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BEFORE THE
CALIFORNIA ENERGY COMMISSION

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2015 Integrated Energy Policy Report (*2017 IEPR)*	)	Integrated Resource Planning

Joint Agency Workshop on Potential Methodologies to Establish Greenhouse Gas Emission Reduction Targets for Publicly Owned Utility Integrated Resource Plans

CALIFORNIA ENERGY COMMISSION
HEARING ROOM A, 1516 NINTH STREET
ART ROSENFIELD HEARING ROOM
SACRAMENTO, CALIFORNIA

TUESDAY, APRIL 17, 2017
1:00 P.M.

Reported by:
Kent Odell

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CEC

Commissioners Present

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Karen Douglas, Commissioner, CEC

CEC Staff Present

Heather Raitt, CEC, IEPR Program Manager
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Presenters

Richard W. Corey, Executive Officer, CARB
Mary Jane Coombs, CARB
David Vidaver, CEC
Garry O'Neill-Mariscal, CEC
Moderator Michael Sokol, CEC
Justin Wynne, CMUA - (Braun Blaising Smith Wynne)
Tanya DeRivi, SCPPA
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Public Comment

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I N D E X

P R O C E E D I N G S

APRIL 17, 2017 1:03 p.m.

MS. RAITT: All right. Good afternoon. Welcome to today's Joint Agency Workshop on Potential Methodologies to Establish Greenhouse Gas Reduction Targets for Publicly Owned Utilities Integrated Resource Plans. Yeah. So we're just going to get started here.

I'm Heather Raitt. I'm the Program Manager for the IEPR. A few housekeeping items I'll go over quickly. If there's an emergency and we need to evacuate the building, please follow Staff to Roosevelt Park, which is across the street diagonal to the building.

Today's Workshop is being broadcast through our WebEx Conferencing System and parties should be aware that you're being recorded. We'll post the audio recording on the Energy Commission's website in a couple days and a written transcript in about a month.

At the end of the day we will have an opportunity for public comment and we're asking the comments be limited to three minutes. Please fill out a blue card, and that's at the entrance, if you go ahead and give it to me. When it's time to

comment please come to the center podium and identify yourself and speak into the microphone, and please give your business card to the court reporter.

For WebEx participants, you can use the tap function to tell us WebEx coordinator that you'd like to make a comment during the public comment period, and for phone-in participants we'll open the lines at the end.

Materials for the meeting are available at the entrance to the hearing room and listed on our website, and written comments are welcome and due on May 1st, and the notice provides information about how to submit comments. And with that, I'll turn it over to Chair Weisenmiller.

CHAIRMAN WEISENMILLER: Thank you. Like to thank everyone for being here. I think one of the things that SB 350 did, and certainly, stepping back to the Scoping Plan from the Air Board and the Governor's State of the State and then the legislation, I guess, in terms of the flow, it really started to crystallize everyone to focus on greenhouse gas emissions.

And certainly, come out of 350 one of the things which we need to do is resetting greenhouse gas emissions for -- we, meaning all the collective

agencies -- for greenhouse gas emissions, and basically looking at how we're going to achieve those through the IRP process.

And so one of the questions always becomes, what's the baseline? You know, we can't be in a situation eventually where we know that say we're not meeting the targets, but we're not clear who or what the responsibility is.

So this is part of the foundation, then, is to have this Workshop today on potential methodologies. Alternately, what the -- I was going to say the Air Board's going to have to figure out how to allocate it across the various IOUs, POUs, LSEs, et cetera, but at least this is one of the foundation steps in trying to get the baseline together. So with that, Richard.

MR. COREY: Yes, thanks, Chair Weisenmiller, and good afternoon. Great to be here. What we are looking for this discussion, we're really excited about the discussion because I think it's going to be useful in terms of informing the methodology in terms of the GHG targets for LSE.

So SB 350, a lot of elements to it, but the element we're focusing on is both the GHG sector based target, and then ultimately, how do you roll

that in, just as the Chairman said, to LSEs. And I think and the other thing we're thinking about is the interaction that the Chairman also mentioned with respect to the scoping.

So in parallel to this process we are continuing to work on the Scoping Plan and having an overall strategy that clearly includes the electricity sector contributing to how we're going to meet the garget called for SB 32, a 40 percent reduction in GHGs.

So in the draft we have a range, and clearly, that's an area that will continue to be worked on. And we're getting comments that that'll be useful as we think about the electricity sector going forward with an RPS of 50 percent, with continued energy efficiency and reduction in consumption.

Even with the significant transition that's playing out in the transportation sector, both in light duty and, ultimately, the heavy duty side, as we transform to electrification of transportation, all those things factor into the methodology, the approach, how do we have a clear GHG signal and how do we design it and implement it in an effective way that can mostly monitor it, have effective, clear

baseline, and make progress to our long-range targets.

When I say long-range, that's well beyond 2030, but 2030's an important milestone. So with that, I think I'll conclude.

MS. BROOK: There we go. Martha Brook, Commissioner McAllister's Technical Advisor. And Andrew's very sorry to miss this today and he wanted to make sure I paid attention and took good notes, and that's what I plan to do.

MS. RAITT: Great. So I'd like to invite our first speaker, Mary Jane Coombs, from the California Air Resources Board, to make a presentation.

MS. COOMBS: Thank you very much and thank you for hosting us here today. I'd like to do a little overview right now of, from ARB's perspective, the SB 350 interagency aspect of these workshops, and then go on to talk about the basis for a potential divvying up of the sector target, and that'll be followed up by a discussion by Dave Vidaver that will outline how that basis could be utilized in this process.

So first of all, I think we all know that SB 350 requires ARB to establish targets in

coordination with both CPUC and CEC, and that all three of the agencies have roles here in this process. So CPUC and CEC have significant and equal roles in establishing the sector and individual LSE and POU planning targets.

In addition to that they have their own process. Today we're here through the IEPR process. And I understand from talking with some folks that there are questions about what the ARB process will be in the end, and I think we can -- my presentation today does not touch on that, but I'm sure that we can answer questions on that, as well.

So the three agencies will facilitate a joint, informal, public process. We want to avoid any duplication and streamline the process, both for ourselves, as well as for the stakeholders involved. And workshops will be attended by Staff from all three agencies, even if they're not noticed as joint workshops.

We will collaborate on public materials and we jointly review both the comments and stakeholder feedback, as appropriate. We want to point out that from ARB's perspective that our website on the SB 350 process points to the CEC and CPUC websites on this process, and we always mirror any workshops that are

going on, on our website.

From our perspective, our tentative schedule on the Scoping Plan is that we will release in spring of this year a Final Proposed Scoping Plan. Our Board will consider that in June of this year, and then by the end of this year we plan to consider the SB 350 sector and the individual planning targets.

All right. So into how we can determine how to split up this sector target that we have been having discussions about at the various workshops for the electricity sector. So I want to emphasize again that I'm talking about a basis here for estimating the individual LSE and POU targets, and David Vidaver will go into further detail about that.

Although not explicitly noted in the slide -- this is what I'm going to be talking about in the next few slides here -- is essentially the same as we have been discussing through our Cap and Trade Program of a post-2020 allowance allocation methodology for the electrical distribution utilities.

There are some differences between that and what I'll be talking about here today and that will be noted. So the idea here is that we would calculate the greenhouse gas emissions in metric tons

of CO_2e, associated with the electricity served by each electrical utility noted in the Cap and Trade Regulation.

As those of you who are well familiar with our process in the Cap and Trade Regulation know, we utilize projections from a number of different resources, primarily the 2015 IEPR Demand Forecast. So we used the load numbers from that.

We utilized the 2015 S2 Resource Plans to get information about generation sources, and then for those utilities, and in particular in this case I am talking about electrical distribution utilities in the Cap and Trade Program, which is a slightly different set of the load serving entities in the POUs we're talking about here.

We utilize other data sources that could be -- could get the same level of information that is in the demand forecast and the S2 Resource Plans. So here I have a link from our December Proposal for the EDU, as we call it, allocation methodology.

I do want to note that since these slides have been put together we put out another proposal for our post-2020 EDU allocation methodology, and we can provide an updated link for that there. I'll note on the next slide what the difference is between

the December proposal and the proposal that went out on last Thursday.

So a little more detail, and I'm not going to go into the nuances of each electrical distribution utility. There are some exceptions. Just to let you know that the link provided on the previous slide and a future link will be provided -- will provide exhaustive detail on each utilities' calculation.

