Independent Emissions Market Advisory Committee – meeting of November 30, 2021

Dallas Burtraw, Chair:

Thank you all for being here. I want to, at the very outset, take a moment to do what we don't do enough, which is to express gratitude to Malinda Dumisani, Bill Dean, and Shereen D'Souza for continuing to be responsive and helpful to us and guide us. We really appreciate it and thank you so much for that.

We have a quorum. The purpose of this meeting is to discuss the content for our annual report. We have in previous meetings identified topical areas and identified lead persons for each of those areas, so we're going to rapidly go into those topics, which nominally constitute the chapters that we want to include in the report this year. I want to encourage wholehearted participation from all Committee members. We've had a bilateral exchange of ideas amongst all of us working on subcommittees together. I want to make sure that everybody has a chance to get their mind around the ideas that are being discussed with each other's Committee reports.

I want to also put out there now that we will discuss process at the back end, but what I'm anticipating will happen is that very shortly after this meeting, the notes that we all have – whether it's just bullet points or a narrative – could be sent to Malinda. She can post them as draft content or draft outlines that can be shared with all the Committee. Maybe that's not the best way to go, so we'll come back and discuss the process on this after we've had our substantive discussion.

The other thing we are going to need to do is to decide whether we're going to have another face-to-face meeting such as this, before the holidays. Our report is an annual report. I would strive to see if we can get it done before the Christmas holidays, but it's more important that the report be strong than that it meet that deadline, because the audience that receives the report, the Legislature, will really be positioned to do so in the third or fourth week of January,

Then, I just want to move right into it. There are five subcommittees that we created. The first one is the compliance event and assessment, and Danny is the lead on that topic and Meredith was working with him on that.

Danny Cullenward, Vice-Chair:

Let me give a quick introduction about this proposed chapter in the report. We want to do two things, so I'll speak to the first thing and then, Meredith, I might invite you to

speak to some of the discussion we've had about non-compliance buyers and other roles that we're seeing for allowance purchasing in the system.

The main motivation for this chapter is to do a very elementary observation or a stock-take of the outcomes in the market following the compliance event that occurred on November 1. We are at the end of the third compliance period. Entities subject to the program surrendered allowances and offsets equal to their covered emissions, and CARB announced that they had a 100% compliance rate, which is great news.

This event will provide an important window into the status of supply and demand in the market. We hope to very succinctly introduce that topic and provide some numerical context for the outcome, given the compliance event, basically providing a nice moment in time where essentially the books are shut on the first three compliance periods. It allows us to observe the number of compliance instruments that carry forward into the fourth compliance period, where we're now active.

I think the concept of doing this is pretty straightforward. We do have to make an important methodological call. I was hoping the Committee could talk through how we want to do this. The issue relates to timing and relates, Dallas, to your suggestion about exactly when we want to finish the report. We can, with current data and expected data, likely put together numbers that very simply measure where we are at the end of the third compliance period, in a couple of weeks. And the way this could be done is this: we have quarterly compliance reports which CARB has briefed us about in the past. Those provide an instantaneous snapshot of the allowance and offset holdings and private market participants' accounts, as well as various government accounts. We have the third quarter compliance instrument report, which tells us on October 1, what the holdings in the market were. That information is great but not complete, because compliance entities obviously were stockpiling many allowances and offsets to prepare for the compliance event, which they completed on November 1. So, if we want to use these data to give us a picture of what's going on at the end of the third compliance period, we need to adjust them by the allowances and offsets that are surrendered from private entities back to the government in the form of retirements at the compliance event.

CARB is expected to release its data, tomorrow, December 1. That will tell us the composition of allowances and offsets surrendered, so we would be able to decrement the allowance holdings and offset holdings in private accounts by those surrenders. The Quebec regulator historically has followed suit on a similar time frame, maybe a couple of weeks delay sometimes, so we would we would be waiting for that information. And we also have a November allowance auction, at which some of the third compliance period allowances were offered up to sale and purchased by entities. So, is will be very easy to adjust the third quarter compliance report by the compliance data from California and Quebec. California is due tomorrow. Quebec is hopefully due very soon.

The auction data which we already have would provide a complete picture, and that should be feasible to do. I think as soon as the data are ready, and therefore probably by mid-December, it is a straightforward thing to do, if we want to choose that route.

The other route would be to wait for the fourth quarter compliance instrument report, which will take a snapshot of market holdings on approximately January 1, and would therefore capture all of the transitions we talked about, but probably wouldn't be ready until the first week of January.

Either of those options would allow us to very concretely summarize the sort of accounting outcome of the third compliance period, and to briefly connect that into discussions about various projections from groups that have carefully thought about these issues, about what we might see at the end of this period. That's the main chunk of the chapter.

Meredith Fowlie, IEMAC:

The way I understand it – and everything I really understand I've learned from Danny – is that it's not a really heavy lift, especially given all the foundations that Danny has already laid down in terms of proceeding faster. I see no real reason to wait. It would be nice to be able – as Dallas hinted at earlier – to have a chapter ready to go. We know what the numbers look like, but I'd be curious what other people think. My understanding, Danny, as you've laid it out, there's no new information, it's just tabulated for us versus us doing some of the work with that, with the releases that are imminent in the next week.

Danny Cullenward, Vice-Chair:

The Quebec data releases have been pretty close to the California releases, sometimes slightly lagged. With that information, it's really just a question of adjusting totals.

I believe everyone has announced 100% compliance so there's no surprise about the total numbers, but we don't know until we get those full data releases: did companies turn in 2017 allowances, did they turn in 2019 allowances? We don’t know the vintaging and composition, until those data sources come out.

Dallas Burtraw, Chair:

This was really helpful. Your presentation here clarified most of the choice for me, but the Q4 compliance instrument report – is its main contribution that, as Meredith just said, it organizes this data for us that we otherwise could do ourselves in a simple way? Or does it bring additional relevant information about 2021?

Danny Cullenward, Vice-Chair:

It would bring a slight bit of new information, which is that any offsets that are issued in between the compliance and instrument reports would show up and would not otherwise be captured. We could think about how to address that if we wanted to handle that detail, but as to the composition and location of allowances, the early methods should be predicting what we would expect to see, because the only opportunities for allowances to transfer, either from private accounts to government accounts or vice versa, occur at the auctions and at the compliance events, as well as at the free allocation of allowances. But because the free allocation of allowances for 2022 doesn't affect the third compliance period allowance budget, we don't have to worry about that detail.

So, to summarize, Dallas, it should show us the same thing, plus or minus slight differences in the offset supply which again are modest and could be easily addressed. Waiting would have the advantage of us not running any numbers. We would simply be observing a raw data source and explaining in simple terms what it says.

But we could move earlier. We could also propose a slight hybrid: proceed with the early calculations to make sure we have a sense of what we're looking at. If our final report is delayed past the release of the compliance report, simply update the numbers, and the citation.

Dallas Burtraw, Chair:

I hesitate to ask Committee members to do extra work if we can just wait and CARB is going to do it anyway. But on the other hand, I think we learn something from the exercise, or at least I will – Danny, I think you already pretty familiar with this. My only concern – which we might ask Malinda to reach out and come back to us as whether there is a concern at CARB – is that, somehow, we could make a mistake in what is, as I understand it, a very simple, adding-up exercise. But if we were to make a mistake and, as an official Committee of the State, to have our annual report come out with information that turned out to deviate very much from what's available in the early part of January, that, one could argue, affects expectations in the market. Maybe I'm being overly cautious on that. We should ask CARB to let us know if that's a concern. I wonder what the Committee thinks.

Danny Cullenward, Vice-Chair:

I welcome the Committee's input. I want to emphasize this: it wouldn't take a ton of effort and I am very happy to proceed in both tracks and to wait for the final outcome. These are really important questions.

We would not be doing any calculating if we wait. I am wide open to whatever approaches folks think make most sense. I am very happy to make sure that the approach we adopt is one that meets CARB standards for data integrity.

Meredith Fowlie, IEMAC:

My preference would be to proceed if it really isn't that much work, but to wait to release the official report, so that we understand where we seem to be, so that we can start to formulate the interpretation.

As Danny laid out, it's not just a table of numbers that we're proposing, but there's some discussion of what those numbers imply, so let’s take the time to know where we stand and we can start forming ideas about what that implies.

Katelyn Roedner. IEMAC:

I agree with that approach. My question was going to be similar to Dallas'. Danny, you've done these calculations before, and I was curious if, in the past, what sort of difference you'd seen between these calculations and then the Q4 report and that sort of thing. I'm just curious. Along the same lines of what Dallas was asking, if you expect any sort of difference between these two sets of information. It doesn't sound like it's anything significant other than, as you said, the issuance of offsets. I don't have strong feelings one way or another, but I think Meredith laid this out that it's worth doing this work but then waiting to release when we have the official numbers. That makes the most sense to me.

Danny Cullenward, Vice-Chair:

Okay, that all sounds really good to me. Again, we can't really move with the sort of faster method, until the data sources come out, so it's still a couple of weeks of holding.

Let me do some back-of-the-envelopes to see if we assume 100% compliance, what we're likely looking at that might form the basis of the discussion. I can very easily run the faster method as soon as the public data are available. Approximately two to three weeks later, we should have the final official data. I would not expect a significant difference. It sounds like, Dallas, subject to the timing of the report being pushed into early January, I would say this would provide us with the path to have the most

information and take the least risks, in terms of making sure we're confidently expressing what the data are.

Dallas Burtraw, Chair:

That sounds really good. Do you have, Danny, a strong expectation about when the Q4 compliance report will be out, or should we ask CARB about that?

Danny Cullenward, Vice-Chair:

We could certainly ask. I think there's a there's a clear pattern of that coming out in the first week of January. I'm not aware of any binding rules on that, but I would be delighted to have a CARB's input on that. It's literally in CITSS, a system that tracks holdings. They just press a button to generate a report. I should mention that we talked about this timing issue, whether or not we could have it by the end of this year, back in our 2019 report. It's not material. It's very simple for them to do, and they have a clear track record of doing that on a quarterly basis.

