STATE OF CALIFORNIA – THE RESOURCES AGENCY
BEFORE THE
CALIFORNIA ENERGY COMMISSION (CEC)

In the matter of,	
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Preparation of the 2012 Integrated Energy Policy Report (2012 IEPR)	

Draft 2012 Integrated Energy Policy Report Update

California Energy Commission
Hearing Room A
1516 9th Street
Sacramento, California

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10:00 A.M.

Reported by:
Kent Odell

COMMISSIONERS

Carla Peterman, IEPR Lead Commissioner

Robert B. Weisenmiller, Chairperson

STAFF

Suzanne Korosec, IEPR Lead

Also Present (* Via WebEx)

Public Comment

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Amber Reisenhuber, Independent Energy Producers Association

Tim Tutt, Sacramento Municipal Utility District

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Beth Olhasso, Agricultural Energy Consumers Association

Valerie Winn, PG&E

Robert Stanley

INDEX

P R O C E E D I N G S

NOVEMBER 7, 2012 10:04 A.M.

MS. KOROSEC: All right, we're going to go ahead and get started here. Good morning everyone. I'm Suzanne Korosec and I manage the Energy Commission's Integrated Energy Policy Report Unit. And welcome to today's workshop on the first draft of the 2012 Integrated Energy Policy Report Update.

A few quick housekeeping items before we begin; rest rooms are in the atrium, out the double doors and to your left.

We have a snack room on the second floor, at the top of the atrium stairs, under the white awning.

And if there's an emergency and we need to evacuate, please follow the staff out the building to the park that's kiddie corner to the building, and wait there until we're told that it's safe to return.

Today's workshop is being broadcast through our WebEx conferencing system and parties do need to be aware that you're being recorded.

We'll make an audio recording available on our website in about a week and a written transcript should be posted in about two weeks.

We have a very simple agenda today. After opening remarks from the Commissioners, I'll give a

brief overview of the report and we'll move directly into public comment.

During the public comment period today we'll take comments, first, from those of you in the room, followed by those participating on WebEx, and then those who are participating on the phone, only.

If you'd like to make comments, we do ask that you fill out a blue comment card specifying what topic that you're providing comments on, and give the card to Lynette Green, our WebEx coordinator here.

We'll take comments in two groups, starting with comments on chapters 1 through 4 of the report, which covers the demand forecast, the natural gas outlook, combined heat and power and electricity infrastructure assessment, followed by comments on the Renewable Action Plan, which is chapter 5.

And to help us organize the comments on the Renewable Action Plan, if you have comments specific to one or another of the strategies, please also specify that on your blue card.

When making comments or asking questions please come up to the podium at the center of the room, use the microphone there, so we can make sure the WebEx participants hear you and so that your comments are captured on the transcript.

And it's also helpful if you can give our court reporter your business card when you come up to speak, so we can make sure that your name is spelled correctly in the transcript and we get your affiliation correct.

For WebEx participants, you can use either the chat or raise-hand features to let our WebEx coordinator, Lynette, know if you have a question or comment, and she'll either relay your question or open your line at the appropriate time.

We're also accepting written comments until close of business on Monday, December 3rd.

And the notice for today's workshop, which is available on the table in the foyer, and also on our website describes the process for submitting comments to the IEPR docket.

So, before I go into an overview of the topics covered in the report, I'll turn to the dais for opening remarks.

COMMISSIONER PETERMAN: Good morning. Thank you, Suzanne. Welcome everyone. This is Commissioner Carla Peterman and I'm Lead Commissioner on the 2012 IEPR.

Thank you all for taking the time to be here today and hello to those on the WebEx, and taking the time to learn about the IEPR, to ask questions. If you

haven't read it, I hope that you will be encouraged to read it after going through today's discussion.

Let me give a very hearty thanks to Suzanne Korosec and Heather Raitt, and the entire IEPR team for the tremendous amount of work they've put into getting this draft together, as well as thanks to all the staff who provided input throughout the process, both in materials and actions, and in facilitating and coordinating the series of workshops we had for the IEPR.

I believe we had nine workshops for this IEPR. Seven of them related to the Renewable Action Plan. And even though a much smaller number than we often have in terms of workshops, still it was a tremendous list and many of you stakeholders were present at every workshop and the record was improved by your input.

Because the 2012 IEPR is an update, it has a more narrow focus than the biennial IEPR, but there still have been many trends and exciting new activities within the energy space. And we capture these in the chapters that cover the electricity and natural gas demand forecast, the natural gas trends and outlook, combined heat and power, and the electricity infrastructure assessment.

I imagine the Chair may have a comment about

the -- in particular about the electricity infrastructure assessment.

But I'll just comment that we had a very well-attended and engaged workshop on infrastructure issues earlier this year in Southern California.

We had kind of an unprecedented, I would say, representation and coordination from the leadership of the various energy agencies. And I appreciate the PUC Commissioners, ISO, and ARB for all participating in that forum with us.

Throughout the seven workshops we had for the RAP, we also had significant representation from other agencies. I can recall at least probably on four of the workshops we had members of the PUC, Commissioners from that body on the dais with us.

And that's incredibly important because I think what we discovered through the process of trying to develop a Renewable Action Plan is that there's an increased need, as always, for coordination amongst State agencies, and not just coordination amongst State agencies, but also coordination with local government.

And I'm going to just add a few other comments about the RAP, in particular. A key theme was planning and integrating our planning efforts; our energy planning efforts with our land use planning efforts, our

siting at the State level with siting at the local level, and the need to integrate and better understand the connections between transmission system planning and distribution system planning.

As we move to develop more of the distributed generation I think there's an appreciation that there's more detailed data we're going to need about the distribution system, and we'll need increased coordination between utility planners, local planners and State planners in order to make sure that we are developing the distribution system in a way that is supportive of DG and Smart Grid initiatives.

As the executive summary for the RAP lays out, we are looking towards a vision of the future that is renewable-centric, and that is low in greenhouse gases.

And we've recommended actions here that we think will assist the State in meeting its 33 percent goal in 2020, as well as position the State for future renewable and higher growth levels as required and desired.

Another key theme that emerged, that I want to focus on, is the need to optimize the benefits we have from renewables. And there were a number of workshops that focused on what those benefits are and how to do that.

And particularly some of the actions focused on

identifying preferred locations for renewables that maximized some of those benefits, including not only greenhouse gas benefits and other air pollution benefits, but also economic growth in certain regions and for the State.

The actions reflect the record and the workshops, and a lot of the input we've already gotten. But the point of this workshop, as well as any of your comments, is really to get feedback on how to improve the actions.

You know, they involve many stakeholders and we've given it our best attempt, but please give your suggestions about how to clarify if you think there are other areas that you think are under-emphasized.

For example, I've commented on the value of the distribution system planning and we have an action in the RAP about having a dialogue on that. I would welcome particular feedback on where to focus within that action, how to narrow, where to prioritize.

You know, again, I'm looking for feedback from those who are doing the distribution planning, as well as those who want to be more informed about the process.

As we move forward to develop clean energy, keeping consumers and consumer protection at the forefront will be important.

And so we also must, again, be cognizant of cost, as well as the impact on ratepayers, and also the value that customers are getting.

So, I'm also interested if you have particular actions that would help improve the quality of the product that customers receive, and kind of guarantees and warranties around the long-term viability of those projects.

Indeed, as we particularly invest in more DG and we have more regular folks buying these technologies there may be an increasing role for the State in terms of ensuring some protection.

So, with that I will turn to Chair Weisenmiller for comments, but we look forward to your input and thank you again for being here.

CHAIRPERSON WEISENMILLER: Yeah, I would like to first thank Commissioner Peterman for her leadership on this, for bringing the enthusiasm, intelligence and focus to keep this thing moving along.

And certainly echo her comments on the staff, I think Suzanne and Heather and, you know, Lynette, and all the staff participants in this have certainly been key to pulling things together.

And at the same time it reflects the stakeholder contribution. I mean at the end of the day we're sort

of synthesizing things and in some areas we've gotten a lot of input, in other areas we got less. And that less part of it is some of the issues may be intractable. You know, how do you revitalize manufacturing in California is something which goes well beyond this agency, but is a huge issue for the State.

And consumer protection, again, is something which for this sort of innovative products, new industry, you know, are certainly challenging. It's not like you can say here is the track record for the last 50 years of this equipment, or this installer, or this industry.

So, we're facing some challenges which are pretty fundamental but I think, again, converting that renewable-centric vision means that one of our real responsibilities is looking at how to enhance the value of renewables and how to decrease the cost.

And I think this document, in the RAP, provides a very set, a coherent, fixed set of things we can do in both those areas.

And as we go forward and implement those, you know, presumably over time we will need to continue to reflect on what our progress has been, and how that's emerging, and make corrections as we go forward.

Certainly, one of the hallmarks of this has been

the collaboration across State government. You know, that as we're going forward trying to come up with the particular actions we've reached out to the other decision makers, had dialogues. Obviously, all these entities are fairly complex institutions. You could line up perspectives pretty broadly across a 600-person organization, but we got pretty much at the top, you know, general commitments on stuff. Not to say you can't find somewhere in the 600, you know, more difficulties. But I think that's the role of leadership is to pull things together.

And I think as we've gone through this process on -- you know, we really wanted to focus on renewables this time.

At the same time, yes, obviously, the world changes fast and it is one of those issues we always deal with in planning is that the future is very uncertain, and so one of the things that I found most striking in this IEPR was the Climate Change Workshop and the climate issues.

I think all of us looking at the East Coast realize that, you know, there's natural machinery for climate, but to some extent climate change is putting some of these natural phenomenon, like hurricanes, on steroids.

And so, basically, as we look at what is an aging infrastructure in California that is very fragile in a lot of respects, when you look at the power grid, and a very fragile and very complicated.

You look at some of our solutions and, indeed, introduce more complexity into those systems, and then you look at climate change and how that's changing stuff, again, there's sort of real challenges that we will have to continue to focus on.

