you can manufacture things anywhere. Those emissions will occur anywhere. In fact, when we, one of our last rounds of visits here with members of the Assembly, many of them recognize that a lot of emissions comes over from China and there's nothing that we can do about that here. But let's work on minimizing the jobs leakage, and that's what's important to us and the men and women who work in our plants.

Mr. Chairman, thank you for your time this morning.

MR. WRIGHT: Mr. Anderson, I'm calling on you and I appreciate you taking the chair in the corner and push the red—when the red light comes on, you're good to go.

MR. CRAIG ANDERSON: Okay. Good morning, and I'll deviate from my comments just to say that I was born and raised in San Pedro. My father actually worked at the Torrance petroleum refinery there which we know is gone.

Good morning, Chair Wright, and Committee Members. I'm Craig Anderson. I'm the director of Environmental Affairs for Solar Turbines. Solar is a California Manufacturer. We make industrial gas turbines. We've been located in San Diego for 85 years, and we have more than 4,000 employees in California. We have two large facilities in San Diego where all of our new product is manufactured, as well as our research and development for our entire business. About 90 percent of our product is shipped out of California. We're an international company. We've been reporting our greenhouse gas emissions voluntarily through the climate action registry since 2007. We've been designated a climate action leader and we are now one of the first companies to participate in the cap-and-trade program.

I can say without hesitation that AB 32 is viewed by our company leaders as not only the most significant environmental regulation we have faced in California but also the greatest threat to our growth of our business in California. This is because the most important aspect of our operations are also the entire source of our greenhouse gas emissions, and those are our engine test cells. Our engines are part of a highly customized, engineered process system that is customized for each of our customers. Before our customers will accept our product, they travel to San Diego and they witness the testing of their engine in one of our test cells. Our customers are primarily interested in knowing that our products will operate safely in their facilities. And given some of the very highly visible catastrophes in recent years, none of which involved our equipment, the emphasis is on safety by our customers and not less testing to demonstrate safety. Simply put, if we can't test our turbine engines, our customers won't buy them.

Under the cap-and-trade program, Solar's received a baseline or benchmark of emission allocations that we must operate under. And while I appreciate the view of the agency that there is no real cap on a specific facility, I can tell you that the business perspective is that we have a cap that we must operate under. Having said that…

SENATOR WRIGHT: ________ output?

MR. ANDERSON: It will be low under this program.

SENATOR WRIGHT: Okay.

MR. ANDERSON: Correct. Having said that, we're very grateful to the ARB because they took considerable time to understand our specific business and we do believe that the benchmark that they've given us is fair. However, as you can see from the graph—you all should have this graph here—under the current regulation Solar will need to reduce the benchmark amount of engine test by more than 25 percent beginning in 2015 and more than 50 percent beginning in 2018. Our only option is to participate in a yet-to-be-tested allowance trading market. When you consider that not a single one of our competitors will ever need to comply with AB 32, our company views requirements to reduce or product safety testing by 50 percent, a major threat to our business growth.

AB 32 requires the ARB to design a program that discourages emissions and business leakage. I have worked with the ARB for more than 25 years in several capacities, and they are by far the most talented and capable environmental agency in the world. But they've been given an unfair and unreasonable challenge in trying to predict through a yet-to-be-tested leakage monitoring system what could happen to Solar's globally dependent economy under cap and trade. This is because you cannot detect and you cannot compensate for what you can't see or what never happens. For companies like Solar, decisions about growth within California will be made in the context of meeting our customers' expectations. Decisions about capital investments and new jobs will be made internally with a long-range perspective and it will not be visible to the Air Resources Board or any other agency or designee charged with monitoring our business flight. The uncertainty that cap and trade represents will be an unprecedented factor, not just in retaining jobs in California but growing them here as well. This uncertain can be mitigated substantially by providing regulated businesses with full allowance benchmarks through 2020.

This is not a free lunch. Companies will still have to reduce their emissions each year up to 15 percent in 2020. This will be a challenge for companies, but it has a chance to be viewed by California's business leaders as something that is feasible. Thank you.

SENATOR WRIGHT: Thank you much.

We're going to keep moving. I went to Mr. Anderson. Ms. Shulman—did I pronounce that correctly?

MS. MONA SHULMAN: Yes. Shulman, yes. Thank you.

SENATOR WRIGHT: Mona, I got, but…

MS. SHULMAN: Thank you, Chairman Wright, and thank you to the committee for the time this morning, and it seems like you're going to get a good cross-section of companies here.

I represent Pacific Coast Producers. We're a grower-owned agricultural cooperative. We have about 160 grower/owners and we're a food processor. Our growers are located in Northern California, and our facilities are located in Northern California as well. Our growers, many of our growers are multigenerational family farms. And we have a union contract for our workforce. Our facilities are being located in rural areas with high unemployment. Our growers grow fruits and tomatoes. Our tomato plant is a plant that reaches the 25,000-ton threshold and is affected by AB 32.

We are not going to leave California. Unlike the previous two companies, we don't have the opportunity. Our growers are here; our facilities are here. California produces the vast majority of tomato products in the United States, about 95 percent, and so we're here as an industry.

With that said, CARB has placed food processors in the medium-risk category which means we will get 100, well, approximately, 90 percent our allowances free, freely given, for the first two years of the program. That will reduce down to 75 percent during the second compliance period and 50 percent during the third compliance period. We also have taken early actions. A lot of that has been due to criteria pollutant requirements under federal law, but that has required us to become more efficient and we have expended capital and resources to reduce emissions, not for greenhouse gas purposes but for other purposes. In addition, for many years our customers have been a great driver for sustainability and we have, because of both costs and perception gone through our processes and done what we can to reduce trucking, reduce fuel use, reduce water use, and none of this will be given credit for under the cap-and-trade program.

We estimate that our costs of this program over the life of the program will be at a minimum, $1.5 million to $2 million for our company. We are limited by technology. We have some of the latest boiler technology, boilers being our main source of emissions, that there is. And so we have limited opportunities to reduce greenhouse gases, enough to stay out of the allowance market. So we will be in the allowance market.

As has been raised several times, the uncertainty that that provides, it's hard for businesses. In addition, in any given year, although our field department tells us they're very good at estimating what the harvest will be, there are times that our production will vary ten, 15, even 20 percent over the processing season. Our energy usage depends on a lot of variabilities in the quality of the tomatoes, the timing of the deliveries, and so it's hard to predict with certainty what our emissions will be in any given year. Now I know we have time after the harvesting season to procure allowances, but we don't have the information or the costs to put in at the time to understand what our costs are going to be for that season. So it does create business uncertainty.

CARB has agreed to a leakage analysis, to look at our industry, and see if there's a leakage risk, because we've raised the point that our products are primarily sold outside of California. We have competitors, both domestically in the United States and overseas—China, Italy, Greece, Spain, and others—and so, you know, raising the price to consumers will result in a shifting of production over to other markets.