Dallas Burtraw, Chair:

I get a sense of the Committee that we understand where we want to go with us. So, Danny, you and Meredith carry on with the rest of your presentation.

Danny Cullenward, Vice-Chair:

I would be delighted to continue, but maybe you want to chat a little bit about the discussion around other kinds of buyers. We've been talking about the compliance perspective. Then there's other issues we've been chatting about.

Meredith Fowlie, IEMAC:

I can say a word on it, but I think that you've done more thinking about what we can actually do. I think the role of non-compliance buyers is potentially important to think about and Danny has already done some work, figuring out how we might get a handle on the changing or evolving role. I'm curious with the Committee thinks. Potentially, there's some reason to track this, to think about what role these non-compliance entities are playing – if this is people buying at a lower price with the anticipation of selling higher; or if there are various offset programs outside of California that are using

California permits to offset emissions outside but potentially re-injecting those permits back into California. Thinking about where they're going and how they might potentially reappear and when – it seems important to me in terms of tracking these things, but I don't know if I'm overly focused on this dimension. Danny, you were able to actually get a read on this.

Danny Cullenward, Vice-Chair:

Yes and no. I think one of the key challenges here is that we have public data on the share of buyers who are compliance buyers versus non-compliance buyers at auction. Coincident with the recent increase in allowance prices, we've seen an uptick in non-compliance buyers above historical norms in the last couple of quarters at auction.

Those are public data. We can look at those. The problem is that we don't know the intent of instrument holders. And the other major problem is that more and more of this activity, especially as it shifts to secondary markets, is coming in the form of futures and potentially derivatives, where the data on those will come more from the CFTC. They'll not be tracked in the allowance and offset tracking systems that the jurisdictions run.

And they introduced potential complexities. I mentioned to several of you just as a data point, that we had secondary markets trading almost $6 above the last auction. There was a significant correction, where at least at the time of the auction, the secondary markets expected a different price outcome than the auction participants did. That is potentially evidence that we're seeing different drivers and different purposes in those markets and, again, I think we want to be careful to talk about those issues. I agree, they're important and trying to understand them better could be useful, but the data are a lot harder to come by, as soon as we start thinking about the secondary markets.

Meredith Fowlie, IEMAC:

From my perspective, I've been thinking about why should this Committee and the public be interested in tracking this role, what kind of information would be useful, how would it be used? I don't have good answers to those questions, but as that role seems to be increasing, I think those questions become more important to think about and work through.

Katelyn Roedner, IEMAC:

That would be my question. What is the goal here? I certainly agree with both of you that it seems like the role of these non-compliance buyers is increasing. I see that as part of the functioning of a good market that you have this this investment. I would say at this point I'm not overly concerned about it, but maybe you guys are better at looking

down the road further than I am. I'm curious just to hear more about where you think this this should go.

Dallas Burtraw, Chair:

Let me follow you, Katelyn, by saying, I really agree with what Meredith and you just said. The role of these third parties in the market, according to theory, is essentially to sponge up risk. They make the market and help it function more efficiently.

But let me just channel what we might hear in public comments at the end of this meeting, or we might hear at a future date from compliance entities. If they perceive that non-compliance entity participation in the market is leading to price volatility, or raising price above fundamentals, then they're going to complain. Other programs that I'm familiar with have often heard the compliance entities argue that only compliance entity should be eligible in the auction. I think that's really bad design and all the other programs that I'm aware of have ultimately decided not to do that, but I do feel their concern: that if they if it feels like the market is being manipulated away from fundamentals, then it can make their investment planning and compliance planning challenging. So that's why I think it is proper for this Committee to be talking about this. I'm not sure that it leads me to suggest any type of action should be taken.

In the Regional Greenhouse Gas initiative, there is a market monitor who, after every auction, issues a fairly comprehensive report where they look for any evidence of market manipulation or other things. It's a series of standardized reports that are tables and charts that are filled in after the auction. I'm not sure who plays that function in the California market.

Meredith Fowlie, IEMAC:

I know that there are holding limits for compliance entities. Are there holding limits for non-compliance entities? What are the market rules that govern non-compliance entities? Danny, you probably know.

Danny Cullenward, Vice-Chair:

My recollection is that the holding limits apply that to all actors. I don't think anyone is suggesting that some of these out there are hoarding all the allowances, breaking the holding limit, or anything like that.

I think we are seeing the role of the non-compliance buyers grow in ways that are different than two or three years ago. To the extent that becomes important to outcomes

in the market, being able to speak plainly about what that is, could be important, potentially in relation to the sensitivities Dallas raised. Certainly, Meredith and I are not in this chapter saying why that's good or bad. It's just a flag. I think we're seeing that role grow, and that's just a dynamic that folks may want to pay attention to at some point in the future.

Dallas Burtraw, Chair:

I invite you to take a little bit more risk than that in the narrative. That's really great what you just said, just make this observation. That's helpful. But maybe it's worth articulating why this can be a good sign for maturing market, and why CARB or CalEPA may want to continue to pay attention to it. For example, the justification of holding limits, or something like that. I think that for lesser-informed readers, that might be a helpful paragraph in that chapter. But if that doesn't come together, easily without becoming too long-winded, then, never mind.

Danny Cullenward, Vice-Chair:

That sounds like a short non-judgmental description of some of the positive features and some of the potential risks that explains that to a more lay audience might be helpful. Again, I what I'm trying to communicate is that I don't think we're here to say, here's the one secret trick to understanding the market, or that it’s a really good thing or a really bad thing that's happening. But I think it is hard to look at the last couple of quarters and say this isn't an important driver in the results that we're seeing.

Meredith Fowlie, IEMAC:

Let's agree that this is something we should track. Are there some more information sources that could be useful? Because it's not something I have thought deeply about in the past.

Dallas Burtraw, Chair:

It doesn't necessarily belong in the report, but if there are some questions, like we just came up with about the application of holding limits or how this is being tracked and who is tracking it, Meredith, then we could send a message over to CARB and ask for answers to these questions.

There's one other topic I wanted to invite you and Danny to maybe touch on in this chapter, very briefly, because I believe that the CARB Board itself has taken a stand on the potential involvement of compliance entities in other jurisdictions. California

allowances could be used for compliance in other jurisdictions. There's nowhere that's really doing that, but you might remember 30 months ago or so there was a little bit of a flare-up, I think some misunderstanding, perpetrated in the trade press, about what might happen in another state, with one possibility being to use California allowances for compliance. I don't think that was very much planned on anyway. I think that precipitated CARB to develop a policy statement or something more. I think it'd be really interesting if you could include a very brief summary of that.

In other words, addressing the question, now that we have Washington State bringing its program forward and other jurisdictions also as well, they might see the California allowances as the gold standard, so as their prices rise up to some level, they would see using California allowances as a cost-containment mechanism.

So that also falls in the general rubric of non-compliance entities that we were just talking about. I wonder if you could just fill in for the reader where we stand on that issue. Again, if that turns out to be more trouble than I anticipated, then just drop the suggestion.

Danny Cullenward, Vice-Chair:

That's great. I think we'll look into that. Again, I think the challenge will be in not wanting to get out over our skis, but I think that what we're identifying is that there's lots of different ways people could use allowances, that are separate from complying with the cap-and-trade rules in California, Quebec or future jurisdictions. Considerations around those users are potentially things that people should be paying attention to.

Dallas Burtraw, Chair:

This is just terrific. You guys really set out really nice succinct content for this chapter and a really doable plan. Any other comments on this? And you have what you need from us?

Ross Brown, IEMAC:

Dallas, since it came up in the earlier item on the timing of the quarterly compliance instrument record, on the CARB website, they have January 7 as a posted date for issuing that. I think that's what we're talking about. I think that's consistent with what Danny was saying but, just want to confirm that's on the website.

Dallas Burtraw, Chair:

Perfect. Something to be revisited at the end of our meeting but that would feed into a schedule that might not allow draft narratives for all the chapters complete. We can be ratifying them while this information comes in. and we can measure it up against stuff that then Danny and Meredith might have already constructed, and allow us to get a report to the Legislature by approximately the third week of January. Really good. That was helpful, Ross.

The next topic on our agenda is the Scoping Plan. Katelyn is the lead on that and Danny and I have tried to provide some input. Katelyn, can you take over?

Katelyn Roedner, IEMAC:

Absolutely. In our last meeting, we had a quick update on the Scoping Plan from CARB staff. We wanted as the Committee to dig into this. We have this opportunity with the Scoping Plan to think about the 2030 goal and to think about goals after 2030. We also potentially have an opportunity in the Scoping Plan, for California to have it as a model for other jurisdictions, of how they map out meeting climate goals.

In this outline, we've started by a quick revisiting of the 2017 Scoping Plan and what CARB described as the goals and outcomes. and process there and in that. CARB evaluated the abatement potential of all of the existing policies and then relied on cap-and-trade to close the emissions gap between expected abatement and the overall goal. That really established cap-and-trade as this backstop policy to provide some level of certainty of meeting that goal.

Certainly, since the 2017 Scoping Plan – and Danny was really helpful in talking through this – we hear about cap-and-trade as the backstop. We also hear about the role of cap-and-trade in providing a steadily increasing price signal. We have these two goals of the program.

But, in the 2022 Scoping Plan that CARB is working on right now, it's very unclear what the role of specific policies is at this point. It seems that CARB has really articulated the intention of modeling outcomes, as opposed to modeling policies. It's been a little challenging to understand what role cap-and-trade or the LCFS or any other specific existing policy has in in meeting our climate goals.

It's a very different process this year, as certainly we heard from CARB. We all have a lot of sympathy for the challenges of planning over such a long time, from now until 2045, and planning for multiple goals at once. We have to meet the 2030 statutory goal. We have the 2045 carbon-neutrality executive order, but we also have this request from Governor Newsom to also consider a 2035 carbon-neutrality goal. CARB has a lot of balls in the air here, which we all have a lot of sympathy for.

