DOCKETED

Docket Number:	15-RETI-02
Project Title:	Renewable Energy Transmission Initiative 2.0
TN #:	206289
Document Title:	Transcript of the September 10, 2015 Joint Agency Workshop on Renewable Energy Transmission Initiative (RETI) 2.0
Description:	N/A
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/6/2015 3:33:20 PM
Docketed Date:	10/6/2015

CALIFORNIA ENERGY COMMISSION

STAFF WORKSHOP

In the Matter of:	) Docket No.
	) 15-RETI-02
Joint Agency Workshop on	)
Renewable Energy Transmission	)
Initiative (RETI) 2.0	)
_____	)

CALIFORNIA ENERGY COMMISSION

THE WARREN-ALQUIST STATE ENERGY BUILDING

ART ROSENFELD HEARING ROOM

(HEARING ROOM A)

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

THURSDAY, SEPTEMBER 10, 2015

9:30 A.M.

Reported By: Kent Odell

APPEARANCES

Commissioners Present

Chair Robert Weisenmiller, CEC
Commissioner Karen Douglas, CEC
Commissioner Janea Scott, CEC

Agency Partners

Ken Alex, Office of the Governor
Michael Picker, California Public Utilities Commission (CPUC)
Michael Florio, CPUC
Carla Peterman, CPUC
Keith Casey, California ISO
Kevin Hunting, California Department of Fish & Wildlife

Staff Present

Roger Johnson, STEP Administration
Al Alvarado, Strategic Transmission Planning and Corridor Designation Office
Scott Flint, Strategic Transmission Planning and Corridor Designation Office

Panel Presenters (* Via telephone and/or WebEx)

Roger Johnson, STEP Administration, CEC
Brian Turner, CPUC
Neil Millar, California ISO
Scott Flint, Strategic Transmission Planning and Corridor Designation Office, CEC
Neil Millar, California ISO
Molly Sterkel, CPUC
Barry Tippin, Balancing Authority of Northern California
John Dennis, Los Angeles Department of Water & Power
Al Alvarado, Strategic Transmission Planning and Corridor Designation Office

APPEARANCES (Cont.)

Public Speakers (* Via telephone and/or WebEx)

*Michael Sintetos , California Bureau of Land Management
Michelle LaPena, Dry Creek Rancheria Band of Pomo Indians Legal Counsel
Robert Laurie, Imperial Irrigation District (IID)
Pushkar Wagle, BAMx
Steve Mills, Alliance for Desert Preservation
Eric Eisenman, PG&E
Nancy Rader, California Wind Energy Association (CalWEA)
Jason Smith, TransCanyon
*Sarah Quinn, National Park Services
Peter Weiner, Paul Hastings
V. John White, CEERT
Kim Delfino, Defenders of Wildlife
Barbara Boyle, Sierra Club
Erica Brand, The Nature Conservancy
Rachel Gold, Large-scale Solar Association
*Paul Staples, HyGen Industries

I N D E X

I N D E X (Cont.)

P R O C E E D I N G S

September 10, 2015 9:35 a.m.

CHAIRMAN WEISENMILLER: Good morning. Thanks for your attendance. This is the kickoff on what we're calling RETI 2.0.

As you can see we've got a broad group of regulators here and perspectives and a pretty good group in the audience, I'm sure.

Michael, do you want to go ahead?

PRESIDENT PICKER: Thank you.

This concept of revisiting the Renewable Energy Transmission Process, RETI, and the California Transmission Planning Group, kind of came out of a conversation that Bob Weisenmiller and I were having. We were talking about the various goals for the future development of renewable energy here in California, the Governor's Greenhouse Gas Executive Order -- which will probably drive us to a significantly new high level of renewable energy projects as well as a variety of demand resources -- the various goals that are embedded in SB 350.

So the challenge becomes what are the things that we need to do to prepare for the future? And they are on a variety of different levels in the hands of a variety of different agencies, but we were reflecting on what was successful about the ARRA projects. We cited between 2009

and 2011 something like 17,000 megawatts of large renewable energy projects when nobody expected us to be able to actually permit and begin construction on any. By the end of 2013 something like 11 gigawatts had actually interconnected to the Grid. And so we were trying to parse out what helped us to do that and what did we need to take forward into the future?

And so clearly the RPS was very important in terms of starting these new industries off. We had nothing that compared to a cadre of developers who could actually conceive of, site and build an interconnect and operate that scale of large-scale renewable energy projects in California. We didn't have the financing mechanisms in place. We know that that was very important.

We know that the President's ARRA dollars were very important, because they actually helped to get the banks (indiscernible) to help build that financing tool for that pipeline of projects. We know that very important was the relationship between the State of California and the Department of the Interior, both the CEC and the BLM, Bureau of Land Management, the Department of Fish and Wildlife here in the State of California and the U.S. Fish and Wildlife Service were absolutely essentially to processing those projects and to getting them built on time.

So those few things were critical, but there was one piece that we also knew really contributed fairly heavily and that was the work that people did to look at the resource areas in California, to actually conceive of portfolios that would make sense to build a consensus -- and especially that -- building some consensus around those portfolios. And then to look at the transmission infrastructure that we would need to actually move those electrons from those renewable power plants to market.

And so well over 50 percent of the projects that are currently built and interconnected, and a higher proportion of the projects that are permitted, but not yet built are clustered along three transmission segments: the Sunrise Powerlink, the Colorado River segments that go from the border at Blythe through the Morongo Corridor into the San Gabriel Valley and the Tehachapi Renewable Power Transmission line. Without those, and without actually having preplanned them, we'd still be struggling to actually help projects get financing.

And so when Bob and I looked at each other, we realized that we need to start now with starting to think through that last piece, the transmission planning. And the building of a consensus on how much large-scale renewable projects and where and which transmission corridors that actually helped. There was a lively debate

early on in the RETI CTPG Process on whether or not California could depend on a 100 percent distributed generation scenario. And clearly, at that time, that was very impractical. There may be some additional increment that we can count on from distributed energy resources -- certainly from the demand side resources in terms of meeting our 2030 goals -- but it's not clear yet that we can count on it entirely to meet 100 percent of the growth of the our renewable energy needs here in California.

So the question before us is then how do we begin to do that? And so what we wanted to do today is to start to sample what other people learned from that very successful period. What kinds of things do we have that would aid us in the next steps? What is there that we need to perfect?

So, for example, where there's been a lot of work through the Desert Renewable Energy Conservation Planning Project that has created a vast wealth of data on biology in the desert. The work that the Office of Planning and Research has done on the Central Valley has actually helped us to evaluate how new technologies can fit better into smaller footprints in the Central Valley. So we need to really kind of look at that data and start to weave together this next picture.

And then we need to actually develop some kind of

a process to look at scenarios and we need to actually build some public consensus process through something similar to the California Transmission Planning Group. So that when we go out to talk to the rest of the world about the things that we think need to happen there are people out there who are very prepared, as they were in the past, to say yes this makes sense.

So I think today we'll hear from a variety of different participants, both here from the leadership of some of the critical agencies, and then we'll hear from some of the staff. And then we'll take public comment. And at the end we'll give some direction to our staff to see what we want them to come back to us with.

So with that, I'll turn this back to Ken Alex. I'm afraid he has to leave early.

DIRECTOR ALEX: There might be a little one or two things going on across the street at the Legislature this week. So I have to leave early, but I just have some quick comments. And primarily, to thank Chair Weisenmiller and President Picker for including in RETI 2.0, consideration of an effort that OPR has been working on in the Central Valley that President Picker just mentioned. And I wanted to just give people a sense of what that is and why it's important that it work well together with RETI 2.0 and it help inform this process.

So the Desert Renewable Energy Conservation Plan has been a very complex project to figure out in the Mojave where's the best location for renewable energy in combination with all the other important values that need to be preserved and protected along with some development in that area.

That process has taken many years. And so when we started thinking about well how do we deal with renewables in the Central Valley? Is there a different process that can be easier, quicker and get us to a point where we have some level of agreement, but don't have to go through a multiyear process to define every aspect of development and land use in the area?

And so we've tried to use some developments in technology to allow different groups to come together: environmental groups, solar industry, agricultural world, local government, state agencies and some others, to develop their own maps of where they think the least conflict for potential siting would be.

And so in a matter of just a few months we now have developed those maps. And for anybody who's interested, they are publicly available for review and comment. I will put it up on our website at OPR soon to give everybody a chance to look at those. And they represent different maps by different groups looking in the

Central Valley and really focusing on places where prime farm land can be preserved and other values can be protected. So looking at places in the first instance where land perhaps is degraded in a way that doesn't support either agriculture or species.

And the good news is that there are quite a few acres that fit that description. And I think they are going to give rise to some very good discussion about what transmission would be appropriate to make those areas accessible and usable. So I just really wanted to highlight that these two processes are going to work together and that the RETI process will be informed by this, I guess we've been calling it the Solar Ag Convening for the Central Valley.

And if it works, you know, it's still early in the process, we still have to make sure that this is a valuable way to go. But if it does work I think we can expand that to some other areas and other possibilities in the State. So again, thank you gentlemen both, for including it in and I really look forward to seeing how this works.

PRESIDENT PICKER: So I think we're going to turn back to Karen Douglas from the CEC.

COMMISSIONER DOUGLAS: All right. Thank you, Michael. I just have a few brief comments. I'm really

excited about this process and I want to thank Chair Weisenmiller and President Picker for their vision and for taking the initiative to get this process going. I think the fact that we are all here and the fact that there are so many people in this room and on the WebEx shows the importance of what we're about to do.

As President Picker said, we are building now on a track record of success and a set of experiences that are going to set us up for success in this process and success in our meeting our 50 percent renewable energy targets. We have a strength on the permitting side from experiences with the ARRA projects in interagency collaboration. We're building off of interagency relationships that I think are really unparalleled, at least in our experience.

The experiences and lessons learned from planning efforts. RETI, RETI-1, CTPG, DRECP, San Joaquin Solar, there every time we have worked together and been through this we have learned -- stakeholders have learned we've built our capacity. And I think we're in a really good position now to deliver on RETI 2.0 in a way that it is science-based and utilizes the best available information, collaborative. Certainly in terms of interagency collaboration and I include local governments emphatically, in the word "interagency."

Also, in terms of being able to foster robust

stakeholder dialogue and build towards consensus and build towards a shared understanding of opportunities and constraints that can help us build towards consensus. And we're in a position now to be able to build on really good, existing work that has been done. Again beginning with RETI, moving through subsequent planning processes, where we have a lot of work behind us.

In a lot of ways, the early stages of this will be assembling information and data that's already been collected and already been put together in different ways towards a bigger picture -- in a way that's also outward looking and welcomes participation not only within the state, but from entities that are interested in partnering with us in the broader western region.

So I'm very excited about this. I want to welcome everyone here and look forward to the workshop.

PRESIDENT PICKER: I'm going to jump to Commissioner Peterman. Is that okay with you?

COMMISSIONER SCOTT: Sure.

COMMISSIONER PETERMAN: Thank you. Good morning everyone, it's pleasure to be here. Thank you, Chair Weisenmiller and President Picker, for gathering us altogether. I think again, you can see from everyone who's up here, all of our agencies have a sincere interest in making sure that we're planning thoughtfully for the future

that we're all continuing to work on, so just a few comments from me kind of echoing some of the things that others have said.

We've made a tremendous amount of progress since the first RETI. And while I was talking to some folks in our agency about the history with RETI and really what we were starting with I just thought, "Wow, we've got it easier," this set of Commissioners, because we've got such a good basis to start from. You know, when we look back about what we knew in 2008 and 2009 we know so much more about the renewable energy potential as well as the cost.

But there are various different portfolios that can get us to the future that we want. And so that's important for us to do really thoughtful scenario planning. And that planning must include strong environmental land use analysis.

One of the outgrowths of RETI that I've had the privilege to be able to work on is the RPS Calculator. That's the analytical tool that collectively, the agencies and stakeholders developed, to help us do scenario planning particularly at the Public Utilities Commission. And what's impressed me about the RPS Calculator process was that it's been primarily staff driven. But it's had a tremendous amount of engagement from staff at the Energy Commission, the Public Utilities Commission, the ISO and

support from the leadership of those agencies over time.

I think one of the challenges with it though, is that because it's staff driven it hasn't gotten the attention its needed to get from the Commissioners and the management of the different agencies. And so this year in the RPS Proceeding, acknowledging that we made it a formal part of the proceeding to start getting more stakeholder comment. But indeed, I think we still need to engage more with local governments and with other agencies that are doing land use planning.

And so one of the things I hope to get out of RETI 2.0 process is better environmental information that can be useful for any planning that we're doing at the CPUC. And what I think we can provide is there is a tool that's available that has some elements, I think, that can be useful for helping to achieve the aims that we collectively have.

And so I think what's important about this gathering is getting everyone together to talk about what do we already have and what's missing? You know, what do we need to add to it, because there's a lot of great work that's happening. And some of it I'm not familiar with, so I'm really look forward from some of the other utilities and agencies.

And just a couple of other things, some of the

key questions I think to grapple with as we move forward, one is again how to best utilize the environmental land use information that's been developed by the CEC, counties, and federal and state agencies. And I'm looking forward to hearing about that, also what scenarios should be developed. Collectively propose various scenarios, diversify portfolios, out-of-state resources, but there can be so many more, so again looking forward to your feedback.

Also, how much new transmission is actually needed versus optimizing the transmission that we have? There is some interesting work happening with energy only portfolios being considered at the ISO. And so I want to make sure that we're maximizing the investment in the planning that we've already done, particularly as President Picker noted, around the Sunrise and Tehachapi and the other transmission lines.

So with that I'll say I'm just looking forward to the discussion and into engaging with all of you as we go forward. Thank you.

PRESIDENT PICKER: I'm going to jump over to Commissioner Scott.

COMMISSIONER SCOTT: Okay. Good morning, all. A lot of what I was going to say has already been said, so I will echo many of the comments of my colleagues here. I want to say welcome to all of you; it's fantastic to have

you here and to be working on all of this together. And thank you, President Picker and Chair Weisenmiller, for your leadership on this.

A lot of us have been in the trenches, down in the weeds, down on this together for awhile. And it's hard work, right? It's tough work, but we learned a lot and we learned that we can solve issues. We can address barriers. We can get the advanced planning we need to get done. We can identify the pinch points early, so that we're able to address them in a timely way. And we know that we can be successful in the work that we want to do together.

And in this process, I really look forward to identifying specific issues that we're looking -- challenges we're looking to solve. What the common goals are that we want to work on together. I look forward to working also with our engaged and thoughtful stakeholders on this. I really do think that when we're working together we can achieve the important climate goals that the Governor has laid out for all of us. And I look forward to the presentations in getting kicked off, so.