We are appreciative that CARB is looking at this issue, but we are concerned with the timing of this study which will take place after the inception of the cap-and-trade program. So if the cost of allowances goes too high for us, our option is to reduce production; and reducing production means reducing jobs; it means reducing our growers' crops, and all the suppliers and vendors that supply our growers. We would seek to be placed in the high-leakage category so that we receive emission or allowances free for the life of the program, which has been noted is not a free lunch. We would still be obligated to reduce emissions. And in the alternative, if there were an auction and there are funds available, we would ask the legislature to look at returning a portion of those funds to food processors so that we could engage in research and development to find ways to reduce emissions.

Just one other point that I have to make, just because I'm in the food industry—and with the recent drought that highlights the issue—I mean, food supply is not a certainty. We've been blessed with growing up in California and having food at the grocery store at all times but that's not a guaranteed case, and so we would say that the contribution of the food industry to the economy, not only in dollars but in value, is worth considering giving us some different treatment. Thank you.

SENATOR WRIGHT: Thank you. Mr. Joyce.

MR. ROB JOYCE: Thank you. Mr. Chairman, Members of the Committee, thank you for this opportunity to testify today about the economic impact of the cap-and-trade regulations under AB 32. Guardian Industries Corp is a privately held company based in Michigan and a global leader in the production of advanced glass products for the building, automotive, and solar sectors. We have manufacturing operations in 25 countries on five continents. In 1978, Guardian launched a float-glass manufacturing plant in Kingsburg, California. Today, the plant employs nearly 300 people and is responsible for at least five times that number of indirect jobs. Guardian has invested hundreds of millions of dollars in the Kingsburg plant to improve its performance, continuously reduces its greenhouse gas emissions, and enable it to produce energy efficient glass for California's residential and commercial buildings.

The AB 32 cap-and-trade regulations, as currently designed, will have a negative economic impact on flat-glass manufacturers in California for two primary reasons.

First, the flat-glass industry is energy intensive and trade exposed and very vulnerable to leakage. Yes, sir?

SENATOR WRIGHT: Distinguish flat glass from round glass from curved glass. I don't know the glass…

MR. JOYCE: Well, flat glass, our industry sector in the glass sector, flat glass, we produce glass that's literally flat that's used in buildings.

SENATOR WRIGHT: Like that window?

MR. JOYCE: Exactly. Mostly primarily for architectural but also that's fabricated into windshields, for automotive, or increasingly, you know, solar, the glass that's used in different solar technologies, concentrated solar, you know, and also in electronics. So we serve a number of different industries, or sectors, rather, but architectural would be the largest as opposed to the container industry serving the bottling industry.

SENATOR WRIGHT: So a car windshield would still be a flat, f-l-a-t…

MR. JOYCE: Well, it has to be fabricated or we have float-glass furnaces, they're called, and they literally produce what is flat glass and then that could be fabricated into various end-use products, including windshields. But that would be done in a separate facility.

SENATOR WRIGHT: As opposed to a bottle, which is…

MR. JOYCE: Exactly. It's a different manufacturing process.

SENATOR WRIGHT: I'm sorry.

MR. JOYCE: Yeah, no. Is that clear? Okay.

So for two reasons, we see a negative economic impact on our, part of the flat-glass, of the glass sector.

First, the flat-glass industry is energy intensive, as I mentioned. Competition from both U.S. and international sources is intense. And the flat-glass sector is highly price sensitive. Therefore, a flat-glass manufacturers cannot pass compliance costs onto customers. As a result, they will be placed at a significant disadvantage when competing against companies in jurisdictions that have weak or no emissions control requirements.

Second, due to the nature of their manufacturing process, flat-glass producers cannot respond quickly to reduce greenhouse gas emissions. Float-glass plants operate 24 hours a day, 365 days per year, for up to 15 to 17 years with a furnace line melting raw materials at temperatures in excess of 2,000 degrees Fahrenheit.

SENATOR WRIGHT: ____ float and flat?

MR. JOYCE: Well, float and flat. Well, just float is the process by which you're producing flat glass. So let's say they're interchangeable for purposes here.

SENATOR WRIGHT: __________.

MR. JOYCE: But these furnace lines must be completely rebuilt every 15-18 years in a process known as a cold-tank repair. A float-glass plant must be shut down completely for several months during this cold-tank repair. Because of technological restraints and operational risks, significant modifications to reduce the greenhouse gas emissions of a float-glass plant should be undertaken during a cold-tank repair, not during the operating life of a furnace. Therefore, compliance costs associated with the cap-and-trade regulations will likely erode the competitiveness of flat-glass manufacturers in California without providing a meaningful incentive for them to reduce greenhouse gas emissions.

Guardian has made significant investments at its Kingsburg plant in recent years. In 2008, at a cost of $100 million, Guardian completed a cold-tank repair of the plant. Recognizing California's intention to move forward with AB 32, Guardian invested in expensive state-of-the-art, pollution-control equipment and took other actions to reduce the plant's greenhouse gas emissions. In fact, Guardian reduced the plant's greenhouse emissions by 44 percent during the cold-tank repair. We are confident the Kingsburg plant today, from the perspective of total air criteria pollutants, is the most environmentally clean float-glass operation in the United States and among the cleanest in the world.

In addition, in 2004, Guardian invested $50 million in advanced coating technology equipment for the Kingsburg plant. This nanotechnology-based equipment enables the plant to produce highly energy-efficient glass for California's buildings. Guardian is fully committed to sustainable manufacturing practices and to producing energy-efficient products that advance the goals of AB 32. Our $150 million investment at the Kingsburg plant over the past eight years demonstrates the extent of this commitment.

We recommend three steps to limit the negative economic impact of the cap-and-trade regulations.

First, CARB should reconsider how it implements AB 32's mandate to give credit to those that voluntarily undertook measures to reduce greenhouse gas emissions. As you know, AB 32 requires CARB to "ensure that entities that have voluntarily reduced their greenhouse gas emission prior to the implementation of the section receive appropriate credit for early voluntary reductions. Underscoring its importance, the CARB board quoted this section in Resolution 1132, adopting a final version of the cap-and-trade regulation, in October 2011. However, in practice, CARB has done little tangible to meet this requirement. There is nothing concrete or specific that ensures that an entity like Guardian's Kingsburg plant receives appropriate credit for early voluntary reductions. There is no early-action program, nor is there any provision for the cap-and-trade regulation that ensures that credit is given. There is no allocation of allowances or early offsets. We respectfully suggest that CARB develop a process by which such credit can be applied for and granted. Such a process would be especially relevant and critical to sectors, such as flat glass, where major modifications to reduce emissions can realistically only be made during specific and confined periods of time.

