

CALIFORNIA ENERGY COMMISSION
IEPR LEAD COMMISSIONER WORKSHOP

DRAFT 2013 INTEGRATED ENERGY REPORT

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RE: Draft 2013 IEPR Report

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Reported by: Kent Odell

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P R O C E E D I N G S

9:11 A.M.

1
2
3 IEPR LEAD RAITT: Good morning. Welcome to
4 today's workshop on the Draft 2013 Integrated Energy
5 Policy Report. I am Heather Raitt, Lead for the IEPR.

6 I will begin by going over to the usual
7 housekeeping items. The restrooms are in the atrium.
8 Please be aware that the glass exit doors near the
9 restrooms are for staff only. The snack room is on
10 the second floor and there under the white awning.

11 If there is an emergency and we need to
12 evacuate the building please follow staff to Roosevelt
13 Park, which is across the street diagonal to the
14 building, and wait there until it is safe to return.

15 Today's workshop is being broadcast through
16 WebEx, and parties should be aware that you're being
17 recorded. We will post the audio recording on the
18 Energy Commission's website in a couple of days, and
19 the written transcript in about three weeks.

20 Today's agenda is short. After opening
21 comments from Commissioner McAllister, I will provide
22 a high-level overview of the draft report. We will
23 then provide an opportunity for questions and
24 comments. We're asking parties to limit their
25 comments to three minutes during the public comment

1 period. We will take comments first from those of you
2 in the room and from WebEx participants and then from
3 phone-in only.

4 For those in the room who would like to make
5 comments, please fill out a blue card and give it to
6 Laura Ernst. She's there, our new project secretary.
7 When it's your turn to speak please come up to the
8 center podium and speak in the microphone. Please
9 also give your business card to the court reporter.
10 For WebEx participants please, you can use the chat
11 function to tell our WebEx coordinator that you want
12 to ask a question and make a comment during the public
13 comment period. We'll either relay your question or
14 open your line at the appropriate time.

15 For phone-in only participants, we'll open
16 your lines after taking comments from the in person
17 and WebEx participants.

18 Written comments on today's topics are due at
19 the close of business on October 29. Comments -
20 sections for providing comments are on the Notice,
21 which is on the table with the handouts. Also posted
22 on my website.

23 And with that I will turn it over to the
24 Commissioner McAllister.

25 COMMISSIONER MC ALLISTER: Okay. Well thanks

1 to everybody for coming. I want to first think
2 Heather and Lynette and the whole IEPR team for
3 putting out a really excellent product. As you all
4 know - I think everybody in this room has been through
5 multiple IEPRs; if not, you know, then welcome to the
6 club. And actually, I think this is the first time
7 that I have really, you know, clearly watched it from
8 beginning to end - more than watched.

9 But it is a real important thing that we do
10 in the IEPR, it's a set of topics that we cover that
11 really are the most - you can argue the most policy-
12 relevant to the State. And all wrapped up in a bow
13 and you know, I think over time, the last few cycles,
14 the Commission has increasingly tried to focus on
15 making it digestible and accessible. And I hope we've
16 succeeded in this document. A certainly if we haven't
17 I want to hear that, any suggestions to sort of make
18 it more readable - in an executive-summary, kind of
19 highlights reel kind of thing, would be helpful to
20 hear.

21 But we want this to get out there and let the
22 world know how much is going on in the state and how
23 much - for example, the agencies are working together
24 and how much the dialogue is evolving, in a very
25 positive way. This is not to minimize the challenges

1 that we have in the state; we have a lot of them, and
2 that's - basically if you read the chapter titled
3 "Toward the IEPR," you'll get a sense of what the
4 high-level issues are.

5 As far as the core bread-and-butter stuff
6 that we do all the time, the forecasts, the
7 infrastructure considerations, etcetera - but there
8 are also a whole bunch of statutory things that we
9 kind of have to put in the IEPR - "Okay, we've got to
10 put that in," we've got to do that because every four
11 years you have to report out on X program. So we do
12 that.