PRESIDENT PICKER: Mr. Florio?

COMMISSIONER FLORIO: Thank you. It's a pleasure to see such a good turnout today. I was not particularly involved in RETI 1.0, so this is a little bit new for me. But I know that I am standing on the shoulders of giants,

many of whom are at this dais and in this room.

I think we have a luxury here, looking 15 years out to 2030. You know, looking back it's really a miracle what was accomplished and we didn't -- we kind of plunged into it without really having the opportunity to look 15 years ahead like we have now. I think this gives us a chance to look at strategic options in a way that was very hard to do ten years ago, because the industry was new. The data hadn't been collected. And, you know, it was a real struggle and in many ways a miracle that we've gotten to where we are today.

But I think we can do it even smarter this time. I think with the luxury of a little more time to plan we can be more strategic. I think this is the time to consider out-of-state options that have been presented over the last few years. I'm not saying I'm for or against, but I think this is a good opportunity to look at Wyoming wind, New Mexico wind, Arizona solar.

And in some ways we have the advantage of our past experience, but we also have new challenges. The integration issues get tougher as we push from 30 percent to 50 percent. It's going to be much more critical to consider diversity of resources in the portfolio. So I think this gives us a perfect opportunity to look at do we want to expand farther to the east in procuring our

resources? You know, can we as Commissioner Peterman said, repurpose existing transmission that maybe was built initially for large coal plants, which are now starting to retire at least partially. Is there a way to tap some of those out-of-state resources without 100 percent new steel in the ground in terms of transmission?

At the same time it's clear we have an abundance of in-state resources. And getting the right combination of those is critical. While we've done a lot of work inside of California there's also been some very good work done at the WECC through the Environmental Data Task Force. It's certainly not as granular as the DRECP, but there has been work done there looking at environmental and species constraints on other potential corridors in the west.

So there's a lot to draw on and I think it's a really important opportunity as we're at this inflection point to take a step back and say, "Where do we want to be in 2030? And what's the best combination of resources to get there?" So I'm looking forward to an excellent conversation around these topics. Thank you.

PRESIDENT PICKER: I'm going to turn to Kevin Hunting from Fish and Wildlife.

MR. HUNTING: Thank you. Thank you, President Picker and Chairman Weisenmiller, for convening this group. And I appreciate the invitation to be here today as well.

You know, reflecting on the comments I've heard already I agree with everything that's been said, especially when it comes to lessons learned from the ARRA projects. We had a vision, our agencies, at that time. It didn't take us long to realize that reacting to incoming project applications and permitting on a case-by-case basis was not the most efficient or effective way to not only reach our renewable energy goals, but to reach our environmental and species goals.

California has got one of the highest levels of biodiversity in the entire United States. It's a biodiversity that a lot of people are very passionate about and it's central to our mission. And we are a trustee agency for those resources, so we're highly motivated to finding a better way to reach the important renewable goals and transmission planning goals that you'll hear about today, while managing and maintaining that biodiversity.

So during RETI 1.0 we had some data, some information that we were trying to piece together, and integrate that with transmission planning and renewable energy development information. And kind of looking back on that now in the face of what's been developed for the DRECP and the exciting potential of the San Joaquin Valley effort especially. It was really rudimentary compared to what we can do now. We've got some excellent information

and excellent data from which to plan for this kind of outcome on the 15-year horizon. And I'm hoping we can accomplish this in a way that is a true balance on a landscape level -- not a project level, but a landscape level -- a true balance between maintaining that biodiversity and reaching our renewable energy goals.

So I'm excited about the potential. I'm delighted to be part of the effort, and again I appreciate the opportunity to be here.

PRESIDENT PICKER: Thank you.

Keith?

MR. CASEY: Thank you, President Picker and Chairman Weisenmiller, for having the ISO here. We really look forward to the opportunity to collaborate and partner with you on this initiative.

It's hard to be original, being the last speaker here, so let me just reiterate our support for, I think, three themes that I've heard fairly consistently.

The first is we've come a long way since RETI 1.0 in terms of transmission planning, portfolio development all aspects, environmental considerations. So the theme of leveraging what we have and what's working well, we're very supportive of. And I think we'll have an opportunity today to really do kind of a level setting with everyone here in the room on just how far we've come, what's working well,

what's not.

The second theme that Commissioner Florio hit on is integration challenges. And I think as we move forward thinking about 50 percent, we really need to be mindful of what it's going to take to efficiently and smartly integrate that portfolio into the system. And that gets to diversity -- diversity in terms of technology as well as geographic diversity. And I think we really need to pay careful attention to that.

And the third theme is regionalism. That as we think about the 50 percent portfolio we have to recognize that there's potential opportunities and synergies there with the rest of the west on other goals. The clean power plants certainly, one aspect as we look to facilitate integration through better regional market coordination. There could be opportunities for transmission upgrades to enhance our ability to do our regional market coordination.

So I think that as we move forward on this initiative we really ought to broaden the scope to bring in as many partners throughout the west to really look comprehensively at collaborative opportunities here. So I look forward to the discussion today and appreciate the opportunity to be here.

PRESIDENT PICKER: And I have to point out the importance of the independent system operator to their

earlier RETI CTPG process, because at that point you drove a lot of the modeling and actually supplied a lot of the leadership to actually make the consensus process work. And you were the first up in terms of actually considering projects.

So I also want to note that we don't have representatives sitting up here today from our partners in the federal government. And I just want to stress why it's important to begin to build them into our discussions. Transmission projects especially, to the extent that we feel that we need them, are on long linear projects. They rarely only fit into the neat, tidy jurisdictions of state agencies. They inevitably move across federal lands and so we will not get very far in our discussion at the staff level if we don't start to figure out how to begin to engage them.

And it may be that when we get to the discussion in "Next Steps" that we'll want to investigate a similar kind of an MOU that we had with those same federal agencies around the Renewable Energy Action Team.

COMMISSIONER DOUGLAS: If I could just briefly speak to that, Michael? Jim Kenna wanted to be here. He's in Washington D.C. doing Congressional briefings. And he may have sent some staff to speak in the agency comment period. But I think they would be very interested in that

follow-up discussion.

PRESIDENT PICKER: I'd be happy to take Tom Pogacnik.

Okay. So is there anything else from our agency leadership?

(No audible response.)

So with that, I think we're going to move to a Staff Panel and they're going to talk a little bit about what kinds of things are we doing. What kind of considerations do we take from what we've done in the past? What do they see as being the holes that need to be filled in? And so we'll start here with Roger Johnson and just run around the table.

MR. ALVARADO: Before I start -- my name's Al Alvarado with the Energy Commission. I just wanted to let folks know that we do have a full house here. We do have an overflow room at the Charles Imbrecht Hearing Room, which is just right across the way. And we have this discussion streaming over there.

Roger, we have your presentation up.

MR. JOHNSON: Thank you.

Okay. Good morning, thank you for this opportunity to present today. And I've been asked to, essentially talk about where we are today with renewable energy and where we've run in the past recently that's

brought us to this point of looking at RETI 2.0.

So if I could have the first slide. I'd just like to bring us up to -- do the numbers. Essentially, California has done a lot, as we all know. We have a currently installed renewable generation capacity of 21,000 Megawatts. And retail sales for 2014 were 25 percent of renewables. And so that's well on the way to our 33 percent goal by 2020.

Renewable energy projects in the process -- the Renewable Energy Action Team is tracking 474 renewable projects in California right now that are in some form of a review or have been approved and are under construction or waiting to start construction. And that's 34,680 megawatts of projects in review. And of those, there's 193 of those that have permits, and that's 12,930 megawatts.

So I think that this large interest in these renewable projects, we're well on our way to maybe being able to reach the Governor's goal of 50 percent by 2030. Next slide, please?

I'm sorry for the size of this, but if you have that handout maybe it's better to read. This is just a representation of those 474 projects that are dispersed throughout California. And this shows the technology and the size of the project and location.

So while it seems like this is a quick start to

RETI 2.0 -- at least it was for me -- I'm really pleased to see the same agencies, stakeholders and groups in this room that were part of the RETI 1.0 process. So with that combined history where we were in RETI 1.0 and where we want to go in RETI 2.0 I'm looking forward to this effort. So our past -- next slide please?

Our past planning practices, I think, are notable. And I'd just like to quickly go through a few of them. Back in 2004 we had some collaborative study groups. The PUC ordered the establishment of the Tehachapi Collaborative Study Group to develop a Transmission Plan for 4,500 megawatts of wind energy in the Tehachapis. In that same year, the PUC and Energy Commission supported the formation of the Imperial Valley Study Group. And that was to look at 2,000 megawatts of transmission for, at that time looking to deliver geothermal resources from the Imperial Valley.

Work on these studies was completed. The ISO was able to develop the transmission plan, the projects were designed and approved by the PUC and essentially constructed and are in operation today. So that's really a very successful story of how we worked together, to plan for that renewable energy.

RETI -- a lot of people have talked about RETI, and we'll talk more about that at the next session. But

RETI was initiated in 2007. It was a stakeholder-driven process designed to identify transmission projects, to accommodate California's renewable energy generation needs in support of our RPS goals.

RETI stakeholders identified 30 competitive renewable energy zones in California. These were areas where resources were identified: solar, wind, geothermal. And then they looked at developing 80,000 megawatts statewide and 66,000 megawatts were in the desert.

CTPG -- the result of RETI were then used by the CTPG, the California Transmission Planning Group, which included the IOUs, the POUs, and the ISO. They took the RETI results and developed a Transmission Plan for the State of California to meet the 33 percent goals.

In 2010, the FERC approved the ISO's revised transmission planning process that requires the ISO to develop a conceptual statewide Transmission Plan, and therefore that replaced the CTPG function.

DRECP -- quite a bit's been said this morning about that, so I won't say much more other than that started in 2008. And I can't believe it's been that many years, but we're almost there. We're getting ready this -- towards the end of this year to release the final EIS/EIR for the Land Use Plan Amendment associated with the DRECP. That was, as has been mentioned, it was a substantial

planning effort. We looked 22 1/2 million acres in the California desert and looked for the way to balance development of renewable energy with the conservation of important species and habitats.

In 2012 the DRECP put together a transmission technical group to look at the transmission needs associated with the DRECP alternatives. And that effort was used to evaluate what transmission resources would be needed and what would the land use requirements be, how many acres of habitat would be affected by those different transmission options?

Ad Ken Alex mentioned the San Joaquin Solar Valley, I won't say much more about that other than that's currently going on and they should have, like Ken said, their maps will be out soon. And they're hoping to have a final report in November of this year. They also have a technical transmission group associated with that project. PG&E, SCE and the ISO are working together looking at the ability to repurpose existing transmission. And right now they've identified 1,000 to 2,000 megawatts of transmission capacity that could be available for renewable generation in the Valley.

And then finally, RETI 2.0, we'll be discussing that more later in this meeting. But as people mentioned we are fortunate that Chair Weisenmiller and President

Picker had the vision to start it now. We always wish we would've started these things years ago, so I'm looking forward to have the opportunity to work with this group, and to pursue our new goal of 50 percent in 2030.

PRESIDENT PICKER: Okay. Thank you.

Brian Turner?

MR. TURNER: Great, good morning. My name is Brian Turner. I'm with the California Public Utilities Commission. I just wanted to provide a short overview of our initial approach to RETI 2.0, to get your feedback direction from the principals and stakeholder comments.

First of all, we're bringing to this -- I want to talk about what we're bringing to this in terms of our interests, the capabilities, and what we would like RETI 2.0 to serve in the CPUC's interest.

So RETI 2.0 can serve our core mission of reducing costs, assuring reliability and maintaining the safety of the California electricity system. We're quite interested in what proactive collaborative planning and the diverse portfolio can bring to reducing costs. Not just the total costs of the system, but the integration costs of achieving the 50 percent portfolio and more importantly, achieving the overall greenhouse gas reduction.

Again, also with reliability -- what does a more diverse broad -- both resource technical, technology

diversity and even regional diversity bring to assuring the reliability of the electricity system.

And then lastly in safety, our overarching preeminent goal of reducing the greenhouse gas intensity of assuring environmental and land use sustainability and safety to the system. And what can we do to proactively plan for that safety. So that's what we're hoping to achieve with the broader engagement that RETI 2.0 can bring.

What we'll be bringing to that effort are our existing analytic capacity and proceedings, some of which we've described. And we'll hear more about in just a minute, the RPS proceeding, the long-term procurement planning proceeding, several demand-side proceedings which have to do with the total demand and the other resources on the system.

Also, our partnerships that we've heard described, but also quite sophisticated process alignment that we've achieved between the PUC, the CEC, and the ISO especially. Some tight timelines frankly, for those processes to occur and we'll need to align the RETI 2.0 process with those existing proceedings. So we'll be looking to establish that.

And then lastly, we're really looking at this as an opportunity to do scenario planning that can bring into

our considerations a much broader set of forces that are acting on, that have emerged since RETI 1.0 and that we have to deal with going forward. And that includes new technologies, new economics to those technologies, the new and stronger relationships and frankly new trust and interest amongst potential partners that we can leverage.

We're looking to consider what does the future entail when we think of broader energy markets and grid operations within California and across the west.

And then there are significant opportunities with not only California's new greenhouse gas policy and moving to 50 percent, 40 percent reduction in total greenhouse gases, but now federal carbon policy. And what is that going to do to shake up western power markets, western power generators in the transmission system? So we're very much looking forward to RETI 2.0 providing some insight and scenarios based on those forces.

So we're bringing a lot to the table. We're ready to dive in, but we need to move quickly and that's my message. Thank you.

PRESIDENT PICKER: So Mr. Flint? Oh, no. I'm sorry, Neil Millar, I skipped over you. My apologies.

MR. MILLAR: No problem, sir.

Yes, on behalf of the ISO there were a few points I also wanted to make at the onset. A lot of these have

already been touched on to different degrees, but I'll try to pull them together from our perspective.

As you've already heard, there have been a number of process improvements focusing on transmission generation interconnection that went on within the ISO planning processes. Those also relied very heavily on the increased level of coordination with the various regulatory processes whether it was the IEPR process or the long-term procurement planning processes. That level of coordination is something we really didn't have in place the first time around. And that's hugely valuable to us, so we really wanted to emphasize that and I'll be touching on that a bit more in my later presentation.

In terms though of the needs we see, as we move forward into RETI 2.0, there are a few areas that -- you know, the initial RETI 1.0 process was what enabled and led into the development of more granular portfolios. That level of detail is really critical that we see to making firm transmission decisions to move forward, to move forward confidently and with purpose.

There are also some areas that we see that need to be considered that perhaps weren't taken to the same level of depth the first time around. Those issues include correlating all of -- there's so much great data now that wasn't available the first time around, but correlating

that information for in-state resources. How does a great area of disturbed land compare to a great resource within the desert? How are those compared and aligned, as well as clearly the need to look more broadly at out-of-state resources, both from the resource perspective as well as the renewable integration benefits that regionalism can provide.