Second, CARB should do more to address leakage. We note that in its Resolution 1132, the CARB board directed staff to continue to review information concerning emission's intensity, trade exposure, and instate competition of industries in California and to recommend to the board changes to the leakage-risk determinations, including for the—excuse me—refineries and glass manufacturers. We understand that CARB has commissioned a study to address this, but more action is needed soon as companies must prepare for the economic impact of cap and trade today, for the program goes into effect in just a few months from now.

Finally, we applaud this committee for focusing on the impact of the cap-and-trade regulations on jobs and manufacturing competitiveness in California. We urge you to continue this work and we stand prepared to assist in any way we can. Thank you.

MR. ANGUS CRANE: Hi. First of all, I want to thank the chairman and the committee for this opportunity to speak. My name is Angus Crane and I'm executive vice-president and general counsel for the North American Insulation Manufacturers Association, and we are the association that represents all the manufacturers in North America of fiberglass and mineral wool insulation, and we have found that we have four companies who operate in California, and the experience of our companies is that it is already very difficult to manufacture in this state because of the regulatory environment. There is a concern on the part of all of my members that the cap-and-trade program may be the program that will actually tip the balance and force them to make decisions that they would rather not make.

NAIMA members provide probably, easily over 1,000 jobs in California, over $100 million in annual revenues. We also are a very big user of recycled glass. Fiberglass insulation is the second largest user of recycled cullet or glass in the United States. Owens Corning has a facility in Santa Clara; Johns Manville has a manufacturing facility in Willows, California; Certain Teed Corporation has a facility in Chowchilla, California; and Knauf Insulation has a facility in Shasta Lake. So in addition to providing many jobs—direct and indirect—it benefits to the economy and a user of recycled glass, the use of fiberglass insulation products helped to reduce the very pollutants that CARB is trying to reduce, greenhouse gases. In fact, CARB has recognized that insulation is the most cost-effective tool to actually reduce greenhouse emissions from the built environment or residential and commercial buildings and it's cost-effective, so there's something counterintuitive making it difficult for us to produce the insulation product that will actually help reduce greenhouse gases in California.

I think the other thing that's very important to recognize is, that if we were unable to do business in California, we would still be able to supply the market with the fiberglass insulation because of the number of plants we have in the United States. When they came to assign allowances, fiberglass is the third sector of the glass industry. They have forwarded the other two sectors of the glass industry which would be the glass packaging and the flat glass, 100 percent allowances for all three phases. Fiberglass was given 100 percent for the first phase. Second phase, 75 percent, and 50 percent. We asked them why they had differentiated us, and they said because there is not a threat of foreign competitors coming in and taking over the market. We made the argument—and I do believe that CARB has listened and they are going to continue to analyze this—but if you would look at this map of our plants that are operating in the United States or North America, you'll see, that if California is genuinely concerned about leakage, they need to be more concerned about the two plants that we have at your border in Arizona, two plants in Utah, and four plants in Western Canada that would have a greater leakage threat than anything that would be happening overseas.

Also, if you look at that map, you can see that we have the potential, in the middle of the country and in the eastern part of the country, to take care of any kind of closures or reduction and production at other facilities. We have the capacity to supply the market if we are not able to operate in California. And so what we're asking CARB to do is to recognize that in looking at linkage, they need to take just as seriously the threat from domestic plants or domestic markets because we're able to do this.

The other thing that I want to emphasize is, that as many people have indicated, the fiberglass manufacturing plants in California are the best performing, meaning, they have the top-of-the-line pollution control equipment. There's nowhere we can go with that. We can't reduce our pollutants by improving our pollution control equipment. And so in order to stay in business and continue to operate, we would either have to have the allowances or we would have to have a reduction in production so that we were below the trigger.

So this is what we're asking from CARB and we are grateful that they are continuing to have dialog with us and talk with us. Again, our concern is that the dialog is not going to take place until January of 2013. And so in the end, NAIMA's members must compete and survive to provide the jobs and economic benefits that they provide to California and that the cap and trade has the potential, the cap-and-trade program has the potential, to impose such great burdens that plants cannot compete and survive.

We just would ask that California consider, that if they're going to continue to go down this road, that it recognize that there needs to be significant mitigation of the impact that these programs are going to have on our four facilities in order to be able to survive and continue to provide the benefits to the citizens of California and to the economy of California and, again, I thank you for this opportunity.

SENATOR WRIGHT: Thank you.

I think, you know, all of you have expressed something that I'm not sure was necessarily oblivious to the people at CARB, which is, one of your options is to reduce the output of your facility and simply increase the cost of the product that you sell to the consumer. I mean, that level of economics, I think, they missed. As I understood him describe leakage, I did not take him to mean that he was simply looking at foreign, but I thought he was looking at other state(s) as well. Maybe I'm…

MR. CRANE ??: When we met with them, we thought felt that we were singled out and asked them the question, Why didn't we get the 100 percent for all three? And they said, because we didn't have data on—the foreign markets are not a threat—and the argument again we made was Arizona and Utah are for more relevant threats because they're right at your border, and so they indicated that they would try to consider domestic. But at this point, the reason we don't have 100 percent allowances is because they did not consider the domestic markets.

SENATOR WRIGHT: In the case of the food producers, Ms. Shulman, if you've estimated that you've got about a $2 million cost, does that, is that a cost that you can pass on?

MS. SHULMAN: Well, we can always try to raise the price of our products. The question is, do our customers then go buy from somebody who can offer them for less?

SENATOR WRIGHT: About what percentage would be $2 million of your company's revenue?

MS. SHULMAN: Well, if you're strictly looking at the tomato plant, you know, it's probably, of our revenue, it's hard to say what that is. I think the important point is that the market for canned tomatoes and tomato paste is a national and global market and pennies and dimes make a big difference, and the $1.5 million to $2 million estimate is based on, you know, the minimum floors put in my CARB at the $10 and then the inflationary 5 percent factor, and so that doesn't take into account what the costs are of the allowances if they're higher than that, nor does it take into account the increased cost of electricity and natural gas that we will be experiencing because, as those industries are put under the program and then the transportation fuels in 2015 and so, you know, the costs are really going to be much higher than that, we believe.

SENATOR WRIGHT: A similar thing, I guess, with your costs with the turbine, as I understood, when you're running the turbine as a test, that's when you have the greatest emission capacity.

MR. CRANE: Correct. We' just really using that energy to complete the transaction with our customer. So if we cannot do that test, we cannot complete the transaction.

SENATOR WRIGHT: So the manufacturer of the system itself is not a great carbon producer for you?

MR. CRANE: Yeah. We don't use a lot of energy to actually build our turbine, yeah. We're just testing it so that our customers will accept it from a safety standpoint.

I just want to add one question about leakage or add one comment, and that is, that when we get into this leakage discussion and when we're talking about how we will detect and monitor the leakage, from a business standpoint, we haven't heard any convincing argument that there is anything anybody could do to reverse leakage once it's already happened. So when we're talking, when the agency is talking, about monitoring and trying to detect leakage, what are they going to do about it once they've detected it?