But very generally, the emissions are calculated, the emissions that we're talking about for the 2030 target, from natural gas resources. And for the assumption of what that emission factor is we use .4354 metric tons CO_2e per megawatt hour.

And then generator specific emission factors for solid fuel resources, as well as using the IPCC's AR4 global warming potentials. Natural gas generation is calculated as what's left over when you take the generation for load, subtract out solid fuel and generation and subtract out zero emissions generation.

The zero emission generation is calculated based on each utility, I should say this is for the December proposal, based on each -- for the December proposal from the Cap and Trade perspective -- on

each utility meeting the 50 percent requirement in 2020, and this 50 percent is applied to sales projections, and then any additional zero emission resources not covered under the RPS Program, so your nuclear, your large hydro.

So the major difference I want to note here is that in the proposal that we released on Thursday we have changed our assumptions for post-2020 EDU allocation to assume a 45 percent RPS requirement by 2030.

And it's not necessarily that the RPS requirement will be 45 percent. The assumption is that a lower percentage of the electricity for RPS, not all of that is going to count as a zero emission resource.

So forming and shaping power is going to have a different consideration. So we assume a 45 percent, zero emission resource from the RPS by 2030. Load served by natural gas is assumed to never drop below five percent.

And then finally, the LSE and POU target estimation does not utilize a cap adjustment factor. And it's -- those who are familiar with the Cap and Trade Regulation process, the same is assumed for the proposal that just went up on Thursday. So they are

closer together in that sense. So I believe that is my last slide. Thank you.

MS. RAITT: Thank you very much. Our next presentation is David Vidaver, from the Energy Commission.

MR. VIDAVER: Good afternoon. My name's Dave Vidaver. I'm with the Supply Analysis Office of the Energy Assessments Division of the Energy Commission. Before I get started I'd like to thank Mary Jane for all her help in understanding CARB's proposal, to the extent that I do.

So just to review, on February 23rd we had a Joint Agency Workshop that discussed two topics. One was defining an overall electric sector emissions target in 2030 for IRP purposes, based on the analysis done for the Scoping Plan.

And the second question asked at that workshop was what, if any, methodology would be used to divide the electric sector emissions reduction target between the CPUC's and Energy Commission's respective IRP processes.

During that workshop there were three options were considered. One was using the methodology similar to CARB's allowance allocation for EDUs, here referred to as Option A. The second

option was simply dividing the electric sector target across POUs and LSEs based on electric load served in 2016.

And the third option was to develop a bottoms up methodology for apportioning the electric sector emissions reduction target across those same entities. Comments were received on all three. The subject today is a third part, and that is allocating the Energy Commission's share of the sector target to publicly owned utilities that are required under SB 350 to adopt IRPs by January 2019, and subsequently submit them to the Energy Commission for review.

So we can look at the same three choices in deciding how to do this. One of the choices was simply dividing the electric sector target based on load served in 2016. The advantages noted by parties' comments was it's very transparent and it's very simple.

Just simply take historical loads from 2016, divide it up and you have everybody's share of whatever sector target you choose for 2030. The disadvantage of this methodology is it doesn't account for the distribution of non-RPS, zero and low-carbon portfolio resources across POUs.

Basically, if you're endowed with a lot of large hydro and nuclear it's easy for you to reach a given emissions target. If you don't have any of these you either bet a lot more energy efficiency, get a lot more RPS eligible energy.

Utilities do differ in their endowment of non-RPS zero carbon resources. I've got 19 utilities up here, the 16 POUs required to file IRPs with the Energy Commission and the three large IOUs. And you can see that the City and County of San Francisco is sitting kind of pretty, and Anaheim and San Diego, well, they just don't have a lot of zero carbon resources in their portfolio.

So the use of Option B would make it very easy for the City and County of San Francisco to meet whatever target you established for it, and make it much more difficult for San Diego Gas and Electric and Anaheim to reach theirs.

Today we're going to discuss Options A and C. One is using a methodology similar to the one that Mary Jane described, and the other is developing a bottoms up methodology of our own choosing. Fortunately, we don't really have to do -- choose between one or both, because Option A is very similar to Option C.

If you take the Air Resources Board's methodology for allocating carbon allowances to the EDUs with a couple of modifications, you come up with something that looks like Option C. Mary Jane went over the CARB proposal for each utility.

You simply estimate the net energy for load, the retail sales, and from that, 50 percent RPS energy requirement from net energy for load, the RPS energy and any other non-RPS zero carbon energy in the portfolio.

You come up with a residual. You assume that's met with gas at .4354, or heat right up about 8200 BTU per kilowatt hour and that's your expected emissions in 2030. And as CARB did, they assumed that any utility would need to balance its loads -- five percent of its loads with natural gas.

So and you can see that document we relied on. Our job is easier than CARB's. CARB has to allocate allowances for 2021 to 2030. We're just setting a target for 2030. So we don't have to concern ourselves with time paths and rate shocks in 2021, for example.

The data sources that CARB relied on were the Energy Commission's California Energy Demand 2015 forecast; relied on the same forecast for retail

sales estimates, and it relied on the S2 supply filings submitted by all load serving entities in California to the Energy Commission in the 2015 IEPR.

The advantages of using this methodology are that it aligns the targets with each entity's endowment of resources that make it easier to meet a given target. It can be used to assign percentage shares of emissions to POUs, regardless of the sector target you choose and whether or not there's an initial allocation between the CPUC and Energy Commission entities.

It also assigns shares of GHG emissions to non-filing POUs, which are a not insignificant part of California's electricity landscape. It also uses a methodology and data that have been vetted by CARB. So there are questions to be resolved.

Should the five percent minimum gas assignment be retained? That applies to three utilities, only one of which is a filing entity. The other two are very small. The total amount of gas-fired generation involved that is sort of forced on the system by retaining this assumption that otherwise wouldn't be utilized is less than one-tenth of one percent. So it doesn't introduce a significant distortion, for want of a better word.

Should the allocation shares be updated, too, based on the most recent CED forecast, which is a year more recent. It was adopted earlier this year, and/or the 2017 supply form filings, which are coming in as we sit here.

The numbers will change, but you have to remember that the total emissions from the sector are determined by the overall target that we use, and all we're doing by choosing different data is changing the individual utility targets sort of at the margin.

If you all of a sudden found your 2030 net energy for load forecast dropping substantially because you put in a lot more energy efficiency let's say in 2017 than you did in 2015 filing, you're going to be rewarded by a GHG emissions target that is a little more stringent.

We'd like comments on whether there are any other modifications to this methodology that would improve it, or is there a methodology, either considered in the form of Option B or any other methodology that you might come up with that you think would be preferable.

And we have some results using the 2015 and 2016 data. We have the 16 POUs here. There are four columns. The first column is share of projected

emissions across all POUs and CPUC jurisdictional entities. You can see the total at the bottom is 21.1 percent.

That means that the 16 POUs obligated to file with the Energy Commission under SB 350 constitute 21.1 percent of the sector's emissions. We have projected emissions based on the demand forecast and the utilities' information as filed in the 2015 IEPR. And jointly they yield a projection of 12,200 -- excuse me 12,200,000 metric tons of CO_2e.

The third column represents the utilities' targets, assuming that the midpoint of the Scoping Plan is used as a sectoral target, and that the allocation between the CPUC entities and POUs either uses the methodology recommended here, or that there is no initial allocation between the two.

And the final column is the share of POU emissions. The bottom number of 92.7 percent indicates that the 16 filing POUs are -- the emissions targets one would associate with the 16 filing POUs are 92.7 percent of the total emissions from all POUs, large and small. And I believe that concludes my presentation.

CHAIRMAN WEISENMILLER: Yeah. Dave, just a couple questions.

MR. VIDAVER: Yes, sir.

CHAIRMAN WEISENMILLER: On the three entities who would be affected by the five percent, who are they?

MR. VIDAVER: One is the City and County of San Francisco. One is Eastside and the other is even tinier than Eastside Power Authority. I'm sorry. I don't have it off the top of my head.

CHAIRMAN WEISENMILLER: Okay.

MR. VIDAVER: But I can find that, though.

CHAIRMAN WEISENMILLER: Okay. And you said only one of them would it matter.

MR. VIDAVER: The City and County of San Francisco is far and away the -- has the largest load of the three. We're talking about -- want to make sure I got the units right here -- 50,000 metric tons of emissions associated with natural gas that because City and County of San Francisco, if it didn't have this five percent allowance for gas to balance its loads would be at -- let's see.