So as we move forward on these we have certainly, escalating challenges as you've already heard on renewable integration. But we also have the new opportunities providing we get the appropriate coordination and direction in place early and with enough time to take action. Thank you.

PRESIDENT PICKER: So I'm going to call on Molly Sterkel while Mr. Flint deals with business.

MR. ALVARADO: Yes, we were going to move to the next panel, which is Considerations of Current Activities. And we do have Roger Johnson on the top of that list, as you wish?

PRESIDENT PICKER: Okay. So you actually want to run these as separate panels? Then please go ahead.

MR. JOHNSON: Okay. I just wanted to spend just a few minutes talking about RETI 1.0 for those of you who weren't able to participate in that. I wanted to share with you what that looked like compared to maybe what RETI

2.0 will be today. First slide.

So RETI 1.0 was initiated in 2007, as I mentioned, as a stakeholder-driven process. It was designed to identify transmission projects, ease future designation of transmission corridors and expedite the siting and permitting of transmission lines and renewable generation.

The stakeholders identified the 30 Competitive Renewable Energy Zone CREZs, again 80,000 megawatts statewide and 66,000 megawatts in the desert. Next slide, please.

So the RETI had a governance structure. It was stakeholder driven, but it had a Coordinating Committee, which was essentially made up of the agencies that are identified on the slide. And the role of the Coordinating Committee was to ensure the RETI process produced the information needed for policy decisions by the agencies. They kept the process on schedule and they provided direction on peripheral policy issues when necessary.

And then we had the Stakeholder Steering Committee and the role of this committee, which was made up of the transmission owners and operators, the generators, the utilities, the power purchasers, the agencies, landowners and the environmental and public interest organizations. So this was the group that was responsible

for developing and adopting the work plans, ensuring active participation by its members and forming the working subgroups as appropriate.

So RETI had three phases primarily. The first phase was identification of the CREZs. Phase 2 was to refine those CREZs and then finally Phase 3 was to work on the priority CREZs that were identified.

In the end RETI was successful in that every CREZ developed a Transmission Plan to essentially be able to reach that CREZ and deliver that energy to the Grid.

RETI worked to have an open and transparent process. We had stakeholder participation, including again all the owners: the transmission owners and providers, the renewable energy developers, the electric retail providers, all the agencies, Native American tribal governments, landowners, the environmental and public interest, balancing authorities and other interested parties.

The Energy Commission was able to essentially keep a webpage up to keep people informed. In the beginning, some parties felt they didn't have full access to the process and there was an effort later in the process to be more inclusive and to allow parties to join the working group meetings and to participate in those meetings.

So the output from RETI informed the renewable

procurement and transmission permitting at the PUC. RETI informed the renewable generation and transmission planning at the POUs. It informed the Energy Commission for transmission corridor designations. And it informed the ISO on the transmission planning process. And it definitely informed the transmission planning for the DRECP.

So that was RETI 1.0. That was how we did it and now we'll talk today about RETI 2.0.

PRESIDENT PICKER: Can you talk a little bit about the relationship between the RETI process and the California Transmission Planning Group process?

MR. JOHNSON: I can try, there might be somebody better. My understanding was that the output of the RETI, those transmission plans for those CREZs was picked up by the CTPG, which formed itself to develop a statewide transmission plan. And so the CTPG was the IOUs, the POUs, and the ISO working essentially by themselves to develop this transmission plan.

MR. CASEY: Well, I'll just add to that. I think CTPG was formed in 2009, so the RETI work had largely been completed in terms of portfolio development. But I think Roger's right that CTPG largely leveraged the portfolio information that came out of that effort to look at -- thinking comprehensively in terms of statewide transmission

what could be need to support that. So I think the key linkage there was leveraging the portfolios. There wasn't much interaction between the two groups.

PRESIDENT PICKER: Thank you.

So Scott?

MR. FLINT: Good morning. Scott Flint, Energy Commission. I'm going to talk a little bit this morning about a proposed statewide approach for environmental analysis that the Energy Commission has been working on. And fasten your seat belts; I've got to go pretty quick.

From the standpoint of this conceptual approach to what we would envision, we've been working on a conceptual approach for transmission planning to take it from the regional work we've been doing, both on the DRECP and San Joaquin efforts, to a statewide approach. We've been working on that with the Renewable Energy Action Team ever since we first started working on ARRA projects in the DRECP.

The focus initially was to work in the regions that had the highest renewable energy potential. And then eventually address the whole state renewable energy potential areas for the whole state, so we're working on progressing to that from the regional work.

So a conceptual approach for moving to a statewide framework for renewable energy planning would

include utilizing and building on the outputs of the existing planning processes since we already heard about DRECP, San Joaquin Valley Solar, but also local agency planning efforts that are underway to plan for renewable energy elements in their general planning processes. Some counties are very far along on this process and others are just starting. So we would incorporate those.

We would look at incorporating useful elements of the original RETI project process. We would then evaluate existing statewide data sets to be able to use data in a statewide manner to look at other areas where specific data was not developed in regional efforts. And then we would continue to develop and expand a Renewable Energy Generation Scenario Tool, which we have a version up and running that works with some of the data from the DRECP.

So just to visualize how some of this might fit together we would take some statewide data that was generated. This is the RETI 1.0 areas, Category 1 areas. We've updated this for the DRECP area. We would propose to update this kind of information statewide -- legally and legislatively protected areas where typically projects would not be permitted. And then add in the information from the DRECP and the San Joaquin Valley efforts, which both within their regional boundaries have addressed renewable energy resource locations, land use

considerations, and environmental factors.

So we've done those in various ways, so we'd look at how we've done that. And then combine them with available statewide data sets that we have that are pretty robust nowadays and available statewide. So we have some data available statewide through the process. We would evaluate and use the best data, assemble it into logic and data models that allow us to work with the data, to examine similar issues in a similar way that we have in the regional levels.

So we can basically step our work up from the regional level to statewide. And then folks who are embarking on planning at the regional level can step back down for their elements of their planning.

So at the end of this work, on the data, we would then have the data underlie a Renewable Energy Generation Scenario Builder. This is the tool that we've already worked on and have operating in the DRECP area.

And basically, the way it works it allows -- it works with the underlying data in three categories: energy resource data where you can evaluate solar resource, megawatt targets and those sorts of things; land use data where you can look at agricultural lands, excluded lands, ownership; and then environmental data where you can look at terrestrial intactness conservation value sorts of

models and connectivity.

So the data would be in here and this tool would be available to help generate potential renewable energy development scenarios that can then feed into a transmission planning process.

So here, this is a similar effort we did in the DRECP in identifying alternatives. But in this approach this allows the stakeholders and the agencies to turn the dials on this various data. And as you see on this slide, you get an output that basically identified areas on the map for you that met your conditions that you set for the data that is underlying the model.

So this is the approach we're working on to help contribute to scenarios.

The initial list of data and modeling tools that we would propose to work on are examining existing statewide data sets; building a Statewide Landscape Intactness Model, which we did for the Desert Renewable Energy Conservation Plan; Statewide Conservation Values Model, which we did for DRECP and the San Joaquin effort. San Joaquin effort then added an Agricultural and Range Lands Model, so we could bring that sort of land consideration into the planning. We have a Statewide Climate Console Application that can serve as an overlay to all of these outputs and give us a picture of climate

change potential impacts on the landscape. And then, of course, the Renewable Energy Generation Scenario Tool that I just talked about.

So working in a collaborative process with stakeholders and still taking advantage of the relationship we built in using the Renewable Energy Action Team, we would propose to work through this process examining the data sets in a series of webinars or workshops, very informal and more working sorts of meetings. And we would evaluate the statewide data sets, logic model development, and operation. We can run some outputs and evaluate those, work with a Scenario Builder Application before its development and operation, use that application to generate various scenarios, and evaluate those scenario inputs through this process.

We think this sort of framework approach would fulfill where we have been going with energy planning from the Energy Commission perspective. And also support the environmental considerations and environmental aspect of a RETI 2.0 effort. Thank you.

PRESIDENT PICKER: Questions?

Okay. We'll keep moving along, so I think we're at Molly?

MS. STERKEL: I think Neil's slides sort of flow nicely into my talk, so...

(Off mic colloquy re: order of speakers.)

MR. MILLAR: Thank you. I'll just touch very briefly on a few processed slides. As I mentioned earlier, considerable work has been done since the RETI 1.0 timeframe on the transmission planning processes at the ISO as well as the coordination with others.

By way of a reminder many of you have seen versions of this slide before. The ISO has in place a comprehensive transmission planning process that we execute every year. The first phase is particularly relevant. It's the formation of detailed study plans identifying the inputs that go into our transmission planning process.

Phase 2 leads into the development of the technical studies, looking at the reliability needs, the policy driven needs which in particular focus on renewable generation requirements and broader economic analyses to come up with a comprehensive plan that best meets all of those needs.

I should remind people that California was the first to have a federal process in place within its federally approved tariff to accommodate policy-driven transmission before FERC Order 1000 appeared on the radar screen.

The third phase is also the procurement stage. The plan is expected to be real. It leads to transmission

project identification and execution. Within the coordination with the state agencies this is particularly important to us.

We rely very much both on particular inputs and also alignment with other state agency processes, relying on the data coming from the Energy Commission and the Utilities Commission on both load forecasts, load modifiers for preferred resources as well as other resource needs through the form of generation portfolios. We do our work on the transmission planning, which is then aligned and provided as input into the various procurement processes executed by the Utilities Commission.

This is an iterative process, so what we go through one year feeds into the next cycle. We have a 16-month process we run annually, so there's always overlap and information feeding forward into the next process.

As I mentioned the process does lead to project identification and execution. Over the last five years in aggregate we've been moving forward on over 6 billion in transmission projects. Around 600 million of that related directly to policy-driven transmission supporting renewable generation. Most of those projects -- just building on a comment from Commissioner Peterman -- most of those projects have actually focused on expenditures that allowed us to get the best use of the transmission system that's

already either existing or has already been moving forward. So these were optimizing projects that made the best use of the wires we had.

The other change that's actually going to be showing up on the radar screen within 2016, 2016 will be the first year of execution of the interregional planning processes that the ISO has developed with its neighboring planning regions. That includes WestConnect, which many other utilities within California are members of as well as Columbia Grid and Northern Tier Transmission Group to the north.

So there is now a broader framework for interregional coordination with the other groups that didn't exist previously. And we'll be helping to draw on that as well.

So when we look at the transmission planning processes that have been refined in the past as well as the new tools in the toolbox we have to move forward. We do see that the past coordination has been very effective in identifying transmission needs. We do have the better coordination in place and we do see that this allows us to move forward more effectively through RETI 2.0, to identify and execute the transmission projects that we need.

PRESIDENT PICKER: Thank you.

Okay.

MS. STERKEL: I'm ready. I'm looking at Commissioner Picker who has twice called upon me, but now I'm finally -- I think it's actually, finally my turn.

PRESIDENT PICKER: I can take direction.

MS. STERKEL: I can't avoid it any longer. So my name is Molly Sterkel. And I'm the Program Manager for Infrastructure, Permitting and Planning at the California Public Utilities Commission.

So my staff support both the long-term procurement planning proceeding as well as the review for our electric permitting cases for transmission lines and substations. So my remarks today focus on the State's existing generation and planning processes and how they may inform, as well as be informed by, the forthcoming RETI 2.0 process.

So I think my remarks really follow nicely to Neil's remarks, because over the past several years technical staff at the CEC, the CAISO, and the CPUC have worked together to better align the three cyclical processes that inform the core of our electrical infrastructure planning processes.

So Commissioner Peterman said, "What do we already have?" And what we already have is some really intense foundational work on coordination of our planning processes. And so I'm going to delve into the weeds of

that a little bit here, because I think it will help us as we think about how to add more information out of RETI 2.0 into our planning processes.

So the processes I'm referring to are the Energy Commission's Integrated Energy Policy Report, which very importantly produces a Demand Forecast, which we use throughout the long-term procurement plan process as well as the transmission planning process at the CAISO.

The second one is the CPUC's long-term procurement plan proceeding currently led by Commissioner Picker.

And the third one is the annual transmission planning process at the CAISO.

So the hallmark of this three-way coordination, which we sometimes call process alignment, has been to align the development, delivery and utilization of the inputs that are developed at one organization. And then used by the other organization all in the pursuit of coordinated and sensible planning.

These are big infrastructure investment decisions that we make as a state and so it's really important that we align our resources and our decision making.

So the key part for the CPUC is kicked off in the fall of each year as we lead the coordinated development of common planning assumptions and scenarios. These

assumptions and scenarios are updated on annual basis. And I should say we do a bigger update in the odd-number years like this year, leading into the biannual IEPR process and LTPP process. But we do a more limited update on the even-number years, because we're trying to be supportive of the CAISO's annual transmission planning process.

So for those of you who were watching this past year in the fall of 2014 we did workshops and eventually issued a final set of assumption scenarios in March. And we did that after our staff -- I'd like to just describe a little bit how we developed that process.

So our staff worked with the CEC and the CAISO staff to come up with the latest information. We also contacted a variety of other sources to look at each and every assumption in our load and resources table and come up with the best information available. Then we circulate those draft assumptions. We workshop them, we take written formal public comment and we eventually develop a final set of assumptions and scenarios.

So the assumptions are -- each assumption is for a load or resource item, but a scenario is a combination of those, is the unique combination of the assumptions. And what we do once we have those assumptions and scenarios -- I just want to talk how we then use those a little bit.

Well, first we compile a simplified Load and

Resources Table. But then the PUC and the CAISO use these common assumptions as well as the Energy Commission, in a variety of ways, in our various efforts.

So for the PUC we use our assumption and scenarios to support our proceedings that authorize procurement of generation and other resources. So we develop modeling. We do production cost modeling, parties do production cost modeling. And we do all of that with a common set of assumptions. And then the resulting analyses can be subjected to additional public comment and additional public input and then vetted, so that the Commission can deliberate and decide on the authorization of new procurement-related investments.

For the CAISO, each transmission cycle as Neil so brilliantly showed you on a quick slide, each transmission cycle has a study plan and in that study plan they use a base case. And that base case relies upon our assumptions and scenarios. And that's really helpful, because the base case that's the developed may lead to the utility -- I mean it may lead to the development and authorization of CAISO-approved lines. And so it will be nothing, but helpful for future permitting of transmission lines that the CAISO is using our assumptions and scenarios in its base case. Because then when we review -- when the PUC is in the position of reviewing transmission lines -- it can do so

with the foundational knowledge that we were coordinated on the underlying assumptions that led to the transmission line approval.