13 And then there are a smaller group, I think,
14 of particularly policy-relevant topics that we put
15 into the IEPR because their time has come, and I think
16 there are a couple of those - energy efficiency in
17 existing buildings is one of those; demand response is
18 certainly one of those; the SONGs challenge is one of
19 those.

20 So we've really incorporated those topics
21 into the process to make sure they get into the IEPR
22 and that they do reflect the current state of thinking
23 on the best path forward.

24 And on top of that, this time we have a
25 collaborative process. I think it's always

1 collaborative, to a great extent, but the imperative
2 to do that, I think, is more this time around. And I
3 think we have succeeded in interacting much more
4 robustly at the staff level, and also at the
5 Commissioner level - at the agency lead level.

6 So I'm happy with the way the process has
7 gone thus far. Certainly we really depend on ongoing
8 stakeholder input; I really appreciate your all
9 coming; I know it's a big chunk of time and energy to
10 get here, and listen and listen and listen and then
11 have your three minutes, and so I really appreciate
12 your patience and engagement in this.

13 I also want to point out that - just the
14 dedication of staff, you know, through thick and thin,
15 sleet, snow, rain - building closures - have really
16 managed to keep the train on the tracks and rolling
17 pretty quickly. And sometimes it feels inexorably
18 down the track. And I'm trying to make sure that I'm
19 on-point when I need to be on-point.

20 So managing that process is not a trivial
21 endeavor, and so I appreciate the professionalism of
22 the staff on that front. And also within the
23 divisions, the leads and the teams that put together
24 the various chapters really did a fantastic job. A
25 lot of back and forth, many, many iterations. Putting

1 together a document like this is really not a trivial
2 thing to do, so I really appreciate all the expertise
3 in the building that went into this.

4 We pulled the - this workshop forward to
5 accommodate the ARB scoping plan - that discussion in
6 happening in the afternoon, so I imagine some of you
7 after lunch, you'll get lunch somewhere between here
8 and there and walk over there. So hopefully we'll be
9 able to wrap up prior to lunch so that those of you
10 who need to go over there for the scoping plan
11 discussion can do that.

12 But I certainly wanted to make sure that we
13 had enough time for public comment on the IEPR. So we
14 started a little bit earlier than we had originally
15 planned.

16 Joe Weisenmiller, as many of you know, is
17 not here. He is off on a well-deserved vacation, so
18 you know, I'll try to channel him when necessary as
19 well, he's very interested. He had not planned to be
20 the second on this IEPR but then Commissioner Peterman
21 got appointed over to our sister agency and left him
22 kind of holding the bag. So he really stepped up to
23 the plate, and I really appreciate his doing that.
24 But I hope he's not listening in.

25 The WebEx I think is probably available in

1 Europe but I certainly hope he's not, you know,
2 sitting somewhere with his phone listening in.

3 And let's see - I guess, other than that I
4 would just highlight the - really, the joint - the
5 energy collaboration that went into quite a bit of
6 this. It was ongoing, actually. I'm sure that there
7 are likely to be some comments here about the
8 forecasting, and some of the other topics that affect
9 all the agencies and the IEPR really is the convening
10 forum to have these discussions.

11 And the schedule is at the December business
12 meeting to adopt the forecast itself, and then the
13 IEPR documents in January. So there is a period
14 between the forecast adoption and the IEPR adoption
15 where we can have some discussions and move forward
16 with the inter-agency discussion that we need. So we
17 can perhaps begin to do some of the details there
18 later in the session.

19 A couple of the other core topics - I really
20 want to call out a few of the topics. Everybody, you
21 know, I think did a great job, but transportation is
22 another topic that I think, with Commissioner Scott we
23 had a number of really fruitful workshops on, and it a
24 topic that is certainly coming to the fore. You know,
25 we've obviously been administering the 118 program;

1 that got extended, thankfully, and we'll continue to
2 do that.