It is interesting as you look at the New York experience, one of the messages that came out, which is very similar to what PG&E found after the Loma Prieta earthquake, was that CHP was one of the -- gas-fired CHP was one of the ways to maintain reliability. You know, that just as with Loma Prieta, that was what kept the lights on in the Bay Area was co-gen.

That, you know, certainly in New York City places like NYU, which had gas-fired co-gen projects, they had power, they had heat. You know, they had reliable service.

And that's, again, as we look at the values of these technologies, at the same time, frankly, some of the DG projects in New York City did not have that sort of reliability because of the day the distribution circuit is set up. Once you've knocked out that, you've

shut down the DG project and they're a black start. You know, at that point it's not much of a help.

And I guess if you've got the solar on your roof, you know, you're probably wondering what, with 80-mile-an-hour winds how that's going to survive, much less the value of it.

So, climate change is going to be an enduring problem for us for at least, I was going to say, the next 10, 20 years, if not the next 50 years as we go through what that means.

And as we roll out renewables, they're going to be linked in our thinking.

I think the other part of it is, having said that, you know, we've -- we had that unprecedented meeting in Southern California and I think each year we've looked at the infrastructure issues in South Coast, and this year they've become more complicated, harder. You know, certainly no one's plans of any sort, and I've seen hundreds of scenarios ran, every looked at both units of San Onofre being out.

You know, I mean, again, the Sunrise Power Link, again, we've examined every case conceivable, but that was never examined by anyone.

And so I think, you know, again, looking at what some of those black swans are as we're doing planning is

important. And certainly the climate change issues really make the sort of South Coast issues more complicated, and then you can find that with the air issues that I think are becoming more daunting.

So, again, we've made progress, we pretty much put a real spotlight there but, if anything, the issues are even more complicated, I think, than we realized going into this a couple years ago.

So, again, trying to find solutions, you know, we're certainly focused on that in the next IEPR.

But the bottom line is that, you know, as we dig into some of these issues we are finding out they are more complicated than we might have thought. But I mean, and I'm sure as we go forward on the implementation we will have surprises.

But, again, at least we have a vision of where we're going and we have, I think, in place a lot of cooperation across State decision makers and we will be able to adapt to those situations, to maintain the reliable grid that California needs.

So, again, I think this has been critical and shows the value of this type of activity.

So, again, thanks again.

COMMISSIONER PETERMAN: And, Suzanne, I'm just going to add one more comment. I think, Chairman,

you've really highlighted the array of issues and it's at a point where we do need to prioritize. And so, particularly as it relates to the actions, you know, with the Renewable Action Plan there are 31 actions.

And we know that there are more than -- and within them, it's kind of cheating because there are some sub-actions within them. But we know there are a much wider universe of actions that various agencies, the State, and stakeholders can take. But we wanted to focus on those actions that we thought were most important in the near term.

If you look at the EPIC plan, which the Energy Commission adopted at a Business Meeting last week, you know, that was hundreds of pages and that just had a series of actions and activities one could do in the R&D space, alone.

And so there are going to be other venues where there will be more actions outlaid related to some of these sub-topics, but at a high level this is where we thought to focus.

So, we look for your feedback on prioritization within our list of 31, as well as if you think there is something that is a higher priority than something that's listed there.

And so in your comments I think we would welcome

if you wanted to say here are my, you know, top five priorities based on my stakeholder group or perspective, because it will only be as successful as stakeholders are willing to utilize it and adopt it. And we want this to be very usable, we're investing our time and our energy, and we will continue to make this action a real livable, usable document.

So with that, Suzanne.

MS. KOROSEC: All right. Before I start, I want to tell our WebEx participants we are getting a lot of background noise, so please do not unmute your lines. You have that capability, but please don't do it until we get to the public comment period.

All right, just some brief background on the IEPR. Every two years the Energy Commission prepares an IEPR that includes energy policy recommendations based on the CEC's analyses of energy price, supply, demand, transmission, distribution and market trends.

In the off years we prepare an Energy Policy Review, with updated information on topics that were raised in the biennial IEPR.

As Commissioner Peterman mentioned, this is an update year so the focus is a little more narrow and it focuses on activities that were started during the 2011 IEPR proceeding and either continued or completed during

2012.

The bulk of the draft report is devoted to the Renewable Action Plan that was developed in response to Governor Brown's direction in his Clean Energy Jobs Plan for the CEC to develop a plan to expedite permitting of the highest priority transmission and generation projects.

The other activities covered in the report include CEC's Electricity and Natural Gas Demand Forecast that was adopted in 2012, two reports on natural gas trends and market outlook that were finalized in 2012, an updated assessment of combined heat and power potential in California, and a staff white paper on CHP barriers, and the ongoing assessment of electricity infrastructure needs in Southern California.

I'll cover these activities first and then move on to the Renewable Action Plan recommendations.

So, during the 2011 IEPR proceeding the CEC staff put out a preliminary forecast for the 10-year period between 2012 and 2022, and then finalized the forecast during the 2012 IEPR update proceeding.

The forecast included three scenarios based on high, medium and low energy demand. And the final results showed that the average annual growth in demand

for electricity between 2010 and 2022 is projected to range from slightly more than one percent in the low case, to a little more than one and a half percent in the high case.

For natural gas, the expected average annual growth for demand during the same periods is between .58 and .81 percent.

The forecast didn't include impacts from uncommitted energy efficiency savings. Those are savings that are reasonably expected to occur from programs or policies that haven't yet been implemented or funded.

But in July 2012 the CEC did provide preliminary estimates of these savings to the PUC to be used in their long-term procurement process.

We expect to see an updated efficiency goals study from the PUC by the end of 2012 and the CEC will use the results from that study to provide an updated assessment of uncommitted energy efficiency impacts by the summer of 2013.

The IEPR update includes three recommendations related to improving the demand forecast in the future. First, we need to expand our analysis of the potential effects of climate change on consumption and peak demand.

Second, we need to explore disaggregating the forecast to support better distribution system planning and geographic renewable development zones for DG, starting with providing forecast results by climate zone, in addition to our usual planning area level forecasts.

And third, we need to improve how uncertainties are reflected in the forecast, particularly those surrounding California's policies for zero emission vehicles, combined heat and power, and distributed generation, which will affect future demand and consumption.

The 2011 IEPR proceeding included a staff draft assessment of the natural gas market outlook, which was released in September of 2011. The final version of that assessment was published in May of 2012, along with a companion document entitled, "2012 Natural Gas Market Trends."

The update summarizes the top four issues that were identified in those reports as likely to have an effect on natural gas markets.

The first is hydraulic fracturing, or fracking, which has led to shale gas, representing around 34 percent of total gas production the United States, but which has also raised environmental concerns due to the

amount of water and the chemicals that are used in that process.

The CEC is continuing to monitor activities at the State and national levels that relate to fracking, to evaluate the effects that those activities may have on the availability and price of shale gas.

And some of these activities include a study by the US EPA on fracking's effect on drinking and groundwater. Also, proposed rules for fracking on Federal and Native American lands that were put forward by the Department of the Interior in May of 2012.

And in California, the Department of Conservation is developing regulations for fracking and encouraging California energy companies to publicly disclose where they conduct fracking and what chemicals that they use.

A second issue that could affect the natural gas market is a national shift from coal-fired generation to natural gas generation because of natural gas prices currently being lower than coal prices.

In California, natural gas demand hasn't risen as much as in the rest of the United States, but there may be increased demand here in the future because of the need for natural gas plants to help integrate renewable resources, and because of growing demand for

natural gas as a transportation fuel.

The third natural gas issue is that the electric and natural gas industries are becoming more interdependent and there needs to be better coordination between the scheduling of pipeline deliveries of natural gas and decisions being made on electricity dispatch. This is very important for natural gas plants that will be used to provide integration services because they'll need the ability to ramp up and down very quickly to support intermittent renewables, but might not have scheduled the natural gas deliveries that are necessary to be able to do that.

The final natural gas issue is the pipeline safety and reliability, and how events like the San Bruno explosion and development of additional pipeline capacity nationwide could affect natural gas prices with upper price pressure in the case of the San Bruno incident, and potentially lower costs related to added pipeline capacity.

The IEPR update recommends that given the importance of natural gas plants to support renewable integration, the CEC and the PUC should monitor and participate in any FERC proceedings that are related to natural gas supply and pipeline development that could affect California, as well as proceedings related to

harmonization of electric and natural gas markets.

The IEPR update summarizes two papers that were related to combined heat and power facilities, related also to Governor Brown's goal of adding 6,500 megawatts of CHP by 2030.

The first document was an assessment of technical and market potential for new CHP that was conducted for the CEC by ICF International, which identified about 8,500 megawatts of active CHP throughout California and more than 14,000 megawatts of additional potential that could be developed.

The second document was a CEC staff white paper that was released in September of this year, that discussed barriers to CHP development that were identified in our February 2012 IEPR workshop on CHP issues.

Some of the challenges to future CHP development that came up in that workshop included allocation of allowances under the current cap and trade rules, cost and regulatory complexity of interconnection, the effects of a variety of charges on CHP investment costs and operating costs, the cost of metering requirements, particularly for smaller projects, and the lack of eligibility of CHP projects for net energy metering unless they use biogas or are a fuel cell.

For CHP, the IEPR update recommends that the CEC should revisit and update the technical assessments in late 2013 or early 2014 for the PUC's use and the 2014 long-term procurement plan proceeding, and also include an evaluation of the potential effects of cap and trade on CHP.

Agencies with jurisdiction over interconnection processes should work towards easing those processes for facilities that expand their generation capabilities.

And the CEC and PUC should continue to evaluate the progress of the PUC's QF settlement agreement, of AB 1612, and of other programs to encourage new CHP and report on progress to the Governor and the Legislature.

Next, we have the assessment of electricity infrastructure needs in Southern California. As the Chair mentioned, that was done in the 2011 IEPR proceedings in response to the unique combination of factors in that part of the State. At the time, the focus was on the State Water Board's policy to reduce once-through cooling power plants, along with the scarcity of emission offsets for new replacement facilities, uncertainties about how much energy efficiency and demand response are going to reduce electricity demand, the need for flexible generating resources to support the State's renewable portfolio

standard, and the number of agencies with responsibility for some aspect of electricity planning or development.