So forgive me for going into the weeds, but it's really important to see how the various pieces feed into each other.

So I also just want to mention that back in 2010 along the time of the RETI process, the CPUC and the CAISO established a memorandum of understanding of how this process would work. Back then we referred to it as the MOU. Now we're calling it the process alignment. It's all part of this effort of coordination. The MOU recognized that the ISO will incorporate into its transmission plan scenarios for the long-term -- sorry, scenarios from the long-term procurement planning process to the maximum extent possible.

And the CAISO does so with the goal of trying to identify the needed transmission elements that are supporting the State's previous energy policy goals.

This Memorandum of Understanding and this process is really a monumental leap forward compared to where we were a few years prior to that when the new infrastructure investments were being driven largely by generator interest. And the CAISO queue was very large; there were over 50,000 megawatts of generation in the queue. And so

that spawned the understanding that we can't plan infrastructure in response to just generator interests, but we had to use a more policy-driven approach.

All of that is now in place in the CAISO Tariff and in this staff-to-staff process alignment that I've been describing.

So over the past few years the process has worked well. And the TPP has made some significant infrastructure approvals as was shown in the slide by Neil Millar. And we have been checking each year to make sure the infrastructure is in place to support the existing 33 percent RPS goal.

But as we look to the future expansion of renewable energy development and low-carbon resources that will be needed to serve the State's energy needs, as Commissioner Florio said for the next 15 years, we don't have all of the answers yet to what else will be needed in the future.

And we know we have a lot to learn from the special studies that we are conducting and we will continue to conduct. We have a lot to learn about how distributed generation, energy only; resource diversity can meet these future needs. And what I just wanted to leave people with was to just emphasize that our coordination efforts of passing back and forth assumptions and scenarios and inputs

and models -- and we do this on a cyclical and annual basis -- is a good foundation that we can function with as we work towards that future.

We need to be strategic, thoughtful and inclusive as we gather and analyze our information. And help the next generation of infrastructure planning investment decisions be made in a thoughtful manner. So thank you.

PRESIDENT PICKER: Thank you.

So we actually have invited two representatives from the publicly-owned utilities. This is always unusual for the Public Utilities Commission, because we tend to forget that we don't regulate everything that moves on the face of the planet. But 30 --

COMMISSIONER PETERMAN: (Indiscernible)

CHAIRMAN WEISENMILLER: How about the people that don't move.

PRESIDENT PICKER: -- 30 percent of the State's energy needs, electrical energy needs, are met by public utilities of one side or the other. So I think it's very important to begin to talk about your interests, your needs, your processes as we begin to move into this discussion. So thank you.

Mr. Tippin?

MR. TIPPIN: Yeah, thank you very much for the opportunity to speak today. My name is Barry Tippin. I'm

the Director of the Redding Electric Utility to the north of us here. And I currently serve as the Chairman for the Balancing Authority of Northern California and the Transmission Agency of Northern California or better known as BANC and TANC.

TANC, as most people would know, is several POUs that have, through a joint powers agency, have access to a 500 KV line to the Oregon border and through which we transact with the Pacific Northwest.

BANC is a balancing authority that includes the cities of Redding, Roseville, Shasta Lake, Modesto Irrigation District, the Sacramento Municipal Utilities District and the Trinity Public Utilities District as well as contains generation and transmission facilities under the Bureau of Reclamation and the Western Area Power Administration.

BANC has different challenges in terms of operations of the transmission system and the integration of renewables. Within the BANC footprint, each individual utility is responsible for regulating and integrating its own renewable resources. And we do that through traditional trade agreements amongst each other or other POUs outside of the ISO and with a contract for the Pacific Northwest. As you likely know we are not in, and have not been in an organized market.

Our renewable portfolio consists of firmed products, dispatchable products, and regional procurement products that were procured prior to the bucket scenarios that have been required of late.

We don't have any pending retirement of antiquated thermal units, so most all of our units are actually fairly efficient and meet current standards. And so we're not facing some of those same issues that face the rest of the State.

With regard to the current process that we're speaking of, RETI 2.0, really I would offer four main comments. And I think you'll find a lot of commonality to our comments versus what you've heard today already. And what many of you echoed earlier.

We really support the statewide process. I think it's a necessary element. We were involved in RETI 1.0, as we're calling it now since we have a 2.0, and we certainly expect and would like to be a collaborative partner in RETI 2.0 in the development of that product.

We very much also agree with the idea of not jumping to the conclusion that all new renewable resources must be met through new transmission. The idea of optimizing the existing systems, I think, is critical. I think that also needs to take the form of looking at the existing corridors and what can you do with existing

corridors? And building out those corridors and/or retrofitting them with DC lines or some other fashion that could increase capacity.

I think it's important to look at local solutions that may be available. I know currently it's not in consideration, but certainly the deployment of distributed generation is going to continue to proliferate and continue to provide a valuable offset to greenhouse gases. And there's certainly a need to continue the conversation in terms of whether it counts and how it should count.

You know, we need to reorient our thinking in terms of the connection to renewables, that we're delivering renewable energy maybe and not just resource adequacy. And that may provide some opportunities for using of the existing systems.

Building new, significantly new, and large transmission systems is a very costly endeavor. And it has considerable environmental harm and hurdle and it may be the most valuable transmission is one that's not built. In terms of land use planning I think that's a very important element that's been brought up a few times. And hailing from a small city, it's very important to us in terms of local control on planning issues and land development issues. And I think harmonizing those elements are very, very important. State and local jurisdictions often have

different points of view and they have cross-purposes. And so making sure that early on we recognize those differences and work to make sure that we identify those and work through those is important.

Failure to do is when you perhaps end up in litigation. Litigation, I think, is a very large hurdle for us in terms of meeting our goals within the timeframes that we've set forth for ourselves.

I think we need to face the fact that when you have prescriptive solutions to greenhouse gas reduction that you logically place environmental attributes of a project, perhaps ahead of environmental harm. And that can lead to things requiring overriding considerations and predetermined outcomes. And I think we need to recognize that, because when you prescribe a certain product to meet greenhouse gas reduction goals you certainly add an element to the land use planning that is not normally in place when you look at alternatives.

On way, I think to offset that, goes back to not only distributed generation but other things that can happen in a local community. When you look at the 50 percent energy efficiency goals that are being placed, that's going to have a big effect. And there's a lot of ways that utilities can participate in helping in transportation electrification, infill housing perhaps and

energy efficiency that comes from that. Other elements that might be able to be used to not only hit the 50 percent reduction in energy -- or increases in energy efficiency, but also shave peak loads, driving down the need for new generation and new transmission.

I think those all need to be encapsulated in some form and fashion. It probably doesn't go forward in a long set, but it certainly needs to be upfront, because as you're doing your forecasts, as you're looking at the need, if you ignore those key components then you might overbuild. And overbuild is something I don't think we want to do. Not only for the environmental issues that we've spoken about, but perhaps most near and dear to my heart is consumer impact.

We haven't addressed that in any significant form. And I think we need to recognize that costs are rising for our consumers. And they don't appear to be going down in any fashion. Even with a increased footprint for transmission and perhaps a reduction of overall costs I think we all recognize that the influx of the renewable and the requirement for regulation of that renewable is going to cost additional money for our consumers. And maybe through energy efficiencies we can help lower or maintain their bills or minimize increases on their bills.

But I think we need to recognize that the cost

per kilowatt hour will continue to climb. And that needs to be an important aspect of what we do and what we think about. And part of that will come back to whether we're considering a optionality closer to home or whether we look at the regional aspects. I certainly believe that the regional aspects and the regional renewable sources will be a necessary component. But we also need to pay close attention to what opportunities we have closer to home to reduce the burden on the consumers who ultimately will pay the tab.

In conclusion, I think this is a great effort. I think it's a necessary effort, but I think there's significant challenges. And it's a very complex landscape that we're working under and if we all come to the table with a very open perspective I think we'll have a better product.

PRESIDENT PICKER: Thank you.

Mr. Dennis?

MR. DENNIS: I'm John Dennis. I'm the Director of Power System Planning and Development for the City of Los Angeles Department of Water and Power. Thank you for the invitation just to be here today and to participate in this process. I'm just really excited about the opportunity and the planning and what's going on and the stage that we're at, here for the next step of where we're

going and with the aspect of 50 percent renewable. So thank you again for this consideration.

And the current activities, we just want to give a quick update on the current activities. What we're doing to reach that and some of these that are specific towards the transmission planning and action.

To date, in our system we have currently under construction our Barren Ridge Renewable Transmission Project. That is increasing the capacity of that line from 600 megawatts to approximately 2,000 megawatts. And that brings in power from the Mojave and Tehachapi regions.

Again, in line with Commissioner Peterman's information there, interestingly enough this is following a corridor that was built 100 years ago to bring in hydro power into Los Angeles. And following that same corridor, so we will be putting in two new lines and re-conducting an existing line to bring in that power to L.A.

In addition to the transmission projects this particular one that's under construction, it's being serviced next year. We're also adding additional equipment for voltage support as we see this transition, so synchronous condensers and static var compensators and shunt reactors all out in the external system as well as inside the L.A. Basin to take care of some of the changing needs of our system.

As well, even inside L.A. we're reconducting some of our transmission lines and replacing and building some new to take care of our needs that are growing inside the city.

As for the RPS renewable projects that are underway, we are set to achieve our 33 percent renewable energy by 2020. We have over 30 projects or programs that are geographically dispersed over California and five neighboring states. DWP expects a diverse resource mix with approximately -- these are roughly about 50 percent of that being solar, 25 percent wind and 25 percent geothermal and small hdyro, so very, very similar to the progress of the State.

We're following that proportionately. We have a 1,687 megawatts that are in service today. We have 1,000 megawatts that are under construction and we have another 1,000 megawatts that are either perspective or planned, so overall total there's 3,754 megawatts that are either in service or under construction or planned. So very exciting changes that are happening in our system as we look to the next reach for 40 to 50 percent RPS and making that stretch.

We still see a very strong interest inside of Los Angeles to try to meet our interests inside the L.A. Basin. And so our L.A. governance continues to express a great

interest for local solar and we're still trying to incentivize that effort as well as growing more with geothermal.

And then the next one is energy storage and seeing where that goes, those opportunities that lie ahead of us. There is still some infancy on some of that technology that's growing. But we're looking at the likes of battery ice energy and inlet air chilling for some of our thermal plants.

Additionally, on some of the transformation that we're undergoing is in addition to just the RPS, but in correlation with that, we're repowering our coastal plants to take our units off once-through cooling. And with those replacements we are putting in some quick start units for renewable integration as well as replacing our coal generation. That will be in our mix and up to currently and then 2025.

And then some areas of studies that are underway. We're looking at all of the elements of generation, transmission and distribution for maximizing renewable energy on all those aspects. And looking at a variety of studies internally, but also so that we can accommodate just more renewables in our system and also make this a sizable transition to be coal-free in 2025.

As far as collaboration and coordination that's

underway. We appreciate the opportunities to participate. We're on active participation on several regional and in-regional transmission planning groups that are both inside the state and with neighboring states.

We're also, as part of our studies in addition to those regional planning activities we're also looking closely at reevaluating the Southern California Import Transfer Study. And rerunning and revamping that to look at what kind of imports we can bring into Southern California, into our region. It's very important for us as we look at that externally as well internally, our needs.

As for challenges that lie ahead of us, and our wish list in some of this process, obviously to set some of the criteria for what we're looking at -- the rulemaking. Certainly we just need them to be clear and consistent and predictable in the rules that we're facing towards renewable energy. And I think with that predictability as well it'll invite and encourage long-term investments. And so a steady hand at that rulemaking will be extremely important and greatly appreciated as we look at these.

As I noted what's really interesting is that as we look at this transmission corridor, some of these that we have, they're 50 years old or even 100 years old. And so they've done well for our state and for our region. And these are the footprints that are being laid today. And

they will go a long time. So as we look at these rules of interest that we're forming again, that will be extremely helpful as we lay out and actually build these systems out.

The other area, just of great importance is the integration and optimization issues that we do face. Now, that we've got a good handle we're starting to feel how these systems are working together and tying together.

We do see some challenges as we start to look ahead, so forecasting tools are going to be important even as we enter into 20 and 30-year contracts or agreements for building these systems. Even though some of that technology doesn't exist today, we know that it will improve and it will get better in ten years.

And so we can anticipate some of that as we look at contracts and build some of these systems. And so we can anticipate that and work with the industry as far as those forecasting tools and what they may look like. And even though we don't have those answers to date, we believe that they will be there for us. And we can anticipate some of that.

Curtailment is going to be something that'll be a part of that mix as we start to look at this, what that is, and ride through capability. Just of interest, as we look at the reports that came out from RETI 1.0 we start to see some technology that today -- it was estimated at a certain

price and today it's a third of that price that's being offered. And so the concern as we start to look at grid reliability that we don't want to move and everybody just swing to one particular technology. And to find that sweet -- it's attractive as a price, but a dependence on one technology could be harmful to our state and to our region. And so we want to make sure that we look at those opportunities and what the needs are with the reliability of our system.

So with that we'll look further at these studies with storage technology and making sure that we look at diversity. And diversity doesn't mean just in the technology alone, but as well the regions. And so we're starting to get a feel even as we see cloud covers and certain patterns coming through, how far we should look at these in perhaps spreading out those projects to different locations or different regions.

And sometimes just because the wind is blowing and you think they're separated by many miles or even across different stateliness, the correlation of some of those can be very, very close. And so we need to look at some of that and how that affects for integration and even as we look at the storage needs.

So lastly just to say is that our emphasis, I think, what has been our mantra along this line is

reliability and rates that are reasonable for our people and responsibility towards the environment. And that is going to be accomplished through our greenhouse gas reductions and renewable portfolio. But we just look forward to the collaborative efforts in these transmission studies and the projects that will provide long-term sustainable benefits that move us towards these new goals that are in the State of California.

So thank you for the opportunity to participate today.

PRESIDENT PICKER: So questions for any of the staff and the publicly owned utilities?

COMMISSIONER FLORIO: Yes, for Mr. Dennis. Obviously we at the PUC don't have much of a window into what your planning is doing, but just various media reports. But what's the current thinking about what happens when Intermountain Coal shuts down? Are we looking at gas storage, using the transmission to bring in renewables, what's the status of that? I know it's not finally decided, but...

MR. DENNIS: Perhaps all of the above. At this point the participants in the project have made an agreement or they're working on their final agreements as far as what they will do. But basically is it'll allow them the opportunity between now and 2020 to work on what

that will look like or what that new facility would look like or what that region would look like in bringing that power or taking care of that. Would it be all a complete replacement? Would it be a mix of gas or there's alternative energy resources that are in the region?