Where are we here? You can see -- whoops. You can see that City and County of San Francisco is sort of fully resourced with RPS and zero carbon, not RPS energy. So if you didn't allow it to balance any of its loads with gas it would have an emissions

target of zero.

And if you're going to allow it to, it has roughly 1 million, I want to say megawatt hours, but it has an allowance of 50,000 metric tons of emissions that -- which constitute roughly one-tenth of one percent of the 10 or 11 million in the sector, or among POUs.

CHAIRMAN WEISENMILLER: Okay. And thanks. Would you just remind everyone, when we ask for comments, you know, where the -- what the general sense was between Options A, B and C for this intra-POU allocation?

MR. VIDAVER: Can I ask Ms. Jones to come up?

CHAIRMAN WEISENMILLER: Sure.

MR. VIDAVER: She's the one who prepared that.

CHAIRMAN WEISENMILLER: Sure. Okay.

MR. VIDAVER: Thank you.

MS. JONES: So option C got the most votes by commenters, and others had indicated that A would be very similar to C.

CHAIRMAN WEISENMILLER: Okay. Thanks.

MS. RAITT: So we did get a couple questions from WebEx, but we can go ahead and take those during

public comment if you prefer.

CHAIRMAN WEISENMILLER: Oh, sure. That'd be good.

MS. RAITT: Okay. So the next speaker is Gary O'Neill-Mariscal, to speak on Proposed Methodology for Determining Greenhouse Gas Baselines for POUs.

MR. O'NEILL-MARISCAL: Hi. I'm Garry O'Neill-Mariscal. I work in the Energy Assessments Division at the Energy Commission. At the February 23rd Workshop the Chairman asked the Staff to come up with a proposed methodology for setting a baseline for the POUs for use in their IRPs, and this is the proposed methodology that Staff have come up with.

Staff is seeking feedback on this proposal on ways to improve it. So some of the things that Staff was considering when they were developing the methodology to set a baseline for the POUs is that this is going to be a reference point to take a look at the -- where the POUs have been, compared to where they're going.

It's informative, not regulatory. There are a number of data limits that the Energy Commission has regarding what the POUs' specific purchases of power going back are. We right now only have data

going back to 2001 for a number of the POUs going through 2014, through the Power Source Disclosure Program, for example.

There's going to be some uncertainty when we're talking about what the emissions baselines mean, compared to, you know, it's an estimate of the historic emissions because we have emissions intensities that we're using, versus what the actual emissions were.

And there was also a lot of hydro variation. A lot of the POUs have small hydro purchases, large hydro purchases, and that is going to affect their GHG emissions year by year, and we want to be able to account for that.

And then there may be some other considerations the Staff hasn't included in here. We're looking for feedback on those. So Staff's proposed methodology uses the Power Source Disclosure Program. This seems to be the most robust data source for specific purchases that the POUs have made to meet their loads over the years.

This data source isn't perfect. It goes back. The best data we have though the Power Source Disclosure Program goes back through 2001. And the latest year that we have available that's been

submitted I believe is 2015.

This data does not include submissions for all of the POUs in the early years. The most robust data sources for all the POUs started in about 2008 and went through 2014.

As far as a baseline year, Staff was proposing 2009, and this is because of the TEPPC WECC Group shows 2009 was considering that an average hydro year, and I'm using air quotes, because for Californians in particular, for hydro generation, it may not be an average hydro year for all of the utilities specifically, but for California as a whole it does appear that it is an average hydro generation year.

And then some of these other assumptions we had to make were based on emissions intensities by resource type. We chose the EIS's Emissions Intensity Table as similar to what we used in the Clean Power Plan.

We also had to assume a heat rate for the power generators. We used a simplifying assumption and just assigned a heat rate for all of the units. So for coal we chose 10,200, and then for natural gas we chose something very close to 8,000.

And then we also had to assume an emissions

intensity for imported power, traded power within California and other unspecified claims within the Power Source Disclosure Program. We lumped all those together and estimated that at a .484 CO_2e.

And then this slide just kind of gives you a sense of what the baselines using this methodology are going to look like for each of the POUs under the filing requirements. And then comparing that to the sector-wide emissions from the ARB's emissions inventory.

Excuse me. So if you take a look at it, as far as scaling this does come up with what we would expect for the 16 POUs, as far as compared to the electricity sector as a whole, and the numbers don't look too far off from what we would expect from each individual utility.

The total for this were 24 million metric tons CO_2e, which falls pretty close in line with the 100 million metric tons, roughly, CO_2e from the air, the emissions and inventory. So that actually concludes my presentation, but we are looking for feedback on ways to improve this methodology or seek comments from the POUs or from the dias to see if you have any questions regarding any specific parts of the methodology. Thank you.

CHAIRMAN WEISENMILLER: Oh, thanks. This is a good starting point for the conversation. I'm sure at some point people will try to understand more, some of the variation over time, but I think the notion of picking an average hydro year is certainly a good way to try to structure the base, baseline.

MS. RAITT: Thank you, Garry. So next, we have a panel to discuss the proposed baseline and target-setting methodologies, and Michael Sokol is our moderator. So if you can come on up to the tables, that would be helpful. Thank you.

MR. SOKOL: All right. Well, thank you, Heather, and we're obviously pretty far ahead of schedule here in terms of the time on the Agenda. So that gives us plenty of time for a good discussion here.

And I think, you know, what we've been discussing today are a few potential methodologies for how to get to those POU-specific GHG targets, and then also the discussion on the developing baselines. So what we'd be interested is hearing just a little bit of feedback from some of the POU reps here on sort of what -- is there anything missing.

Are there any major comments you want us to focus in on? Obviously, we'll be looking to the

written comments to help fill in some of those gaps, but I think we want to make sure we're keying in on any major topics.

So just to get started we have, you know, just three panelists here. We have Justin Wynne from California Municipal Utilities Association, and then we have Tanya DeRivi here from Southern California Public Power Authority, and then Scott Tomashefsky here from Northern California Power Agency.

And I'll sort of kick it off and just let you frame some opening remarks, but we'll keep it more conversational style to try and dive into specific issues that you feel are important to discuss. So I'll turn it over.

MS. DeRIVI: Thank you. This Tanya DeRivi, with the Southern California Public Power Authority. And we thought we'd change things up a little here and work on collaborating our joint presentation here on issues to provide feedback on Staff's presentation, both ARB and CEC.

First, we wanted to say that the public power utilities here in California are fully committed to meeting the goals outlined in Senate Bill 350, both the RPS and with the 2030 GHG reduction goal going forward.

This was outlined in a letter that was sent to the Energy Commission from the IRP Utilities Governing Board Leaders, which includes mayors, city council members and the POU Governing Board Leader Presidents, in a recent letter from the February 23rd Workshop, where we did say -- reiterated our commitment to achieving the SB 350 goals and listed a number of issues, including consideration of rate impacts and how the electric utility industry, particularly here in California, is undergoing significant changes at an incredibly rapid pace, which sort of lays the groundwork here for comment that we will be sharing here.

Also wanted to express our appreciation for both the Energy Commission and Air Resources Board Staff for working towards collaborating -- collaboratively working on issues towards implementing SB 350.

This includes, for example, the Energy Commission Staff working on a Transportation Electrification methodology on how we can compute the GHG emissions for crediting under the Air Resources Board's Cap and Trade Program, which was something that was outlined in Senate Bill 350 when it was passed. With that, I'll turn it over to you.

MR. WYNNE: Thanks, Tanya. So Justin Wynne on behalf of the California Municipal Utilities Association. And just at the outset I just want to have a couple points on process. And we appreciate that there's been an increased coordination between the three agencies in this effort, and we appreciate the comments earlier from ARB Staff that there would be this continued joint process moving forward.

I think one concern that we have is because there's going to be one electric sector range that needs to be divided up, it's possible that the recommendations of the CEC could have impacts for the CPUC jurisdictional entities, or recommendations from the CPUC could impact the POUs, just because there's one single pot that we're dividing up.

Because of that concern we want to make sure that all of the parties are together in the workshops as much as possible. One of the things we want to avoid would be potentially a joint ARB-CPUC proceeding where the only way that we could provide input would be through the CPUC's rule-making, because I don't believe any of the POUs are actually parties to that proceeding.

And also, the PUC doesn't have jurisdiction over the POUs, so any of the recommendations from the

PUC would have concerns. So ideally, we would move as quickly as possible to a formal ARB process. I understand that there'll be recommendations from the different entities -- different agencies ahead of that.