Since we published the 2011 IEPR we've now added to the mix the reliability issues associated with the outage at SONGS, as well as concerns about the potential impacts of climate change on electricity demand and generation based on a report that we had done with the National Resources Agency on climate change vulnerability, and also based on recent events in New York.

Also, there's uncertainty about increased electricity demand from the South Coast Air Quality Management District's policy to electrify combustion sources in the Los Angeles Basin.

The IEPR identifies several studies that have been or soon will be completed that affect the estimates of infrastructure needs. But again, as the Chair mentioned, these studies don't take into account the outage at SONGS.

The PUC has opened a proceeding to examine the SONGS outage and whether remaining capital investment should be remove from rate base.

And to prepare for this past summer without SONGS, there was an interagency group that studied and developed plans for various contingencies.

Cal-ISO was also evaluating how to assure reliability if there are unexpected outages at SONGS and Diablo Canyon, and what generation and transmission infrastructure would be needed to permanently replace the nukes.

Results of the studies will be provided to the Energy Commission as part of the 2013 IEPR proceeding, and to the PUC as part of the 2012 Long-Term Procurement Plan.

The draft IEPR also talks about the complexity of evaluating electricity infrastructure needs for the State as a whole. Given the many uncertainties that affect planning assumptions, like the base demand forecast which could change based on economic and demographic growth, increased transportation electrification and climate change.

There’s also the issue of energy efficiency savings and demand reductions from programs that are not included in the base forecasts, but are reasonably expected to occur, programs to support rooftop PV and CHP, and also from demand response programs.

There’s the timing of once-through cooling and other power plant retirements, as well as assumptions about the progress of other resource additions that are in the pipeline.

There's the mix and location of renewable projects that will be developed to meet the 33-percent renewable target. There's the amount of DG and CHP that's added to the mix.

Also, uncertain about the effect of climate changes on existing resources, for example, less efficient operation due to higher temperatures, or changes in hydro output, or increased danger of wildfires, also effects of catastrophic weather events.

And, finally, potential effects of the cap and trade program.

Recommendations in the IEPR related to the infrastructure assessment include the CEC is committed to participating in reliability assessments for summer 2013 and 2014, and in developing and implementing measures to maximize reliability, and in the PUC's investigation of the SONGS outage.

The Cal-ISO's Nuclear Facility Replacement Study that was submitted -- that will be submitted as part of the 2013 IEPR, should be the basis for debates about policy decisions to address nuclear facility outages.

And the CEC will conduct a public workshop during the 2013 IEPR proceeding to review that assessment.

The 2013 IEPR proceeding will track the progress

of the AB 1318 studies and, in particular, any changes to the analysis of replacement of OTC facilities based on the SONGS outage.

The Cal-ISO should provide refreshed assessments of the once-through cooling compliance schedules in light of the SONGS replacement studies, and the CEC will provide technical support for that effort.

And, finally, the PUC should consider opening a new proceeding, or either a new proceeding or using the existing Resource Adequacy Proceeding, to evaluate allowing utilities to participate in a forward procurement mechanism to provide the flexible capacity that California needs.

Now, we come to the main topic of the IEPR update, the Renewable Action Plan. This builds on the foundation that was provided by the Renewable Power in California Status and issues Report, which was published as part of the 2011 IEPR proceeding.

That report summarized California's progress towards its renewable goals, talked about the main challenges to future renewable development, and identified five high-level strategies to address renewable challenges.

The actions in the Renewable Action Plan are based on the following general principles. First, we

want to promote a renewable-centric generating portfolio that maximizes economic, social, and environment benefits, while minimizing costs and risks.

Next, we want to position California for potentially higher renewable targets after 2020, given the Governor's statements that the 33 percent RPS is a floor, not a ceiling, and given California's 2050 greenhouse gas reduction goals.

Third, we want to focus on actions that aren't being undertaken by the market and that can be influenced by the State, and be feasible within State agency purviews.

And we also need to recognize connections between action items under each strategy and that successful implementation of some actions might reduce the need for other actions.

Fifth, we need to broaden California's electricity planning to account for economic and equity issues, to encourage more involvement by local governments and residents, and also to include the distribution system, in addition to generation and transmission, in electricity planning.

Next, we need to promote clean energy investments that are essential to California's long-term security, and stability and economic welfare, and also

to developing the next generation of clean energy technologies.

And, finally, we need to address cost issues with actions to lower the cost of renewables and also reduce the impacts on electric rates from adding renewable generation, and to make sure that costs and benefits of renewable development are distributed fairly, especially to disadvantaged communities.

So, strategy one, this focuses on identifying and prioritizing preferred areas for renewable development.

Recommendations here include CEC, PUC and local governments, and the Governor's Office of Planning and Research, we need to work together to identify preferred renewable development zones, with initial focus on identifying zones in the Central Valley, and also more closely aligning local government land use planning and utility planning processes.

Next, the CEC needs to broaden its electricity planning efforts beyond 2020 to look at renewable targets higher than 33 percent.

And California needs to continue its efforts to develop renewable energy on State properties and expand that effort to put renewables at elementary, middle and high schools, and in areas of Southern California that

need additional energy supplies.

For strategy two, the emphasis is on getting the most value from renewables by appropriately assessing the costs and benefits.

Recommendations for this strategy include modifying procurement practices to get a high value portfolio that includes projects that provide integration services, or reduce the risk of forest fires that can damage transmission lines, encourage investments in disadvantaged communities and create jobs within California.

The CEC and others also need to work together to ensure that electric vehicle charging infrastructure captures renewable benefits. For example, by encouraging times when wind generation is high, but the load is low.

And on the cost side California needs to reevaluate its residential electricity rate structure to make sure that new costs are more fairly spread across all ratepayers.

And we also need to develop more transparent and publicly available data on renewable costs.

Strategy three is targeted towards reducing renewable interconnection and integration costs and requirements.

Recommendations here are divided into three categories, transmission interconnection, distribution interconnection and grid level integration.

So, for transmission integration -- or excuse me, interconnection, we need to have consistent use of the CEC's environmental analysis for in- and out-of-state resources in transmission planning to improve the efficiency and effectiveness of the process.

We need to monitor the status of Cal-ISO-approved transmission projects to make sure that they're completed.

And we need to streamline transmission line development to allow timely interconnection of renewable facilities.

Recommendations for interconnection at the distribution level include beginning a dialogue to develop a more transparent and integrated distribution planning process that will help with strategic deployment of DG and reduce interconnection costs.

Also, we need to develop new production and control systems to avoid damage to the distribution system as DG penetration increases.

And the CEC needs to develop a more disaggregated demand forecast that will support a comprehensive distribution planning process and

identification of preferred locations for renewable development.

Finally, we want to create a statewide data clearinghouse to make renewable generation planning information readily available to State, local, utility and industry planners.

To help address renewable integration challenges, the draft IEPR update recommends developing a forward procurement mechanism that allows demand response, storage, DG and natural gas plants to compete on a level playing field, to ensure that we have enough flexible capacity to integrate renewable resources.

The Cal-ISO also needs to define clear tariffs and rules for integration services that allow these technologies to provide those services.

And California should also support development of integration services on a regional level to take advantage of near-term renewable solutions throughout the west, things like expanding sub-hourly dispatch and intra-hour scheduling, dynamic transfers between balancing authorities, and improving solar and wind forecasting.

And, finally, the CEC and PUC need to work with FERC to make sure that California's natural gas infrastructure is adequate to support the integration

services that natural gas facilities will need to provide.

Strategy four relates to supporting renewable technologies and projects that create in-state jobs and in-state industries.

Recommendations include improving the alignment of workforce training efforts to better match with the evolving needs of the renewable industry; developing a clearinghouse to better connect workers, employers and education providers; and to do outreach to encourage participation from inner cities, poor rural communities, and Veterans; and supporting the renewable technology innovation and development through the State's iHub Initiative.

The final strategy includes the continuing need for energy-related research and development to support renewables, along with addressing financing challenges at the early stages of project development and a lack of capital in later stages of commercial development.

R&D activities for existing technologies should include combinations of renewable technologies that can be located in a region.

And R&D is also needed for innovative technologies that are on the horizon, that could help with California's RPS goals.

We also need to continue promoting R&D into technologies and strategies that will help with renewable integration, as well as R&D for proactive siting of facilities to avoid impacts to environmentally sensitive areas and to reduce permitting delays.

In the financing area, California should create an interagency clean energy financing working group to coordinate and leverage existing clean energy financing programs and to increase public awareness of what programs are available.

The State should also support extending Federal tax credits to attract investment in renewables, and should also evaluate the effectiveness and impacts of the property tax exclusion for solar systems that expires in 2016.

Finally, the Energy Commission should modify its existing financing support programs to more effectively provide loans to renewable developers and technical assistance and low-interest financing to public entities.

So, that's a very high level summary of the recommendations in the update and now we want to hear from you.

I have not received any blue cards, so I'm assuming that people will just come up as they choose to

speak.

With that, I'll turn it over to Commissioner Peterman.

COMMISSIONER PETERMAN: Okay. Well, I'll be first to ask, since folks didn't turn in blue cards raise your hands if you think you're going to make a comment?

Oh, we can self-police that. I was going to say if the whole room got up, we'll start getting blue cards.

Ladies' first. Sorry, Carl. And then blue cards will show up.

MS. BRAND: Good morning Commissioners, my name is Erica Brand and I'm the Director of the Renewable Energy Initiative for The Nature Conservancy's California Chapter. And I'm pleased to be here to make some comments on the draft report.

The Nature Conservancy is one of the world's largest leading conservation organizations. We work in 33 countries and all 50 states.

Our mission is to conserve the lands and waters upon which all life depends. We're a science invaded driven organization who are committed to promoting California's transition to clean energy, while also protecting species and ecosystems.

I'm going to focus today on chapter 5, the Renewable Action Plan.

The first strategy that I want to comment on is "one, identifying and prioritizing geographic areas for renewable development."