The preliminary recommendation that I think worth thinking about is: suggesting that CARB establish, similar to how they did in 2017, a baseline of the abatement potential of all of the existing policies, including cap-and-trade. simply to understand, what we already have in the policies to deliver. Then consider what is that emissions gap and what is it going to take to close that emissions gap through: more or different or more ambitious sectoral policies, through a more ambitious cap-and-trade program, and through new policy that might be needed. But the point is to really consider the policies that we already have.

Dallas Burtraw, Chair:

There's a lot of responsibilities assigned under the Scoping Plan that go beyond the reach of this Committee. But what's really relevant to this Committee is the contribution from sources covered by the cap-and-trade program to achieving the overall greenhouse gas reduction goals by 2030.

In the past, there's been uncertainty about exactly how it would be achieved but, CARB, for the record, made a statement about what they expected to be the contribution from the cap-and-trade program. Now it sounds like they're that projection is even more vague going forward. This is, I think, what really should be of concern to the IEMAC.

Katelyn Roedner, IEMAC:

I think that's right. I would agree with that.

Danny Cullenward, Vice-Chair:

I'll add briefly, and I'd welcome Meredith or Ross's thoughts, but I think that another issue is that the legislative authorization of the program only extends through 2030.

And I think that it's hard to predict the drivers of supply and demand in market-based programs. No one expects anyone to make a 10-year forecast that's perfectly accurate for these systems. We could end up with outcomes in the mid- to late-2020s that are different than expectations. And then there's a need to think about renewing the program, which could add to the complexity of the situation.

So just be mindful of setting clear expectations and thinking about the role of the program. The more clarity and consistency that can be developed earlier, I think, the easier it's going to be to navigate the longer-term feature of the program – which, again, it's only authorized to the end of 2030, and it would take an extension through the Legislature to do that. So, to extend it to any future targets, including the one that's the focus of the Scoping Plan, I am mindful to follow that dynamic and I appreciate, Katelyn, your efforts to lay out the context and to encourage a little bit more clarity. On this I think

that's an important line we can be pushing towards, assuming that others agree with that as well.

Meredith Fowlie, IEMAC:

I'll build on that because that was the direction I was thinking of heading. One of the recommendations is to model cap-and-trade. That is a big ask and depending on how it's interpreted. I think we can ask about – and this is feeding directly into another chapter that we'll be hearing about – is anticipating, how many permits are in the bank, knowing what we know about the sources under the cap-and-trade program. make some attempt at projecting the emissions reductions that are achievable.

Because I think we need at least a sense of ballpark where we're headed, so that we do not surprise the market by reacting, later on, to something we could have anticipated now. I think that there's a lot we don't know, but, labeling the known unknowns and then trying to figure out roughly where we're headed, could really inform decisions now as to how we're going to respond as we get more information, so we can provide as much regulatory certainty as we can, while also building in some levers and response measures to keep us on track.

Katelyn Roedner, IEMAC:

Yes. that's really helpful from both of you. You can tell I'm not a modeler when I say things like, we can just model cap-and-trade. For those of you who actually do that work, I do appreciate that that's a huge task, so I like how you reframe that about projecting the emission reductions that that are achievable. I think it is really what we're getting to there.

Dallas Burtraw, Chair:

One distinction, as I understand it, the Scoping Plan process – I'm trying to follow the workshops as much as possible –has to do with 2045 and the 2035 alternative long-run forecasts. Danny brought up the crucial milestone of 2030 goals. Is the Scoping Plan organized to address that milestone specifically, or is it really looking over the horizon past 2030?

Katelyn Roedner, IEMAC:

It seems like it's structured to do both. CARB certainly has to plan out for 2035 and 2045. My understanding is that meeting the 2030 goal is obviously part of that. If we're

looking at a 2035 carbon-neutrality target, then we're going to have to overshoot that 2030 goal significantly.

That's part of what I understood from the CARB workshops I've been able to be part of. I think that's part of the challenge, that you know there's multiple time horizons here, that they are trying to think about all at once. That is a challenge.

Danny Cullenward, Vice-Chair:

It's also, I think, a subject of some controversy, because the law is very clear that CARB absolutely can consider longer planning horizons, for example, 2035 and 2045. I think everyone would agree that that's a perfectly permissible direction. There's also some clear statutory direction to plan for the existing legally-binding targets, of which we only have 2020 and 2030. So, there are multiple targets, bit only one of them is coincident with the authorization of the cap-and-trade program. I am going to be a little rude for a second: I think the idea of carbon neutrality by 2035 is not a realistic conversation at all. The longer-term targets invoke changes that are not commensurate with the current state of the program or statewide policy and are not aligned with the authorization of the cap-and-trade program. To begin with, I am really sympathetic to the challenges, but I think part of what we are seeing is some controversy about talking about the long term, versus focusing on the immediate steps, and a legally-binding target. I think a good climate policy analyst and advocate would say we should do both. But doing both is no simple matter.

Dallas Burtraw, Chair:

Right.

One of the things that had come up in our previous meeting and I think in your notes previously, Katelyn, was affordability, whether we should undertake an affordability analysis of an element of the Scoping Plan. Is that something that you have any thoughts about?

Katelyn Roedner, IEMAC:

I'm glad you brought that up because it was something I did want to raise with the full Committee. I had in my notes from our last conversation that that was something that we also really wanted the Scoping Plan to take a look. They have this modeling and then they're going to do an economic analysis and health analysis, but where did this question of affordability come in? I interpreted that specifically with respect to electricity. I'm assuming we're thinking about you low-income communities and rural communities and that sort of thing.

I was relying on my notes from the last meeting, so I don't have a lot more context on that other than, I think it would be worth understanding a little bit more from CARB. Maybe I need to go back and review the slides and presentation, about what is included in their economic analysis, and is affordability explicitly addressed in that, or not. I'm sure others have thoughts there.

Meredith Fowlie, IEMAC:

One question I think about affordability: it's part about what's it going to cost, but a big part is about who is going to end up paying. It's hard to say anything about that if we're not talking about policies, if we're only talking about what we want to do but not how we're going to do it and how it's going to get paid for. That is not a reason not to talk about it, but that's yet another reason to be thinking more about not just what the strategies are but how they're going to be deployed, because it's hard to get a read on incidence of we don't know how we're going to incentivize.

Danny Cullenward, Vice-Chair:

Just to connect the dots very briefly, we've talked a little bit about this as the Committee, whether the purpose of the cap-and-trade program is or should be a quantity backstop, or a steadily rising price signal. Those are two potentially different functions. They're also harmonious in certain circumstances. And I'll just suggest that if the purpose of the cap-and-trade program is to guarantee we hit our 2030 target, you would design and operated in a different way than if your purpose was to provide a big boost and a steady and predictable support structure that complements a variety of other strategies. Those kinds of issues are necessarily part of this broader question.

Dallas Burtraw, Chair:

Can you reply to this comment, Danny, and see if I got this right? You are building on things I think I've heard you say before. Because covered sources account for roughly 75% of greenhouse gas emissions in the state, even if we took a full-throated stand that the cap-and-trade program should provide a quantity backstop, it would be a quantity backstop for three quarters of the sources of emissions in the state, which leaves to the Scoping Plan process the job of addressing how to get from there to that last mile, so to speak. with what's happening at sources outside the cap-and-trade, I would look to the Scoping Plan process at least to inform me as to whether we actually see proportionally more or proportionately less emission reductions over the rest of the decade from natural and working lands and other sources outside the cap-and-trade program, versus the cap-and-trade program. If one cannot anticipate that emission reductions are going to be available outside the cap-and-trade program, then I would look at expanding the

ambition within the cap-and-trade program to achieve the 2030 milestone. Commensurately, if there are rich opportunities that are successfully harvested outside the cap-and-trade program, then cap-and-trade does not have to be made more stringent. Is there anything that you find wrong about what I just said. Is there anything that we can say that would be helpful about this?

Danny Cullenward, Vice-Chair:

No, I think those are all really good observations. I think it's just part of the challenge that we use this language, as if “backstop” guarantees that outcome. Not only are there no guarantees, but you have partial – not complete- coverage.

At the end of the day, any regulator, including CARB, has to be balancing the expected outcomes and tracking and adjusting, and at a minimum, you've got to be doing non-cap-and-trade targeting for the non-cap-and-trade sectors.

So, if you think they're going to perform similarly, push similar ambitions. If you think one is going to be cheaper or better or easier than the other, push on that one harder. I think having some clarity around that could be useful.

I don't want to take us away from what I understood to be Katelyn's main points of view, which is that we're not actually engaging in that conversation right now in the Scoping Plan process. To even begin to start to outline some of the broad contours could be a really constructive contribution, if CARB or others were to engage in that more directly.

Dallas Burtraw, Chair:

I think that was really nice way to wrap it up there.

The third topic we have is the border carbon adjustment and Meredith is the lead on that. I've provided some input to Meredith, and so can you lead the conversation, Meredith?

Meredith Fowlie, IEMAC:

I want to preface this by saying thank you to the Committee members, because I circulated a draft chapter and got some good comments already. I'll outline what Dallas and I had in mind to do with this chapter, but it's very much a work in progress. and we can take it in any direction.

The point of departure was the observation that the potential for emissions leakage has been a defining concern both in California, and also other jurisdictions like Europe and Canada. There's a lot of academic work that's been done, thinking about the different types of provisions leakage mitigation provisions what a policy maker could use in

theory: border carbon adjustments, output-based updating and variations on that theme. We don't have a lot of empirical evidence on how these policy provisions and features actually work in practice, but California has been pushing that frontier and we now have years of experience with both the border carbon adjustment, a version of that in the electricity sector as an example, and also output-based updating for emission-intensive and trade-exposed industries.

It seems that this is a good time to take stock of what we seem to be learning about that experience, from a California perspective – mounting climate ambition and rising carbon prices are only going to elevate leakage pressures – we are learning from what we've done so far in order to think about refinements potentially in the future. Also, when you talk in other policy arenas, Europe and other jurisdictions are also curious about what they can and can't learn from the California experience.