But given the concerns about the fact that we're splitting one pot up, our hope is that anytime any of the entities are making recommendations on this that we would all have the opportunity to provide comment on that.

And then I was just very briefly going to start off with the ARB proposal related to the IRP GHG targets. And just an initial comment would be, these are really complicated proposals, that there's a lot of data involved, and also, things have been changing very rapidly.

And so it's been difficult for us to get complete input from our members. So we actually had a lengthy call earlier today and a lot of that was still just trying to understand what the proposals actually are. And so we have to cross that threshold before we can actually get in and be evaluating each of the different proposals.

Some of the things that we're still struggling with is this idea that there would be a

methodology to split between the POUs and the CPUC entities, and in trying to understand how that relates to the methodology used to set the individual entity targets.

And just looking through the slides from earlier, it seems like they're very close. There may be some differences. And so just understanding how that actually functions will be really important. Also, the fact that there was the recent proposal from ARB that changes how the allowance allocation methodology is set.

One of the things we are still struggling with is going through some of the Excel spreadsheets provided for that and seeing how that changes -- what the changes from that are and how they factor into this, whether there's an actual change to the caps or whether it just factors into something that's changing relative percentages, and then how that relates to this -- the actual target of the 52 million metric tons.

One of the concerns we have there is that I think it's important because it's a planning exercise that it would be appropriate for that to be set as a range, and that something I think we've been consistent about is the -- that we would support the

ARB target being set as a range.

MS. DeRIVI: I'll pick it up from there. This is something that we had tried to emphasize during the February 23rd Workshop, and had appreciate ARB's recommendation dating all the way back to November of 2015, I believe, that there be soft targets or planning ranges incorporated as part of their proposal.

And there are a number of important reasons for this. One big one, of course, being what the effect of Transportation Electrification is going to be on the electric utility industry. And that's not just cars and trucks. That's also ships and boats; for example, that dock at the Port of Los Angeles, where they also have a program to electrify ships coming into the Port of Los Angeles, which is a huge impact on load profile for the Department of Water and Power in L.A.

There's also turning points for those of us in Southern California that aren't blessed with easy access to a lot of hydro. We got into long-term, out-of-state coal contracts, which require long-term commitments and there are going to be specific turning points that we are working towards where emissions profiles for certain utilities in

California are going to change significantly when those turning points actually happen.

Those are significantly complicated contracts to try to negotiate out of or early divestiture of, and that's something that certainly need to be recognized, another reason for importance of getting ranges.

There's also the impact of change in law, state law and federal law, as we've seen from the recent presidential election, as well as rapidly changing state proposals and state laws here at the California State Legislature.

There's also no way of telling how the economy can be impacted. A recession that went all the way up through the middle of 2009, which is one of the baseline target years that Staff is now discussing, can also significantly impact public power and other utility profiles here in California.

There's also the issue, of course, of north versus south and what the specific demographics are between Northern California utilities and the larger, highly-urbanized, mostly highly-urbanized Southern California utilities, like the Los Angeleses and Burbanks versus an IID or some of the small members that NCPA has, like Biggs and Gridley.

Also something that needs to be recognized and the capability for each of the public power utilities to be able to reach the goals set, and again, why there needs to be ranges.

MR. TOMASHEFSKY: Thank you, Tanya. Good afternoon. I want to go back to a point that Chairman Weisenmiller made at the beginning of this discussion on this panel, is this is really the beginning of the dialogue in terms of dealing with this.

And so a lot of the initial marching orders and conversations we've had with Staff have really been driven on trying to answer what actually is possible and what's not, and what areas are more challenging and what areas are not.

And so we'll talk about those a little bit more when we get into the baseline numerics. But I will say just as a starting point that the timing for understanding how these pieces fit together is really important for us, and I will say for those of us, which is most of us, have been in the trenches of the Cap and Trade discussion and the numbers for a good part of six months, and arguably, for a good part of a decade now.

The numbers are important, and how the

numbers are used becomes very important, as well. It's one thing to establish a target, but it's also very easy to take that out of context and then it becomes problematic in so many other ways.

So it's something even with the best intentions there are things that are taken and run with in different agencies and other organizations which create unintended consequences. And so we want to make sure we've avoiding those type of things.

So the dialogue is very, very important here. So with that in mind, really, it's the notion of the range on the Scoping Plan. I think we've got some major decision points that are coming up. As Mary Jane had indicated, in June we have some significant feedback from the environmental justice community that's going to play into an upcoming Board Workshop before that ultimate decision is reached.

That may have an impact on what the ranges look like, may or may not, but it's something that needs to be part of the dialogue. So that's an important consideration. The notion of aligning the data with the allowance allocation data, that's very helpful.

Questions on whether there is value towards looking at more up-to-date information. There's

really no opinion on that at this point, but you do have a lot of S2 data that's coming into this building in the next week or so.

So now, you're looking at data that goes out from 2017 through 2026 and not 2015 to 2024. So there are a lot more assumptions that are built into 10-year projections that were used two years ago, as opposed to using information that might have more refined insights on demand forecasts, where those are going, and the like.

So there's a lot of things that really build into that conversation. And of course, you know, you get into the question of dealing with this, as Tanya had mentioned, electrification. We know that we're about to start that conversation in terms of how that impacts the demand estimates.

And it's been acknowledged by the Air Board and here, as well, that there is some important impact that we have to address. But if we lock down on a target before we start to think about those things, we may find ourselves short-changing the impact of those policies in terms of how the numbers fit out.

So there's just a lot of things to consider at the highest of high levels. It's certainly worth

having the dialogue, and as I said earlier, the conversations we've had not only internally within our own groups and our own organizations, but also with the Staff, has been very helpful, at least in terms of trying to understand what's possible and what's not, and definitely look forward to having more of that conversation in the next 45 minutes.

MR. SOKOL: All right. Well, thank you all for kind of the opening comments. I think, just to make sure that we hit kind of each of these topics, there's a lot of ground to cover here. So kind of shift gears to the specifics about the target-setting discussion and really thinking for, you know, we heard highlighted that the importance of having ARB as part of that discussion, of course, and the CPUC, as well.

And so we do have representation here. So I think highlighting any of those key issues or really questions or some of the POU specific thoughts, and maybe it's just reiterating some of what already came through in the comments. But as we get towards that third part of the question, are those three options that they've laid out hitting the key points and is this bottom up approach sort of seem like the way to go.

MR. WYNNE: So I think we made the argument in the comments that we filed jointly that we had an initial preference for a bottom up approach. One of the main things is that we wanted to make sure that the characteristics of the individual utilities, both their ownership of non-GHG meeting resources, but also any economic differences or any characteristics that should be considered would be factored into how the target is set.

I think we are still having discussions and evaluating what that means, and particularly because the way that the original ARB proposal versus the current ARB proposal, because they're so significantly different, it's still a challenge for us to understand what the impact of that change is and how that would affect how each individual target would be set.

And it's still -- I think a next step would be more discussion with Staff, because frankly, there's still questions that we were still discussing this morning, or even over lunch, that things that we didn't fully understand. And so it makes it difficult to state an absolute preference for any of the positions.

MS. DeRIVI: Tanya DeRivi with SCPPA. I

just wanted to clarify that during the February 23rd Workshop I had expressed strong opposing to use of ARB's Allowance Allocation Proposal and wanted to clarify that was the old proposal, now.

We have now since in the last few days seen a new proposal. So our answer would certainly be different.

MR. TOMASHEFSKY: The other thing that's nice about, if when you start to look at how the Allowance Allocation Proposal was built way back when, in I guess Cap and Trade 1.0, for lack of a better term, it was more of a tops down approach.

The fact, I think the comment's been made in public forums that the power sector is really ahead of the curve in terms of where it's expected emissions level would be vis-à-vis the start of the program, which gives us a little bit more flexibility in terms of dealing with the bottoms up approach, that there's -- if there's any concern that the bottoms up approach would not actually yield enough emission reductions, we're actually in a better position to address that.

And as we have, again, going back to our Cap and Trade experiences, what's been nice about that proposal is it was designed to deal with each

individual utility, and deal with some of their unique aspects of what they're dealing with in terms of forecasts.

So there's been a number of instances where demand estimates have been adjusted, and it doesn't have a negative consequence on the rest of the Allowance Allocation Proposal. So it's not pitting one utility or one sector against another.