TNC has on-the-ground experience and scientific expertise in developing landscape-scale ecological assessments to determine areas that are more suitable for renewable energy development and not as essential for biodiversity conservation.

In 2010 we completed the Mojave Desert Eco-regional Assessment to look for areas of least conflict for siting of solar energy facilities.

So, we're encouraged by the direction of the draft Renewable Energy Action Plan as taken to identify and prioritize areas that are more suitable for development.

We appreciate that the Commission has prioritized development within the existing built environment first, followed by lands with least impact to habitat value, and that are in areas near existing or planned electric system infrastructure.

Concentrating development in zones will ensure that projects are built faster, cheaper and in a manner that is better for the environment, developers and

ratepayers.

However, it's important that the zones are constructed using the appropriate scientific and policy framework. So, we encourage the process for developing the zones to be open to stakeholder involvement beyond which is indicated in the draft.

For example, The Nature Conservancy has a history of working in the Central and San Joaquin Valley to protect important ecosystems and biodiversity. And it's important that these areas and investments are recognized in the zone development process.

So, we're looking forward to participating in that.

For strategy three, "Minimizing interconnection and integration costs and requirement," we agree with the Commission's finding that the environmental and land use factors are under-used in renewable resources scenarios and should be further incorporated into the transmission planning process in the long-term procurement plan.

We encourage the Commission to continue to link these planning processes to efforts that are already underway, including the DRECP, which we are heavily invested in.

And outside of that desert area, we support the

Commission's proposal to hold a public workshop to further define how to better incorporate these factors into those planning processes and we look forward to participating in that, as well.

We're interested in your proposal to create a statewide data clearinghouse for renewable energy generation planning and we agree that the clearinghouse should include environmental considerations important to siting decisions, environmental data.

But it will be important that a clear and transparent methodology is established for how the environmental criteria and associated data are identified for use and applied in the site screening process.

And lastly, for strategy five, the R&D and financing, we appreciate that the Commission has identified the risk, including cost delays and uncertainty of locating facilities in sensitive areas. We're encouraged that the Commission has prioritized applying public funds towards research that support proactive siting to avoid impacts to environmentally sensitive areas and permitting delays.

So, just to wrap up, we're encouraged by the direction that the draft is taking. We'll be submitting further comments and we look forward to participating.

So, thank you.

COMMISSIONER PETERMAN: Thank you.

I don't have any questions. Do you have any questions or comments?

CHAIRPERSON WEISENMILLER: I think the one suggestion certainly made to you and NRDC is we've all done a lot of thinking through RETI and DRECP on sort of the utility-scale projects.

But as we look more and more at the build out of DG in the urban environments it will be useful, again, to be thinking about where are the best options there and where are the most troubling options.

So that, you know, again, we can sort of be proactive going forward.

And also what some -- in the context of DRECP, we did the Best Practices Manual and, again, trying to think of what's the analog for that in the DG context.

MS. BRAND: Yeah.

COMMISSIONER PETERMAN: And especially appreciating that the scale of DG can be from a couple kilowatts to 20 megawatts, you know, give or take, and so you might have something to say about the higher range of those DG installations.

MS. BRAND: Yeah, that's a great suggestion, thank you.

COMMISSIONER PETERMAN: Suzanne, I'm going to ask, actually, that we go back to your initial suggestion, which was to hear comments first. If anyone has comments directly on chapters one through four, only, let's hear those first and then we'll take -- we'll go back to hearing comments on the RAP.

Please?

MR. ZICHELLA: Good morning. I will also -- Carl Zichella from NRDC, for those on the phone, and we'll be submitting comments for the record, also.

I just wanted to briefly touch on a few things. First of all I want to say this is a terrific job, we're very, very pleased; so many of the things that came up in the workshops over the course of the past year are in this document. Stakeholders got listened to, we noticed, and I want to thank you for that.

As someone who's participated in a lot of those, I can see the evolution of the thinking that went on here and it's really gratifying to see this agency really draw upon the experience from the stakeholders that have participated; all of them, not just us.

A couple of things, when we talk about natural gas outlook and trends issues, I think we need to think about some of the things we're discovering about fracking wells right now. The water quality issues and

air emission issues, aside for a moment just the supply of these things, we're finding that many of the wells are depleting very quickly, have to be re-fracked over and over again. And in many parts of the country the wells are being abandoned altogether, instead of re-fracking, to open up new wells because the free methane that they get from the newer wells is much more lucrative than having to re-frack over and over again to get at more of the bound up natural gas that's in those rock formations.

So, a lot of new information about that, I don't think anyone's talked about it. It's come to our attention as something that we need to explore a little further and I think we should put that into the analysis, too. It could add to a spreading of a natural gas place throughout the country, not just in California. We are already seeing that in Wyoming, for example

On the other outlook in trends, I think one thing we want to look at is not just committing so much to new generation for flexibility, there are many solutions we need to look at that are a suite of things. I'll return to some of that, we talked about SONGS. But I do think -- which will be a nice little laboratory for some of them, frankly.

We ought to explore other options before just relying completely on more flexible generation, when we may not need it. We have a lot of reserve margin in California right now.

We can repurpose some of the new OTC gas plants for flexibility, reduce emissions while we're getting better ancillary services from them. I think that's a direction we ought to go.

And I also, frankly, although people don't like to talk about it, we need to look at the inefficiencies in our existing grid system that prevent us from getting full advantage of the system throughout the State.

Our publicly-owned utilities and investor-owned utilities are not well integrated. It's wasteful, it's not good for reliability, it prevents us from sharing reserves that we could commit to this and avoid having to build new ones, for example, and I don't think we're looking fully at it. I'll come to that when we talk about SONGS in just a second.

One thing about the combined heat and power issues, if I may, is there hasn't been much discussion about looking at combined heat and power boilers as potentially providing flexibility services, and I think we ought to think about that, too.

They're well located for distributed resources,

they tend to already be in urban settings, and if we do the zoning initiative that's been described I think we could get a lot of benefit out of strategically located CHP, just as we could out of strategically located storage.

I mentioned the balancing area coordination issues on the electricity infrastructure assessment part of this. I do think it's been overlooked a little bit. I understand the political difficulty in it, but when we're staring down the possibility of being -- having to permanently retire 2,200 megawatts of capacity, I think all of these things that are low-hanging fruit, potentially, although they're politically tough, from an electricity stand point they need to be looked at because they have a big payoff for us potentially in reliability, and getting more out of the system.

And in some cases getting better access to some of the regional resources that were talked about, being able to utilize some of the DC lines controlled by DWP, for example, to help provide resources to some of the other parts of the Cal-ISO system that are in Southern California, as well.

When it comes to SONGS, just a turn here very briefly, NRDC is partnering with Rocky Mountain Institute to take a hard look at low carbon ways to

replace SONGS, not just in the short term, but the longer term.

RMI is coming out with a report, I believe this week, addressing short-term needs to increase the amount of renewables in Southern California based on their re-inventing fire platform.

And we're looking at both demand side issues, such as demand response, the role of energy efficiency, properly accounting for energy efficiency, and looking at demand side management controllability of demand resources, demand response, for example, as part of that, in addition to some of the great efficiencies that I've already mentioned.

And I'll be -- Carla, I was planning to reach out to both of you, actually, to talk about this, we'll be having a meeting on the 16th, in Santa Monica, to discuss this with some of the major stakeholders in Southern California, about a different way of looking going forward. Not discounting the role of gas, but not being as reliant upon it for meeting some of the needs that we have there.

And that brings us to the RAP, so I guess I'll wait for the rest of it.

CHAIRPERSON WEISENMILLER: Yeah, Carl, my comment is I'm afraid that some of the environmental

groups have some myopia on these issues. That resource planning now really has to deal with flexibility. You know, that frankly some of the energy capacity issues that we've struggled with in the past are not the real issues.

And in the demand response area for flexibility we really need something in a half-hour. And unfortunately -- and we can easily point to a variety of programs throughout the country that can do that.

But at least I know when I looked in Southern California and Northern California that San Diego there's zero that you can get in less than six hours, zero megawatts.

PG&E, they told me was two megawatts.

You know, Edison has some of the control stuff but, again, locationally. So, I think all of us have a vision of demand response, but I guess it's more auto DR is the way I'd characterize it that we have to focus on in this context.

MR. ZICHELLA: Yeah, I don't -- absolutely, we don't disagree with that. We're looking at this in the longer term.

CHAIRPERSON WEISENMILLER: Right.

MR. ZICHELLA: We think there are technologies that can be employed. There are aggregators, for

example, operating in California, with California utilities, very small amounts of power.

CHAIRPERSON WEISENMILLER: Oh, yeah.

MR. ZICHELLA: But I think there's a way there that we can look at options that give us, over the longer term, an ability to do more.

CHAIRPERSON WEISENMILLER: I agree. Again, it's sort of embarrassing how other states, Texas, or PJM are doing so much better in that area than we are.

MR. ZICHELLA: And MISO, also.

CHAIRPERSON WEISENMILLER: Yeah, exactly.

MR. ZICHELLA: I mean I think there's a lot we can learn from some of the RTOs around the country.

CHAIRPERSON WEISENMILLER: Yeah, but at the same time, again, the climate change issues and what that means for need is sort of staggering. I know we keep getting asked questions about what about this program, or that program which, frankly, might be a hundredth of a degree temperature impact, while we're looking at things -- you know, temperature changes of a couple degrees and trying to figure out what does that mean for our loads.

So, I think certainly gas will be part of our portfolio. The amount of other options we can get there will be good but, you know, we do have to understand the

complexities and the uncertainties, and not just focus on the low end.

MR. ZICHELLA: I'm not saying we should do without it, Mr. Chairman.

CHAIRPERSON WEISENMILLER: Yeah.

MR. ZICHELLA: I think what we're saying is we want to use it as efficiently and as flexibly as possible, avoid new base load because, really, in the system that we have with so much variability, base load doesn't help you that much.

CHAIRPERSON WEISENMILLER: No. I don't think anyone's going to --

MR. ZICHELLA: Right. Yeah, that's --

CHAIRPERSON WEISENMILLER: -- base load gas, yeah.