And also, there are a few papers. I picked three that all came out in 2021, Not everyone wants to spend their time paging through 60-page papers about leakage, but I think that there are some basic insights from this research that might be useful to share with a broader audience, an audience that can actually act on these insights. The idea with the chapter was to lay out why this is any important policy design question.

Note that California offers a unique opportunity to learn something about how these provisions are working. I summarize hopefully in a constructive and useful way what we seem to be learning from these papers.

I don't want to bore the audience with the details but just to flag what I have been taking away, in conversations with Dallas, Danny and others, from this work that could potentially be useful and instructive in California.

I want to remind everyone of why the electricity sector is so important, if you think about California hitting our 2020 goal of reducing emissions to 1990 levels early in 2016. My read of the numbers is that about 75% of those emissions reductions happened in the electricity sector, and over half of those – obviously the accounting is a little bit nuanced – were attributed to reduced footprint of imports. So, electricity imports have played an important role in reducing emissions associated with California consumption of electricity, at least on paper, However, concerns have been raised, that the reductions that we're counting on paper may either overstate the reductions or understate the true emissions footprint of electricity consumption in the state. That is something we should be paying attention to.

There are these three papers. I won't go into all the details but will try to put the details in the chapter. Here are some of the things I take away from the work that's been done. One: it's easy to say it's a great time to review the evidence, but it's really hard to understand what has actually happened, because you need to look at the emissions we've observed and compare it to some counterfactual estimate of what we would have observed in some world that we don't live in, where either the policy wasn't put in place or the leakage mitigation measures weren't put in place.

There's a lot of work that has to be done and there's a lot of uncertainty when we're trying to create a benchmark to compare what we observe against what we think we would have observed in some counterfactual world.

One of the papers compares the emissions and electricity production at power plants in the WECC, in the western electricity market both in California and outside. One challenge is that those outside California, but in the western electricity market, these electricity producers are affected by California's climate policy. That's the leakage question we're asking: how does the introduction of a carbon policy in California impact production and emissions outside? The authors match these electricity producers in the WECC with producers in other US markets, outside of the WECC, and assume that these observations of a similar power plants outside the Western market tell us something about what those Western power producers would have done absent California's climate policy.

The punch line of that paper is that the authors note that relative to these outside controls, we see a reduction in natural gas emissions and production in California, and we see an increase in coal plants the western market outside of California.

So, we might take from that, that there is evidence of leakage in the traditional sense, that we raise the operating costs of plants in California and that shifts production and associated emissions outside, and the implication if you interpret the results in that way is fairly high leakage rates. But one thing that's interesting, if you look deeper and you actually look at the hour-to-hour impacts on these plants, the reductions in emissions in California gas plants is primarily during the day. And the increases in coal plants is primarily at night. So, that's inconsistent with the textbook definition of leakage where we see a coincidence shift, because we don't have storage in these markets at that time, so we would have expected to see a coincident reduction and increase, if this were the standard leakage story. What I take away from this paper, it's a little more nuanced and one interpretation of this is being driven by the fact that we had nuclear reactors retired at the same time that the cap-and-trade program was implemented. We saw a big push to increase solar generation to fill that void. The solar generation in the middle of the day might push the gas production down, but we still need more baseload when the sun goes down. So, it's a more nuanced story.

Danny made a point I had intended to elucidate in this chapter. It's more complicated than that in California, because in the California electricity market, we regulate not only in-state producers, but also delivers of electricity to California. If you want to import electricity into California, you need to purchase permits to offset your deemed emissions – the emissions associated with those imports. There are two papers that have been really trying to get a clear read on this border carbon adjustment. and the extent to which is it is succeeding in including in the cap-and-trade program emissions not only produced in California, but associated with electricity consumption in California. I won't get into the details of those papers, other than to say that they are detailed simulation

models that think about how well the border carbon adjustment will work, given the way the border carbon adjustment works in California.

There's a default rate that I can pay as an importer, or, if I can point to a clean resource out-of-state, I don't need to pay that default rate. Instead, I need to pay the rate that's implied by the resource I'm pointing to as my source.

The concern about resource shuffling is that when if a resource can claim a zero greenhouse-gas emissions intensity, and therefore avoid paying any carbon compliance charge to import electricity into California, what you may see is clean resources preferentially dispatched to California. It is not like we're shutting off coal plants and firing up clean plants. We're just reallocating the dirty resources to supply load in areas that don't tax carbon and preferentially allocating the clean resources to California. There's been some simulation work that looks at this and conclude that the potential for resource shuffling is very high, given how much low- or zero-carbon resources there are outside of California.

Consider this: instead of allowing sources to forego the default rate in in favor of a rate that is consistent with the source outside of the state, require all imports to pay a rate that reflects the marginal emissions intensity of out-of-state resources. That could be a more effective way to mitigate emissions leakage via reshuffling, and then provide a more accurate accounting of the true carbon footprint of imports. Because of the Dormant Commerce Clause and other concerns about protectionism, that may be hard to implement. However, in the Energy Imbalance Market, we do have a version of a correction that adjusts the cap, accounting for this kind of resource shuffling in the footprint of imports. Where I'd like to take this part of the chapter is to note that there's real potential for resource shuffling, and that the literature is pointing to a design refinement that potentially could deliver a more accurate emissions accounting. There has been experimentation along those lines. The push to expand the expand the EIM to the Extended Day Ahead Market could offer an opportunity to learn from our experience today, and build on and refine, an approach that's been taken in the smaller EIM.

I want to say that the other part of the chapter deals with the emissions-intensive trade-exposed non-electricity sector. I think the chapter could say something about that, although we don't have as much empirical research to draw from. In that regard, we find ourselves at a point where the potential for leakage could be escalating, given rising carbon prices and mounting ambition. This could offer similarly an opportunity to revisit the design of that leakage mitigation provision.

Dallas Burtraw, Chair:

I thought that was great, Meredith. We appreciate you reading the 60-page papers and writing them occasionally yourself.

To go back through some of the topics you brought up, you mentioned the diurnal characteristics of changes in generation. Would you say it's plausible that, at least in the daylight hours, the stage is set for negative leakage? California could be contributing to emission reduction in the WECC, at least during daylight hours either now or maybe by the end of this decade. How does one think about that in the whole balancing question about laundering contracts, etc.?

Meredith Fowlie, IEMAC:

I think maybe the stage is set. Certainly, when you look at that paper you can't reject zero, in the sense that there's not a whole lot of evidence, that over the time period they were looking at, you were seeing reductions in the production of out-of-state thermal generation because we're exporting solar. Certainly, solar generation continues to increase, especially in the middle of the day. There's potential for that and I think I would turn to Jim Bushnell to refine that point and see the potential for negative leakage.

People have thought about this. To the extent that carbon policy has accelerated investment in clean generation that can crowd out dirty in the middle of the day, then that's a form of negative leakage. We can document and account for that. Do we claim it, do we use it to offset positive leakage in the evening hours? I think that's an interesting question. I haven't thought carefully about.it.

Danny Cullenward, Vice-Chair:

I think all of this detail is really good. We've got to figure out a way to make electricity markets and cooperation function well, and I think that's a core motivation for digging into these details. Something I like to come back to, in recognition of all the complexity, is right now the way the accounting system treats this leakage question is to use a fairly outdated and relatively crude way of looking at average Western emissions.

I think we have the data and capacity to go more granular in terms of geography and time. We've got to go more granular if we want to accurately capture the effects of regional cooperation. As we get more renewables on the grid, the middle of the day in many seasons is going to be a very low carbon time, and the evenings are going to be higher carbon. If you don't account for that difference, you will fail to capture the true climate consequences. I think it's a really important time to ask some of these questions.

I really appreciate, Meredith, you're digging in. I want to emphasize and I hope the chapter will emphasize, why it is so important to do this, and that is because you need to make climate policy and electricity markets play well together. And the better they play together, the easier it is to cooperate and unlock cheaper gains and achieve better

outcomes for everybody. I know you already think that. I'm reminded every time I dig into the complexity, that that is why the complexity is important.

One of the legal issues you mentioned that there may be challenges with applying broad averages to imports but not to the in-state folks. If you do that through a cap adjustment, then I think those risks are very different. And the more accurate you can get that, the better policy outcome. I think, also, the legal argument that you're accurately measuring the consequence, and you're making sure that the consequences are borne more by the broader system rather than by the individual participants, I think that will tend to reduce the concerns.

Ross Brown, IEMAC:

I think it's incredibly helpful to have you dig into some of the research that's out there and summarize what we know or don't know based on that research. As you said, not everybody has either the time or the technical skills to do that, so I find that incredibly important, so I appreciate that.

I think the discussion that you all had on the electricity side of things is very important and it sounds like there's going to be a lot of really good information and thinking around some of those issues.

Maybe you haven't had as much time to think about energy-intensive trade-exposed industrial sources. I do think that is also a very important and maybe even increasingly important issue with rising allowance prices. I understand that there are time and resource constraints on how much can be done within a month for this particular report.

I know that there are lots of challenges, Meredith in particular has done lots of work on trying to get at some of those issues and trying to understand what some of that leakage might be. But if there's any anything that could be done in the near term to help move that ball forward, either in collecting data or having additional research, or just other alternative strategies for trying to target free allowance allocations to mitigate leakage, if there's anything to help inform that discussion over the next year or so that could go in here, then I would push for that, because I know you're one of the foremost experts on that particular issue. It would be helpful to get your concrete thoughts around what could be done here in the near term that could help move that ball forward.

Meredith Fowlie, IEMAC:

That's super helpful, and I'm willingly pushed in that direction. The reason to hesitate is that we really tried to write the paper that said something about this for California, but the dearth of data on cross-state border trade has really frustrated any careful empirical exercise. With that big caveat out there, I think we were able to generate general insights about the cost of coarse targeting and the implicit design tradeoffs therein.

There is a placeholder for a discussion of at least general insights that can be drawn from the work that's been done that could have bearing on this conversation.