3 It's a huge area going forward, and I wanted
4 to call out that team as having really done yeoman's
5 work on getting the IEPR chapter in shape and really
6 on-point. It's a very meaty topic, and I hope you'll
7 have a chance to look at that; it's really - going
8 forward that's such an important topic.

9 I mentioned energy efficiency - electricity,
10 infrastructure and the SONGs challenge, I think, are
11 all sorts of topics that we're absolutely going to
12 keep talking about as areas we see as of future
13 importance. The principals continue to work on that
14 topic and we're reflecting the state of that
15 discussion in the IEPR.

16 Overall, it'll challenge Joe Weisenmiller a
17 little bit, but obviously it's a concern for all of us
18 - but what I would say is a concern for all of us - is
19 the challenge of climate change. In our future IEPRs
20 we're absolutely going to have to be incorporating the
21 state of knowledge on how climate change is affecting
22 our power system, affecting energy demands, and
23 constraining our ability to respond to some of these
24 challenges. We need to really anticipate that,
25 planning out to 2030, 2040, 2050 is something that we

1 need to continue to develop the tools to do
2 effectively.

3 And a lot of that is actually the uncertainty
4 and making sure that we're planning for that
5 uncertainty; that feeds right back into our forecasts.

6 So continuing to evolve those tools is just
7 something that is not going to go away. That
8 challenge is here, it's going to stay and we have to
9 make sure that across the agencies and resource-wise
10 we're preparing ourselves to continue to develop our
11 expertise and our mechanics to really incorporate that
12 - you know, the risks going forward, to qualify it as
13 much as we can, put the error boundaries around it and
14 make sure that we're in a good space.

15 So those are kind of my overarching comments.
16 And she'll have a chance to dig into some of those
17 particular topics as we go forward. But with that I
18 will pass it back to Heather.

19 Thank you again for coming.

20 IEPR LEAD RAITT: Thank you.

21 So I'll present a high-level overview of the
22 Draft 2013 IEPR.

23 The public resources code requires the Energy
24 Commission to prepare an IEPR every 2 years in odd-
25 numbered years - that assesses energy supply and

1 demand, production, delivery and distribution, market
2 trends and major challenges. These assessments are
3 then used to develop energy policy recommendations.

4 On February 8, 2012, the Energy Commission
5 adopted an order instituting information proceedings
6 to gather and assess information to assist in
7 preparing the 2012 IEPR update and the 2013 IEPR. The
8 Commission issued a scoping order on March 7, 2013
9 identifying the topics that would be covered in the
10 report, and between October, 2012 and October, 2013 we
11 held more than 28 public workshops on a variety of
12 issues identified in the scoping order.

13 Throughout the process there was extensive
14 stakeholder participation both at the workshops and
15 through written comments, and through this the
16 stakeholder engagement was instrumental in developing
17 the IEPR.

18 The need to reduce greenhouse gas emissions
19 and prepare for climate change is a policy overlay on
20 this year's IEPR - the state's economy, environment
21 and public health depend on reducing the greenhouse
22 gas emissions as well as increasing our preparedness
23 for climate change.

24 Another important policy emphasis is on
25 maintaining system reliability. And the IEPR includes

1 nine chapters with analysis of key aspects of
2 California's energy system and describes many
3 activities either completed - or underway. Effort --
4 those include efforts to increase energy efficiency,
5 particularly in existing and new buildings; efforts to
6 advance demand response; efforts at manipulating
7 energy use when needed for optimal grid operation -
8 tracking the status of bioenergy and barriers to
9 increase the use of biomethane, forecasts in
10 electricity demand, analyzing electricity system needs
11 in Southern California and estimating the costs of new
12 generation, developing the strategic transmission
13 investment plan, monitoring nuclear issues, analyzing
14 natural gas issues, reporting on the progress of the
15 alternative renewable fuel and vehicle technology
16 program and forecasting transportation energy use -
17 and evaluating the impacts of climate change on the
18 energy system as well as (a cap-base reducing natural
19 gas emissions).