MR. ZICHELLA: We're in significant agreement here.

CHAIRPERSON WEISENMILLER: I think so.

MR. ZICHELLA: The question is how much. We have a lot of plants that we're going to re-do.

CHAIRPERSON WEISENMILLER: Right.

MR. ZICHELLA: We're going to completely refurbish and in those plants I think focusing on flexibility of those resources to get a double bang out of them, they're going to be lower emissions, they're

going to be lower fuel consumption, they're going to be faster ramping, that's exactly what we need to do.

CHAIRPERSON WEISENMILLER: Yeah.

MR. ZICHELLA: And they're in places that will help us.

CHAIRPERSON WEISENMILLER: Exactly. I want to see some of those moved forward as quickly as we can get them going. Thanks.

COMMISSIONER PETERMAN: And, Carl, I'll just make one comment. I'm sure you'll come back up and talk as part of the RAP. But I'd be interested in particularly your comments that you'll file on opportunities to better coordinate the California balancing authorities.

In the action 18, we have here, it talks about regional integration and coordination, and we call out doing an EMI study for California, and not just west-wide, but -- yeah, would appreciate your comments on that, how we can expand that a bit more.

Because right now it's a part of the WEC model, more so than thinking about a California-centric approach to it.

MR. ZICHELLA: Thank you.

COMMISSIONER PETERMAN: Anyone else with comments on chapters 1 through 4? Please, Mr. Alvarez.

MR. ALVAREZ: Manuel Alvarez, Southern California Edison. I guess as I approached our comments, we kind of tried to integrate it, so there will be a number of issues that will surface again in the renewable discussion, if we get there later.

But I just wanted to highlight a couple of things. First of all, I'd thank the Commission, and the Lead Commissioner and all the Commissioners who participated, and the staff, I think the work that was accomplished is actually going to provide us some real benefits.

And actually appreciate the reaction and incorporation of various stakeholder comments that went through the whole process. So, I think that's a good general comment on the activity.

But let me focus on the chapters you want to hear about. First of all, I think we appreciate the recognition of the infrastructure planning activities that need to be undertaken in the State, and we actually look forward to participating in that going forward as we unfold that in the 2013 and future IEPRs.

It's definitely something that we advocated for during the process and the Commission listened to us in that particular activity, so we're pleased there.

I'd just like to remind the Commission, though,

as under the infrastructure we do operate in a market environment, now, so balancing the planning function and the market, the market development activities is something that I think you're going to have to wrestle with in the future. And we look forward to actually, you know, what the long-term market process for -- as it's driven to its conclusion or its results end up in that results.

We also appreciate the update and the need for distribution planning broadening into the generation and transmission components of that.

But we want to keep the Commission aware that the components have their own different techniques, and structure, and requirements, especially on the distribution area where primarily it's radial. And so it's something that needs to be taken into account.

So, as you look into the stakeholder process of how you would do a distribution planning process, we want you to keep those items in the forefront as you move forward. The dialogue that you recommend in your strategy is actually a dialogue we support and look forward to having that dialogue, but we want to make sure that you have the differences between the components well in hand.

Not only are there technical issues, but

regulatory and jurisdictional questions that come into play there, that you need to wrestle with.

The other item I want to bring up to you is we've made progress on a lot of that activity. You're aware of all the interconnection work that the utilities and other stakeholders are -- the Rule 21 and the WDEP process at the ISO. There's definitely a lot of reform going on in that area.

And the interconnection discussion that takes place in terms of how, where and when is definitely something that's been advanced in the last year or two and we look forward to continued dialogue there.

We've been actively involved in that activity, as you're aware of. You folks have been involved and all the stakeholders have been involved, and it's definitely something that continually needs improvement.

Your notion of modifying the utility procurement practice is something that we'd like to bring to your attention. You're aware of the State laws of retail requirements that still exist, community aggregation that exists. And how it affects the utility bundled customer is something that I think you're going to have to wrestle with. Some of those customers, per se, don't participate in those activities and it's something that we're going to have to look forward as we deal with the

infrastructure.

And I guess, and finally, I just want to bring up the question that came up earlier on the local issues, the land use, and requirements, and the participation that's part of the planning activity that needs to be brought up. For the most part, studying those future activities is something that we haven't done collectively.

The utilities, at least Edison has looked at t hose issues quite closely. And the complexity of how you bring in the land use, the local planning agencies, the local governments into that process is something that we're going to have to wrestle with going forward.

So, those are my general comments on the activity and we'll get back to the renewable activities later. Thank you.

COMMISSIONER PETERMAN: Thank you, Manny. I'll just make a quick comment about the distribution system planning, although I imagine we'll talk more about it in the RAP discussion.

That, you know, encourage you to submit comments about what you see as the components that the -- the component considerations, regulatory considerations, jurisdictional considerations that are going to be important to be aware of.

And I think our attempt here is just to first have a sense of what is being done and then to talk about what needs to be done. And I think that was a comment we heard throughout the workshops about a perception of some of the distribution system planning being more black box or harder to follow through a rate case proceeding and such.

And so, you know, having a dialogue where we focus on this issue at a level where a broad array of stakeholders can understand what's going on, and so we look to the utilities who are doing this planning for more information about how they're proceeding and what would improve it.

And I think we've identified, for example, that a disaggregated demand forecast would be helpful in terms of thinking about distribution system planning, so that's something within our purview.

But we won't assume what others can do as well, and so that's why we want to start that discussion.

Anyone else want to comment? Please. Welcome.

MS. REISENHUBER: Good morning Commissioners, my name is Amber Reisenhuber with the Independent Energy Producers Association.

Thank you for the opportunity to comment today. I had a chance to go through the IEPR and look at that

in more detail.

But today mainly I'll make three main points kind of on the slides that we went over.

The first one is regarding the uncommitted energy efficiency. IEP has been pretty vocal in the past about concerns about including uncommitted energy efficiency in the demand forecast.

And we understand that the Energy Commission has generally not included uncommitted resources in the demand forecast.

And we believe that relying on committed, rather than uncommitted resources, when projecting the demand forecast is the most prudent path forward for planning. So, we're here to support the Energy Commission's approach in that regard here.

The second issue that I wanted to touch upon was regarding the CHP. On slide 9 of your guys' presentation, you indicate that the CEC and the CPUC will evaluate the progress of the QF settlement and for the CHP resources.

We support this approach as an appropriate step forward. The CHP QF settlement process is a process that's already in place that we think can help inform how much CHP is commercially viable and available today. So, we support looking at this process to determine CHP

policy because this process will reflect the commercial interest and viability of CHP, rather than relying on the technical capability to drive the commercial viability.

So, I think a way to sum that up a little bit is from our perspective we think you should be looking more at the technical availability -- or excuse me, don't let the technical availability drive the commercial availability of CHP. And so we think that looking at the CHP QF settlement is a good starting point to look at from there.

And then I just had one broader point that's a broad application of the Renewable Action Plan, if I may just address that really quick.

I know one of the goals is to identify and prioritize the geographic areas as part of the Renewable Action Plan, and for the preferred resources.

So, we would suggest that this information be publicly available and transparently conveyed in the RPS RFO process that are conducted by the utilities.

We think that the transparency of these geographic factors will aid the marketplace in understanding how the utilities are weighing various factors in the bid evaluation and ensure that the effort of identifying and prioritizing these geographic areas

are used to the maximum extent possible and efficiently.

I'm not totally facile with how the Renewable Action Plan, all of that could integrate into this, but just one suggestion for you guys to think about.

COMMISSIONER PETERMAN: Well, appreciate that. And I think to the extent that folks can identify ways to connect some of the actions here to longer term processes already in place, that's beneficial to hear your thoughts.

MS. REISENHUBER: Okay.

CHAIRPERSON WEISENMILLER: Yeah, I think probably just to clarify the uncommitted conservation issue, the Commission's typically concluded that we will, certainly going forward.

The difficulty we've had is the PUC's going through a major, we think, evaluation of the utility conservation programs.

And as Suzanne pointed out, we hope that we will have the goals adopted and the programs in place that will allow us in the next IEPR, then, to go through, have public hearings on those, and figure out what to include in our committed.

At this point we have potential studies --

MS. REISENHUBER: Correct.

BOARD CHAIRPERSON ALLENBY: -- but, you know,

frankly, if you look at areas like existing rented housing, you know, the potential there is huge. It's been huge for 30 years and we're still trying to figure out how to crack that nut.

So, hopefully, out of 758 we'll be in a position, again, to have some pretty solid programs that we can really count on going forward.

MS. REISENHUBER: Okay.

CHAIRPERSON WEISENMILLER: But again, it's certainly we're going to be including something going forward. Our difficulty has been, as you do these things with two agencies trying to step together there are times that you go out of sync. And, unfortunately, this is a year where we're pretty much out of sync.

MS. REISENHUBER: Well, we look forward to participating on that process as you guys move forward on those issues, as well.

CHAIRPERSON WEISENMILLER: Oh, yeah. Certainly, we encourage you, we encourage everyone, again, to have that sort of collaborative discussion of what's going to come out of the new programs and what can we really build into the forecasting calendar.

MS. REISENHUBER: Thank you, guys.

COMMISSIONER PETERMAN: Anyone else in the room with a comment on chapters 1 through 4?

Is there anyone online; anyone on the line with a comment on chapters 1 through 4.

Well, that speaks very highly of the authors of the chapter, so thank you.

We will, of course, appreciate your written comments. I think we've given about three weeks for comments, almost a month. And we're doing that intentionally to allow sufficient time for folks to think, digest these documents, and keep us informed.

So, with that we'll turn to comments on the Renewable Action Plan. If anyone wants to come up to the mic, please do.

Mr. Tutt.

MR. TUTT: Thank you. Good morning Commissioners, my name is Tim Tutt, I represent the Sacramento Municipal Utility District.

And, first, I just want to congratulate you on this document. I think it's one of the most concise IEPRs. I haven't actually checked, but it's probably the lowest page count of the IEPRs recently, but it still is packed full of some very good actions, we think.