Ross Brown, IEMAC:

I can appreciate that one of the key findings is that there's not great data or it's very difficult to do the research in a way that comes up with a very concrete answer. It makes it difficult to come up with concrete recommendations. Maybe there will be some sort of number or some sort of adjustment and some sort of calculation that's made on how that piece of the program is implemented. If you have even just an inkling of some other strategy or other number or other kind of calculation that could be better than what we currently have – I appreciate that there we are all kind of operating in a world where there is a lot of uncertainty and limited information – I would like to get a sense of your thoughts.

Meredith Fowlie, IEMAC:

That's great. I appreciate that. We will push in that direction.

Katelyn Roedner, IEMAC:

I'm not sure I have a ton of specific feedback to give you, other than to say that I found this to be incredibly helpful to read through your summary of these papers. And I would also second the interest in the EITE section. Maybe the conclusion that Ross was just talking about is that more data is needed, but to the extent that output-based allocation is working or needs to be adjusted or is not working – I think those are all really important and relevant questions. I would be really interested in hearing the rest of the Committee's thoughts, I think that could be a very interesting issue to dig into here and maybe over the longer term as well.

Dallas Burtraw, Chair:

Meredith, can I ask two follow-up questions, one on each part of the chapter about the electricity sector? You mentioned the EIM and how the EPA or CARB canceled some number of allowances, commensurate with solving the model twice essentially and having a fairly reasonable estimate for the short run Energy Imbalance Market. But I've heard you say previously that it tallies to a relatively small volume of allowances that have to be cancelled, compared to what would happen if the EIM were to expand to a day ahead market. Would you conjecture that that is actually a bridge too far, that that type of approach cannot be used? More generally, are you optimistic that that Energy

Imbalance Market provides some kind of more timely information that works better than the first jurisdictional deliberate approach?

Meredith Fowlie, IEMAC:

Danny is the one who's made the most pointed comment. Certainly, there are refinements one can make. The EDAM is a tiny little market, which is part of what made it like the ideal vehicle, I think, to try and think through this and try potential solutions, I think, on the one hand, there are refinements one can make to the EIM adjustments, to make it more accurate and more reflective of the conditions of the market when the transactions are happening. There is a process in the context of the larger, EDAM-like planning process that's specifically thinking about greenhouse gas emissions and accounting. I think that the fact that it's large is more of a political question, I think that this particular solution that's implemented in the EIM, my understanding is that one can't simply pick it up and move it to the EDAM. It just doesn't work that way. But I see tremendous potential. One of the reasons to write this chapter is to express our enthusiasm or interest in seeing EDAM take this issue seriously, because I think the implications are serious enough to merit effort invested in thinking how an EIM-type solution could be refined and improved and extended to this larger market. I'd be curious if Danny, or others who are paying closer attention, feel differently.

Danny Cullenward, Vice-Chair:

No, I think that's exactly right. The solution can't just be ported over, even if you wanted to, and getting a handle on how to balance leakage risks with some of the legal issues and the fact that the current accounting system uses a WECC-wide average that's quite old and no longer represents the increasingly diurnal patterns of renewables oriented Western grid, it strikes me that this is a really good time to focus on that and hopefully an opportunity to figure out how to make those systems work across the different parties that would be involved.

I'm not following the process as closely as I used to. But I know that's been a sticking point in past conversations.

Dallas Burtraw, Chair:

Great. And my question for the second half of the chapter is about output-based allocation, in contrast with a border carbon adjustment that might be applied to cement or another industry. I've heard it discussed that the State might look at border carbon adjustment. I'm wondering if you know, or others on the Committee know, whether this

is something that's meaningfully pursued. In contrast, about output-based allocation, without being Pollyannaish, I have the sense that it works fairly well. I approached that by looking at the change in variable costs that are associated with compliance. That involves resource costs associated with reducing emissions and it involves the allowance burden. The output-based allocation is intended to offset the allowance burden for compliance entities, and to wit I'd like to know whether the EITE allocations are estimated to be greater than or less than the allowance burden that these entities would otherwise incur.

That was a bunch of questions rolled into one. My main question to you is, whether there is a meaningful border carbon adjustment for some particular industry that would be a substitute for output-based allocation.

Meredith Fowlie, IEMAC:

One of my ideas with the chapter would be not to answer that question, but to pose that question, and to compare those and contrast those two. It seems from my read and the outside looking in, that's where Europe is pushing. They're moving more towards a border adjustment for all for leakage-exposed industries. It's a question one could ask and think through what the implications are. I would turn to the lawyers to ask them what are the practical limitations for the State to do that. This chapter is to summarize what we do and we don't know about California's output-based updating program. and have some form of border carbon adjustment and think through in the qualitative terms, the pros and cons of making that move. It may be an academic exercise if it's not viable or possible. If there's zero probability we're heading in that direction, that might not be the most constructive conversation, but it's probably a good question to ask.

Dallas Burtraw, Chair:

Right, I agree, that's good. I don't know about Europe moving that direction, but indeed they certainly have expressed the intent to do so. But this is the second time they've reloaded and express that. There was also a target over the transition to 2020 and it was never approached, so now they're talking about approaching it with trends over the course of this decade, but observers hold different views on whether that's plausible or not.

So, this is, again, terrific work. My only concern for this and the previous two chapters you've heard about previously, is whether I've enabled and encouraged everyone to be overly ambitious and take on a lot of work. I think that the real world will discipline what can actually show up in these chapters. This was an outstanding presentation, Meredith.

The next chapter is on offsets, so I think we can move right into that. Danny, can you take this one away?

Danny Cullenward, Vice-Chair:

This chapter would start with the size of the offsets program, about which we will have a little bit more information when the compliance data comes out, to see how many offsets were used. We have the supply data already. We have well over 200 million offset credits, most of which come from the forest offset protocols. It's not necessarily large relative to the total supply of allowances, but relative to the emission reductions intended to be achieved by the program, it can be quite a big number.

A couple of concerns have come up. I've shared these research papers with the team. The first issue is some concern around the standards for additionality and offsets. There isn't a general distinction between what could happen and what would happen, which I think is at the heart of a lot of these issues. Projects can claim that certain things could happen. They don't necessarily have to establish that those baseline scenarios would likely happen. They're able to claim based on scenarios, if it's possible legally and economically, for those scenarios to manifest. There's been some reporting on large projects that have suggested that some of these projects may not be choosing realistic baselines.

A second concern is related to over-crediting in the program. My co-authors and I, in a paper recently published in *Global Change Biology*, documented what we see is a large-scale case of adverse selection, where most credits in the forest offset protocol are issued to projects on the basis of them having more carbon on their lands, relative to a calculated regional average. The paper makes the case, using program compliance data, that those averages are not accurate descriptions of what typical forests look like. It makes the case that developers and participants in the programs have preferentially selected lands that have naturally higher carbon stocks than the calculated averages that are used for crediting.

The final concern is around the permanence of some of these offset benefits. I spend a lot of time these days engaging with financial sector actors. I realize the extent to which this permanence question is really not well understood. When somebody emits carbon dioxide in the atmosphere, it has effects that last for hundreds to thousands of years. The question of temporary climate benefits, and what benefits those achieve, is actually quite complicated. California has defined the word permanent to mean a 100-year standard. So, the idea is that the claims that are being made are meant to last for at least 100 years. I think there's some unfortunate evidence that, especially with growing fire risks, our portfolio is not capitalized properly to address those risks. The program has an insurance-like program that sets aside a share of credits that can be used to compensate for things like fires or death of trees. The last two fire seasons have been very severe, and raise questions about how that insurance system is designed. I think

that it's increasingly clear that it is not set up to last 100 years. That is a challenge, separate from the challenge of whether or not 100 years really meaningfully reflects the permanent impacts that CO2 has when somebody chooses to admit it.

After introducing some of these issues that are going to a very high level, I think the next two steps would be to talk about Washington state, which has recently passed a cap-and-trade program that could be linked with California in the future. It has some distinct provisions around carbon offsets that differ relative to California and also share some similar features as well. The standards for offsets under the Washington State bill use the same language in terms of the basic requirements. But there's a couple of key issues that are distinct, and that have come up in Committee conversation, which I thought it would be useful to review.

Maybe the most prominent of which is that Washington State developed an under-the-cap approach for offsets, in contrast to the above-the-cap or outside-the-cap approach. In California the supply of allowances is given, and offsets are additional opportunities to emit. Covered facilities can emit more by acquiring offsets, because those offsets are meant to represent reductions achieved outside of the cap. So, they're essentially on top of the cap. Washington state, by contrast, has developed a system where they say the supply of offsets is actually reduced first, and the offsets are underneath the cap, meaning that they count toward the cap. And what's interesting about this is, if there are climate performance concerns around the offset credits in Washington, even underperforming or failed offset projects will not deviate the program design from its anticipated climate effects, because they're underneath the cap rather than on top of the cap. So, they're not extra opportunities to pollute. They're part of the emissions budget to begin with.

Washington State also has options for the air pollution regulator to condition the use of offsets if facilities are not adequately improving local air quality conditions. The tensions between local air quality conditions and offsets use have been a topic of controversy here in this State.

So, briefly describing some of the similarities and differences in the Washington approach, we thought it could be useful to summarize some things people are doing.

And then the last piece of the puzzle would be to talk about potential reforms, if policymakers decide that there are issues that need to be addressed here.

One of the directions that could be pursued is the out-of-cap reductions, currently funded through offset projects, through GGRF expenditures. Instead of funding the forest conservation efforts through offset credits that are generated, they could potentially be supplanted by public funding raised directly from the sale of allowances at auction.

It's possible to think about ex-ante market reforms as we think about supply-demand balance in the program. If there is understood to be a significant degree of problematic

crediting in this program. it may be useful to consider an ex-post adjustment, where you observe the consequences of less than perfect offsets and change allowance supplies going forward to address that.

It might also be useful to think about updating this buffer pool design, as we think about trying to make 100-plus-year commitments and a change in climate. The basis for the buffer pool designed does not include either geographic risk variation, nor climate risks. As we know, risks to forests are getting significantly worse already and will continue to get worse over time.