It's basically saying, you know, to the extent that you need some additional consideration, we can provide that. And I think the range has the ability to provide that, as well. So to the extent that you're dealing with a range, it is almost intended to say, okay, this is a proxy of whether people are moving in the right direction.

But in fact, actually, if you align it with the objectives of the Cap and Trade Program, the cap by definition should bring down the emissions factor. And if you look at what's built into the Cap and Trade Proposal with the 50 percent renewables and hydro and other things that are backed out of it, there's -- you go a long way down the path at actually reducing your emissions by a significant amount, just by virtue of following along those lines.

This provides another proxy to kind of look at it, and it raises the question, too, of just kind of thinking along the lines of you could even consider whether you really need to look at it on a raw data basis, or even a carbon intensity basis.

It gives you options to address the issues. So we don't want you to go down -- too far down the path without thinking that there's other options to accomplish the same objective.

MR. SOKOL: Okay. So I think on that note, you know, those are some good points, and we'll look again to the written comments once your members have had a chance to digest a little bit and provide feedback. But shifting gears here to the baseline discussion.

And I know it's -- some of that's been discussed for a while now as, you know, sort of a non-regulatory, informative baseline that can be used to help illustrate progress towards GHG reductions. And so thinking through, what are the -- you know -- I mean, you heard the Staff proposal today, so sort of initial reaction to that.

You know, what factors maybe weren't considered or different considerations that we should focus in on as we try to finalize that.

MR. WYNNE: Yeah. So the POUs understand that there's a need for greater data on GHG emissions and that it would be useful having metric that would measure relative GHG performance over time. I think one of the primary goals should be that whatever metric is developed, it should be clear, have accurate information, but it should also be readily understood by the public and have value in what it's conveying.

In our initial discussions I think it's possible that a baseline metric could serve that function. Just in our -- when we were going through the proposal some of the things that stood out would be that you're going to have -- for the IRP POUs you're going to have 16 different baselines.

And understanding that this is separate from the IRP, you will have GHG targets or GHG ranges for each of those entities. And so each POU will have a different percentage of reduction that it will need to achieve from its baseline to get to the range or the midpoint of the target.

And so that causes some confusion because what I actually did is I took the numbers from the proposal in the baseline presentation and I compared them to the targets that were in the IRP target

setting.

So there was the 2030 projections and then there was the division of the 52 metric million megatons. And every single utility has very different percentages that they would get between either of those numbers.

And for example, SMUD, they have a much smaller distance to travel just because of where they were in 2009. So they, maybe 20 percent or 25 percent reduction. Whereas, a number of other utilities have to go with 60 percent below that.

And so if you were just looking in isolation at a baseline and percentage below that baseline it's not necessarily conveying the information about how that utility is doing overall in GHG performance because we're operating off of such different data points.

And then if you're aggregating that into a single chart -- I'm struggling in those -- with all the different -- with the sweeping different amount of information that would need to be conveyed I think that that could lead to confusion.

One other element of problem with baselines would be it doesn't take into consideration increases or decreases in load. And so as that utility may be

growing or the utility is, through energy efficiency programs or its load is reducing, if you're just looking at emissions compared to the baseline it's not necessarily telling you that story.

An important element of that would be Transportation Electrification. So you could have a utility that substantially increased its load or kept its load constant because of Transportation Electrification. There's a GHG benefit associated with that, but it looks like they're performing poorly in reference to a baseline.

The one other element is that there is a lot of data that is going to be out there, because we're going to have the IRP targets and everything that's in the IRP. We're going to have AB 1110 that I think will be discuss a little bit later, which will give you an intensity.

But then we also just have compliance and reporting that goes on for the Cap and Trade Program, and when you introduce the baseline, I think one of our fears is that there could be confusion. So I think where we're at is that there can still be a well designed metric.

And maybe this is a good starting point for that, but it would need to -- our recommendations

would be it would need to find some way of conveying to the public something that is valuable without causing more confusion.

MR. SOKOL: Gotcha. And I think I just would add, too, so in addition to sort of concerns and topics that we should consider in the establishment of this baseline methodology we'd be interested in hearing what are the alternatives that we should be considering.

So you mentioned that there's probably a metric out there and I think we'd be interested to hear if there are some thoughts about what that would look like.

MS. DeRIVI: Tanya DeRivi, SCPPA. I wanted to add to what Justin had just said, just some fundamental concerns about a one set methodology working well for everyone. Again, the north versus south utility divide amongst public power is fairly stark when it comes to issues like saying 2009 would be a good year to use because it's a average hydro year.

Well, really, the only average hydro that we have coming out is Hoover Dam, which we have long-term contracts for through an act of Congress to the year 2067. So that's great, but that's a set amount

for a select number of utilities, and southern California doesn't nearly resemble the resources for hydro that northern California utilities have.

So that would be a concern for us. We also have, for example, the Inland Empire is one of the fastest growing urban or metropolitan MSA areas in the entire State of California. The population growth between the year 2000 and the year 2010 was a 30 percent increase in population growth.

So for public power utilities like Riverside, for example, they're going to have a significantly different profile serving load between those years. And that area only keeps growing because it's so expensive to live in downtown Los Angeles, an urban area.

And then there's also the concern that the baseline metric, if it is published and available for folks to take a look at to measure specific things against, that it could result in something we saw this year, which is an introduction of a state bill to try to codify an Energy Commission tracking progress report related to coal.

That created quite a number of concerns for those of us in southern California that have long-term contracts for coal that we are diligently trying

to negotiate early departure from, but that's just one of the unintended consequences that could potentially come up if baseline data is used as sort of benchmark.

So this is one example that where maybe deference to local governing boards could be something that is evaluated by CEC Staff, since they are certainly the most knowledgeable of how their load profiles have changed, could change, particularly for Transportation Electrification, for example, when you compare highly urban areas versus more rural or agricultural areas where that might not take off quite as much, so.

MR. TOMASHEFSKY: I had an opportunity to mine some of the data just to figure out what's there and what not. As a starting point to that, one of the interesting aspects of the -- just the IRP process is by virtue of answering a lot of the questions that are written in SB 350.

Many of the -- and that's where I -- when I see the informative non-regulatory it definitely gets my dog ears to go up in terms of why that may not be such a bad thing, just in terms of, there's a lot of checks and balance that are going to go through this whole process, and we have statutory requirements

dealing with the RPS Program and Cap and Trade and all those things.

So there's a lot of things that kind of direct us to go in certain directions. Dealing with the numbers and the proxies becomes the second objective. And to see that in a slide is helpful, and then it becomes a question of how do you actually apply that.

And that's been the interesting dynamics we've had over the last few weeks to kind of ask some of the questions. Kevin had posed a question about what's the potential for actually coming up with a 1990 level, and so when Staff comes up with a 2009 level I'll get into some of the concerns with that.

But let me go through the 1990 exercise that we went through, as it depends on who you ask that question whether it's doable or not. And what you find is, my kind of -- my analogy is that when I was here at the Energy Commission in 1996 I got email.

And so when you think about the fact that prior to 1996 you're looking at 1990 data that pre-dates the Power Source Disclosure Program. It pre-dates a market design. It pre-dates any allusions towards an RPS program, an Energy Efficiency Program and a lot of things related to that.

And so the decision points in terms of what's there and also the data that support that information is definitely sketchier. You start to deal with things like having data on tapes as opposed to having data available just by hitting a couple buttons and clicking.

And so it becomes more of a challenge to get that information. And also what happens is when you start to deal with the unspecified aspect of a resource you're dealing with bilateral contract, blended resources, you don't really have any paper trail in the old U-tags that are really tied towards climate.

So you're starting to look at data that really wasn't intended to ever be used in the form that we're looking at today. So it becomes problematic. So the further you go back in time to come up with a pure number, it becomes a little bit of a challenge.

And so the 2009 estimate, at least in terms of a first order for a conversation, is at least something to think about because there's some logic behind why you've chosen that, but there's still issues surrounding that.

And it does raise the question of, is that a

representative number. You still have an RPS that's 20 percent by 2017 or 2020. Depending whether you're an IOU or a POU, it's a little bit different. We're just starting to get into the energy efficiency data.

The greenhouse gas stuff we're just at the point where we're actually adopted a program to deal with the Cap and Trade Program, but we really haven't dealt with the mechanics of it, and where we are today is much different.

So the dynamics of the data we collect today can answer that question much, much more clearly than it can going back further. I did ask the question, and here, just to give you an example, I didn't really know where our 1999 Power Source Disclosure Report is, so I called over here to find it.