I think it focuses appropriately on near-term implementation at a time when we've just passed a 33-percent RPS and are beginning to implement that, when

we're about to hold the first cap and trade auction, when we're still halfway through the SB 1 distributed generation process.

Focusing on getting those measures implemented and how they all are going to work together is a great focus for this report.

It also, though, starts to look at the long term. And we, at SMUD, know that we're going to have to look beyond 2020 at some point, but we do think it's reasonable to just start that process and kind of take a breath and work on the things we already are putting in place at this point, rather than actually targeting new programs that will be well into the future before they're implemented.

Finally, I just wanted to say I think you talked a lot about collaboration in this report and publicly-owned utilities, like SMUD, have done a lot of research and done a lot of metering infrastructure work, and so on, so we do think that there's a -- that it's reasonable to have that flexibility in the State to have places where we can test out different ways of looking at inverters, and different ways of incorporating Smart Grid technologies.

And so we appreciate the focus on having that flexibility for these local actions to happen. Thank

you.

COMMISSIONER PETERMAN: Thank you.

I was just looking for the specific action, Suzanne might know it, but in terms of thinking about the longer-term planning. I think we're excited about the action to do an analysis for 2030 because we feel that there's been focus to this point on 2020, and the longer range, 2050, but -- action 3? Action 3.

But in terms of seeing how things are going now, letting those programs develop, but thinking about their nearer-term impacts, so I think we should get some more information from that process. Thank you.

Please, welcome.

MS. BOYLE: Good morning, my name is Barbara Boyle and I am with Sierra Club, the National Beyond Coal Campaign, and I'm based here in Sacramento.

I'm also one of the stakeholders on the DRECP.

Sierra Club has been very involved in siting of large-scale and mid-scale renewable energy projects in California for several years now, and in several processes, including the Solar PEIS and the DRECP.

And, therefore, we were quite gratified to see in this recent IEPR report a stress on looking to more low-impact areas to put large-scale renewable energy in California, and also to increase the places where we can

go.

Particularly, we are very supportive of the focus on the Central Valley and the opportunities there. We have a lot of very low-value farmland that could be utilized for large-scale development and it's currently not being prioritized.

Similarly, we've been very involved in the Imperial Valley. That's another place where there is contaminated or unusable, old ag land that is ripe for conversion to energy production.

And also, as I think you pointed out in the report, there's a very large unemployment rate there and folks need jobs.

Looking forward, considering the renewable energy target going up in 2030 and beyond, we certainly are very supportive of prioritizing large distributed generation penetration, as well as increasing energy efficiency.

We've made significant comments in the DRECP process about how we need to double down on energy efficiency.

I want to commend SMUD, who is here today, because they have a great track record on that, that perhaps other utilities could emulate.

So, we hope that can happen but, also, we need

to keep our eyes open to the potential that we may need to import some renewable energy so as not to really have unacceptable impacts to high value habitat.

And on that point, I think it's very important that moving forward, if we are going to follow this hierarchy of focusing on the lower-impact places first, it's really important to follow what the CPUC has been doing recently, and is probably going to increase, which is to take a hard look earlier in the process at some of the projects that are put forward that have high environmental impacts and, potentially, are also high expense projects.

And that CEC should coordinate closely with the CPUC and not spend a large amount of money on trying to permit projects that ultimately are not going to be built.

So, we would want to encourage, again, that the CEC look at the potential that it cannot approve some of the projects that are being proposed on high-value areas.

So, once again, thanks for the emphasis of this report. We think it's really moving in the right direction.

I just want to say one more point about fracking, which I would agree with Carl that we really

need to take a close look at what we're discovering from around the country and perhaps some workshops focused on that, or other mechanisms to do more research because we are hearing a lot from our membership about a sudden concern about fracking in California.

So, thank you very much for this opportunity to speak.

COMMISSIONER PETERMAN: Thank you and thank you for your comments.

CHAIRPERSON WEISENMILLER: Yeah, I had a couple comments. The first comment, which I certainly almost made after Carl's presentation is that, obviously, as we walk through DRECP and get to the end game there, the question in a way is where to go next?

And that certainly should be a very broad discussion next. In other words, it's not something that we can, as an agency, decide but, certainly, much more legislative, the Governor's office and everyone.

So, that will be a process which, as DRECP is winding down, then certainly it's time for everyone to start the discussion of what next? And certainly, I personally think that the South San Joaquin area is sort of high on the list of what could be next.

But, again, we'll really need to tee that up next year and work through something because, as you

know, those are major commitments of time and money that we want to make sure everyone's bought off on.

And the flip side, I was going to say certainly in this question of the PUC, and the process, you know, obviously with DRECP we're trying to give signals of what locations are preferred and which ones aren't.

And at the same time, certainly our comment to the PUC was this is the agency really with that -- you know, a lot of environmental experience on siting power plants. They don't. You know, they have it certainly for transmission lines.

And so we need to make sure just as we don't creep into things, that we don't creep into things that are more appropriately dealt with at the PUC, that they not creep into things which are more appropriately dealt with here.

You know, if they had awarded those contracts, we certainly would have looked at those. As you said, maybe the expense would have been wasted by the developers.

But as you know, we only were going to approve those only if we have mitigated any significant environmental impacts on those and certainly do a pretty thorough job on that.

COMMISSIONER PETERMAN: Yeah, and I'll --

MS. BOYLE: You know, we disagree on a few of those, but I'll let that go.

CHAIRPERSON WEISENMILLER: I realize that, but I needed to respond to your comment.

MS. BOYLE: Thank you.

COMMISSIONER PETERMAN: And also, just following from the Chair's comments, it's not just where to go next, but what elements of the DRECP process are most important to continue when doing some type of planning in the Central Valley, what elements need to be different.

So, building upon that experience and having an appropriate process for Central Valley, as well, knowing it won't need to be exactly the same or all the same stakeholders.

MS. BOYLE: Just another comment to follow up on that, I think that one of the key issues for us is how much development is going to occur in the desert region and how much can it sustain?

And to the extent that these other -- the infrastructure is developed for some of these other areas, which we know to be lower impact and lower mitigation cost move forward, as well as upping DG and energy efficiency, then the actual number of projects overall that have to come from the desert are going to

be lower. And that's something that we're really concerned about, that there is a real -- there's a real limit to how much it can sustain.

So, thank you very much.

COMMISSIONER PETERMAN: Thank you.

Carl?

MR. ZICHELLA: Hi, Carl Zichella back again, now on the RAP.

I wanted to say, first of all, I agreed with what Barb said about, and what the Commission said about the sun in San Joaquin. No surprise there, been working on that for a long time.

But I would say, in Southern San Joaquin we have the added benefit that there have been a number of environmental surveys of the RETI zone that was established there. And the developers are keenly interested in moving forward there.

They're stuck in what is a chicken and egg situation in that they're not prioritized; they don't have access to transmission.

The market, as was mentioned earlier, is now constrained because the 33 percent is being treated as a ceiling by the utilities, it is. It's not being treated as a floor.

So, there aren't the opportunities for those

generators to get contracts that would then allow them to be considered part of the discounted core that the PUC then hands to the ISO for transmission planning.

So, the transmission resources they rely upon to open that area are never prioritized.

I should say that is something we should look at in this because for the first time, now, Cal-ISO has prioritized transmission in the Central Valley that does not have to deal with interconnections.

They're looking at access to Helms Pump Storage, which is appropriate. It is one of the few ways we can store electricity in California and it's under-utilized because it's transmission constrained.

I think climate change is going to affect that very directly, as we talked about earlier, how much water we can have there, regardless of where it's coming from. There may not be the water to provide enough storage for future years and we've got to factor that in, too.

But for the time being we have a great resource we're not using well, close to growing load centers that could open up these areas that isn't being prioritized.

And I've actually written a blog on this, which I'll be happy to share with you guys, and I probably should have sent it to you already.

But this chicken and egg situation is very real. I met with the developers yesterday. They're feeling very squeezed because they put a lot of investment, and including the environmental surveys. This area could be permitted very rapidly.

There are literally -- you know, I think there are one minor wildlife conflict in the entire 30,000-acre area. But it's not being pressed by other factors, including speculation from farm investors and permitting farmland that doesn't require any water.

So these areas, even though they're contaminated, could be converted to tree crops that our foreign investors are beginning to engage with. And the zones that we have could be shrunk unnecessarily and unfortunately if we're not paying attention and creating the opportunity for these zones to begin.

So, that's a procurement problem, it's an infrastructure problem with the transmission. And I think one way to look at the transmission is to encourage the prioritization of multi-value, multi-benefit lines such as the Midway-to-Gregg Transmission line, and some alignment up to Central Valley.

Another intriguing aspect of this project in the Southern San Joaquin, that's in a RETI zone now, is that they have transmission identified also on disturbed

lands. So, we could route transmission, new transmission in the Central Valley with relatively low conflicts.

Of course, you can never do it with no conflict, but the fact is you can do a pretty good job right now. And a lot of money, a lot of time, a lot of very good science has been done in trying to ascertain how to go at this.

So, I call that to your attention on the Central Valley. And as we think about zones perhaps one way to do it is to look at it as a ladder. Get a zone started in the Southern San Joaquin, with some procurement possibilities. Looking, again, forward at the beyond-33-percent goals and then developing the infrastructure to help open up additional zones.

I should say, parenthetically, there's 200,000 acres of farmland in the Westland's Water District, alone, that has to be retired because it's selenium contaminated and salt impaired, it's marginally productive and the water allocations are declining.

So the farmers, themselves, will take whatever opportunity they can. If foreign investors are offering them five times what the value of the land in irrigated agriculture will be to get that land just as a place to park money in speculation, I think that's a problem we

ought to get on the radar screen because it could really conscribe our opportunity there.

Now, one thing I wanted to mention on strategy 3, on grade level recommendations, Carla, you had mentioned you wanted some more information. I'm happy to provide that in written comments, too.

I think you put your finger on many of the things that need to be looked at. Better balancing area coordination in-state is a very important thing. We can use the resources we have better, we can provide balancing resources more efficiently, we can use the flexibility reserves more efficiently and build less.