So those studies once they're all in agreement, the 38 participants that are in there, then they will work on those particular studies as far as what will be best for all the entities involved. So we would see that taking shape in the next five years. And then lock that in and the period from 2020 to 2025 would allow for the design and construction of that facility to be replaced and ready to operate by that date.

COMMISSIONER FLORIO: Okay. Thank you.

COMMISSIONER DOUGLAS: Yeah, just a brief comment if I could for Mr. Tippin?

Some of your comments really hit some themes that I've become pretty familiar with in some of our local government outreach. You know, the relationship between local government, land use jurisdiction and local planning and broader, kind of higher-scale planning initiatives like RETI 2.0 and for that matter, RETI 1.0 when we were working on that, and DRECP of course.

The kind of broader interest in a way, you know we're convening here to talk about renewable energy and

transmission planning. And that's a really core part of our greenhouse gas goals, but of course on the local government side you're seeing energy efficiency. And so are we, in fact. In our business meeting we approved the AB 758 Implementation Plan for Energy Efficiency in Existing Buildings. There is a major component of partnering with local governments and other entities around the State to make that a reality and to achieve the goals in that.

You brought up electrical vehicle charging. And, of course, this is Commissioner Scott's world, but in her world the Energy Commission and the PUC as well, this is another area where we cooperate very closely with the PUC. But one thing that we've done is provide some readiness grants to local governments for their planning.

So I just wanted to acknowledge you bringing up a broader set of issues in the energy picture, it's something that we've both heard and experienced in conversations with local governments. And that we're very open to talking about it. I think the Energy Commission generally is recognizing increasingly as we move forward with our greenhouse gas goals the partnership between us and with local governments is going to be incredibly important.

And Mr. Dennis, I didn't mean to just address Mr. Tippin with that, because of course we're working with

L.A. on a number of initiatives and really need to be.

MR. DENNIS: If I could just follow on that one? Thank you. With regards to the transportation and electrification of the transportation systems, it is a big part of our Integrated Resource Plan towards the overall reduction of emissions. But it does create an additional burden perhaps, even on the electric system. And so we have to be prepared for that.

And that's why is I said our emphasis is not only just for the external as we deal with the transmission and bringing it into Los Angeles or producing it locally, but also making sure that our Grid is robust enough to handle our forecast for vehicle electrification in all aspects of transportation. Ultimately, the goal is for that greenhouse gas reduction.

COMMISSIONER PETERMAN: Just, you know, building upon that. I appreciate that it's been good to be reminded that there are other pressures that might be driving a new transmission planning initiative beyond the 50 percent renewables target. And so particularly with transportation electrification I've been thinking a lot about distribution level upgrades. But if we actually get to the goals that we're striving for there'll be some transmission level impacts as well.

And particularly, just bringing up Intermountain

and so it would be useful, as that fleshes out, what are the problems we're trying to address going forward to really pinpoint what are some very unique kind of one-off things that are going to happen in the next 10 to 15 years not only from state policy, but from federal policy as well.

I also appreciate, specifically, the raising of the issue of cost, because everything we're trying to do is just to plan smarter, which hopefully should lead to lower costs. Bur really highlighting that as a goal, I think, of this process as well is important.

So one question I had particularly for the agencies that talked about process alignment, is that it seems that this process alignment is a very delicate and time-sensitive process. And I was wondering if you could speak to what parts of that process maybe take the longest or the timing is most uncertain?

You know, where are there some bottlenecks that a) future planning process of RETI 2.0 could help inform, because it sounds like things are going well. But things can always go better, so what can we do to help? For now and for the future.

MR. MILLAR: I'll take the first cut of that, Neil Millar with the ISO.

The timing of the various processes we think we

have very tight right now, they are feeding properly into each other. I think the big issue that we need to make sure of is an issue though that Molly touched on initially, which is when we get through to actually making those decisions, the decisions are good but we also need to be able to move to implementation.

So the permitting processes, the downstream work after we've all agreed that these are the facilities we need, tied to the right assumptions and inputs, we then need to make sure that the execution can also be delivered on a timely basis.

So I think the additional coordination into the various permitting processes is also really important. In that scenario I think we will have to spend a bit of time on in the future to make sure that we still respect everyone's responsibilities and authorities, but also ensure that those processes move forward as efficiently as possible.

MR. CASEY: If I may just put a finer point on Neil's comment?

It really gets to not starting from square one when we get to the permitting process for determination of need. How can we leverage the study work that goes into the planning process, into the permitting process to really not get bogged down in starting all over again?

CHAIRMAN WEISENMILLER: Yeah. I would remind everyone if you look at the Governor's Clean Energy Jobs Plan, his goal was to get from six to eight years for permitting building projects to three years. So we haven't made -- we need to be smart from the start to make things go smoothly, but we haven't made much progress in that sort of expedition of transmission projects, say.

COMMISSIONER PETERMAN: Yeah, I think that makes sense. I'd also note that what we talked about in a previous IEPR Workshop also was again, that better alignment between the planning process and the procurement process as well. And so in the most recent staff paper on the RPS Calculator we've asked for some comments about some of that process alignment, because again not wanting to start from scratch but respecting each entity's jurisdiction and decision-making role.

PRESIDENT PICKER: To both Mr. Dennis and Mr. Tippin, we're talking about trying to construct a process. And even here on the table there's differences in terms of the scope of our jurisdiction. We deal with five regulated utilities. We don't really have a process, our calculator wouldn't necessarily actually take your needs into account.

The CEC does actually have more of a geographic authority although they don't generally take the lead on permitting some of your projects. And so how does this

process that we're talking about become useful to you? Is there just going to remain the traditional disconnect, because you operate within your own balancing authorities? Are there things here that we can do that actually would help to build some sense of how this helps the State of California to meet its overarching goals in terms of clean energy, reliability and affordable power bills?

I'm just trying to understand what the continuing relationship ought to be with the publicly owned utilities as we move forward.

MR. DENNIS: I had the privilege years back, of sitting in on a variety of the meetings with the California Transmission Planning Group. And what I really appreciated in that process -- and some of our individuals -- Dr. Mohammed Beshir was actively involved in that -- is that the group was given particular guidelines and criteria. And there was some liberty obviously with setting some timelines to really think it through. And with an independent way to just really creatively think that through, what needed to be done.

And I really appreciated the purity of that process. I think that was very healthy. And from that I believe the timelines that Neil has described came about in setting those, so that those are done on annual basis. And you've got that process that's been refined and fine-tuned

in there.

For us, I believe that as CAISO has indicated their involvement in collaboration with the other entities, WestConnect and some of those others that they're involved with, is of most help to us. That we're participating in those actively and not just looking here in the State, but also looking -- and I think that's obviously an interest by the State, as was commented earlier to start to reach out further to take care of not just our transmission interests, but also the renewable energy interest.

I would say as far as one of them, we are focused on the planning. It might be something that just in the execution of projects at times, sometimes when we're crossing a variety of different areas whether it be different kinds of utilities or crossing particular areas, there are sometimes some just very difficult areas to execute that. The individuals that might be sitting at a desk or whatever that might be, sometimes that just needs to be escalated in a variety of ways in order to execute it and make sure that those jobs are delivered in a timely fashion.

So that might be an area where we could have an SOS to help come to and perhaps be a tiebreaker when we have some of those difficult -- with some large entities that might be here in the State or even in the U.S. to work

through some of those. For efficient and getting those jobs delivered on time.

MR. TIPPIN: Thank you. That's an excellent question and I would echo many of the same comments.

I'd also state that while we have access to our own transmission either through ownership or contract, many of us within the BANC footprint also rely pretty heavily on the Western Transmission System. And so that transmission system is vast as you know, and it goes throughout the Western United States. And I suspect it will be a major element as you look at optimizing the existing transmission.

And certainly with the Clean Power Plan and the direction that the federal government is going in relation to greenhouse gas reduction we fully expect that DOE and Western will continue to be a player in all of this discussion. And as such we certainly find it valuable to us for us to be involved.

PRESIDENT PICKER: Great. Is there anybody else?

I wanted to note that Mike Sintetos (sic) from the Bureau of Land Management is on the phone with us.

Michael, do you have anything that you want to add to the conversation?

MR. SINTETOS: Yeah, can you hear me okay?

PRESIDENT PICKER: Yes, we can.

MR. SINTETOS: Great, thanks President Picker.

Jim Kenna, the BLM California State Director wanted to send his apologies for not participating today. He's traveling, but just asked me to say a few words.

BLM has obviously been an active partner with the State through the RETI 1.0 process and now through the DRECP process. And so we just wanted to reiterate that we're committed to maintaining that partnership into RETI 2.0. Obviously, this is very important not just for state goals, but also for federal goals. So we look forward to being a part of all the work going forward.

PRESIDENT PICKER: Okay. Thanks.

So I think at this point we were going to talk a little bit about Next Steps, Mr. Alvarado?

MR. ALVARADO: Good morning. I think we had a pretty good discussion earlier today covering many of the lessons learned from our previous collaborative stakeholder processes.

There was also a very good discussion about the process alignment activities going on between the Energy Commission and the Public Utilities Commission and the ISO. I think we have a pretty robust and timely process of the different jurisdictions and analytical activities between the agencies.

We've also discussed some of the many new

challenges that we're likely going to encounter as we consider a future where we're expanding the number of penetrations of renewable generation in California. These challenges are not only in what's considering how much new renewables, what is economic, but also how these renewables will also integrate well into the system.

And we consider operational optimization considerations -- that was brought up too -- but there are many other uncertainties we do need to consider. I think there was a discussion about potential electrification. There are a number of many other assumptions that we need to consider as we move forward to evaluating and coming up with an expanded analytical activity to evaluate new transmission for California.

So just launching from this strong foundation that we already have, and as we move into RETI 2.0, the very first step that the agencies are going to engage in is to develop a Draft Work Plan working closely with the Public Utilities Commission, the California ISO. And as we've discussed, also expanding the scope into the rest of California. It's very important to include the other California balancing authorities.

And without a doubt we are interconnected with the rest of the Western region and we will eventually need to expand our analysis to consider the opportunities and

how we're going to operate with the rest of the WECC Region.

So this first next step we'll come up with a Draft Plan, which will be considered between the agencies and this is a stakeholder process. So it is very important to us to bring all these efforts before you.

We also -- Mr. Flint had also talked about some of the ongoing analytical activities here at the Energy Commission that's covering the environmental data and analytical approaches. We've already hit the ground running, so this is going to be -- we're going to be moving forward with this effort. And we're also going to be planning a series of workshops to at least cover this activity and everything else as we move to bring in all of the considerations.

It is important to bring and engage all stakeholders, the tribal leadership, our federal, state and local agencies. I think we have many involved here today.

In an effort to facilitate this open dialogue we are developing a website and we hope to at least use this website as a means to provide as much information to the public as possible. And also this will be a location where we can also receive any comments. The URL for this webpage, it's still under construction, but I have them listed here.

For the public that wish to participate we do have a new docket for this RETI 2.0 proceeding. We encourage you to sign up to our Listserve and you will be receiving notifications on every step of the process that we engage in.

We've also, in the Workshop Notice, we've also asked as we kickoff for this introduction to the RETI 2.0 we want to give everyone an opportunity to provide and file comments. And we have a date of September 24th. And if you wish to provide comments and file comments I have also, the third bullet here, a location where you can file comments online.

With that, that's my short quick list of the next steps. I do think this is going to be a pretty robust process, a lot of activities. That's going to be running through this year into next.

PRESIDENT PICKER: So I just wanted to make a few comments. I'm going to take the prerogative of jumping in first. And then after the other agency folks here make comments, we'll go to public comments, which may also help to inform the steps forward.

When you come back to us with a Work Plan, I also hope that you'll come back to us a little bit with some discussion of what the proper governance is for actions. We've sort of impaneled this informally and so I think that

it's important for us to actually investigate what the role is -- for the feds will be. You know, come to a couple of things that we need to that we need to take into consideration when we look at that.

Second, is that we're going to face challenge in trying to figure out what goals are we actually pursuing? And so I'll just say that some of the modeling on the Governor's Executive Order in the 2030 Goal actually tells us that we would be focused more, at least on renewable energy, on a 60 percent goal than a 50 percent goal. To meet our 2030 goals we'll actually have to incorporate a higher proportion of our generation from renewables than we really would need if we were just pursuing a straight out renewables goal.

So if the basic rule is that you get what you count, and we're actually trying to get to a reduction in greenhouse gas rather than simply building renewables, we have to begin to factor that in. So we ought to have a little discussion on that.

I do think that we've heard a couple of things around the table here. One is that we need to do things that we didn't do during the ARRA process. And the ARRA process, it was really far more aimed at getting projects built, helping the industry to get established. At this point solar and wind are pretty well-established throughout

the U.S. When you can get three-cent wind out of both the west and the Midwest, utilities are just procuring it. When you can get four and five-cent solar contracts in increments over 100 megawatts there's not as much tension on simply trying to force projects.

So I think that we will have to spend more time as we think this through on the liability. As the Governor says, "keeping the lights on and keeping bills affordable." So I think that we're going to have to really refine that least cost, best fit model. It can't simply be a least cost. It has to be a least cost, best fit. So I think that people here have pointed both to an eye to integration of renewables and a regional and technology diversity. So I think we'll have to really factor that into our Work Plan and into our thinking.

I'll say that when we start to talk about integration we're sort of in the new world. It's not just enough energy, it's what do you do with those parts of the day and times of the year when you have too much? And so there's a value to having a multistate approach, both in terms of the diversity of resources that may help us to actually integrate the resources, but also a larger market.

If we want to sell a 1,000 megawatts of excess renewable generation from the State of California it may help us to actually think about those things and model

those things. So as we look at the technical challenges we really have to have a multistate look. We have to look at portfolios that cover a larger geographic basis.

That then brings us back to the importance of having our federal partners. And it may actually be new partners and I think we really need to think about how do we do this.

The next thing that I just really want to point to, is that we really need to think very hard about what's a stakeholder process where we can talk all these issues through? And maybe early enough that we can actually refine our thinking -- while I think that when we get to governance we will want to make sure that decision makers actually have a role in the process to provide direction. And to set up for the kinds of decisions that we're statutorily required to make.

We do need to build in the stakeholder process early enough that there's a consensus, both about the inputs and the outcomes. And so I think that's another set of challenges that we'll face.

And I have to say that it would be useful to continue to have discussions with the publicly owned utilities, because ultimately the electrons tend to be a little bit less finicky about political and economic jurisdictions than we are as policy decision makers. So we

should look at that as part of this question of diversity of resources.

So I'll just leave that there. I've heard other people speak to some of these things. I also just wanted to underline them as being very important to the Public Utilities Commission.

CHAIRMAN WEISENMILLER: Yeah, thank you.