SENATOR WRIGHT: Isn't it kind of trying to revive a dead guy? (Laughter)

MR. CRANE: Well, it's already happened.

SENATOR WRIGHT: Yeah, right. That's what I'm saying, yeah.

MR. CRANE: Yeah.

SENATOR WRIGHT: Once you take the round in the head, that's pretty much over at that point.

MR. CRANE: Yeah. So that's…

SENATOR WRIGHT: Yes, sir.

MR. JOYCE: I just wanted to make one comment about that leakage point as well. I mean, I can use Guardian as an example, but I think it applies to many companies. We plan well in advance when we make large investment decisions, years in advance. So when considering, you know, where to put new technology into a plant or whether to rebuild a plant, you know, we look well into the future, not, you know, months, and that, I think, plays into the uncertainty issue here, but that's the way we need to operate as a business.

SENATOR WRIGHT: And the other thing that I think, Mr. Crane, you alluded to, as the job leaves, then so does the revenue that we would have gotten or received from the income tax, from the worker. I didn't hear—I hate to do it when people leave, but it's always fun to talk about people after they leave (laughter)—but I didn't hear him address leakage from the standpoint of the economic cost to the state for job loss. I mean, it's not just that the flat glass or your turbine or the insulation or the tomato paste. Do you guys do the Sun-Dried tomato paste too?

MS. SHULMAN: Our company does not but there Sun-Dried tomatoes in the valley, yes.

SENATOR WRIGHT: Oh, okay. That Sun-Dried tomato paste is really good. (Laughter) But the challenge becomes, is that given 60-plus percent of the revenue to the General Fund is income tax, that losing a job is a huge hit to the fund. So not only do I lose the tax that I might have received from the company, but I also lose the income tax that I would have received from the worker, and I lose the revenue that the worker would have spent on whether it's a car or his house or the refrigerator or the Nike shoes, I mean, whatever else he would have spent in California, I lose that as well, in addition to the income tax, in addition to the revenue that I might have picked up from the company. So it begins to compound itself when you discuss leakage, you know, in a broad economic sense.

See, the 3 billion (dollars) that they looked at in terms of cost did not take into account what happens to the General Fund revenue that's lost on the other side, and I think the point that you made, Ms. Shulman, that we're not looking today per se at the utility sector, but this will cause probably a 10 to 30 percent increase in your gas and electric bill which also poses another increase to your cost beyond your competitive point. So I think you raised that.

And both of you guys who are in the glass business, I mean, my only trip to a glass plant was in Murano, Italy, and they do a little different work than you all you do, but it was clearly hot in there all the time, you know, to watch the Moretti brothers making glasses. So the heat level and the things that you consume would be a challenge.

I'm going to get to the last panel and try to move forward, but I thank all of you.

MS. SHULMAN: Than you.

SENATOR WRIGHT: And if you did submit, if you have comments that were in writing—I know some of them were received, I got your graph, sir—we'd like to get that because we're just trying to compile something and get it going, get it going forward, and I've got Tim O'Connor, John Cheney, Dorothy Rothrock, Cathy Reheis Boyd, and John. I'm going to—Kabateck, Kabateck—is that it? Kabateck.

What we're going to try to do is—yeah. We're going to try to go through—I think it's easier to take the last panel rather than try to adjourn, if it's all the same to everybody. I know that the hunger pangs will get you (laughter); but if we can get to the last panel and then we can do public comment, but that will let us wrap up at one time. Thank you so much.

MS. DOROTHY ROTHROCK: Thank you, Chair and Members. Dorothy Rothrock with the California Manufacturers and Technology Association.

I think that the information you've received today about the job implications associated with, particularly the allowance allocation system that CARB has established for the cap-and-trade system is going to create what I think is a perfect storm against manufacturing jobs in California. But the setup is, first, it's already a very difficult environment to make investments in manufacturing and to create jobs in manufacturing.

Between 1977 and 2001, California got fully 5.6 percent of the share of U.S. investments in manufacturing. Since 2001, that's dropped to 1.9 percent. So we're already in a very difficult environment. You heard from some of the folks just before, 30 percent higher costs for manufacturing in California, and we have not yet implemented AB 32. We've learned, in terms of layering costs, the compounding effect of all this, we did an AB 32 cost study that actually did show, What if you add up the cost of all the different programs under AB 32? What impact will that have?

And to your point, Chair, we found that the annual state and local revenue loss associated with all the programs is $7.4 billion a year by 2020. There's a hidden tax on every family of about $2,500 by 2020. All of these things add up to a gross state product loss of 5.6 percent, about the same amount that we lost during the great recession. So this is a huge program, a big cost, and that is even before we get to the leakage risk associated with the allowance allocation system. That economic impact that I just described assumes there's no leakage. That's something we simply have to absorb as a state because of higher costs of doing business. If in fact that leads to leakage, these numbers will get worse in terms of additional losses to the state, additional losses in wealth creation when manufacturing flees the state.

There's a solution to this, at least that last aspect, the one that I'm focusing on, the allowance allocation. CARB simply has to provide 100 percent free allowances, up to a reasonable benchmark, that will provide the declining cap, get us to the 1990 levels that we need to under AB 32. The fact that they have not taken this approach is unnecessarily raising the costs that will exacerbate the leakage that you've learned about. There's no justification for this. We've been working on this for years. The idea that they are going to monitor leakage and somehow go back and fix this later on is absolutely wrong. It won't work. There's no time; 2013 is too late. We need to get this fixed now before the November auction.

I think I'll end there. If you've got any questions but move onto the others?

SENATOR WRIGHT: We'll be back.

MR. JOHN KABATECK: All right. Well, I was going to say good morning but good afternoon, Senator and Members of the Committee, thank you very much.

My name is John Kabateck. I am the executive director for the National Federation of Independent Business California. We are a nonpartisan, small business organization where California's in the nation's leading organization serving only small and independent businesses, about 20,000 small businesses here in California that we serve, about 350,000 across the nation.

With that in mind, I think it's first important to point out that the mom-and-pop businesses that we serve and small business owners in general do believe in all of us working together to promote a clean and healthy environment, not just for the small businesses but for our communities. In fact, according to a recent survey within NFIB, 43 percent of our members are already taking measures to make their businesses more energy efficient, to reduce the amount of energy consumption in their businesses, in their small businesses, independently, out of their own pocket, and without a government mandate in place. But unfortunately, similar polling is also showing us within NFIB the soaring energy costs—natural gas, propane, gasoline, diesel, fuel oil—all things that small businesses rely on and use regularly in our communities are the leading concern among small business owners, second only to rising healthcare costs.