I've been encouraged by actions like the Imperial Irrigation District's Memorandum of Understanding with San Diego Gas and Electric. I mentioned that at the workshop we had as a real model for IOU/POU interaction to build and share transmission resources for mutual benefit and lower cost.

A lot of that is going to be upgrades in existing corridors. It leads you in a direction that gets you a much more efficient build out that can accommodate the renewable energy resources and a good mix of other resources, too.

So, I think that's one thing to think about on the list is be a coordination, if not consolidation

outright. We certainly can do a better job of that. It's a hot topic on everyone who's looking at renewable energy integration across the country, from the National Renewable Energy Labs, to the RTOs in the East, the Midwest RTOs -- the Midwest ISO has done a great job of looking at geographic diversity within their border and they have real advantages. It's given them a chance to do integration with less reserves and lower cost than we're going to pay if every BA does their own.

And I think that's kind of what we're looking at here, otherwise. And again, IED has taken a step outside of that box and they need to be commended, I think, for doing that. I'd like to see them follow completely through on the plan they're developing, but I think that's another issue.

Many of these things, also, were recommendations in the NERC and FERC report on last year's blackout in the Southwest. Things that relate to situational awareness include better coordination and communication between and among balancing authorities in the West, California's neighbors. We need to not ignore that.

While we're keeping a focus in-state, let's not forget the ISO also includes Nevada, now. We need to think about the relationships between Nevada, Arizona, and the Pacific Northwest, with whom we already have

energy trading agreements that we can take advantage of and create markets for our own renewables, frankly, that they're eager to get their hands on, too.

I think that's pretty much it for now. I'll have more for you in written comments, but I think a lot of what's in this report, as I said earlier, is really gratifying to see. Great thinking, it's the right set of things in my opinion. We can certainly always improve a little bit, but I'm really very pleased with this IEPR and I want to thank you for it.

COMMISSIONER PETERMAN: Thank you and thank you for your careful read. You are particularly engaged in west-wide transmission and integration issues and so I appreciate your thoughtful comments on that, as well as on general development issues.

CHAIRPERSON WEISENMILLER: Yeah, thanks a lot, Carl. I would note that, unfortunately, IED's taken a couple of steps backwards and so at this point they're more a problem than someone to point to as really innovative.

Obviously, I wish they would get more to the front of the line but, you know, perhaps with the new board they will.

MR. ZICHELLA: Well, two steps forward, one step back. We need to encourage them in the right

direction --

CHAIRPERSON WEISENMILLER: Exactly.

MR. ZICHELLA: -- because it was the right idea. I didn't realize they had retreated somewhat.

CHAIRPERSON WEISENMILLER: Yeah.

MR. ZICHELLA: Thank you.

COMMISSIONER PETERMAN: Thank you.

Hello.

MS. OLHASSO: Good morning, my name is Beth Olhasso, here on behalf of the Agricultural Energy Consumers Association. We represent 40,000 farms and dairies in California and related associations, and kind of coming at this at a little different perspective, from the bioenergy perspective.

You know, we look at the Governor's DG goals and see how the bioenergy community can fit into those goals, and what our barriers are to producing, you know, usable energy, especially with the passage of SB 1122 the past legislative session, and getting those 250 megawatts out and onto the grid.

And one of our biggest barriers that we're looking at is interconnection. And the plan does a great job of looking at interconnection and the, you know, problems with intermittency. Not an issue that we have with bioenergy because we can even store it, you

know, before it's turned into energy, somewhat. I see a little smile there, but we can store somewhat and schedule our power a little bit, even though it is mostly base load power.

But we really support efforts to streamlining interconnection, looking at the costs, and just the uncertainty with interconnection.

You know, we're seeing our projects, it's taking so long to get interconnection agreements put forth and they change drastically from the beginning to the end, and the timing is such that some of our projects are losing 1603 funding on the Federal level, which our timeline is much shorter than wind and solar.

So, we can see how the IEPR and the Renewable Action Plan can look at streamlining those processes and getting bioenergy onto the market in a way that helps, so we're not relying on those intermittent wind and solar generation projects as much, and we really can contribute to energy generation.

But also, as you all know, that pulls -- bioenergy, especially at dairies, can pull a lot of greenhouse gases out of the atmosphere. So, we have a double component to our projects that we think that the Renewable Action Plan within the IEPR can really help streamline and get onto the market.

And we will, of course, provide more detailed written comments, but just wanted to highlight just generally what we're looking at right now.

COMMISSIONER PETERMAN: Thank you. Is that the end of your statement?

MS. OLHASSO: Yes.

COMMISSIONER PETERMAN: Good. On the interconnection issue, it's come up through meetings and such that we've heard from the bioenergy community, that interconnection is a particular challenge for bioenergy projects versus other projects.

And, for example, one of the comments that was made to me was the fixed location of these projects, you know, they are tied to an established farm or dairy, and so it's not as easy to relocate.

And so to the extent you can in your comments, you know, you've seen how we laid out the RAP, specifically, I'd appreciate you noting -- I mean any of the challenges.

If there's a particular interconnection challenge that we haven't identified here, if you want to provide some suggestions about what that is for the bioenergy space as well as just looking at, again, at those actions, and if there are particular things that are unique to bioenergy and not other DG, to highlight

those for us.

MS. OLHASSO: Absolutely.

CHAIRPERSON WEISENMILLER: What I was going to say was that, obviously, as I understand it, you have problems both on interconnecting either gas or electricity into the system. So, probably given that unique perspective, it's good to flag both of those for us.

MS. OLHASSO: Sure.

CHAIRPERSON WEISENMILLER: I would say that certainly Commissioner Florio is pretty committed in the PUC processes to try to deal with the distribution and interconnection issues, to speed that up and simplify it.

You know, as we -- the reality is on those situations is that it is a swamp. You know, that certainly when we talk to the utilities and they get more and more requests, and all those to some extent can interact and so, you know, you would certainly be facing something like the history of the ISO queues of every-expanding queues, you know, and then trying to figure out how to sort those out.

Our approach in this IEPR was to talk about trying to open up the distribution planning some and, certainly, that's gotten some degree of attention from

the utilities.

But at the same time we would encourage your perspective in that what is the system. As I said, as we look at the distribution system and trying to say where should it be expanded, where are the real bottlenecks, to try to make that a much more public process, as opposed to encouraging people to read the work papers in a general rate case and trying to figure out where the distribution investments are going to be and whether it's in your location or not.

MS. OLHASSO: Right.

CHAIRPERSON WEISENMILLER: Anyway, in that conversation certainly you could add a different perspective than some of our utility commenters.

MS. OLHASSO: Yeah.

COMMISSIONER PETERMAN: And I think also a part of that, when you talked about the, you used the word "distribution," Chairman, I was thinking about there are different models for distributing digester gas, for example.

And so when we're thinking about it, we're thinking, okay, what upgrades to the distribution circuits are going to be needed, you know, based on where we think there's going to be localized generation.

But if there's a model that's emerging for some

type of collection of digester gas across farms, then that would mean there would be less areas that would need to be upgraded, then that's important to know where the industry is thinking they're going, as well.

MS. OLHASSO: Yeah, we're very involved with the California Dairy Campaign, and actually writing a hub-and-spoke model that --

COMMISSIONER PETERMAN: Okay.

MS. OLHASSO: Yeah, we're part of that whole process. So, it's great that you're focused in on that, too, because it's a great opportunity for both sides.

COMMISSIONER PETERMAN: Certainly. Well, we can always use more information, though, and all the stakeholders as well, so if you want to summarize some of those points in your comments, I think we'd all appreciate it.

MS. OLHASSO: You bet. Thank you.

COMMISSIONER PETERMAN: Thank you very much.

Next is Ms. Winn.

MS. WINN: Good morning, Valerie Winn with Pacific Gas & Electric Company.

As my colleague from Southern California Edison noted earlier today, I wanted to also share my thanks and congratulations to the IEPR team for a very well prepared document, and congratulate you, Commissioner

Peterman, on your first draft IEPR report, as well.

It was accomplished with only -- with fewer than 15 workshops, which those of us who are actively participating very much appreciated.

Now, as we -- there are many elements in the draft IEPR that, you know, PG&E is very supportive of. Certainly, your focus on -- I'm not going back to chapters 1 through 4.

But certainly the focus on developing a forward procurement mechanism, that's something we've been very interested in and focused on.

You're supportive comments on residential rate reform and how, you know, we may need to make some changes to that going forward so that the costs are spread equitably to everyone. Those are concepts we're very supportive of as we're focused, really, today on providing safe, and reliable, and affordable electric and gas service for our customers.

And so I was very pleased to hear, as we talk about the Renewable Action Plan, that you were saying there are 31 different items and that we will need to do some prioritization, perhaps, among those items.

Certainly, the distribution planning process is an area that could have a bit more light shone into that so that people have a better understanding.

And it's fundamentally been a process, the interconnection process that was designed for interconnecting, you know, one 500-megawatt plant, not a 50, or a 500-megawatt plant.

So, I think we've all been learning a lot and I know it's been challenging for our customers, but we're certainly working on trying to improve that process.

Probably won't change overnight, but I appreciate the fact that we'll continue the dialogue and make improvements in those areas.

And we'll be filing some more extensive comments on December the 3rd, but did want to say thank you very much it was a very well-prepared report. Thank you.

COMMISSIONER PETERMAN: Thank you and thank you for your comments and your engagement throughout the process.

I will note that you not only came, but you also brought staff with you and so that's -- and when you couldn't make it, someone else was in your place, so that's always appreciated.

Next is Mr. Alvarez?

MR. ALVAREZ: Manual Alvarez, Southern California Edison. Thank you, Commissioner and you heard my praise for the report in my initial comments.

So, I guess before I get into some of the

specifics let me tell you what I think our approach is for the December 3rd filing.

We plan to provide our comments in kind of three different categories. One is some general comments that we have in the report and then specific comments in each of the particular sections.

And then what we'd like to do is offer you some suggestions on language changes at the end, so you can evaluate those and consider them.