20 I will go over the highlights and touch on
21 the recommendations for each of these chapters.

22 The first chapter is on energy efficiency,
23 which is first in the loading order, and the Energy
24 Commission is working with the CPC and other
25 stakeholders to develop a comprehensive program to

1 advance energy efficiency of existing buildings. In
2 June the Energy Commission released a draft action
3 plan for the comprehensive efficiency program for
4 energy - excuse me, for existing buildings. It's
5 expected to be finalized later this year.

6 An overview of the recommendations in the
7 draft plan include improved data - reporting and
8 management tools to improve compliance with standards,
9 education and work force training.

10 Other opportunities for energy efficiency
11 advancements include achieving the goals for state
12 buildings and Governor Brown's executive order B-18-12
13 and increasing energy in schools through the use of
14 Proposition 39 funds.

15 Also adopting compliance standards to reduce
16 plug loads can assist in grid resilience and
17 responsiveness and will help advance California's
18 energy efficiency goals.

19 California also has the policy goal of
20 achieving zero-net energy building standards by 2020
21 for residential buildings and by 2030 for commercial
22 buildings. Towards this goal the Energy Commission
23 worked closely with the CPC and stakeholders to
24 develop a definition of zero-net energy that can be
25 used to update the California Building Energy

1 Efficiency standards for 2016 and 2019.

2 Recommendations for sure success in meeting
3 the zero-net-energy goals include adopting triennial
4 building standards, updates for increased efficiency
5 in new buildings by 20 to 30 percent in each update,
6 providing assistance to help achieve Reach standards
7 and improving the voluntary energy tier in the
8 California Green Building Standards Code.

9 The IEPR also discusses progress towards
10 utility energy efficiency targets. Efforts needed to
11 help achieve all cost-effective energy efficiency
12 upgrades include advancing mechanisms to finance
13 energy efficiency measures, locational and peak period
14 energy efficiency, natural gas end-use efficiency and
15 inter-agency collaboration to modernize energy-related
16 information management.

17 Assembly Bill 2339 directed the Energy
18 Commission to evaluate policies to assist greater
19 penetration of geothermal heat pump and ground loop
20 technologies and include recommendations in the 2013
21 IEPR.

22 While purchase and installation costs can be
23 high, geothermal heat pump systems can use 25 to 50
24 percent less electricity than conventional heating and
25 cooling systems.

1 To advance heat pumps, ground loop
2 technologies - to advance heat pump and ground loop
3 technologies the Energy Commission encourages various
4 actions by the industry, including to produce and
5 model local ordinance, promote the use of California-
6 specific geothermal heat pump standards for training
7 and certification, submit an alternative calculation
8 methodology application to the Energy Commission, and
9 to collaborate with federal, state and local agencies
10 to reduce permitting issues.

11 Chapter 2 is on demand response, a top
12 priority in the 2013 IEPR. Demand response can play
13 an important role in maintaining a reliable electric
14 system by influencing demand according to system needs
15 and constraints, potentially offsetting the need for
16 new powerplants and transmission lines.

17 Despite its potential benefits and
18 possibility alongside energy efficiency atop the
19 Loading Order, demand response remains an underused
20 resource in California.

21 The retirement of the San Onofre nuclear
22 generating station, approaching once-through cooling
23 requirements, increasing the use of flexibility to
24 integrate intermittent renewable resources as well as
25 the long-term challenge of responding to climate

1 change require that demand response play a much larger
2 role in electricity supply and reliability because
3 slippage in demand response market development will
4 necessitate more generation and transmission than
5 would otherwise be required; the need for advancing DR
6 is urgent.

7 The Energy Commission has identified five
8 strategies to advance demand response, the first being
9 establishing rules for direct participation of demand
10 response in California's ISO markets, developing and
11 pilot testing additional market products, to develop a
12 multi-year forward auction mechanism to target demand
13 response in capacity constrained areas.