The Main Street owners do believe that striking an important balance between the community, economy, and environment is a key objective. But the last thing that we want to do during these very troubled economic times, with more than 2 million Californians out of work and scores of businesses closing their doors, is to place an already fragile and uncertain and scared community, frankly, of job creators at even greater risk. Simply stated, higher energy costs mean a higher cost of doing business and small business, understandably, is especially sensitive to these increases in costs.

So again, the most difficult thing that small business owners and all Californians can be facing are complicated and untested mandates and new costs that will force them to close their doors forever and even lay people off. Recent studies have shown in fact, between 2010 and 2011, experts said the exodus of California companies between 2010 and 2011 was 26 percent.

As you have heard already, all businesses and jobs will ultimately be adversely be affected by AB 32, by cap and trade, and regulations that are not implemented carefully and with respect to the impact on jobs and the economy. I don't think there's a Californian out there who frankly genuinely believes that the potential loss of 262,000 jobs, plus $2,500 annual hit to every California family budget, as Dorothy had pointed out, is a step in the direction towards recovery. So all you need to do is ask your local neighborhood baker, the farmer, the auto shop owner, mom-and-pop businesses will bear most of the brunt of these regulations. In fact, again, according to our studies, on average, small businesses end up paying about 37 percent more to comply with regulations than larger businesses, but there is absolutely a residual effect. And as we move forward with these kinds of costs, it's going to have a huge impact.

Once again, state leaders tend to believe—many tend to believe—that if you smack a larger business with a new unanticipated mandate or tax, that somehow the small business owner, our number one job creators, are somehow immune from this. And so the question we ask is, Where and to whom do proponents believe these higher costs or regulations impose on larger manufacturers and producers will ultimately trickle down? And it will trickle down right to the sidewalks and stores on Main Street—businesses, employees, and consumers on Main Street, I might add.

And I do point to Ron Mittelstaedt, president and CEO of Waste Connections, that until recently, was in Folsom, was based here in Folsom; and again, while the largest public company in Northern California, they recently announced relocating to more business friendly Texas to escape costs in regulations. In fact, that morning on the news, he specifically cited higher costs and regulations. But aside from the many people that are employed there who lost their jobs, the biggest casualty from such a leakage, from such a departure of Waste Connections to a more business friendly state, are no doubt the local pizzeria, the bookstore, the dry cleaner, and the people who work there. Nobody wins and yet nobody has been doing anything to address this horrible impact. We appreciate this hearing today of raising that awareness.

It's just plain wrong for leaders to believe that we can somehow isolate or insulate smaller companies from the impacts that are hurting the larger companies in our state. So far, we've not seen a good-faith effort, as Ms. Rothrock had pointed out from the Air Resources Board, from the administration, or from the legislature until now—and you raising this issue, Senator and Committee—to effectively strike that balance between the environment and the economy. By imposing this multibillion dollar energy tax mostly on small business owners when they can least afford it, it's throwing this important balance that I talked about earlier significantly off balance to a point where Main Street, California's employers and families and employees will feel the pain.

So in closing, I will just mention that small business owners do believe we actually ought to absolutely do something about climate change, but forging ahead with a costly and again untested AB 32 cap-and-trade program gives without a plan, without a plan that carefully weighs the impact on jobs, on the economy, and gives businesses sufficient time and opportunity to plan and prepare in the middle of the worst recession we've seen in decades is not the solution, and frankly it's something we will regret for a long time. So I thank you for your time and I'll turn it over.

MS. CATHY REHEIS BOYD: Thanks, John.

Thank you, Senator Wright and Members of the Committee for holding this. I'm Cathy Reheis Boyd. I'm president of the Western States Petroleum Association and we represent 27 companies that explore for, produce, refine, and market petroleum and petroleum products in six states—Washington, Oregon, California, Arizona, Nevada, and Hawaii. I don't get to go there too much, though.

We've been really constructively involved in AB 32 since its inception, since 2006, and then again in 2009 with the low-carbon fuel standard. I know this hearing's dedicated to cap and trade, but there is a linkage to the low-carbon fuel standard and both of those have some huge implications on our ability to supply the California marketplace and I want to leave those thoughts with you. Certainly I don't have enough time to go through them in detail. I would love to have that opportunity because I think they're important issues, but I will highlight them for you today.

So much has occurred since then, and our thought process has certainly evolved. But one thing we came very clear at the end of last year was this idea of the cumulative impacts of these regulations on one sector, in particular, the refining sector in California, and the 14 refineries that operate here, as you well know—six in Southern California and five in Northern California and a few others. When we brought that to the attention of the Air Resource Board, they agreed. They passed a resolution that noted the cumulative impacts could be severe and needed to be looked at and so we embarked on a study to do that. We hired an internationally well-known firm called the Boston Consulting Group, and their job was to analyze the impacts on these 14 refiners in California from cap and trade, bringing fuels under cap and trade, the low-carbon fuel standard, and something known as the Clean Fuels Outlet.

Why did we pick those four? They all come together at the same time on one industry in a very short period between now and 2015. The unintended consequences are severe and not that they cannot be corrected but we want to bring them to your attention because they're very important. You have a presentation that I'm not going to spend a whole lot of time with but it's in front of you, and I want to tick through a few things. It will take five minutes but I think I want to leave it with you so you have something to refer to.

The first page there, page 2, is really what the LAO office was talking about in surrendering allocations over time. That big blue bar you see that's escalating over time is what the refiners have to surrender as they also comply with their reduction in the 2 percent cap per year. When you look at that compared to other industries, it's severe. And so just one piece of the cap-and-trade program over time, they surrender a lot of their allocations because they are not deemed highly trade exposed. What the BCG report, Boston Consulting Group, determines is this industry is indeed highly trade exposed and should be treated as such. So the surrendering of allocations and the costs associated with those are fairly large for this industry compared to others.

The second one, my favorite, I call the Dorothy Rothrock slide, this has been used in other forums, but it's very illustrative and these escalating downward dives you see there in the pink, are those declining allowances? So you can tie the first sheet to the second sheet. We surrender those allocations over time. There's large dollars associated with that surrendering. You see the numbers there in the billions. And really, what the LAO was talking about is the white space on top. That's the declining cap over time. That's 2 percent per year. That's what the requirements of the law are to achieve. So that's the white space, and everything below that is the additional cost from surrendering allocations to those that are not deemed highly trade exposed. It's what you've heard every speaker talk about. So this becomes a very—this surrendering of allowances over time becomes a very core concern in the cap-and-trade program and, again, not necessary to meeting the declining cap, the white space.

The next slide is the next piece that causes concern. We just talked about the stationary source piece which is really the orange lines in this graph. You may ask yourself, What are those big bars that then start, again, same time, 2015? That's when fuels go under the cap-and-trade program. There are no free allocations for the emissions from the fuels. They enter the program at 2015; and in addition to those allocation costs you saw on the previews page that we surrender, transportation fuels come over in 2015 and blow the costs out of the water. So that's the other concern we have, is dealing with transportation fuels in a cap-and-trade program in 2015 time period. At the same time, you're dealing with surrendering massive amounts of allocation and raising the cost.