And I'll work with Suzanne in preparing those comments and make sure that they meet your needs so that you can react to them.

That actually is a compliment that I think I want to give to you, and the rest of the Commission, and the staff, you did react to people's comments and statements during the course of this year. And people can see their work and activities.

And you had various groups of people who were giving you advice and direction, that often conflicted, and so I think you maneuvered through that very well.

The first thing I wanted to raise is something that you raised this morning and, actually, stole some of my thunder because I was going to ask you to take your 31 recommendations and begin to prioritize it.

In your opening comments you put that back on

us, so it's definitely something that we're going to have to wrestle with.

COMMISSIONER PETERMAN: We'll think about it as well, but more heads are better than a few.

MR. ALVAREZ: Okay. We definitely want you to think about the priority.

And as you know, the recommendations involve a number of activities, not only from utilities, but other agencies and it involves a lot of work in many cases.

So, some priority decision down the road, as you think about your final adoption of this report, would actually help in providing some of that guidance.

It's always nice to try to do everything, but we all know we can't get through the door at the same time, at the same place. So, hopefully, that's a message I wanted to leave with you.

We are supportive of accelerating the growth of renewable development in the State of California. We see that, your message in this particular report, so we want to encourage that.

But you've got to be considerate of at least some of the programs that are in the State dealing with the integration of these activities, how they affect the least cost and the best fit of the current system.

Some of that was surfaced today in some of the

other discussions of how you select and choose your particular course of action. So, it's definitely something that you're aware of.

We've always advocated a technology-neutral approach as we go out for RFPs or requests for offers. We'd like you to kind of keep that in mind, also, as one of our preferred approaches.

The other thing that was brought up was this question of zones, in terms of the clustering of where the activity would take place for the renewable development.

We appreciate the notion that you want to have that dialogue because the question of what constitutes a zone, to what extent the zone can be encouraged or hindered is something that kind of conflicts or actually brings up this question between how much of a planning activity do you want to do versus how much do you want to rely on market players to kind of make a choice of where they want to go.

And I think that's a fear that surfaces in a number of arenas, but it's definitely a balancing that the Commission will have to do. It's no longer an either/or choice, I think it's a blending of how we move forward on our market approaches for selection of resources, as well as an overview of a planning process

that kind of sits on top of those market choices.

So, it's a balance that I think you folks have to address. It's a balance that not only you, but the Public Utilities Commission, and other agencies who are involved in some of these resource decisions have to address.

And how you do that I think is going to lead the State into the future, so take that into heart.

The consequence of not doing something like that in development is these clustering activities on distributed generation resources could actually cause more problems than they're attempting to solve. So, you want to try to avoid that as much as possible.

With that, I think that's about all I have to say and I'll look forward to the rest of the comments and then our filing on December 3rd.

COMMISSIONER PETERMAN: Thank you, Manny, just one follow-up question. You've talked about zones and maps and I know that Edison has engaged in its own substantial study of DG in its area, so I wondered if you could just speak to that analysis and where it is in its stages, you know, next steps and how you see that time to the RAP?

MR. ALVAREZ: As you're aware, we submitted that report to you here to look at. We finalized that

report; we're now kind of taking the next step on kind of how do you put more refinement in terms of what the locational issues are.

We have been working with your staff. I think we have a meeting scheduled later on this month to discuss some of the questions that the staff has on that particular study.

We're looking at a follow-up study in terms of how much refinement we can do in terms of where we think the impacts and consequences of development are.

But we don't get to the point of being able to say at this point, you know, something's off limits or not, but that's perhaps something that we need to talk about as this dialogue progresses.

COMMISSIONER PETERMAN: So, what are your general findings at this point?

MR. ALVAREZ: Well, I think in general, you know, we have some preferred resources in terms of our urban areas, where we think we can develop some of the LERs, or the localized energy resources, in urban areas as opposed to the more rural areas.

And if you move out of the urban area and you look at the rural area, you find that the resources behave like centralized systems and so you're more dependent on the transmission system and the operations

of that system to kind of get them in to meet the load.

Once they're into the distribution area, you usually don't impact the transmission area so you have less consequence.

And then you get into the question at that point as to how much you think you can absorb without major consequences or a need for future expansion.

But the question that came up earlier from the Chairman on as you're planning expansion, it's definitely something you need to be aware of as you do that.

COMMISSIONER PETERMAN: Thank you very much.

CHAIRPERSON WEISENMILLER: Yeah, I had one observation. You talked about being technology neutral which, obviously, I think is -- all of us are trying to get some proverbial level of playing field.

But I think part of what we were also trying to get at is the notion that you need to look at the overall portfolio. I mean there's a fear that we're going to end up with portfolios, say, that are very heavily weighted towards PV, which have a lot of cost attraction the way the current scoring stuff is set up, but may not be optimal of the longer term.

So again trying to think, not -- while being technology neutral, but what sort of portfolio provides

the most value for your ratepayers going forward.

MR. ALVAREZ: Right, I'm aware of that and it definitely factors into this, this conflict, or this apparent conflict between a planning paradigm and a market paradigm.

We're all aware of the cost reductions that have taken place in the photovoltaic area. And that, actually, for the most part, is driving the outcome. And as we approach that do we get to a point where we think we've put too much of one technology into an area that we need to speak up on and say that, hey, you need to do something else, a different technology for either operational perspectives or those kinds of things.

But this is a tension that exists. I mean it's the tension that -- the conflict on where various technologies' cost reductions are. That's actually one of the drivers that you have in your report, you want to get to a freestanding, competitive system by which they provide.

You know, from my perspective I guess that's a tension that you folks will have to wrestle with as to how much guidance you want to put in terms of where technology choices are versus what the market is willing to guide you. And that's the key balancing element that you wrestle with daily, yearly, and decades into the

future.

So, thank you.

COMMISSIONER PETERMAN: Thank you.

Anyone else in the room with a comment?

Well, as folks are still thinking and deciding if they want to comment, we will turn to the phone lines.

MS. KOROSEC: Yeah, we have no one on WebEx who's indicated a comment, but we would like to open the phone-only lines to give those people an opportunity. So, Lynette, would you unmute the lines?

MS. KOROSEC: All right, those of you who are on the phone your lines are open. Does anybody want to make a comment? Other than static?

All right, hearing none, let's go ahead and mute there, Lynette.

Yeah, the one that's trying to speak, unfortunately is just coming across as static so --

COMMISSIONER PETERMAN: Okay. Anyone else in the room?

Well, let me --

MS. KOROSEC: This is some kind of record.

COMMISSIONER PETERMAN: We were aiming for the shortest IEPR, the shortest workshop --

MS. KOROSEC: Workshop, shortest public comment

periods.

COMMISSIONER PETERMAN: And I will just say a comment on the length. You know, really, we received a lot of information from the workshops and the real challenge was condensing it down, and I really want to applaud -- oh, we have one on the line, please.

MS. KOROSEC: Yeah, sorry, we do have Robert Stanley.

COMMISSIONER PETERMAN: Hello sir, welcome.

MR. STANLEY: Yes, I just wanted to make a few comments on your renewable energy. In Denmark, an island in Denmark converted all their electrical needs to renewable resources in ten years, between the years 2000 and 2010, and they did it because they had the willpower to do it.

And at first most people didn't want to go along with it, but eventually they were won over.

And so we kind of need to do the same thing. We need to shoot for bigger goals of 100 percent renewable energy, not 30 percent.

And so I've been -- myself, have all kinds of inventions that can reduce energy and achieve a more 100 percent renewable energy goal.

When I was in Australia, I saw this golf cart that had solar panels on top and it ran for two hours a

day just from the solar panels. And so where I live in Chico, almost everybody here in town could use a golf cart-powered vehicle that uses no CO2, because almost nobody drives more than two hours.

Although in Sacramento it's a little harder because you need more speed and stuff.

COMMISSIONER PETERMAN: Sir, thank you for your comments. I think you've touched upon some of the challenges but, really, where we're trying to strive to that, you know, moving beyond 33 percent renewables, there's a challenge to do with scale about we are investing and building out these technologies.

But as you know, California is such a big State and we're, what, eighth or ninth -- we'd be eighth or ninth in economy size if we were a nation.

That it's a tremendous amount of electricity and power that we'll need. And so I think that's the challenge that we're facing that one might not have faced in Denmark.

And also, as you've noted, there's a diversity in needs and resources. So, you know, I think we are supportive of inventions such as, you know, solar-powered golf carts and that will work in some communities, and for myself when I like to golf and be lazy and not walk.

And then there are other communities, like San Francisco, where it would not be as appropriate.

And so I think, again, that's why we're striving with this to promote a diversified portfolio for that very reason.

MR. STANLEY: Yes. Another thing is the enormous amount of waste still going on in California. There's just tons of waste going on that could be reduced.

And then on the agricultural end I was thinking, instead of these diesel pumps out there that are polluting, we should have solar-powered pump barns. Basically, just put solar panels on a barn and they would run the pumps, instead of the diesel pumps. And I just thought that might be a better system to do it.

So, I also have zero emission bus systems, zero emission trucking systems, all kinds of ways to completely reduce CO2.

COMMISSIONER PETERMAN: Thank you, appreciate your comments. In the 2013 IEPR I anticipate we'll be spending more time talking about energy efficiency to get to your point about waste. Indeed, energy efficiency is first in our loading order.

And you may or may not be aware, but we also manage a program here at the Commission, the AB 118

program, which is a transportation program for alternative fuels, vehicles and infrastructure where we are making investments in zero emission buses, and really trying to tackle the transportation energy concerns in addition to the electricity ones, which were focused on here.

But thank you again for calling.

Is there anyone else on the line with a question or a comment? Terrific.

Anyone else in the room?

Well, with that thank you for your participation. I will encourage you to reach out to a friend after this, send them an IEPR. We want people to read it, to think it, to comment on it. We'd rather hear from you all now, as we're drafting it, than as we're implementing it.

And, you know, have a good day, the meeting is adjourned.

(Thereupon, the Workshop was adjourned at 11:50 a.m.)

--oOo--