14 Third, resolving regulatory barriers for a
15 multi-year reliability framework that accounts for
16 customer attributes.

17 Four, continuing the collaborative process
18 between the Energy Commission, CPUC, California ISO
19 and Governor's Office, improving efforts to advance
20 fast demand response.

21 And fifth, advancing customer acceptance of
22 demand response.

23 Following energy efficiency and demand
24 response in the loading order is renewable energy.
25 California is on track to meet at least 33 percent of

1 its electricity needs with renewable resources by
2 2020. Bioenergy is a small but important part of
3 California's portfolio of renewable resources with
4 wide-ranging benefits, including providing a pathway
5 to low-carbon fuels for electricity and transportation
6 applications, helping to meet waste reduction goals,
7 reducing wildfire risks and providing jobs.

8 For electricity production, solid-fuel
9 biomass capacity was 681 megawatts as of 2012. For
10 transportation use, biofuel in-state production
11 capacity was about 220 million gallons per year in
12 2013.

13 AB 1900 by Assembly Member Gatto directs the
14 Energy Commission to evaluate barriers and solutions
15 to advance procurement of biomethane, a fuel that can
16 be used for electricity or transportation
17 applications. That analysis found that challenges to
18 biomethane included regulatory uncertainty and its
19 effects on long-term contracts, the expense of
20 upgrading biogas to pipeline quality, limited access
21 to natural gas distribution pipelines, lengthy and
22 costly pipeline interconnection processes, pipeline
23 safety concerns, low natural gas prices that make it
24 difficult to compete, and the need for technology
25 commercialization.

1 Research and development efforts can help
2 address several of these factors.

3 Recommended strategies for bioenergy include
4 developing a statewide programmatic environmental
5 impact report to focus on streamlining environmental
6 reviews, expanding consideration of the benefits
7 provided by biomass facilities as part of the CPUC's
8 procurement process, developing sustainability
9 standards for biomass fuel harvesting, and supporting
10 research and development for advanced biofuels and for
11 pipeline biomethane injection.

12 Electricity is covered in Chapter 4 and
13 begins with a demand forecast. Every two years the
14 Energy Commission prepares a 10-year electricity
15 demand forecast. The California Energy Demand 2014-
16 2024 Preliminary Forecast presents three demand
17 scenarios: high, mid and low, reflecting different
18 assumptions about economic and population growth,
19 electricity prices, and other factors.

20 In late September 2013 staff proposed a
21 revised draft forecast that also included five
22 scenarios for additional achievable energy efficiency.
23 (The various notes) shown here are updated from what's
24 provided in the draft IEPR.

25 Average annual electricity demand growth from

1 2012 to 2024 is expected to range from 0.76 to 1.54
2 percent; demand growth is expected to range from .8 to
3 1.83 percent.

4 Electricity growth rates are not as
5 historically low as they were in the preliminary
6 forecast due to lower price projections and the
7 additional of port electrification and high-speed rail
8 impacts in the analysis.

9 To help advance energy planning the energy
10 agencies must continue to discuss about the timing
11 and alignment of their planning cycles. They must
12 also continue to discuss about the appropriate level
13 of granularity for demand forecasts.

14 In addition to forecasting future demand for
15 electricity in California it's important to make sure
16 that the infrastructure needed to generate and deliver
17 the electricity is in place. Southern California is
18 uniquely vulnerable, not only because of the potential
19 retirement of power plants that use once-through
20 cooling but because of the permanent closure of the
21 San Onofre Nuclear Generating Station, which provided
22 more than 2,000 megawatts of generating capacity and
23 voltage support for the region.

24 The Energy Commissioner, CPUC and California
25 ISO jointly develop the Preliminary Reliability Plan

1 for LA Basin and San Diego to ensure reliability in
2 Southern California. The agencies are committed to
3 seeking 50 percent of the incremental resources needed
4 from energy efficiency demand response, distributed
5 generation and storage.