The next three slides, I'm not going to read. I'm going to point couple of things to you. These are the findings of the BCG report, the Boston Consulting Group, and, again, look at this immediate concern we have in 2015. The program goes to 2020, certainly. We see some big ramifications in 2015. We are talking with the Air Resources Board about these ramifications and we'll see where those conversation(s) lead. But what you see very quickly is that the refining industry in California, we're not a utility; we're not bound to this market. We have to find where we can supply fuel cost effectively. With these regulations hitting us all at once in 2015, what the Boston Consulting Group determines is the refiners start to behave differently. They start to look for their best opportunity to sell their fuel. And with things like the low-carbon fuel standard requiring you to meet certain elements of selling your fuel to California, in about 2015, that becomes a problem. It really makes it difficult for them to supply this marketplace.

So because of that cost differential, they look for other markets that don't have these regulations, places like Hawaii, places like the Northwest, places like Phoenix, and places like Mexico, which have a very growing marketplace and have a lack of refining capacity. So when that cost differential becomes too much in California, they'll look to sell their products elsewhere and so you get an export. Instead of supplying the California marketplace, you have the refiners reacting in an export situation. The other reason they do that is the low-carbon fuel standard in 2015 becomes infeasible. There is nothing we can blend in our fuel to make it less carbon intensive. Certainly, we know we have corn-based ethanol now. That gets us a little bit. It certainly will not meet the compliance obligations of the low-carbon fuel standard. Then we ship as much Brazilian sugarcane ethanol as we can because it's lower carbon intensive and we do that until the point that we can't do that anymore because, as you know, ethanol isn't totally compatible with engines at high volumes.

So it makes a very difficult situation. Again, you can't comply. You've got increasing costs. You're surrendering allocations. If you don't sell fuel here, you have other markets and the market starts to shift, according to the BCG. Basically they say about five to seven of the refiners shut down in California. They turn into terminals. We lose 30 to 40 percent of the refining capacity and those that are left supply as much as they can, given how much biofuels they're able to put in their fuel, and then the rest is exported outside the state. You have potential shortages in that time period and escalating costs, and you will not have the substitution of electric vehicles or hydrogen vehicles or even an infrastructure to run E-85 fuel-flex vehicles in this short time period to react to that marketplace. So there is a very short-term problem that gets set up for the state of California.

The next page is whether that means to job, 28 to 51,000 jobs are lost; $4.4 billion a year in tax revenue to the state of California. And then the last one is an estimate by Boston Consultant Group of cost recovery for transportation fuels in the range of 49 cents per gallon to $1.83 per gallon by 2020. And if the regulation continues as designed, could escalate up to $2.70 per gallon. That's broken down by each of the regulations because they looked at them independently. So you see 14 to 69 cents as a result of the cap-and-trade program and the other big chunk, 33 to $1.06 from the low-carbon fuel standard.

So I'm leaving this with you to contemplate. I've love to have additional conversation. There's two other graphs in there that just give you an idea. For instance, if we were able to bring all the Brazilian ethanol from Brazil to California to try to comply with the low-carbon fuel standard, the entire country makes 360 million barrels a day and we would need 554 million barrels a day to meet the low-carbon fuel standard more than the entire country makes so they would have to build an additional bio-facility to do that. And between now and 2015, that would be quite difficult.

The other difficulty in switching to that much Brazilian sugarcane ethanol, given the current vehicle technology, we have about 270,000 fuel-flex vehicles in the state of California that can burn 85 percent ethanol. But of course, we have 22 million vehicles that don't, so you'd have to make a complete turnover of the vehicle fleet and put an E-85 pump at every gas station that doesn't currently exist if you can get the entire country's production here which isn't enough. So it sets up a very difficult situation.

The last page shows you the change in trade flows of gasoline, diesel, and jet fuel as a result of these regulations, again, the four I talked about, and the trade-flow shift, from an import to a completely export type of situation for California, which is not good. It's not good for supply in the marketplace; it's not good for job; and it's certainly not good for the economy. That sets a pretty dire situation. The good news is that we think there's lots of these things that can be altered and changed to reduce this impact and minimize the unintended consequences.

I hope that this hearing serves as the start of that conversation. We have some ideas on how one would go about that and we would love to come back and chat, chat about the solutions to what we see as a pretty dire state between now and 2015.

SENATOR WRIGHT: I think so. The challenge that I see, particularly in the refineries—as I mentioned, I have several in my district—is that unlike the stupidity that took place when we went to MTB and the gasoline where you could still manufacture and just export your product, here you wouldn't be able to do that because the problem would be the manufacturer is where the penalty occurs. So what you would end up doing is essentially having to eliminate the refinery because you couldn't operate the refinery because, even if you were exporting the fuel, you couldn't make it and sell it as you could under the other program. I think that would be a challenge. I don't know that people have actually looked at an idea that you'd be selling fuel for two or three—I mean, we're already at anywhere from 30 to 75 cents a gallon above other portions of the country. I don't know that people are prepared to go to $2 or $3 above. And even at the margin where we are, as I mentioned, I think, you know, Ms. Reheis Boyd, we've had this discussion. Certainly in commercial shippers and airlines, they've already begun to account for the cost in California by shifting how they purchase which ultimately means that we don't get the sales tax from those purchases as they occur.

I think, you know, the smaller businesses, you know, in the CARB mindset, if you got a pizza place on Main Street, it's not like the guy who lives in Beverly Hills is going to be able to get pizza from someplace else. So they believe that that guy will just have to absorb it. But the challenge will become, I think, to the fuels and the other sectors, is that just as many of the other industries rely on transportation fuels to make their business, so the guy who's making glass is buying gasoline and he's buying lubricants to operate his business. So in addition to the AB 32 costs that's layered into his manufacturing, now his fuel costs and other costs—his utility costs—

are going to go up as well. So we're going to go from a 30 percent current California penalty for manufacturers, and that can turn into a 45, 50, 60 percent penalty for being in California.

I mean—and I'll see if Senator Dutton has a question here. But again, I did a presentation at my chamber in Torrance. And I said, when you step back and look at California and where we're going, we should really tell about 20 million people to get out of California because you won't have a job; you won't have a house; and there'll be not much here for you, that we're going to shift to a service-based, high-tech economy where we're going with the venture capitalists and the Googles and the Facebooks and all the other things we're simply going to eliminate. And if that's where we want to go, then we should say that as opposed to simply, you know, killing the state by a thousand cuts.

MS. REHEIS BOYD: You may not, Senator, have fuel either.

SENATOR WRIGHT: Well, you will. It'll just be very expensive because the only other option that you would have would be as, you know, some of my friends who have already been looking at the industry as, you make it in India and just ship it to California, already done.