I think on the framing, just to follow up, obviously our focus is greenhouse gas, which means -- and frankly buying renewables that we then have to curtail, doesn't really help us on greenhouse gas or economics. So we really have to be thinking a lot more on the best fit side.

You know, I've certainly -- at a recent IEPR workshop one of the utilities assured me that issue was the ISO's problem; that they would buy it or whatever. And I think we have to have a broader perspective than that. It comes back to, you know, people always talked about in the original siting stuff "more smart from the start."

And I think that's sort of the mantra we want here is to figure out what we want to do given the greenhouse gas side. And try to use this process to winnow out things we don't want to do or how to get the maximum value, both from a greenhouse gas, environmental prospective. And I think that's going to require much more

of a regional focus.

So while we're not empowered to plan for the west that's certainly the participation of other balancing authorities around the west, particularly given the energy and balance market issues, will be very valuable in this process. And that will require some degree of melding where we have very detailed environmental data to where we have lesser data, lesser quality data as we go forward.

And I think it also good to keep in mind this basic thing of if we can do smart from the start, if we can mesh our processes together, then presumably we should be able to move through some of the processes more efficiently and effectively.

But again, I think the basic balance of greenhouse gas cost and reliability will drive us. Again, it's very important as we go through this process to make this something that makes us all smarter on how to get between here and where we want to be in 2030.

COMMISSIONER PETERMAN: I'll note that what I'm looking forward to seeing in the Work Plan, is some sense of recommendations from staff in terms of prioritization of what makes sense to focus on in the next six months to a year. Both from an ease perspective as well as an importance perspective. We've raised a lot of issues, which we will need to address in order to do the

transmission properly for 2030. But some, for example, like planning for transportation electrification will be a little more complicated.

You know, from the presentation, for example, from Scott and Roger it seems like the CEC -- and also from Ken Alexis -- that the CEC has got a lot of tools and development whether it's working on the San Joaquin Valley or some of the intactness modeling. And so I'm interested if there are things that are getting close to being baked or really are at the point where they would benefit from a more robust stakeholder process that we prioritize those, so that we can incorporate them into the work that we're doing.

I'm also looking again, for guidance about how do we continue to coordinate what we'd like to do with what we're already doing. I think we've gotten good input so far today that there are processes that are in the works. And as we pursue smarter strategy, I don't want us to drop the ball on what we need to do in terms of providing the ISO the inputs that it needs.

So I can envision, for example, that there will need to be at points sometimes complimentary processes. That sometimes these ramps will -- you know, putting a clear point and time, we will start to combine processes. But let's make sure that we're continuing to do the

transmission development. We need to for 33, 40 percent as we plan for the 60 percent.

COMMISSIONER DOUGLAS: I was just going to say briefly, and segue really nicely off of what Commissioner Peterman just said, first of all I think the Work Plan and governance is going to be very important. As is the early outreach to potential partners in this effort and we're going to need to focus on that.

And I really support all the guidance that I've heard so far from my colleagues on the dais about prioritization and goals for that Work Plan and for the Governance.

As Commissioner Peterman just said, you know, I also think in the Staff Next Steps Proposal -- puts forward that we can really start now to start the dialogue and stakeholder process on inputs, on data, on models, on how that would be put together. On what you can learn, what are the cautions around using it in some areas with maybe less data than others?

You know, how do we best inform this process with this one very important input on the environmental side? That is one of many things we're balancing and not the only thing. But it's important and it can start now, so I wanted to -- I think I saw one iteration of that slide that said the first workshop might be in September. And the one

I saw today said October, but whether it's late September or early October I want to encourage stakeholders to engage with us. And as Scott said I think the idea would be working sessions as we crunch through inputs and approaches with stakeholders.

COMMISSIONER FLORIO: Yeah, just on the outreach point I think it would make sense to reach out to other states. And project developers who have specific things in mind I think will find us. They're probably in the audience today, but both Commissioner Scott and I sit on CREPC, the Committee for Regional Electric Power Cooperation. And maybe we could try to remind each other to mention at the next meeting there -- that's not until the end of October, but a way where you have states and energy offices and PUCs from around the west engage -- that we can reach out there and let people know this is happening.

And that we welcome their participation, because if we just throw a California party we're only going to have California solutions. And I think -- I don't know what the role is for out-of-state, but I'm pretty sure it's not zero. So, you know, whatever we can do to make this a big tent I think is beneficial in the long run.

COMMISSIONER SCOTT: I think that's a fantastic idea. We ought to figure out if we can even get that on

the agenda. I think that would be terrific.

COMMISSIONER FLORIO: Yeah.

COMMISSIONER SCOTT: I wanted to just note that underscores some things we've heard already today. That how important it is for us to define our goals and really emphasize what President Picker and Chair Weisenmiller said that we're looking for greenhouse gas reductions. And I think that that will drive potentially how we are looking at things, whether it's the best fit, least cost, thinking about how do we really integrate the renewables in a reliable way?

I think the increased demand from transportation electrification is going to throw a little bit of complexity into this, but it will be important for us to think about that.

Commissioner Florio mentioned in his opening remarks that we are at a great point in time where we have the advantage of being able to strategize this much in advance. And I think that that is fantastic, but I also want to make sure that we develop a process that's flexible enough and nimble enough for us to be able to take into account innovations, price changes, things like that that we will want to be able to incorporate as we continue to plan out through 2030 and beyond.

I also wanted to highlight that I heard, I think

it was Neil, who mentioned that the process alignment is actually working really well right now, so I think that's fantastic to hear. And I wanted to underscore what Commissioner Peterman said about if there are things that we can do to help with that or help make that process even better, even more effective please, please think about those and let us know. We're always open to suggestions.

And also just wanted to note I thought it was a great question that President Picker had for the POUs about what is it that we can do to make RETI 2.0 as useful as it can be for you. And I think that's a great question for many of the stakeholders. And as we continue to do the workshops and the process I hope that people will think about that and give us good, thoughtful feedback on that as well.

MR. HUNTING: Just a couple of brief comments, kind of carrying off of President Picker's and Commissioner Douglas's comments. You know, we do have a chance to do this right from the start, smart from the start, this time around.

Our Department is very involved with the Energy Commission on development of the models and some of the information you saw in that mockup, at least of the energy modeling. And there's a lot of data and information and analysis that is behind those models that allow us to

really think through what's most important to our Department and as a sensitive environmental issue, which is siting.

You know, President Picker mentioned we have a well-established energy sector now in California. We should be more nuanced and rigorous in how we look at the environmental part of analysis for planning for transmission and for project siting. And we have the data and the analysis now to do a much better job of that.

So I'm hoping -- you know, just kind of transiting into the Work Plan -- I'm hoping we can spend some time in a public way really looking at some of the environmental modeling and some of the techniques that the Energy Commission has now put together for building scenarios for transmission planning.

MR. CASEY: Yeah. I'd just like to add too, I'm very encouraged on the comments around the importance of keeping the eye on reliability and the integration challenge.

And an area where I think renewables can actually help, I think, is actually being able to use renewables to provide reliability services. I think we've tended to think of renewables as "must take resources," that we've got to get as much on the Grid as we can. But I think as we get more sophisticated in thinking about it, renewables

can be part of the solution as well on the integration side. And I think it may require thinking differently about how we procure renewables in terms of the structure of the contracts, in the ability of renewables to provide economic curtailments.

Also, Commissioner Peterman as well Neil mentioned this issue around resource adequacy. If renewables have to count as a resource-adequacy resource the bar for transmission goes up much higher.

And I think we'll have a good opportunity to explore through some of the current work we're doing at the ISO, what the implications are of that RA requirement. But I think that scenario where we could greatly reduce the transmission needs to get to 50 percent if we think differently about the resource adequacy aspect of renewables and just focus on the energy aspect. So I think that's it.

And then, of course, the regionalism -- I'm very encouraged by the comments on the regionalism. I think that's a really low-hanging fruit for getting to 50 percent that we should take full advantage of.

CHAIRMAN WEISENMILLER: We have two agency comments and then we have public comments.

COMMISSIONER DOUGLAS: We still have other agencies on the WebEx. I think Inland County.

CHAIRMAN WEISENMILLER: Okay. Well, in terms of where I have blue cards I'll have to go through the cards for people in the room. And then we'll go to the people on the line. And again when we go to people on the line we'll start with the agencies first.

So let's start with the Dry Creek Rancheria Band, please.

MS. LAPENA: Good morning, my name is Michelle LaPena. I'm an attorney for the Dry Creek Rancheria Band of Pomo Indians. I'm also a member of the Pit River Tribe of Northeastern California. And I participated initially with the RETI 1.0 when that first started and some of my comments are going to be the same as I said several years ago.

Today I'm pleased that on the last slide there was tribal involvement and input into the development of the Work Plan. But I am concerned that there's not tribal representation on any of the panels.

The RETI Initiative, the very first meeting last time, included the Chairman of the Native American Heritage Commission and a representative from the BIA was eventually involved. And I was expecting that there would have been some lessons learned on that front.

And we now have a representative, Cynthia Gomez, in the Governor's Office. And I'm kind of wondering why

she's not here? If she just wasn't able to be here today.

Commissioner Peterman asked the question, "What's missing?" and I say that it's the tribal governments and the tribal interests, because we have over 109 Indian tribes in California. They have jurisdiction that is mixed and varied. Some have lands that are quite extensive and resource-rich. And some are developing renewable energy projects on their Indian reservations and rancherias.

Tribal governments really do have intimate knowledge of their aboriginal areas and so there's kind of two prongs to the tribal involvement.

One is the upfront consultation with the tribes on the impacts to the environment. I noted in the comments about the Central Valley Plan the comments were focused on ag and species impacts, but I am positive that there are cultural issues in the Central Valley area. I don't know what the CREZ looks like, if this was a CREZ-defined plan. But if so there are many tribes in the Central Valley that have GIS databases and have information that would be informative to the process. And help you avoid cultural sites that could be avoided early in the process.

And I know there's representation here from OPR today. And I can vouch for them that OPR has the ability to provide notice to the tribal governments that they've worked with, the local governments, to establish guidelines

for the consultation with tribes.

And this is a perfect test to see if the State can do it. The State is covered. I believe the CEC is probably -- and this process is probably covered by the Governor's Consultation Policy for all the statewide agencies. And there is a process in place. I just encourage you to implement it.

So on one hand there's the environmental impacts that are potentially caused by new transmission lines. I know that I've participated with a tribal client in the past on the TANC process. Not to call you out, but I know that it resulted in some unfavorable decision making. And unfortunately that was at the end of the process.

And we're always trying to get tribal input at the beginning, because it saves money. It saves time and it involves the tribal governments in a way that's meaningful and beneficial rather than the tribes coming in at sort of at the last minute and upsetting the whole applecart. And then the tribal governments are viewed as in a real negative way. That we're sort of the naysayers and we're undermining the whole process, when we really want to be partners.

I don't know that tribal governments got notices of this meeting today. I got it because I've been watching RETI. I've been participating in the workshops, on the

phone. And I know that when the Desert Plan was being implemented that I received questions from tribal government officials, because I was the only one that really knew anything about it at the time. And then that may have caused some delays in the process where the tribes were brought in late, so I encourage you to do that early.

But on the other hand the second prong really is the tribes have the ability to be their own tribal utilities. And they want to be participating in the renewable energy grid and the upgrades and the transmissions.

I have a tribal client today, the Dry Creek Rancheria, who is very interested in the solar process and developing a solar project in cooperation with the Army Corps of Engineers up Sonoma County. And one of the barriers to doing that is the grid, the transmission. The space is not available in the transmission lines and so it makes the projects that they would like to and are able to develop unfeasible. They are just too expensive, because the transmission capacity is not there.

And so when the State plans around the tribes instead of including the tribes we have projects that can't be putting renewable energy into the grid. And I think that's a real shame that we can't integrate the tribal projects into the grid and participate in the process.

So I encourage you to do that, I encourage you to reach out to tribes. And I will be participating in the development of the Work Plan to the extent I can.

COMMISSIONER DOUGLAS: Michael, (sic) if I could quickly speak to this?

I appreciate your comments. I appreciate your being here. The Energy Commission is covered by the Governor's Consultation Executive Order. We mailed and contacted every tribe in California to notify them of this workshop, so that outreach was done.

As you have probably seen this is a very early kickoff workshop. We have a number of really important partners including all of the federal agencies, a number of state agencies that are not on the dais with us today. We're definitely anticipating some fairly robust tribal engagement or hoping to have that.

We did get that in DRECP, although my involvement with tribal conversations and dialogue in DRECP is more from the latter half of the process.

So I really appreciate your comments and your interest in engaging. I just wanted to welcome you to this process. It's at the very beginning. And when we say we're taking input, for example, from the San Joaquin Solar process and other processes we are, but they're inputs. And we have a process ahead of us that is just beginning.

Thanks for being here. And actually, Roger Johnson, is our Tribal Liaison. If you wouldn't mind at some point giving him your contact information, that's a good follow-up.

MS. LAPENA: Thank you. I'm not surprised the tribes didn't respond to the notice initially, because they get a lot. And so they get notices on everything now. We asked for it and now we have it. And now we have to deal with it all, so I'll do my best to get the word out to Indian Country as well. Thank you.

COMMISSIONER DOUGLAS: Thank you.

CHAIRMAN WEISENMILLER: Okay. Thank you.

Bob Laurie, IID, welcome back to the Energy Commission.

MR. LAURIE: Chairman Weisenmiller, President Picker, Honorable Members of the Panel and Staff, good morning. My name is Robert Laurie. I serve as the in-house Energy Counsel for the Imperial Irrigation District headquartered in El Centro.

I want to thank you for the opportunity to appear here today on behalf of IID. For those that are not very familiar with IID I would simply note that we are the third largest public utility in California, with control over 1,100 megawatts generated from a diverse portfolio. We are an independent balancing authority with inner ties with San

Diego Gas and Electric, Edison, WAPA and APS. And we are the largest irrigation district in the nation.

To those that reside within our jurisdiction these proceedings are not theory, these proceedings are not mere public policy. But rather these proceedings represent possibility and hope for the residents of our district.

Imperial County has the highest unemployment rate in the state. California's unemployment rate is 16 percent -- strike that -- California's unemployment rate is 6.5 percent. Imperial's is 24-plus percent. Imperial is number one in unemployment. And if you prefer, it's number 58 in employment. Either way the number is not good.

Imperial's poverty rate rests at about 23.5 percent. California's poverty rate is roughly 16 percent.

The air molecules we breathe are among the most unhealthful in the State and the Nation. Why is this relevant to our discussion today?

It is relevant, because the law mandates that preference be given to renewable projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment or that suffer from high levels of toxic air contaminants. Unfortunately, Imperial is so afflicted.