And there's also some possibility of thinking about the way that Washington State's approach to offsets includes some conditionality on the part of the regulator, that if air quality does not meet certain standards, they could change the eligibility for certain facilities. That's another potential reform that could address some of the problems that have been identified, if policymakers agree are concerns that could be remedied.

Katelyn Roedner, IEMAC:

Thank you so much, Danny. I think that was a really helpful summary and I think you've flagged some really some features of the Washington program that I find really intriguing and promising. I'm excited to see this this chapter come together.

Here are two additional ideas to throw out for you for consideration. The Washington program adopted California's approach to direct environmental benefits, but they also have specific set-asides for offsets from federally recognized tribes. In addition to the direct environmental benefits language, there's a specific provision to encourage tribal offsets as well. It might be something worth getting at who is benefiting from offsets, and who is not benefiting from offsets.

And you mentioned the optionality that the regulator has in Washington in terms of further restricting the use of offsets by specific facilities. Environmental Defense Fund had a regulatory petition in Colorado that included a similar provision, but was a little bit stricter: anybody who violates an air quality permit or has an adverse impact on a disproportionately impacted community is prohibited from using an offset. Another option to consider is to be even more restrictive around the use of offsets for facilities that are clearly in disproportionately impacted communities and having an outsized impact on the local air pollution in that community

Meredith Fowlie, IEMAC:

I was intrigued by the Washington discussion. I have some homework to do. I still don't know what it means. I thought the whole point of offsets was that there were several sources that were hard to bring into the cap – like trees. They are by their very nature outside the cap. I need to understand what Washington is doing to negotiate that, but

the point about limiting offset use based on local air quality, I found confusing. If I'm a point source of emissions and offsets or just another way to comply, shouldn't we also be limiting the ability to use permits? Why are offsets specifically targeted here? I think these questions just reveal my ignorance as to how the Washington program is working,

The second point was more germane to Danny's point about this ex-post adjustment. I think the concern about offsets is that they're inherently risky. It's really hard to anticipate the future. There are asymmetric information problems and adverse selection problems. A lot of Danny's work and others revealed that these concerns are first order.

Right now, when we learn that an offset project is under-delivering, it's too late. Those offset credits have been assigned and they've been likely used to offset emissions in capped sectors. My question is this: can we go even further and require that more of this evaluation happen in order to issue offsets? That could mean pushing harvest times later so that the reductions are realized over the near-term timeframe, not over 100 years. I would push even further and ask the question: can we require that the project. Investors take on some of the risk that offsets won't be credited If the emissions reductions don't show up as expected? Right now, it seems that the risk is entirely borne by the program.

I see great value in forests for ecological and carbon cycle reasons and reasons that evolve and unfold over decades, if not centuries, but that doesn't lend itself to the compliance offset concept. You're suggesting, Danny, that maybe GGRF funds could be used to pursue those benefits. If we're going to use these offsets as compliance instruments, can we constrain the types of offset projects to those where we can conceivably demonstrate that those reductions are happening over the relevant timeframe?

Ross Brown, IEMAC:

The one specific thing that caught my eye the most was the issue of trying to address local air pollution through restrictions on offsets, and the issues that Meredith raised: your questions about the fungibility of offsets and allowances; what would actually result in the local air pollution benefits; and how that compares to other options that might be available.

Dallas Burtraw, Chair:

It is not yet firmly defined, as I understand, in Washington State about how this element of the regulation would be designed and implemented. A most simple, and maybe least potent but still tangible way it could be implemented, would be to identify, either at the community air quality district level or an individual facility level, an expected annual rate of progress of greenhouse gas reductions. And if the if the air quality district was in a

non-attainment are for air quality standards, say, then individual facilities would be expected to at least maintain an annual rate of progress with respect to their greenhouse gas emission reductions, which might be commensurate with the state's annual reduction goals, let's say 4% per year. So, if you were in an air quality district that was in a non-attainment, and you are relying on purchasing compliance instrument instruments from other sources, such that you are not reducing your own greenhouse gas reduction that 4% per year, then you could not use offsets for that purpose. You could only use other compliance instruments. Because we think that there's arbitrage and these instruments can flow in and out of communities, it doesn't have a first-order effect on what the air quality outcomes are in those communities, but it does address head-on the deep skepticism of some California political thinkers, about the legitimacy of the cap-and-trade program. By precluding the use of offsets, because California enables offset use only at 4% per year currently on a facility-by-facility basis, if a facility in a community that was in a non-attainment area could not use its 4% of offsets, then the overall use of offsets in the state would be diminished. And that would ensure that there would be greater investments in direct emission reduction at covered facilities in the state.

You can probably think of three responses to that. With trading, much of that would be washed out, but I think it would be a signal of intent of trying to align the use of offsets with meeting both air quality goals and greenhouse gas emission reduction goals.

I think it's an interesting thing for Danny's chapter to be addressing. And one other comment, Danny. You mentioned that you itemize three concerns related to offsets performance: the additionality question, the moral hazard which had to do with problematic baselines, and permanence. A fourth concern has to do with direct environmental benefits. I think that we see an evolution in the way that policymakers are thinking about the cap-and-trade program, as increasingly aligning with the need to address air quality concerns, especially in overburdened communities. Hence the existence of the Environmental Justice Advisory Committee and its important contributions. And the way that CARB is relying on them to help design the program going forward. I think that direct environmental benefits follow closely on the desire to achieve our quality improvements. Also, as Katelyn suggested earlier, the investments in natural and working lands associated with offsets might be on a priority basis directed towards tribal land or communities that historically have suffered economic disadvantages or environment disadvantages.

There's beginning to emerge a multi-attribute evaluation framework for thinking about offsets. First and foremost, of course, we have offsets in order to achieve greenhouse gas reductions. But also, we're keeping in the same paragraph concerns about air quality improvements and distribution of economic investments and things like that. So, at the margin, there is a little bit of balancing where you might give up on some measure of a problematic baseline, if it was associated with an investment in a community of interest. I invite you to think about that at the outset of your chapter.

Danny Cullenward, Vice-Chair:

Thank you, Dallas.

I heard, actually from a number of people that there are these interesting tensions and overlap between offsets, air quality, and environmental justice distributional type effects.

Let me just be clear about my own position. I think that reviewing Washington State is very relevant because we have a new development, and some slight differences in the way that legislation is looking at some of these issues. And I think it's also fair to say that the compromise positions, reached in that legislation, use this discretionary control over offsets use as a way to navigate some of these tensions. I personally don't think that the link between climate pollution and local air quality pollution is as direct as those approaches seem to be premised on. I think that the political sensitivity is clear. But I want to be really clear that I heard from everybody that there's this tension around what conditions are offsets used. If you make those conditions about local air quality, it's very hard to figure out how offsets use does or does not impact local air quality. And I think there are some really interesting distributional questions about when offsets exist or other policy mechanisms might exist. Who benefits from them? Who might be harmed by them? Who might be seen to be harmed by them?

And let me do some thinking about how to articulate that. I'll just put my cards on the table. I really think it's hard to make large-scale offsets programs work, I don't think there's a single example of a large-scale offsets program that has delivered on its climate claims. And I think if you look very carefully at the climate claims, then offsets may not be the right mechanism to pursue the out-of-cap reductions and distributional goals that the current program serves. And it may be that alternative policy mechanisms will better balance the funding needs for forest conservation and the distributional concerns about making sure communities of interest received adequate funding for those priority efforts, without exacerbating the tensions or use around offsets.

I do think the most compelling climate claim to be made about offsets is less when a particular facility uses X number of credits, what would have happened if they weren't allowed to do that, because these instruments are fungible. Rather, the bigger question Is this: if you have 200 million of them, how much are you actually pressing on the program, versus pressing on out-of-program reductions? And that, I think, is ultimately what we're talking about here.

Katelyn Roedner, IEMAC:

I don't disagree with that. I think that this question of local air pollution and offsets gets back to one more option for flexibility. If you're a facility that has all these options to comply, but you're also contributing disproportionately to a really bad air-quality situation

in a local community, then taking one of those options for flexibility off the table does not seem unreasonable to me. I don't think you can draw this straight line between offsets and the pollution around me in San Joaquin Valley, but I do think it's an important carrot-and-stick conversation about how we spur more ambition.

Dallas Burtraw, Chair:

Danny, do you have anything more on this?

Danny Cullenward, Vice-Chair:

No. Part of this is going to be drafting the stuff and I'll be looking forward to careful feedback from all the Committee members. I appreciate that there are a lot of things here. I'll try and make this concise and something we can all agree on. I think there's a lot of complexity here. I may end up having a stronger position than the group, but I don't think you can make large-scale offsets work, I think they invariably end up with low quality outcomes. And I think we're seeing that again for the fifth major time that this has happened in offsets markets. So, I'm concerned about that. I'm open to any discussion constructively about how to engage that responsibly and I think that discussion has to begin with the premise that offsets serve legitimate functions right now that need to be understood. Any policy reforms to address any problems that there are in the current system needs to account for those functions and benefits in a way that is constructive.

Meredith, back to your question. Is there a way we can condition the credits on actually observing something? Almost all the credits are counterfactual claims about things being cut down, not about trees being grown. We can observe the trees growing. That's not really where the credits are flowing.

Meredith Fowlie, IEMAC:

This is not unprecedented. For example, in energy efficiency, if you had some randomization or some design feature, you could measure the emissions reductions achieved relative to this control group. This may be La-la Land fantasizing, but the point that you just made is really important. Offset programs are here. You have your concerns – and to some extent I share them – about the role that they should be playing, but to the extent that they are playing a really important role, what are the most constructive things we can offer in terms of improvements that are viable?

Dallas Burtraw, Chair:

Danny, I think you're handling this complex set of issues really well.

And I remind the Committee that if the lead authors of the chapter make statements that one cannot align with in an important way, then you are invited to write a detracting opinion that will be appended to the report.