MS. REHIS BOYD: What the Boston Consultant Group's conclusion is, is that to comply with the low-carbon fuel standard in the timeframe of 2015 is, you cannot comply nor can anyone else comply. So you simply cannot supply the marketplace under the low-carbon fuel standard and no one else can either. Thus the shortages, thus the loss of jobs, thus the shutdown of refining capacity. You have 14 in the state, luckily, and you don't want to lose 30 to 40 percent of its capacity.

SENATOR WRIGHT: Right.

MS. REHIS BOYD: I don't think that it was originally designed to do that but I think, as this has evolved and we've gotten into it, these are some of the unintended consequences that we see and need to be fixed.

SENATOR WRIGHT: I think, and this is conjecture, I have no, I've not read anything or no basis to make this argument, but I think part of what their people who are at CARB—and, again, speaking out of here is—it's kind of game of chicken, so they really would like to get rid of all the gasoline cars anyway and their thinking becomes, if I eliminate the fuel, I'll eliminate the cars and people will buy electric cars. You know, I really don't like glass manufacturing. So if I make it possible for you to do business, then you won't do business. So that's what I'm saying. I mean, the reality is that much of what people do creates an emission. And so now we're going to essentially make it a cost to breathe. And as you do that, then you raise the cost and there will be nothing here for people to do in terms of jobs, unless you're a venture capitalist or unless you're, you know, but I think people will rue the day that we allow that to occur. But thank you all so much. Thank you, Ms. Reheis Boyd, for your comments, Ms. Rothrock, for helping us assemble some of the people on the panel.

Senator Dutton.

SENATOR DUTTON: Just a quick—Dorothy, I know you must have some recent data about how many manufacturing jobs have been lost in the last decade.

MS. ROTHROCK: Yeah, about 635,000, I believe now.

SENATOR DUTTON: What was the average pay of those jobs lost?

MS. ROTHROCK: Last we looked, it was around 65,000 a year.

SENATOR DUTTON: And those were—that's with benefits and health…

MS. ROTHROCK: Yes. It's an average, right.

SENATOR DUTTON: And then if we would—green jobs, green jobs are created under AB 32. How do we know that we aren't spending too much for those jobs? In other words, are we losing jobs and we're replacing them with the others, just like trying to convert to the service industry? Those jobs pay less from the jobs we're losing. So I guess our question is, You know, how do we know we aren't going be spending too much for that?

MS. ROTHROCK: Thank you for the question. And, of course, we don't know. We in fact think there's multiple reasons why the idea that you can replace manufacturing with green jobs and somehow run your economy is faulty.

One is, each manufacturing job has a multiplier impact that's far higher than a service-based job. So for every manufacturing job, you get another two or three other jobs that are supported because there's so much wealth created by the investments and the jobs associated with manufacturing. So when you remove that manufacturing job, you're losing those three jobs. So it's a big downward death spiral when you lose manufacturing. If you're taking revenues or costs and transplanting them then to create or fund green jobs, those are service jobs. At least for the most part, that's all we're seeing now. We're not seeing manufacturing green jobs. Those are not going to have the multiplier effect, and they will only be sustainable so long as that money continues to go to fund them. And when you are done extracting the money from the manufacturers through the loss of those jobs, I mean, it's an unsustainable system to think that you can grow green jobs and make that your economic model in California. We think we adopt the phraseology of the environmentalists and say, it's not economically sustainable to do that.

It's also not philosophically or politically sustainable because no one's going to do what California's going to do if that's the model, and we want to transplant this system. We want others to say, wow, we can have manufacturing and meet AB 32-type goals at the same time. Let's do it. Other states are going to look at us and say, well, their model is to get rid of manufacturing. We don't want to do that so we're going to find another way to do climate change or maybe think it's a bad idea altogether.

SENATOR DUTTON: I was kind of, while I was up here, I was kind of refreshing my memory on the history of the western-climate initiative and the organization that was structured, you know, back in 2007 and back then we had Arizona, California, New Mexico, Oregon, and Washington all going forward. Then by 2008, we added Montana and Utah and British Columbia, Manitoba, and then Ontario, California—Ontario, Canada, and then Quebec. Yet when I look at the WIC Inc membership of their board today, it's strictly California and Quebec, nobody else. So just, you know, looking at it from a business standpoint, obviously if we still had the western states involved with this, it would actually help us create an economic plan that might actually work because there'd be, it'd be like for like. I mean, we don't have—it's like we've created this problem. So I guess my thoughts are, Do any of you know why these other states decided to not become part of the new agenda?

MS. ROTHROCK: I think there may be a different answer for each one, and you'd have to look at their political situation or their economic, but there certainly was a trend starting in about 2008 where everybody was starting to suffer economically, and I think there was just some decisions, You know what? Let's pull back a little back. Plus, the federal government did not go forward, as was anticipated with the cap-and-trade program. So it was a little bit of, let's start out and then they kind of pulled back. California kept going, which is interesting because a lot of the thinking that CARB was doing on how to do allowance allocation was during a time when there was the thought that we would have a broader market. So a lot of the leakage issues perhaps didn't rise as high in their concern.

Now knowing that there isn't anybody else participating, the leakage issues are extremely more problematic because of how close we are to the borders of other states that are not suffering the same cost. So now we need to revisit the leakage issue in light of these new data points, in light of the new information we have on how the program's going to work, and this hearing, I just can't thank you enough for hosting it because it's really the first time we've been able to lay all these things out in a way that we've been trying to do at CARB and some other forums, so I really appreciate it.

SENATOR WRIGHT: The other part that's still scary is, that even if you're successful, it doesn't matter. I mean, you will spend billions of dollars and have zero impact on climate because California's market is insufficient to have any impact.

MS. ROTHROCK: That's why it's so crucial, that whatever we do, it's something that others will also do.

SENATOR WRIGHT: Right. Yeah, and I don't think the other people, you know, when they watch the economic calamity that takes place here, I don't think that there are going to be a whole lot of people lining up (laughter). I don't know if there are any members of the public that had a comment or—yes, sir? Two folk.

Let me thank this panel as we get ready to wrap up.

Give us your name and your…

MR. CHARLES McINTYRE: My name is Charles McIntyre. I'm president of the West Coast Protective League. I represent the glassworkers, not here on the West Coast. I work for Gallo Glass. I'm a third-generation glass employee. I grew up around glass plants. My children also work in the glass industry. And this is an industry that has a lot of nepotism; it has a lot of lot of multigenerational families in glass. You can go to a glass plant and you can find five and six generations. Some of our families have gone back 100 years in this industry where they've gone from factory to factory.

Mr. Robeson stated earlier that there was 15 glass container factories here in California. That number back in 1980 was actually 18 glass plants. It was responsible for around 20,500 union jobs with benefits. Over time—and I don't have a number on what we've lost on an average each year. I don't have that. But what I do know is, right now, we currently have five glass plants in the state of California. And we have approximately around 2,300 union employees with benefits, retirement, and medical. And so with that, this is an industry that's real susceptible to the economy. There's not a large profit margin in glass.