Despite these statistics however, Imperial is also an area of great wealth: wealth of spirit, wealth of

resources. We have nearly unlimited capacity for the development of wind, geothermal, biomass development. And of course the sun always shines.

In order to provide this development however we are also willing and desirous of constructing or enhancing transmission facilities in order to deliver such resources. In order to do so we need to operate in a cooperative manner with our neighboring, balancing authorities. IID as a balancing authority, like all balancing authorities, must provide customers open, nondiscriminatory, comparable access to transmission services.

If we are to come anywhere close to maximizing our productive capacity, and if we can deliver those resources --

CHAIRMAN WEISENMILLER: Could you wrap it up? I'm sorry. MR. LAURIE: Yes, sir.

CHAIRMAN WEISENMILLER: Certainly, written comments will be great, but we're trying to keep everyone to three minutes.

MR. LAURIE: Yes. If we can come close to maximizing our productive capacity and deliver those then all of California will benefit. On behalf of the residents of Imperial and Coachella Valleys we look forward to our participation. And we thank you very much for your time.

CHAIRMAN WEISENMILLER: Thanks for being here.

Lets' go to the Bay Area Municipal Transmission Group.

MR. WAGLE: Good morning, Commissioners. My name is Pushkar Wagle. And I'm here to make a statement on behalf of the Bay Area Municipal Transmission Group, also known as BAMx.

We welcome the joint agency efforts in working together to help achieve the State's GHG Emission Reduction Goals, studying what transmission infrastructure should be to achieve a 50 percent renewable target is a worthwhile effort.

And the good news is that your agencies have developed very sophisticated tools, not available when the RETI was originally formed. It is very important that this joint agency effort fully recognizes and builds off of those tools. You should be heartened to know that based upon these tools the existing transmission system can accommodate a lot more renewables than one might otherwise think.

I'm going to keep it very short, because Commissioner Peterman articulated very well in her introductory comments, the couple of things that I was going to mention. The one extremely valuable tool developed by the CPUC's Energy Division is the RPS Calculator and we heard about that. It's been used in the

last several planning cycles. And we are hopeful that the latest version of this RPS Calculator is the start of the effort to get more complete input from stakeholders before the CEC and CPUC send those portfolios to the ISO.

As you recognize, the ISO plays a key role in determining whether any transmission is needed to accommodate renewables contained in those portfolios. In concert with the Energy Division's latest efforts in refining the RPS Calculator, the ISO in the current transmission planning cycle will be performing a special study of the transmission system using a security-constrained production cost simulation tool, which is a standard industry tool to study the detailed hour-by-hour performance of the integrated generation transmission system.

So in summary we look forward to this joint agency effort to investigate the requirements of the transmission system that goes for any of us well beyond the 33 percent mandate. And encourage the joint agencies to use this new forum to further involve stakeholders to continue the efforts of the CPUC, and Energy Divisions CEC, and the CAISO in studying the impact of the increased renewables on the California transmission system. Thank you.

CHAIRMAN WEISENMILLER: Thanks for being here.

The Alliance for Desert Preservation?

UNIDENTIFIED MALE: There are two of us here.

COMMISSIONER DOUGLAS: Well actually one group -- one spokesman for each group, so you can both do a joint presentation, but come on up.

MR. MILLS: Good morning, Commissioners, thank you. My name is Steve Mills and I'm with the Alliance for Desert Preservation.

And I saw that the CEC's Distributed Generation Strategic Plan states that, "We are at the threshold of reinventing the electric power system." And that was a quote. And that means that we've moved away from the centralized utility scale generation model towards distributed generation, including of course rooftop solar.

And that the CEC views this transformation as an established fact ought to be adopted as RETI's governing principle. RETI then would become an opportunity to bring creative and proactive thinking to a process that has been pretty reactive in the past.

Governor Brown gave a recent inaugural speech, which echoes the CEC. And in speaking of the RPS he said, "I envision a wide range of initiatives: more distributed power, expanded rooftop solar, microgrids, an energy and balance market, battery storage and full integration of information technology."

Just looking at the CEC's latest tracking progress report it says there are now, according to my calculations, 5,471 megawatts of small solar distributed generation online, with another 1,000 pending. And that this increase is fueled in part by a 50 percent decline in the cost of solar PV. The CEC report also points to a doubling of cumulative energy efficiency savings between 2000 and 2013. And we are only now beginning to tap those capacities.

According to UCLA's Luskin Center Report, Los Angeles County alone has over 19,000 megawatts of rooftop solar potential. So in view of this sweeping transformation we would expect that RETI 2.0 will wind up looking much different than RETI 1.0.

And we would expect that with five more years of data under its belt, RETI will abandon the previously stated position in its responses to the 2010 FAQs that RETI will not reassess the potential for distributed generation. That we will have to rely almost entirely on utility scale to reach our goals and that with the State well on its way to reaching the 33 percent RPS goal, the energy market and the laws and policies regulating it are not working.

I would say that whatever the faults of the current system the fact is, is that the PUC is governed by some hard and fast questions whenever a new transmission

facility is proposed about whether it suits public convenience and necessity. When this set of yardsticks, for instance, was applied to Coolwater-Lugo the PUC quite rightly rejected it.

We are concerned that RETI would threaten to throw these hard and fast questions out the window. We don't want to wind up like the Rust Belt cities, stuck with the enormous problems when changing technologies and business models have left their industries behind.

We would urge that RETI's mission conform with the vision embodied in CEC's own Distributed Generation Strategic Plan and in Governor Brown's inaugural speech. Thank you.

CHAIRMAN WEISENMILLER: Thank you.

Let's go on to Eric Eisenman.

MR. EISENMAN: Good morning, Eric Eisenman with PG&E.

What I'm pleased about, what I've really been struck by this morning, is everything I was planning to say I've already heard. So with that in mind I just want to re-emphasize a few points.

First the ISO's transmission planning process is very robust. It's improved a lot in recent years. And it's really been very effective in identifying needed transmission. So PG&E looks for this initiative to really

inform the ISO's transmission planning process over the next couple years.

Next, starting with Commissioner Peterman we've heard a number of times today about optimizing transmission that we already have. That's really critical. We heard some comments about the San Joaquin Valley and available transmission there. That needs to be looked at very, very carefully.

We've also heard a number of times today about interregional planning, looking at resources out of the state. That needs to be included. I am encouraged to hear Mr. Florio say he'll bring it up with the other states.

And then last we've also heard, especially from Mr. Tippin, about the need to consider cost and rate impacts. Transmission is not a free lunch, so that ties back to considering how we optimize existing transmission.

So all of us need to consider the cost in rate impacts, thank you.

CHAIRMAN WEISENMILLER: Thank you.

Nancy Rader.

MS. RADER: Good morning, everyone. Nancy Rader, with the California Wind Energy Association. CalWEA was extensively involved in RETI 1.0 and so we wanted to share our perspective as you launch RETI 2.0.

RETI 1.0 resulted in three really important

lessons learned that the state has really taken to heart.

First the process ultimately recognized the importance of "least regrets" transmission planning, which is a methodology that identifies backbone transmission upgrades that are common to any reasonably possible renewable energy future. This type of planning does not prejudge the market or land use permitting processes and minimizes the possibility of stranded transmission assets.

So the CAISO has carried forward this concept as part of its policy based transmission planning authority that was granted by the FERC in 2010.

And the PUC's Energy Division is now running a stakeholder process to develop a number of reasonably possible renewable energy futures that will serve as the basis for a least regrets system and transmission planning. These futures are being informed by modeling capabilities and data that far exceed what we had in RETI 1.0.

Second, it was widely recognized that it was not possible with any credibility to screen resources on environmental grounds. This aspect of RETI turned out to be a largely arbitrary exercise outside of appropriate jurisdictional channels. It turned out not to be a problem, because of the least regrets nature of the RETI transmission plan, which meant that it was robust under any pattern of development and really wasn't affected by the

environmental scoring.

It did lead to the launch of the DRECP. While unfortunately the DRECP is fast leading to wind energy prohibitions in most of the State's best remaining wind resource areas, we will be able to use it to plan the renewable energy scenarios, because it will be a definitive land use plan. And we can use it as an input to this process.

Third, it became apparent that the RETI conceptual transmission plan as solid as it was wasn't going to be acted upon in 2009. And it has not been acted upon since. And by the way the Tehachapi and Sunrise Plans were in base case for RETI, because they were already well underway. The RETI conceptual plan went beyond these upgrades. A big part of the problem was that RETI 1.0 was not rooted in the agency processes that result in infrastructure decisions being made.

This procedural problem has been addressed in the better-aligned processes that are now underway at the PUC and the CAISO, which we believe will lead to the decisions that we need to invest in the backbone transmission upgrades that will be critically important in preventing significant transmission-related curtailments as we approach and surpass 33 percent renewables.

As Mr. Casey noted, these processes have also

recognized that it's not necessarily cost effective to build out the transmission system to the degree that you'd need to, to obtain a RA value from all renewables. Rather it may be more cost effective for other types of resources to provide RA and to focus transmission planning as it relates to renewables on avoiding significant curtailments.

The PUC and the CAISO are now in the process of conducting a special study to investigate this.

So we've made a great deal of progress as a result of what we've learned in RETI 1.0. And RETI 2.0 should recognize this process and seek to complement the efforts that are already well under way. And I appreciated the remarks of Commissioner Peterman along these lines.

CHAIRMAN WEISENMILLER: Okay Nancy, could you wrap it up?

MS. RADER: I will.

CHAIRMAN WEISENMILLER: Written comments.

MS. RADER: I will. RETI 2.0 should be scoped to ensure that it does not distract or take away resources from these processes or create a competing forum for debate.

Not only would this create enormous resource burden on stakeholders, but it could actually delay progress in building the transmission upgrades that we will need to avoid curtailment. Thank you.

CHAIRMAN WEISENMILLER: Thanks. Thanks for being here.

Jason Smith?

MR. SMITH: Good afternoon Chairman Weisenmiller, President Picker, Commissioners, Mr. Casey, Mr. Hunting. My name is Jason Smith, President of TransCanyon. Good to be here with all of you today.

My intent today is to introduce you to TransCanyon as a part of this process and also to express our interest in participating in RETI going forward. TransCanyon, as a business there's three things I'd like you to know about TransCanyon.

One is we're an independent transmission developer. We are exclusively focused on the Western United States, the 11 states that comprise WECC, which I think differentiates us with some of the other players in the market.

Two, our business model is focused on all phases of transmission from developing, building, owning, constructing and operating for the long term; these key transmission elements that will be a part of our energy infrastructure for many decades to come. So we have a very long-term focus on our business and our presence here in the west.

And third we've been very involved in the Cali

ISO's transmission planning process over the last five years, with Mr. Casey and Mr. Millar. And have also been involved in a leadership role in WestConnect through Mr. Bob Smith, who's here with me today as well through both his prior role in coordinating Order 1000, but also current role on the Planning Management Committee.

So that's TransCanyon as a business. TransCanyon as a company -- two things I'd like to stress there. We are a joint venture, which I think actually brings the best of two things to bear into this process. One is we are an independent player, which I think gives us the creativity to come and help think this process, help think through creative solutions to the problems that we're facing collectively as an independent player.

But I think importantly we also have the support and resources of our parent companies and our affiliates and sister companies like PacifiCorp and Arizona Public Service company that have been long-term stewards of energy infrastructure and the environment in the Western United States for over the last 125 years. So we have that in our DNA to bring to the process as well.

So with that, I'd like to express today that TransCanyon is very interested in being involved in the RETI process, either in a leadership role or in any of the working groups that are being formed as may be appropriate.

We look forward to working with all of you and the stakeholders that are present here today and appreciate the opportunity to comment. Thank you.

CHAIRMAN WEISENMILLER: Great, thank you.

Actually the -- Sarah Quinn, National Park Services. Sorry, I didn't know you were here on the phone.

MS. QUINN: Hello?

CHAIRMAN WEISENMILLER: Sure. Yes, please go ahead.

MS. QUINN: Okay. I just wanted to weigh in on our position with regards to RETI. We've been happy to participate with a number of the agencies and stakeholders that are part of RETI for since [sic] the past couple of years with regards to the renewable energy and transmission planning in the area.

And we are in a unique position. We're the holder of a large amount of conservation land in the planning area.

And our agency of course, as many of you know, is focused very much on resource protection and that includes biological and cultural resources. It also includes areas of historical significance, things that are eligible for listing on the National Register, things like national historic landmarks and national natural landmarks as well as national (indiscernible) trails in which we may not own

the underlying lands, but we do have management responsibility. And we hold all these in trust on behalf of the American public.

And the reason why we would be participants in the process is to make sure that those issues of the trust of the American public are kept in mind in the planning process.

And also because there may be instances where there may be a need to cross some of these or cross-meter some of these lands that are managed by the Park Service. We do have permitted legal authority to permit right-of-way for lesser transmission lines when there is no practical alternative to routing other places. And so where the discussions need to take place and they need to take place early and often to make sure that we're protecting as many resources as possible, while still facilitating this necessary transmission development.

Of course, the Park Services is a huge supporter of this Administration's agenda with regards to all of the above energy strategy and that of the State of California with their renewable portfolio standards.

And so we do want to be (indiscernible) participants to facilitate what we can in making that go forth, while also making sure that we are consistent with our own mandates.

And that's all I have. Thank you.

CHAIRMAN WEISENMILLER: Thank you.

Peter Weiner?

MR. WEINER: Thank you, President Picker, Chairman Weisenmiller and the Panel.

Like many other participants what I've heard here today is a lot of what I would have wanted to say. And I support basically everything that's been said by all of you. It is a great triumph that we have this kind of coordination among the agencies. Ten years ago it would have probably been unthinkable.

I would like to emphasize as the gentleman from PG&E did, who agreed with you, a few things. One, as I think President Picker said first -- but all of you have really echoed -- the importance of a stakeholder process. And I just want to be nuts-and-bolts about it for a minute. I think that we have had such great stakeholder processes. We had a very good one with RETI 1.0.

Earlier than that or maybe a similar time, I can't remember the timing exactly, we had a wonderful stakeholder process involved with the CEC and then the Department of Fish and Game with regard to wind guidelines.

We have had a very good stakeholder process I think with the San Joaquin Valley Initiative.

In contrast I think the stakeholder process with

the DRECP was somewhat more limited and much more internal to the agencies. And I think it didn't work as well, as a result. And I think some of the outcomes of DRECP were more controversial as a result.

So I would urge you that stakeholder processes are really messy, they are really time consuming as democracy often is, but it's really important in terms of getting a good result.

The other thing that I'd just like to emphasize is that transmission planning and this -- and just to echo Nancy Rader a little bit in terms of least regrets transmission planning -- I think it has to be really robust.