So I was actually -- somebody sent it to me by email. So that was good and it was interesting to see that, because there's a fairly wide distribution of resources that are tied to our Power Source Disclosure Report, but that's not commonplace.

So if you look at some of the other filings that were submitted in that time it does go back to the situation that the data isn't really granular enough to get there. So we get into the challenges of dealing with data granularity.

And finding an appropriate baseline, as Tanya had mentioned, depending on what your circumstances are, you can build a case for any particular year to be your year, in terms of dealing with resource decisions that were made from 1990 that were tied to different things.

So the notion of why utilities' resources are the way they are, are a reflection of what the policies were at that time. So try and take a number and then tie it back to that particular year as a snapshot in time becomes a little bit more of a challenge.

So you get into that. You have the early action aspect of things that we do to green up our portfolio, and we were given a lot of statutory incentives to do those things. The Cap and Trade Program gave us additional allowances for taking early action and renewable procurement in 2007 to 2010.

If you use the wrong baseline you may inadvertently factor that in and now ask someone to do more. So you just start to build into those types of issues. You get into hydro variability. We just had a five-year drought. That didn't work for the last compliance period for Cap and Trade, but yet

it's the reality of where we are.

It may help us next year. We have -- well, 2017 will be a very different year. So we have to deal with those things. And then also, the other thing that's certainly new in the -- you know -- in the current version of what we do is financial trading, you know, REC procurement and carbon procurement.

The program is designed to deal with market-based incentives to be able to do more. And so to the extent you do more, numerically you man sell off those numerics in terms of some of the things we report, but in fact the clean energy investments are being made. And so you have to be very careful about dealing with that.

So kind of going back to my initial point, the dialogue is really important. I don't -- I couldn't certainly sit here and say I think 2009's a great approach. I can certainly say I understand the approach, and I don't think that's a -- you know -- it's not a -- it's a rational way of looking at it, but there's a lot of other questions that need to be addressed.

And I think that's the dialogue that we need to have going forward, and it also needs to be fed by

ultimately what comes out of the final Scoping Plan conversation and really understanding what's in that range and how it all fits together. A little long-winded, but that's kind of a basis for it.

MR. SOKOL: All right. Well, thank you with that. And you know, I think we'll look for, again, the written comments to sort of fill in some of those gaps and highlight those issues that you listed there, and then continue the conversation, the dialogue going forward and make sure we get the right methodology there.

So just to connect the dots with the rest of today's Agenda, we've heard a lot of discussion around the Power Source Disclosure Program, and you'll notice on the schedule next to that there's a brief kind of overview of the Staff vision for how that fits with tracking, you know, GHG emissions moving forward.

But I was curious to hear from sort of the POU perspective, if that has been part of the conversation with the members. I know it was highlighted at the February 23rd Workshop, the connection with, you know, the GHG Intensities Power Source Disclosure. But I wonder if you wanted to speak a little bit about how the POUs are envisioning

sort of that connection being made.

MR. TOMASHEFSKY: Sure, I'll be happy to start that. And I will preface to say, we still have a lot more to talk about. The -- and really, the conversation started with the 1110 discussions as we were getting towards the end of it.

And I recall going back to -- even further back to that when NCPA was sponsoring either 162 or 2227, I can't remember anymore. But I remember the question being asked during a legislative hearing about, should there be a carbon intensity factor on the power content label.

And we said, at the time we needed to kind of deal with the issue of unspecified power. But that's something that should be addressed, and obviously, that's become a part of the 1110 process. So trying to figure out how that fits into the equation of dealing with emissions, you start to get into the carbon intensity factor related to that.

You are going to end up with certain things in there where you have to accept the fact that the data's not going to be perfect, even though you have a lot of mined data, you know that the data that goes to the Air Board in terms of emissions is going to be a year behind. You know that part's going to be

problematic.

The question of unspecified resources, there's been questions about how to -- whether to calculate that, whether to be more granular. The Commission about 10 years ago focused on a Pacific Northwest number, and a southwest number and they had two different numbers, and that proposal was rejected at that particular time.

Those are certain things that need to be addressed again in terms of how you look at it. When you start to look at an expanded regional market and you start to look at data from EIM and CAL ISO data that flows in, there's a lot more information that needs to be fully understood to try and calculate those things.

I think that's an important consideration when you start to look at the fact that the 1110 implementation is not supposed to be effective till the 2019 reporting year. So it gives us some time to look at it.

But I do think we have to be very careful as to how we use that and to make sure that we're generally applying the same common set of principles when it comes to looking at that data. You can get the California resource fairly straightforward.

You can get imports to some extent, but some of the unspecified resources still make that a bit of a challenge in terms of how we use it. So again, going back to the informative aspects, the non-regulatory aspect, from the Agency's perspective, if you're using it for purposes of saying, every couple years when you look at the IEPR and you say, well, here's kind of our snapshot of where we see things going and we're using this information to highlight where we have areas where we're vulnerable in terms of maybe there'll be areas where the power sector isn't doing what it should, that's the information that's informative to use so that you can make policy decisions based on that.

I get concerned if the information that was provided on an individual basis was a way of pointing the finger at someone saying, they're not doing enough, as opposed to helping answer the macro questions for you, as whether the power sector and the state's moving in the direction of 2030.

That should be the fundamental objective of any of this information that's included in not only here but resource planning as a matter of practice.

MR. WYNNE: I think the only thing I would add is that as it relates to the IRP, because I know

one of the proposals in the CPUC paper going back sometime was to align, or potentially align the IRP GHG targets with the AB 1110 intensity mechanism.

And if I'm understanding things correctly, that would be more the way that the public would be perceiving it. Whether we have an intensity metric or whether we have a mass metric, the underlying assumptions would be the same.

And so you wouldn't really be changing anything fundamental about the actual targets or what it takes to get to those targets. It would be more just how it's presented. And so I don't think that we have a clear position that we would be opposed or supportive of more directly aligning the IRP targets with AB 1110. I think it would just depend on what the actual impact of that would be.

MR. SOKOL: All right. well, I think that's useful, and you know, I just wanted to connect back with, you know, one other topic, and that's looking at, you know, there's all these other SB 350 initiatives going on.

We have the Energy Efficiency Doubling Effort. We have Transportation Electrification, which has been, you know, a big topic of conversation. We have a number of workshops, the

Energy Commission does, over the next month or so that look at a number of these specific topics.

So I wanted to touch on, you know, Transportation Electrification. I mean, that seems to be a piece that's really been highlighted in the POU comments thus far, and I think, you know, are there other -- how should -- what do you want us to focus on as we move forward with this GHG target setting discussion?

I think there were some written comments that talked about this, but as we get to the POU-specific targets how do we factor that in to making sure that sort of this -- the division, the allocation is done correctly here?

MR. TOMASHEFSKY: What's your timing for the target? I know that when the airport was talking about that, you know, their official answer is that's the next step. So it's the next rule-making we deal with on electrification.

So when we look at the impacts on carbon allowance and how that fits in we know we're not going to have a resolution on that for several years. And we certainly know it's not going to be in the regulations until we're probably in the post-2020 period.

So with that in mind, how does that fit into your expectations of using that particular number? Or do you just use it and say, well, we have an asterisk because we haven't really -- we haven't come to resolution on this particular issue and the agencies are working on that?

MR. SOKOL: I mean, so that's a good question. You saw the ARB kind of schedule for this joint process and that's what we're sticking with for this round, essentially, is the CPUC and us are going to do joint workshops with ARB, and then there's going to be the formal process afterwards.

And so the timing on that sounds like it's a little inconsistent, but I guess I would flip it back to you, to the POUs, from your perspective, is how does all that timing work out with the development of, you know, the first round of IRPs and everything moving forward?

MR. WYNNE: I think the overall comment, and correct me if I'm wrong, is that a POU that is increasing load due to Transportation Electrification or just fuel switching in general, the GHG target should take into account the GHG reduction associated with those fuel switching so that you wouldn't be viewed as missing your target if you had had very

high levels of Transportation Electrification, and the actual impact, the actual impact to the climate is the same as if you had met your target.

I think that's a concept that's there, but I think what Scott is hitting on is we're not expecting the Cap and Trade Regulations to address this issue until a subsequent rule-making, and so we don't fully know -- it's hard to make specific proposals about how that will function before ARB has set the -- how that operates within the Cap and Trade Regulations.