Danny, even if you may have issues with respect to offsets generally, we know that they are legislatively authorized, as Meredith says, they are with us. But there are opportunities for incremental reforms that pry open the door for new models. For example, I really am a fan of your suggestion of using the Greenhouse Gas Reduction Fund for direct investment in natural and working lands. One thing may lead to another, in terms of expertise and a recognition that that's performed well and that it might be expanded over the course of future years.

The fifth chapter has to do with market design, and this is one that I am the lead and the whole Committee expressed interest in this topic, because it encompasses topics that we've written about in previous reports for two or three years.

There are five topics that fall into this. I acknowledge the mantra that shorter is better and will be more influential, but there's a lot of topics that fall into this. would like some critical thinking about what should be taken out of the chapter, as well as what might be added in.

The five topics that fall into this are: adjusting the supply of compliance instruments; aligning the consignment auction with the revenue raising auction; evaluation of EITE allocation; consideration of air quality protection; and illuminating expectations for the carbon market.

So now we'll go through each of those five as briefly as possible.

About adjusting the supply of compliance instruments, the context here is that there are three main sources of compliance instruments in this decade that are relevant for compliance entities: newly-issued emission allowances, which come through the auction and are given away for free to EITE industries; the privately held bank, carried over from previous compliance periods; and the eligibility of new offsets. I think that CARB is interested in identifying whether the number of compliance instruments is consistent with what will be asked of covered sources of the cap-and-trade program over the course of this decade. And if there is a misalignment, then an adjustment to the supply of compliance instruments would be called for.

We've identified, in previous reports, various ways that that could be done. In this report, we hope to add a little bit more guidance about preferences over which one of these, and what are the advantages and disadvantages of these different types of supply adjustments.

So, we identify criteria that we might keep in mind. First, preserving the value of bank allowances, as that's important to preserving the incentive for early action. That does not mean preserving the number of bank allowances necessarily, but preserving their economic value, because the value of bank allowances could increase or decrease depending on the kind of supply adjustments that are brought forward. Second, avoiding disruptions that create perception of regulatory uncertainty. Third, supporting smooth operation of the market. Fourth, gradually increasing allowance price. Fifth, improving the stability of auction proceeds that contribute to the Greenhouse Gas Reduction Fund.

We identified two kinds of potential adjustments: one is administrative and the other is automatic.

Administrative adjustments could be changes in auction volumes, and on a going-forward basis, changes in the freely allocated allowances and changes in offset credit availability.

Automatic adjustments could be things like linking auction volume to the volume of offset use; for example, withholding allowances in the auction commensurate with the certification of offsets. This is the Washington State approach, as Danny was already talking about. Or, for example, raising the price floor or creating additional price steps in the allowance auction, such as an Emissions Containment Reserve, which was implemented in RGGI, starting in 2020, and is described in the Washington state legislation as a feature of their legislation. A focal point for doing this would be something like midpoint between the first Allowance Price Containment Reserve and the price floor, that some quantity of allowances that otherwise would be available would be not be available for a price below that level. Or, for example, implementing a quantity-based adjustment to the auction buying similar to the Market Stability Reserve that the ETS implemented. There is a large set of potential options that are available.

I think we'll take go a little bit further in this chapter, with your help, of identifying advantages and disadvantages of each. That's what I would hope that we could accomplish – not trying to make recommendations, but to set out important questions that should be considered.

Also, how might allocations to rate payers and EITE industries be affected? And how might the Greenhouse Gas Reduction Fund revenues and the value of bank allowances be affected by changes in allowance supply?

That's constitutes half of what this chapter is about. but it's just one of the five topics that are addressed.

The second is simply aligning the consignment auction with the revenue-raising auction. In a previous report, we've described how the consigned allowances have a priority sale in the auction. If the price floor is binding, some of the Greenhouse Gas Reduction Fund allowances don't sell, but all the consigned allowances might sell or they would sell first. This leads to variability in the revenue coming to the Greenhouse Gas Reduction Fund.

Also, it leads to variability in the revenue going to utility customers in proportion to the costs that are incurred associated with the market. So, if the price floor is binding, then the utility customers are still getting more than a pro-rata share of the auction proceeds. This could be aligned, for example, by proportionally scaling the sale of consigned allowances with those that are part of the Greenhouse Gas Reduction Fund. This would add to stability of both revenue sources for both of those revenue users.

And in addition, the State should look for ways – I mean that “should” word there – because I personally feel – and we have said this for three reports – the State should look for ways to improve the visibility of consigned allowances for utility customers. I say this, because recently, a friend of mine – who I talked to about cap-and-trade trade, not an economist – first became aware just two months ago that he was getting a climate dividend, even though he's had several before, because finally, the State sent an email that had a nice presentation of this. I think that the when you're doing something that's to the benefit of people, you've got to bring it to their attention.

The third topic was to evaluate the EITE allocations. This can be done on an ex-post basis, now that we're at the end of the third compliance period. As free allocation contributed to the growth of an emissions bank, the free allocation has been greater than emissions from those industries on an industry-by-industry basis. There's something to be learned from that, because there are opportunity costs associated with free allocation to industry. Could the adjustment of EITE allocations align with an adjustment to the consignment auction and align with variation in sales of Greenhouse Gas Reduction Fund allowances? If the price floor or price step were to bind, then all three sources of allowance would scale proportionally. That could be done by bringing in the EITE allocations.

Fourth, the air-quality protections and the sort of overlaps. We talked about offset use previously, so I don't think we need to say more about that here. It could be struck from this chapter because it's going to be talked about in the offsets provision.

And the fifth is something we've all talked about before, which is to illuminate expectations for the carbon market. Much of the conversation we've had this morning has been about that, within the context of the Scoping Plan process. I don't think we can ask for the final word on this. We could ask the Scoping Plan to do a better job of describing what is going to be the contribution from covered sources to the State's overall goals for achieving its 2030 milestones and its long-term goals.

I'll just remind you of what the five topics were and then I'd like to open it up to discussion. These are five topics: adjusting the supply of compliance instruments and various ways that might be accomplished; aligning the consignment auction with the revenue-raising auction; evaluating EITE allocations and possibly aligning those allocations with the consignment auction and the revenue raising auction; air quality protections; and illuminating expectations for the carbon market and the Scoping Planning process.

Danny Cullenward, Vice-Chair:

Dallas, we've talked a lot about some of these issues in previous reports.

Dallas Burtraw, Chair:

It's old to us, but it may be new to some of the other people whom we want to serve with this report. One of the things I talked about two meetings ago was this year to do a better job of outreach. I would like to involve everybody on this call right now: outreach to members of the Air Resources Board, possibly a presentation to the Board, and awesome discussions with individual legislators.

These are not things that are offered as short-term fixes, but the can shape thinking on evolution of the program.

Katelyn Roedner, IEMAC:

I agree with that, Dallas. More proactive outreach could be really helpful in getting some of these recommendations in front of the right eyeballs.

I would want to understand better, before we made a recommendation with respect to aligning the consignment auction with the revenue raising auction. That makes sense makes sense to me, but I'm recognizing that that climate credit has an impact especially for low-income ratepayers, I would want to understand the equity impacts of rearranging that. Maybe it is more than offset by having more predictability in the GGRF, and the ability to more predictively fund other programs. Since the State looks toward that climate credit and some of the GGRF investments as a way of helping to further equity and environmental justice, I would want to understand what those implications could be, before recommending something that might change how revenue is raised in a consistent way.

Meredith Fowlie, IEMAC:

I share Danny's we've-been-here-before sentiment. To put a finer point on it, one reaction I had as I read through this: could number five come first? The document talks about criteria that could guide CARB if an adjustment is necessary. Could you be more pointed in your discussion of how to conclude that an adjustment is necessary?

Such as, what we're going to learn or what we are learning about the size of the bank and other factors. I think that one of the reasons we keep having this conversation is that we're not as pointed in making a recommendation, while we've got to be careful and we don't want to overstep. In your judgment, what would constitute evidence that an

adjustment is necessary or what should push us to pursue such an adjustment? Then in the discussion of making an adjustment, what are the criteria? You came to that at the end when we're thinking about the expectations for the current market and delivering progress on targets.

I had only other two comments.

One. The EITE allocation issue is one that I'm really interested in. Putting a finer point on how, as you said it in your comments, that could achieve multiple objectives, both in terms of thinking about some of the liquidity concerns that will be raised in another chapter, but also as a potentially important lever for making adjustments if they're deemed necessary.

Two. Katelyn's good point about thinking about affordability and equity when we're thinking about the climate credit. It's a very blunt tool. Right now, we all receive it. I think that there have been some discussions about how one could make it more targeted or repurposing this as a means of funding more targeted affordability measures. It builds on your comment we should think about the implications. We should also think about the limitations of how we're recycling these revenues and whether we could be more surgical and do a better job of achieving whatever objective we're trying to achieve, or we're trying to make people love the cap-and-trade program. If we're using this partly to address affordability, then it seems that there's a lot of refinements that can be made.

Dallas Burtraw, Chair:

Meredith, two responses, then maybe others can weigh in. I think that this is hard and at a higher pay grade than we can advise on this. When is an adjustment necessary? We can put all the evidence on the table and offer a view, but it's not our determination. I hope that the compliance event chapter puts a lot of that information on the table. That chapter lays the groundwork for looking at what is going to happen in the rest of this decade, in terms of available compliance instruments and what are the 4%-per-year reductions from covered sources.

Meredith Fowlie, IEMAC:

I'm not suggesting that in this chapter you alone will determine whether it needs an adjustment, but just some discussion about how to think about the theory. Maybe it's simply the point of that chapter as to the kinds of evidence that one can bring to that assessment.