And every once in awhile at least some of the agencies, I think, are focused on the near term and least cost, rather than best fit and rather than planning for the future. The transmission truly is the backbone and if you build it, it allows people to come. So I think that we need to plan robustly and not in for the short term.

Finally, just to emphasize resource diversity I've heard a lot of mention of various types of technology -- all of them fit. I also want to emphasize the need for geothermal, for wind, for solar and also for renewable storage peakers as an ability to solve some of our problems.

Thank you very much.

CHAIRMAN WEISENMILLER: Thank you.

V. John White.

MR. WHITE: Good morning, nice to see you all together. It makes it more energy efficiency for the public, so thank you.

I'm John White with CEERT. And we had an opportunity to play a role in the direction of the stakeholder process in RETI 1.0. And so I have a couple of process suggestions and then I have a couple of more policy rant.

First of all, I think as has been said, the role of the stakeholder process in the Working Group was very important. The agencies were not micromanaged in the process, they were supervising and guiding. But the Working Group was where a lot of the work was done. It's going to need to stay small and have people that are constructive and willing to compromise. That's not always easy to find.

We're also going to have to involve the out-of-state community in ways we didn't have to before, so I think that's an important thing.

I also think you will need in addition to somebody to manage the stakeholder process that's got deaf to diplomatic skills -- probably will also need technical

support. Black & Veatch played a very important role last time and helped inform the process and keep it up to date.

So with those suggestions and I'll be happy to follow up with your staff and more detail about some of those lessons learned. And Dave Olsen from the CalISO Board and Rich Ferguson were very involved and can offer some specific suggestions.

On the policy side I think one of the things that's really important that's different now is the role of greenhouse gas emissions as the rationale on the driving force. Renewables are a means to the end, they're not an end in themselves. We're going to have a hard renewable target of 50 percent. But the metric that we're going to be measuring our progress is, as President Picker said -- is what we focus on is what we're going to get.

And so this means that I would have some caution about relying so much on the existing processes, because those processes -- RPS Calculator and so forth -- while getting better and having much improvements are really a backward looking rather than forward looking. And we haven't really integrated greenhouse gas calculations yet and we're going to need to.

And it's going to mean a different kind of procurement, more strategic procurement, where we're thinking about reliability. Using renewables for

reliability and using them to get to the greenhouse gas goals, which means we will have to choose them and procure them differently with their attributes for grid reliability and greenhouse gases in mind. And we have a lot of work to do in that area.

So with those comments I wish you well and look forward to working with you.

CHAIRMAN WEISENMILLER: Thank you.

Kim Delfino?

MS. DELFINO: Good afternoon, we are now past into the noon hour. And President Picker and Chairman Weisenmiller and the rest of the panel -- I won't go through the litany of names -- but I'm very happy to see this assembly of all the agencies that work on these issues.

And I'm Kim Delfino. I'm with Defenders of Wildlife. I'm the California Program Director and have a lot of familiarity with these issues. Defenders actually started working on the RETI 1.0 process back in 2008. We were a little late in coming in, it started in 2007. And we've been very involved in a number of the processes that have been listed up on the slides.

I think we're very interested in this process and hopeful that it will build upon and expand the lessons learned and in trying to plan our renewable energy and low

carbon, our greenhouse future in a way that -- as Deputy Director Hunting said from the Department of Fish and Wildlife -- in a way that also achieves benefits for our species and habitats. Because we have learned in watching some projects and lines roll out that there are ways that we can site these projects that can incite conflict or can incite collaboration. And I think RETI can be constructed in such a way where we can be going more with the latter than the former.

A couple of observations, because a lot of things that have been said here I really do agree with.

First of all the goals and assumptions are absolutely critical to this process. And need to be established early and clearly and with a great deal of input I think from stakeholders. I'm not going to go into any more detail on that. I think Barb Boyle with Sierra Club is going to get up here and I think she'll have a lot to say about that.

On the issue about the process, the governance and the stakeholder process, I think it's really important to create a process in a way that will provide trust in the outputs. And that means I think you have to be very careful in terms in making sure that it is an open and transparent process. And that includes all viewpoints and expertise levels.

One of the issues I think with the original RETI process was sort of the way that it was structured with the Governing Board and the Stakeholder Steering Committee and then the work groups and how the decisions and the voting sort of went up and down the chain. And I think it caused some distrust in terms of outputs and I think there's ways to avoid that. And I think we've learned a lot through the other processes that come forward since RETI 1.0.

On the environmental data and modeling that is really important. This is a way to be able to put information into the process, so we can create these low conflict decisions. I'm think we're obviously very interested in participating in that process, I think it should be open. I hope a lot of this is going to be put up on the database and website, which I have to say is probably one of the best things that came out of the DRECP process.

And I would also say that while we have created a lot of information out there. There are still data gaps and I think it's important to identify those early. And think about carefully how we're going to address those issues, because to simply sort of say that there's a data gap and ignore it and move on I think invites potential problems later on down the road.

Finally, really quickly local government really

does have an important role to play here. I think they have to be brought in early into the process. They have very definite views on how land use should go in their counties. And they have the authority to permit projects.

And finally I appreciate the comments from the representative from the Imperial Irrigation District. Defenders has worked for many years, more than a decade, down in the Imperial Valley. There is great renewable energy potential down there.

There's also an opportunity here to maybe plan those types of projects in a way that would also have co-benefits for the Salton Sea and the State's responsibilities for addressing the impacts of a receding Salton Sea. So hopefully there will be a way to integrate those efforts together in the planning process.

And again just really appreciate the fact that you set this meeting up early and are taking input early and look forward to the process as it rolls out. Thank you.

CHAIRMAN WEISENMILLER: Thank you.

Barbara Boyle.

MS. BOYLE: Barbara Boyle, representing Sierra Club. Thank you all. Panel members this has been a really informative and helpful workshop.

I've been involved in these issues since the fast

track days. And I really appreciate the emphasis today on how much we've learned through these processes and the emphasis on natural resource protection as we're moving forward and how that is a co-equal goal with actually building the renewable energy.

It's very important that we figure out how to integrate high levels of renewable energy into California. And how we do that by balancing renewables with other renewables, and so all those kinds of issues as they've been articulated this morning are really important.

I want to focus a little bit on what our goal is and talk a little bit about the renewable energy goal as it was articulated for the DRECP in terms of megawatts.

Looking in the DRECP the California Energy Commission did an Energy Calculator and determined that approximately 20,000 megawatts of new renewable energy would be needed from the desert region. This reflected about 100 percent of the State's solar thermal that would be developed, 70 percent of the PV, about half the wind and most of the geothermal. Of that, approximately 11,000 is already underway and online.

And so what we have is an increment left. And this is to meet the 2040 goal -- and so what we have as an increment left might be 9,000 megawatts. Now, this might not address all the integration needs that we have, but my

point here is to say let's not overbuild, let's clearly identify what our renewable energy goal is from the get-go. And in doing so in corporate all the new policy initiatives such as the 50 percent energy efficiency goal and the other -- and look at the existing rate of DG and how it is increasing and the prices are continuing to drop.

Let's make sure that as we look at what our goal is in this RETI 2.0 process we have a clear sense of how much of the increment needs to come from large scale, and how much can come from other resources and incorporating new technology such as storage.

Looking at other states and how they are involved, certainly we may need to import renewables from other locations. But it's also important to keep in mind what the impacts are in those locations.

And just on process I'd like to make one final recommendation. One of the things that became clear in some of the DRECP workshops was that there really could have been better outreach to minority and low-income communities and to environmental justice communities and groups. And I would recommend that in this process you take that as a very serious goal, because these groups and organizations have a lot of stake in access to things like distributed generation and energy efficiency.

And they also very concerned about clean air in

their communities. And as we move off fossil fuels they are the ones who stand to gain the most. Thank you so much.

CHAIRMAN WEISENMILLER: Thank you.

Erica Brand.

MS. BRAND: Good afternoon. Thank you for hosting today's workshop. I have found it incredibly helpful and informative.

My name is Erica Brand and I'm the California Energy Program Director at The Nature Conservancy. And our work is focused on using science to find solutions to achieve multiple state policy goals, greenhouse gas emission reduction, clean energy and protection of natural and working lands and biodiversity.

The Nature Conservancy has recently modeled a number of 2030 renewable energy scenarios within the Cal ISO Balancing Authority Area. And the data indicate that it's possible to achieve a 50 percent portfolio with a low impact to natural and working lands at a low incremental cost over the base case.

While the data indicate this future is possible it will take planning to make this vision a reality. At this early stage of RETI 2.0 I offer a few thoughts on the planning process.

So the first is that having clear goals for the

process is essential. And I appreciate that that's been brought up several times today. Planning for California's energy future requires integrating multiple policies. If you lack a goal there's a risk of discounting it.

So I'd like to say that protection of nature, specifically natural and working lands and biodiversity should be an explicit goal in RETI 2.0 in long-term energy planning.

The second is to be smart from the start. Planning to reduce siting conflicts benefits everyone. We're glad to hear that RETI 2.0 will pull in the efforts that are underway in the San Joaquin Valley and the California deserts.

The third is scenario-based analysis. That includes land use and environmental considerations. These tools provide data that make better electricity policy. We appreciate that the agencies are focused on analytical tools and how they can be integrated into RETI 2.0 and long-term planning.

Fourth, we appreciate the emphasis on an open dialogue with stakeholders and the need for a stakeholder process, it's essential.

Thank you for the opportunity to share comments. I look forward to providing more in written comments. And definitely look forward to the opportunity to work with you

on planning for California's energy feature. Thanks.

CHAIRMAN WEISENMILLER: Thank you.

Rachel Gold?

MS. GOLD: Hi. Good afternoon. Thank you, Chair Weisenmiller and President Picker. I'm Rachel Gold with the Large-scale Solar Association. And appreciate the opportunity to make comments today.

LSA is very interested in collaborating and engaging in the RETI 2.0 effort. And we agree with others that we will need to think carefully about how to plan for our future renewable energy needs.

I would be remiss if I didn't start off by following up on a number of comments that were made this morning about the success we've seen with the solar industry. In the last several years we have had huge success in bringing on thousands of megawatts of solar energy in the state. And we could not have gotten there without the efforts of all the agencies, counties and stakeholders. We're now ready to build on that success with all of you.

As we have matured and refined our approaches up to renewables development, I wanted to echo Mr. Casey's statement that the industry is ready to help build on all the capabilities that solar and other renewables bring to support Grid reliability and we hope that they will be

accounted for in this effort.

Part of this will be recognizing that we have some inefficiencies in our current systems and markets. And these include that the level of curtailments that we see in it that are projected are tied both to available transmission and to the use and participation of all resources in the grid.

I also had a couple of other comments about the scope of RETI. I just want to echo the comments we've heard so far about ensuring a clear scope to the process. We were really happy, I was really happy, to hear about the continued work on process alignment that's ongoing. And I hope that we can build on that. And as Nancy said not create a duplicative process, but a process that really identifies those gaps and creates even more value going forward.

It will be helpful to that extent to coordinate with those current CPUC and other stakeholder efforts, including specifically with the RPS Calculator.

And we would appreciate a further discussion about the regional scope of this effort and how that may be included. And we would also like to look at, as part of this scope, whether or not we're going to incorporate any needs of an aging infrastructure. And how we might leverage any more recent additions than what we have

already in place.

And finally, it's clear that if we have consistent approaches for attracting investment this industry can be there to meet those goals. And we look forward to collaborating with all of you to do so. Thank you.

CHAIRMAN WEISENMILLER: Thank you.

So anyone else in the room? Then let's turn to the line, the call-in line.

First, are there any public agencies on the call-in line that want to speak at this stage?

Okay, apparently not. So let's go to Paul Staples.

MR. STAPLES: Can you hear me?

CHAIRMAN WEISENMILLER: Yes, we can.

MR. STAPLES: Okay. Thank you today for giving me this opportunity. My name is Paul Staples. I'm a Chairman and CEO of HyGen Industries.

First of all I want to apologize for not getting in sooner, because I was in phone conferences all this morning and I just didn't make the rest of the meeting. I just logged on a few minutes ago and so I apologize for not making it. And so if these comments are repetitive please forgive me, okay?

As far as our long term it's very important.

We've got to plan for the long term, but there are some short-term things that we can do to help expedite this thing.

First of all reduce the T and D for a 100 percent renewable, non-carbon, energy uses. Particularly for fueling vehicles, electric vehicles and fuel cell electric vehicles, at local service stations and local sites where this fueling and this charging will take place. And I think it's very important that we do that.

We also need to open up direct access more -- more direct access contracts with people who are going to be doing commercial development -- and also commit for particularly for transportation uses. Because this is important with the build-out that the CEC is right now doing with fuel cell electric vehicles and other alternative fuel transportation as well and energy type uses. So I think it's really important to do that.

One hundred percent efficiency as someone had indicated -- not a hundred percent -- a hundred percent renewable -- as it is important and efficiency is important. But I would say more important even than that, as much as I believe in that, is the elimination of carbon fuels. And if you can do that, I think that that could take the place of an even more efficient system if you're not doing that.

So that's the main thing -- points that I wanted to make. The most important thing is to try to get to a zero carbon footprint. It's possible with what we're doing with our fueling systems that we're putting in at local gas stations throughout the State, along with many others that are doing that.

And if that becomes the way then renewable ways of doing this will become the rule as opposed to the exception. And that's pretty much all I wanted to say. Thank you.

CHAIRMAN WEISENMILLER: Okay. Thank you.

Anyone else on the line?

UNIDENTIFIED FEMALE: No.

CHAIRMAN WEISENMILLER: No?

UNIDENTIFIED FEMALE: (Indiscernible) callers?

CHAIRMAN WEISENMILLER: Well, okay. But again what I'm trying to do is first identify if there's anyone on that wants to speak, any public agency in particular, otherwise.

So Al, do you want to repeat when written comments are due?

MR. ALVARADO: Sure. Written comments are due on September 24th and you can use our Listserv, our docket's filing system that we have online. And you can find that information on the -- if you go back to my slides I can

pull up -- has the URL in terms of where to file. It's September the 24th.

CHAIRMAN WEISENMILLER: Okay. Great.

This meeting is adjourned.

(Whereupon, at 12:35 p.m., the workshop was adjourned)

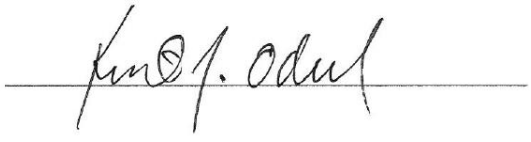
--oOo—

REPORTER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 2nd day of October, 2015.



Kent Odell
CER**00548

TRANSCRIBER'S CERTIFICATE

I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were transcribed by me, a certified transcriber and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 2nd day of October, 2015.

Myra Severtson
Certified Transcriber
AAERT No. CET**D-852