MS. DeRIVI: And I will add, I think -- Tanya DeRivi, SCPPA. I think what would be really helpful is if the Energy Commission and the Air Resources Board could work together in the interim to develop that estimation methodology for electric vehicles, and what the emissions profile would look like so that can be recognized under the Cap and Trade Program, with the subsequent rule-making.

I'm not sure how quickly that can happen, but in the interim I think that would probably be the most helpful thing, to help not just public power, but also the IOUs and the CCAs, as well.

MR. TOMASHEFSKY: And from a numerics perspective one thing just to consider. Again, not to suggest we have this fully baked at all. But to

the extent that you're dealing with additional load impacts, it makes a basis for dealing with target setting from a carbon intensity standpoint so that you start to get away from the twofold problem of how do you deal with additional load, and then how do you deal with the additional emissions.

And what you're trying to do is you're trying to reward being more efficient and less carbon-resource focused in terms of what you use when you are actually -- when your demand actually is there. And so to the extent that you are -- to the extent that you're lowering, lowering the carbon aspect of your resource as you go down allows you to say, yes, I'm moving towards the state's goal of becoming more carbon -- a lower carbon resource.

But at the same time, I'm also not having to address the particular issue of something I have no control over. So to the extent that electric vehicle load and building efficiency load and other things that are being pushed by state programs are working their way in, and for good reasons, at the same time you want to make sure that the utility doesn't have a reason to not incorporate those type of things, so that they're not being penalized for basically just implementing state policy.

And so to the extent you deal with an emission factor and an emission intensity, you tend to at least ignore a portion of that problem. It goes away. Not that it entirely goes away, but at least it allows you to say, okay, now I'm still focusing on what type of carbon resources am I actually providing to serve load to those customers.

And we're not going to worry about the fact that you've now put x amount of additional load on our system because of a deployment of electric vehicles in the state.

MR. SOKOL: All right. Well, thank you for that. I think at this point, again, we're a little ahead of schedule, but I wanted to turn over to the Commissioners and see if they had anything else.

CHAIRMAN WEISENMILLER: Had a couple questions. I mean, the first one was, obviously, this -- you know -- we've been doing Power Source Disclosure for a while. You know, I think one of the things that this is calling out is, you know, certainly looking at the trends.

You may find a few "oops" in the data that came in, and so certainly, it's probably a good time to look at the trend and see if anything pops out as a problem. And certainly, talking about the year,

again, that's something begins -- I'm thinking your comments will be helpful.

I mean, obviously, if you were to say an average of 2009 and 2000 -- you know -- a rolling average or some way of averaging a couple years to, again, deal with something that was anomalous in a particular year would certainly be interesting.

But I think part of it is -- you know -- the thing that pops out, again, facts are facts, is that some POUs ultimately have more difficulty than others getting to their 2030 number. And so again, we've had different approaches on how you might do this.

If I recall correctly from the first Scoping Plan there was some degree of negotiations saying, okay, this is where the utilities as a whole have to get to; now, how do you -- do you assume everyone makes an equal contribution or is there some way of shuffling.

And -- or at least I assume that that sort of thing, you know, would have to come out of settlement negotiations of, you know, once, obviously again, recalling everyone, we're sort of marching forward, the Energy Commission to set in place some sort guidelines, you know, quickly.

At the same time, that will bake in some

planning assumptions, realizing that ultimately the ARB's going to adopt something, you know, in consultation with the three of us and it's unlikely it's going to match exactly what this midpoint is.

But certainly, if parties could, either the IRP POUs or the POUs as a class or all the utilities could come up with something that meets the ultimate ARB target, I'm assuming that might end up not exactly equal percentages, but again, exactly how that evolves over time, you know, but at least to start getting people thinking about.

As you look at the intensities I think it's a pretty clear message some have it harder than others. So I think, again, just obviously, you know, I'm sure none of you are prepared to sign off on anything at this point.

Back on the question of ranges, I think, obviously, the issue that concerns all regulators is that we can't be in a position where there's a range and everyone shoots for the high number in the range and we discover ultimately we just can't get there.

So you know, I think that -- or that people have chosen various portions of the range and then we're asked to say, okay, the POUs are on track or not, and we kind of respond to that. So again, to

encourage people to think more of somewhere in the range as a planning basis, knowing that ultimately you're going to have to true up to whatever the ARB ends up at, because I doubt if they're going to adopt a range, but you know, maybe they will.

I think one of the questions also I wanted to ask, and I don't know who wants to chime in, but you probably notice that President Picker and I have set up an en banc at the POU dealing with how the changes in technology and customer choice is starting to really affect the IOUs.

I don't know what the POU reaction is to those changes. If anyone wants to chime in, please go ahead. Obviously, you're not invited, at least at this point, you're not invited to speak, though I think I could arrange it if anyone wants to, but.

MR. TOMASHEFSKY: I'll be happy to watch.

CHAIRMAN WEISENMILLER: That's what I thought

MR. TOMASHEFSKY: This time; more than happy to watch. No. I think there's, you know -- clearly, we don't have the direct CCA impact just in terms of setting up shop, in terms of statutory requirements of they're not going to set up in municipalities.

But the notion of how you're dealing with

distribution services and DER and all those other things, those are certainly relevant and those are things we're watching really closely. It's raising the question about how that does impact what we -- you know -- how we operate in the future.

So that's not something we ignore. Now, being on the outside of the initial part of that conversation you could sit there and say, well, we know that there's a propensity of CCAs. We know the question of direct access is always in the background.

Those procurement decisions actually impact the markets. And so you start to look at the way we procure resources. They do have impacts on us. Over-generation impacts the markets. Even though we aren't over-generating the same way doing the IOUs, it doesn't impact the pricing and it impacts dispatch and it impacts investments that we make.

So we do watch those really carefully. And short of being invited to speak on those things, which we don't want to do, we certainly want to hear what you have to say. I do want to -- if you don't mind, I just wanted to respond back to one of your comments, which donned on me that when we talk about individual targets and we talk about the aggregate

target-setting, one of the things that you've built into your RPS program is the alternate compliance options.

And so to the extent that there are reasons to not make it to a certain percentage in terms of renewables for good reasons that are actually defined in regulations and statutes, what we don't want to do is we don't want to turn around and then look at the greenhouse gas target and say, well, okay, we got you here because you actually didn't make it because you didn't comply here, when in fact, actually, we were still following the rules.

So as you start to look at the impacts of public power on carbon resources and greenhouse gas targets it is always good to ask the question about, how does that step up to the aggregate level. And then as you look at it individually, you're still sort of going back and forth to say, are we generally going in the right direction.

And I think that's -- if I'm not mistaken, I think that's the objective here is to say, is the POU community moving in the right direction and cleaning up resources, making them greener, dropping the carbon intensity level?

To the extent that there's individuals that

have certain circumstances, it's the same story we tell to you often as far as there are reasons for not necessarily getting there, notwithstanding the fact that we're not looking to say nowhere, basically, there are circumstances that don't make that possible, but we're all moving in the right direction.

So I just wanted to kind of throw that out as a basis for when you start to look at it, scaling up and scaling down, and we're constantly having to do that to understand what's happening behind the curtain when certain things -- some things may not look exactly right at the lowest level. There might be a reason that that's tied to other rules and regulations.

CHAIRMAN WEISENMILLER: Well, certainly, I think, you know, again, we started out, I think we both sent letters back and forth, but obviously, my responsibility is to implement the laws and your responsibility is to follow -- you know -- also to do so.

And so at this point we're in agreement on where we need to get to. Obviously, the IRP process is a way to sort some of that out; certainly, an opportunity to look at some of the tradeoffs between,

you know, additional energy efficiency or Transportation Electrification or whatever.

You can certainly look at a variety of tools, and you will in the IRP context, and at the same time it's good to start having the discussion of just, you know, what are the challenges, and obviously, realizing some of you are more challenged than others.

MR. WYNNE: One other comment I would make is that our understanding of the IRP is that it's a planning -- the primary purpose is a planning exercise and that the role that a range would place, because the range is based off of mid-case scenarios, is that you would factor that into your planning.

Then you would show in your planning that you're on target to fall within that range, based off of these assumptions. As far as compliance, we wouldn't view it as -- is that the compliance would be with the underlying requirement.

So I think RPS does very clear compliance, and you can be out of compliance with that. And because we're pushing towards right now a 50 percent RPS by 2030, in combination with the fact that the utilities might not have direct obligations under the Cap and Trade Regulations, but they're purchasing

power from a market that is under the Cap and Trade Regulations.