I heard Senator Dutton speaking on the green jobs. We are green jobs; we have green jobs. You know, this is a product that doesn't affect the environment at all. It's inert. It doesn't contaminate anything and it can be recycled over and over and over again. And this is an industry on a whole that is recycling at about an 80 percent rate, which is pretty huge. And our furnaces, the more recycled cullet that we use in our furnace, if we use 10 percent cullet, recycled glass, we're going to save 3 percent, 2.5 to 3 percent, on our energy, which is huge. And then when you look at the technology and the strides that are being made by this industry right now is that we're light weighting our ware, as we speak. That costs money. You now, it's lightweight. The glass container is huge but…

SENATOR WRIGHT: What does that mean? I'm sorry.

MR. McINTYRE: Light weighting? It means less glass, less material in the bottle, and so that's a hard process because it takes a little bit of glass to shape ?? a container. But if you can lightweight it, you're saving on the shipping; you're saving on the energy; you're saving on the material and not counting the recycling end of this.

You know, sometimes in our furnaces, it will run up to 60 to 70 percent recycled glass, if we can get it, and that's hard to get in California. So when you talk about, you know—I mean, I'm going to stray all over the place here. You know, I'm not an expert. But when you talk about this recycling and these jobs go away, what are you going to do with that recycled glass? You're going to increase the carbon footprint and you're going to go against everything that you're trying to achieve? Because you're going to be trucking it to New York or you're going to be trucking it to another state to recycle this glass? Or it's going to go to our competitors. Some of this is already going to our competitors down in Mexico. And so right now, we have to compete and we're competing against China on one end; we've got glass coming across the border; and these companies are doing everything they can to stay in business. People are going to buy this glass. Our customers are going to get glass. The question is, Are they going to get it here in California?

So we need a level playing field, and CARB needs to—all I hear is flexible. Well, we've spoken to them before and they haven't been very flexible. You know, they need to really consider the benchmark to make it flexible for this industry. And, you know, and you spoke earlier about not getting the income tax, and what about the bigger picture? What about when we wind up without these jobs, I mean, all of manufacturing in California? And then when we wind up in the social programs that the state can't afford now, and we're going to wind up in them roles.

What about the decaying neighborhoods where these empty factories are going to sit? What about the broken down school systems that are going to suffer more? And then, you know, we've got the small businesses that we support because we have an income to go to these small businesses and buy our goods. This is going to be the turning point in California, and we all can't go to work for Wal-Mart. I'm sorry. It's not going to happen.

I mean, if you're skeptical, all you've got to do is drive through San Leandro and Oakland. Drive down through Los Angeles and see these factories that have come and gone, you know, and the people that used to work there. We're starting to become the Rust

Belt of the Northeast, and it is sad because a lot of these people, their kids that talk about their grandparents and their parents who work in manufacturing and the last job they did was pack up their machines because the jobs went overseas and they went elsewhere. So I mean, you take these factories—they are going to move.

SENATOR WRIGHT: Okay. Let me—go get him. And thank you for your…

MR. McINTRYE: Anyway, that's all I have to say.

SENATOR WRIGHT: Thank you for your comments.

MR. McINTYRE: Thank you, Chair, and thank the Committee.

MR. JOHN LARREA: Thank you, Senator. John Larrea with the California League of Food Processors. I'm kind of surprised I didn't end up on this panel to begin with, but you did hear from one of our members. I'll keep this brief.

I think the question that you asked Mr. Corey from the ARB was probably the most central question that was there, and that is, What is the goal of AB 32? What is the goal of the cap and trade? And his specific answer was that it was to reduce GHGs while considering specific factors of cost, economy, and community. And at times, I'm not sure that that's exactly what's happening, and I think that that's where they need to refocus this.

One of the things that we're looking at in terms of food processing alone is that this goes back to AB 32. There's a section in there when they create this regulation that they are to ensure that the activities undertaken comply with the regulations do not disproportionately impact low-income communities.

I know how familiar you are with low-income communities. I've watched you protect your own communities in your own districts. But the other solid concentration of low-income communities are the areas in which we operate. The small communities which depend upon us for the jobs, for the revenues, and for the incomes and all the small businesses associated with those, we are out in those communities and in those counties that have continuing 15 to 18 percent unemployment, and yet nobody right now can tell us what the impact, the economic impact of this, is going to be on those communities once the cap and trade hits us.

The second thing that they needed to consider that was contained in this is that they also—to consider the significance of the contribution of each source or category of sources to statewide emissions of greenhouse gases. The food processing industry, as a whole, represents less than one-half of a percent of the emissions in California, 1.7 million tons a year. Now that is insignificant compared to most of, the rest of California, and yet we're going to be under a cap and trade. And not only that, but we're also under a medium leakage risk.

Now we deal with uncertainty. I mean, uncertainty in the ag community, uncertainty in food processing is just a fact of life. You can look at the Midwest right now. They have a drought now. Did that expect that drought last year? No. And it's not only affecting them but it's also affecting our dairies out here. So now our dairies are suffering as a result of the drought that's there and we're suffering from the uncertainty every year of whether or not we're going to have a drought and, God help us, we don't want that.

But when we look at what cap and trade is doing right now, when we look at the fact that by 2015, when fuel starts to come under the cap, when transportation starts to come under the cap, and our sources of supply begin to come under this cap so farmers begin to experience higher energy costs, transportation, which we depend on, to move those products to our facilities start to cost more, and then we lose 25 percent of our allowances, plus, the base price of the allowance goes up in 2015, we're not only worried about an actual, natural drought. The best way to characterize it is an economic drought. By 2015, we could experience an economic drought that we may never be able to recover from in terms of this. We may start losing facilities. And the types of people that are going—in order to be able to meet these obligations that are coming for such a minimal amount of these allowances, we're looking at essentially eliminating personnel.

Mona didn't get a chance to talk about that—Ms. Shulman—but essentially they're looking at anywhere between 5 to 10 percent of the people being let go as a result of having to meet the cost of allowances, and we don't know what the costs of those allowances are going to be. So the question is whether or not, in considering specific factors and considering the amount of this, you know, where should ag be? Where should food processing be? We can't move; we can't leave so we have to adjust some other way. And if we're continually going to be under a medium-leakage risk, if we're going to continually be pressed on this, along with the rise in prices associated in 2015, we really don't know what we're going to be doing by then. So thank you.

SENATOR WRIGHT: Thank you much.

And that will—let us adjourn. We went straight through. Let me thank all the people who stayed all the way through. It was easier to keep going than to try to break for lunch, but I appreciate all the time and we'll get a report and get some stuff ready for the interim.

Thank you. We'll adjourn.

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