Danny Cullenward, Vice-Chair:

Just thinking about this, Dallas, there are three different tracks. How can you tell whether or not there might be a problem? What would you do if you found a problem? As the Committee, we've deliberately avoided saying whether or not there is an issue that needs a remedy. I wonder, given the turnover in legislators and CARB Board members and other audiences for the report, whether it be useful to articulate that philosophy. Because I think part of what is going on is that we aren't saying those things, and there may be a good reason to not say those things, so I think we've been appropriately cautious as the Committee. But to the extent policymakers find themselves weighing policy judgments that turn on technical matters where we could engage, I think that being clear that we have not done that is useful, especially if you want to do outreach to the various policy audiences, I think, to invite input on whether or not that's needed could be helpful. It would be inappropriate for us to take that mantle on. But I think we are intentionally avoiding, as a philosophical posture, directly addressing that question. and I think the policy audience readers of the document should hear that. To the extent they follow up on issues, that is something for them to bring to our attention rather than for us to bring to their attention.

Dallas Burtraw, Chair:

Danny, I think I agree with you entirely. You're going to have to help with the narrative. Also, this is the kind of information to put in the framing introduction to the report.

The other thing that you raised, Meredith, I am more sheepish about. I have vacillated on this question about addressing changing the priority for use of funds that constitute the climate credit, whether it be, as it is right now, a universal equal-per-customer amount. Or whether, Instead, as we talked about, a priority recipient should be low-income households. Or whether, alternatively, it should be used to reduce the volumetric electricity rates. which might help accelerate electrification in the state. There's a lot of competing useful purposes for a small pot of money. I became sheepish about thinking that we'd say very much about that. But I could easily be convinced that we should be saying something about that. I'm just not sure.

Meredith Fowlie, IEMAC:

I wasn't pushing in that direction. I think that if affordability is being used as a reason to preserve this particular credit, then there are sharper tools to use to go after that objective. I'm not suggesting that that is the most important, especially given the opportunity cost of spending time on that piece of this report versus the other pieces that you're taking on. I would prioritize the others.

Dallas Burtraw, Chair:

It's a conversation for outside the Committee. I personally am a fan of the climate dividend. I think that if properly advertised and communicated to those who receive the dividend, it conveys a kind of a sense of ownership of the program. There's a lot of money illusion – we know as economists – out there. Just getting a small sliver back of what constitutes your household budget's contribution to the cap-and-trade program really feels good. I have had multiple conversations with people who are not aware of their climate dividend. When made aware of it, they're very happy about that. I think it's a positive element of the overall program design, with only a relatively small sliver of allowance share.

Do you have more to feedback on this chapter? This chapter is a bit expansive. We're still trying to keep it concise as possible.

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Katelyn Roedner, IEMAC:

You flagged number four, that potentially overlaps a lot with the offsets chapter. Number five potentially overlaps with the Scoping Plan chapter. I don't have strong feelings about where things end up, but I think those are two areas where we should make sure that we are not being redundant.

Ross Brown, IEMAC:

My personal preference would be to prioritize ones where we think it's either the most important issue or we have the most value to add. My personal opinion on that is the first item on kind of adjustments to the supply of compliance instruments. It is one of, if not the biggest, ongoing issues around the program. We've talked about it a lot in previous reports, but I think that's where the Committee can add potentially the most value. To piggyback onto the previous conversation around that question on when is it appropriate to make adjustments to the supply, If the Committee is comfortable, providing some additional thoughts on that particular question could be very helpful., If we know that there's a bank of allowances of a certain size, compared to what our 2030 goals are and what the emission caps are out to 2030. Maybe there is a risk that the program isn't aligned with those goals. It doesn't necessarily mean that you will come to a definitive answer on that question, but at least provide some context around how to think about the size of that bank relative to the goals that we have as a State.

Dallas Burtraw, Chair:

We've gone through the subcommittee review of annual report chapters. We still have to do the discussion of administration, which is essentially talking about the logistics of

how we're going to finish everything and then offer the opportunity for public comment on Items not on the agenda. But, since we are just finishing a major agenda item, we need to pause now to give the opportunity for public comment on the things that we've just been talking about.

Nick Burki, Anaheim Public Utilities:

I work for Anaheim Public Utilities.

In regards to your first bullet point the way you described it made it sound that the options in terms of adjusting the supply were to decrease the overall number of available allowances or the freely allocated allowances to industry. My question was this: if you lower the number of freely-allocated allowances, would there be a corresponding and equal decrease in the overall budget? Those allocated allowances are a subset of the overall budget.

Dallas Burtraw, Chair:

That's a really good question, and there's no one single right way to answer that question. If one is concerned primarily with the number of compliance instruments that are going to be available this decade and the emission reductions that are necessary across covered sources, then we're looking for a way to reduce the compliance instruments. One could do that proportionally across various sources of supply, or one could target just those allowances for the Greenhouse Gas Reduction Fund auction, etc. I was framing that more as a question then as an answer, to make explicit the design choice here.

I separately talked about an evaluation of the EITE allowances, to address whether they are sufficient or overly generous, compared to the emissions and costs that are incurred by those trade-exposed industries.

Nick Burki, Anaheim Public Utilities:

I remember you mentioning that and it's actually my follow-up point. I think that would actually be a very good analysis, if CARB would make the data available to the IEMAC. I'm speaking from my perspective as an energy provider and an LSE. All the freely allocated allowances go towards keeping our rates low and manageable. I work for Anaheim Public Utilities, a publicly-owned utility, so we are our own rate-makers. Our civic duty is to keep rates low for our customers. We have found that in the past, it is easy for CARB to adjust the number of allocated allowances to POUs in order to increase auction participation, rather than decreasing the overall budget, because that will impact the State's revenue in terms of the auction. I'd be appreciative if the IEMAC

could take a look at that and definitely differentiate between the overall budget and the allocation to entities.

Dallas Burtraw, Chair:

One point that we've made in the previous report, which I think we the Committee would expect, that if there was a constraint on the supply of allowances in the program, the revenues going to the Greenhouse Gas Reduction Fund would actually increase, because there would be a change in price and change in quantity, which has to do with elasticities in the market. It would affect revenues by constraining supply, so that is an advantageous element of looking at a stricter supply allocation in the future.

So, let, let us move on now on the agenda to the discussion of Committee administration, which is essentially setting future meeting dates and timelines.

In order to comply with the Bagley-Keene requirements, if we were going to have another meeting, and it was before the holidays, it would have to be between December 13 of December 21.

December 13 as the earliest if we were to decide right now today and the agenda were put out today. That would have adequate public notice. I don't think that's possible.

My preference is that I would like to see Committee input and then give back to the Committee a complete draft, even if it's still subject to a lot of revision, before the holidays. The problem is when would that become available to the public and when can we meet and talk about it. It has to be posted 10 days ahead of time if we're all working from a common document.

Alternatively, we would have to continue to just share versions of our draft narratives on a bilateral basis and then bring them to the next Committee meeting.

We're running up against the end-of-the-year stuff and we're going to wait for the compliance event in the first week of January.

Katelyn Roedner, IEMAC:

You're suggesting that we make sure we have a draft report before the holidays that could be available for public comment. And then we would meet in the beginning of January to finalize, Am I am I following correctly?

Dallas Burtraw, Chair:

No, Katelyn, actually you're leading correctly, because I wasn't quite as articulate as that. But I think that's a good formulation of what I was just putting on the table.

If everybody could come up with a draft narrative of their chapters, continue to seek input from other Committee members as much as possible on a bilateral basis, and then submit to Malinda a draft chapter before your holidays, which would be targeting December 21 as the last day, then we, as well as the public, would have a chance to review those. We'll look to set a meeting time around the first or second week of January. How does that sound to the Committee?

Danny Cullenward, Vice-Chair:

I think it'd be useful for us to meet in person. Katelyn, as a reminder since you're newer to the Committee: we can approve things in writing if we were to reach consensus. We can take an action by writing. That's what our Handbook says. But I think we're far too premature for that to be on the table immediately. I think that would be very helpful to have a draft document that could be circulated for our last round of Committee input and any public feedback. That would be consistent with a meeting in early January, followed by any last edits that come out of that meeting or the public comments from that meeting.

Dallas Burtraw, Chair:

I think it could be a less arduous meeting than this one has been. We could definitely find where there's really important points that have to be talked about. And we can talk about also the dissemination strategy for this report, which we haven't really done with previous reports.

I like this plan. We could ask Malinda to poll the Committee, right after this meeting, to look for a date, sometime after the compliance event, which is January 7. I would suggest the week after January 9 to look for a chance to wrap everything up and ratify our work.

Meredith Fowlie, IEMAC:

To make sure I understand the idea: it is to get a drafty draft around to people over the coming weeks to get feedback, and then act on that, then have a penultimate draft that we submit to Malinda by December 21.

Dallas Burtraw, Chair:

We'll ask Malinda to poll for a time where we can all meet in the second week of January.

The last item on the agenda is public comment on items not on the agenda, but we will also entertain comments about the agenda. Let me start with Ignacio Fernandez.

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Ignacio Fernande, Southern California Edison:

My question is related to the soon-to-be created Washington cap-and-trade. You mentioned that the offsets would go under the cap. What regulatory changes will be needed to link these markets, given that the Washington market would not be fit to be linked to the WCI?

Danny Cullenward, Vice-Chair:

I may have done a poor job of explaining the under-the-cap over-the-cap difference. I don't think personally that policy design has any implications for linking. I think it's a policy choice about how to set up a program. The link will have implications for the flow of compliance instruments trading from one jurisdiction to another, and therefore may have implications for the policy goals of one jurisdiction or another. But I don't think that the policy choice about whether to have offsets above or below the cap is in any way a technical barrier. Dallas, did you or anyone else have any comments about that?

Dallas Burtraw, Chair:

I think that's right. I think we're not in a position to address the manifold considerations that precede linking and the negotiations to linking. One observation to be made is that the Washington State approach, if anything, is potentially more stringent with respect to the eligibility of offsets or their role in the program. That would seem to satisfy the criteria that California has identified for making linking possible. I don't see that it's a barrier to linking, but also, it's not something that the Committee has studied.

Malinda, I don't see any other comments coming in, so I'm going to move to adjournment.

And I want to just say, this was really a good meeting, a really substantive meeting, and really reflects a lot of hard thinking by the Committee. I can't thank you enough. I really appreciate it.

I hope we can get our work done before the holidays and I wish everyone the best.