Also, with neg energy metering, energy efficiency, with all of these things the utilities are pushed towards these targets, and if they were out of -- if they're out of compliance with the RPS that is a direct -- you know -- there's potential for penalties under that.

And so one of the things that we hear a lot is that we shouldn't be viewing a utility who is putting the targets into the planning of the IRP and there's [sic] not going to be on target for any -- you know -- within the range, that that wouldn't be a compliance issue where they would be subject to enforcement for that.

I know that there were -- it's important for us, how the actual statutory language was structured, with it being recommendations that would come from the CEC, but that it's not a matter of being out of compliance, and that there's other very severe penalties for the actual elements that make up the enforceable requirements that are part of the IRP.

So it's just one of the things that we consistently hear, is that it's important that when we're looking at the IRP the focus is that this is on

planning, and I think that's part of why we're coming from the position that a range makes sense.

CHAIRMAN WEISENMILLER: Yeah. Thank you. And we're looking forward to your written comments, and let's go -- we have some public comments. Let's go to the last presentation, and then we'll take public comment and questions. Thank you.

MS. RAITT: Great. Thank you to our panelists. The last speaker is Jordan Scavo from the Energy Commission to talk about Greenhouse Gas Accounting with AB 1110, Power Source Disclosure.

MR. SCAVO: Hey, everybody. Jordan Scavo, and I'm here to give you a brief update on the Energy Commission's efforts to implement AB 1110, which includes the development of a Greenhouse Gas Emissions Accounting Protocol that can be leveraged by the IRP process.

Passed last year, AB 1110 modified the Power Source Disclosure Program to require reporting entities to disclose the greenhouse gas emissions intensities for any electricity portfolio offered to their customers.

These disclosures will be found in the power content labels beginning in the year 2020. To implement AB 1110 the legislation directs the Energy

Commission to adopt a methodology in consultation with the Air Resources Board for calculating GHG emissions intensity factors for each electricity portfolio and for the statewide electricity system.

In doing this legislation directs the CEC to rely on the most recent, verified GHG emissions data, and the legislative intent includes having the CEC's approach be consistent to the extent practicable with the approach taken by ARB under its existing programs, including the mandatory reporting regulation and Cap and Trade.

So we are developing a GHG Emissions Accounting Protocol which will establish emissions factors for specific facilities, for unspecified power, as well as determine how to calculate total emissions for utilities' portfolios.

The Commission has identified an opportunity to better align reporting requirements for these programs by leveraging the GHG Emissions Accounting Method in the IRP Guidelines. The Guidelines are expected to refer to the Power Source Disclosure Regulation for the specific emissions accounting method for utilities to report in their IRPs.

This means that the public rule-making process under Power Source Disclosure will be the

forum for stakeholder in put in the GHG accounting assumptions for IRP reporting. Because of this alignment, the Power Source Disclosure Program may serve as a progress tracking tool for the 2030 GHG targets.

And finally, as the multi-agency effort to develop utility-specific GHG emissions targets advances, we'll be following its progress in order to align our AB 1110 implementation efforts to support these activities as best as possible.

The Energy Commission held a workshop February 21st to kick off our pre-rule-making activities and to solicit input on the topics that should drive AB 1110 implementation efforts. We received comments from the broad set of stakeholders and we're currently in the process of analyzing those comments.

Presently, Staff believes we have enough information from the comments received to develop a conceptual proposal for how AB 1110 can be implemented. We are aiming to present this strawman proposal to the public at a workshop in June, and depending on the feedback we receive on our conceptual proposal, we would like to have proposed regulatory language ready by September and to

initiate formal rule-making activities later in the year with a goal of presenting final regulations for adoption at a Business Meeting in the second quarter of 2018. That's it. Thanks.

CHAIRMAN WEISENMILLER: Thank you.

MS. RAITT: Thank you, Jordan. So with that, we can move on to public comments. If you do have a -- if you wanted to make a comment, please fill out a blue card and give it to me. And I know we have one blue card and we have a couple –

CHAIRMAN WEISENMILLER: I'm just going to start with Robert Stanley, if he's in the room. Please come on up.

MR. STANLEY: Hello. I'm Robert Stanley, with Stanley Green Energy, and I have a couple inventions I'd like to tell you about. I invented a solar structure that goes up the canals, and so it -- because my philosophy with my company is to make power where it's needed, and there's all these pumping plants around that use up a tremendous amount of energy.

And so having solar right nearby would be a great way to power some of the power -- the water pumps. And it also has robotic cleaners for the -- to clean it. And hopefully, I'm wanting to sell it

to the State of California some day, to reduce greenhouse gas emissions.

And then I have a second invention, the solar cement plant. The first time I invented it, it didn't work and I had to redo it, and but I made it so it works this time, and it's -- there's another, competing patent where they send the energy right through the side of the solar -- of the cement clinker chamber, and mine bounces the light through the ends of the chamber instead of the sides.

And so I'm hoping the Energy Commission can get someone to help to build my prototype, whether that be China, Mexico or some southern California cement plant. That's all.

CHAIRMAN WEISENMILLER: Thanks. Thanks for being here.

MR. STANLEY: All right.

CHAIRMAN WEISENMILLER: Thank you.

MR. STANLEY: You have any questions?

CHAIRMAN WEISENMILLER: No. Thank you. Anyone else, public comment in the room? Any public comment from anyone online?

MS. RAITT: So we do have two from WebEx that are written in that I could read into the record.

CHAIRMAN WEISENMILLER: Please.

MS. RAITT: Okay. One is from Dan Severson and his comment was that any baseline should consider the facts that some POUs also operate as balancing authorities.

And the second one is from Adam Diamant, and he -- these are questions to David Vidaver, I believe. Can you explain at a higher level what it means for LSE and POU to have a "greenhouse gas" target in a Cap and Trade world?

Under Cap and Trade a POU can emit as much GHG as it desires, as long as it has sufficient allowances to cover emissions. And the second question is, do you mean by target GHG allocation? And David Vidaver is here to talk to these a little bit.

MR. VIDAVER: Well, I'll take the second question first. Says here, do you mean by target, what do you mean by target GHG allocation. It would be the share of the POUs -- the POUs' percentage share of whatever sector-wide target is adopted by ARB.

So the word "target" comes from the ARB's -- from the legislation, of course, but refers to the target that ARB adopts for the IRPs collectively.

The first question, can you explain at a higher level what it means for LSE and POU to have a GHG target in a Cap and Trade world. Under Cap and Trade a POU can emit as much GHG emissions as it desires, so long as it has sufficient allowances to cover emissions.

Wow. I feel like I'm probably one of the least qualified people to answer this, and there are people in this room who have far stronger opinions about the answer to that question than I do.

As some of our panelists pointed out, the GHG target is a planning target, the target assigned to each utility based on the methodology that we've proposed, Staff has proposed. And the targets set forth by ARB for the sector would merely be a way of allocating a sector-wide target that is I would say ARB's best estimate of how the electricity sector will contribute to reducing GHG emissions on an economy-wide basis for 40 percent from 1990 levels in 2030.

And Staff's allocation and proposal is merely a way of equalizing the expected cost of each utility's achieving contributions to that target and ultimately result in its realization. And ARB's Cap and Trade is designed to make emissions reductions as efficient as possible, having measures that are.

Those entities that can adopt measures or implement measures most cheaply do so, do so, and those who can't do so cheaply have to buy emissions allowances. We're simply putting together emissions reduction targets that hopefully level the playing field for all entities.

And if they don't, as the panelists have pointed out, there will be explanations as to why; more Transportation Electrification than anticipated, faster load girth than anticipated, and there will be people who -- entities who will perhaps realize their targets quite easily for other reasons. So Mr. Diamant, I don't know if that answers your question or not, but it's the best answer I can give.

CHAIRMAN WEISENMILLER: Thanks.

MR. VIDAVER: Sure.

MS. RAITT: All right. So thank you. That was I think everything we have from WebEx. So I think we're done with public comment.

CHAIRMAN WEISENMILLER: Okay. So we remind people when written comments are due?

MS. RAITT: Yes. So written comments are due on May 1st, and the notice provides information for how to submit the comments, and there's also some information here for reference.

CHAIRMAN WEISENMILLER: Okay. This Workshop is adjourned. Thank you.

MS. RAITT: Thank you.

(Adjourned at 2:40 p.m.)

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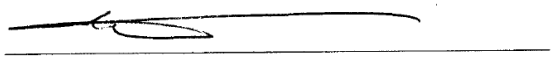

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