6 The plan will also include off-ramps and
7 contingencies if preferred resources do not
8 materialize on schedule or in the amounts required for
9 reliability, or in the event identified transmission
10 projects are found infeasible or unavailable.

11 The finalized plan will be submitted to the
12 Governor after consideration of public comments. The
13 effort will culminate in an action plan to be
14 implemented by the agencies and closely monitored by
15 the Governor's Office. To support the planning
16 processes necessary to ensure California's energy
17 infrastructure needs are met, in 2014 the Energy
18 Commission will begin updating data reporting
19 requirements to assure that up to date, appropriately
20 granular energy data and other information are
21 available.

22 Estimates of future generation cost trends
23 are important when evaluating the kinds of resources
24 that will meet California's future energy needs. In
25 the 2011 IEPR proceeding the Energy Commission

1 evaluated its method for analyzing and estimating
2 future generation costs, and used refined methods for
3 the 2013 IEPR.

4 A rapid decline in costs is expected to
5 continue for solar photovoltaic technologies and cost
6 reductions are expected for solar thermal
7 technologies. Cost reductions for wind are expected
8 to control, although increases in the cost of land and
9 transmission costs are expected to offset the gains in
10 technology cost for California. Other renewable
11 technologies, such as biomass and geothermal, are not
12 expected to see substantial cost reductions. For
13 fossil-fueled technologies, costs are expected to
14 remain flat, but there will be an increase of roughly
15 15 percent over the coming decade as a result of
16 mitigating or offsetting criteria air pollutants and
17 greenhouse gas emissions.

18 Next is a discussion of Transmission.

19 To support the 33 percent by 2020 RPS,
20 California needs to ensure that transmission projects
21 that deliver renewable energy are permitted and built
22 quickly and effectively. Eighteen transmission
23 projects have been identified and approved for the
24 integration of renewable resources. As Governor Brown
25 noted in the Clear Energy Jobs Plan, the energy

1 agencies should continue to work together with a sense
2 of urgency to admit these new transmission lines
3 without delay.

4 Recommendations related to transmission
5 include encouraging participation in the California
6 ISO's energy imbalance market, continuing inter-agency
7 efforts to recommend long-term potential transmission
8 solutions that address reliability concerns associated
9 with the recent shutdown of San Onofre, and ways to
10 reduce transmission permitting timelines - and
11 identifying appropriate transmission corridors.

12 Moving now into nuclear power: California's
13 two nuclear plants - the Diablo Canyon Power Plant and
14 the San Onofre Nuclear Generating Station - are
15 located near major earthquake faults, causing
16 interested concern about potential safety issues,
17 particularly given the Fukushima Daiichi nuclear
18 disaster in 2011. The 2011 IEPR recommended actions
19 by PG&E and Southern California Edison on issues such
20 as spent fuel pool storage, seismic issues,
21 replacement power and reliability, emergency response
22 planning and relicensing. The 2013 IEPR provides
23 updates on utility progress implementing those
24 recommendations.

25 Although the June 7, 2013 announcement of the

1 permanent closure of San Onofre negated many of the
2 recommendations for SCE, the continued storage of
3 spent nuclear fuel on site will require ongoing
4 attention. The 2013 IEPR discusses the events that
5 led to the closure of San Onofre. Recent federal
6 efforts on nuclear waste, and pending legislative
7 proposals. Policy recommendations include
8 comprehensive design basis seismic analysis, timely
9 compliance with fire protection regulations, and
10 accelerated transfer of spent fuel storage.

11 Natural gas continues to play an important
12 role in California's electricity portfolio with nearly
13 46 percent of California's consumption use for
14 electricity generation in 2012. About 21 percent was
15 consumed in the residential sector, 15 percent in the
16 industrial sector and 9 percent in the commercial
17 sector.

18 California continues to depend on out-of-
19 state imports for nearly 90 percent of its supply,
20 underscoring the importance of monitoring and
21 evaluating ongoing market trends and outlook.

22 No issue has done more to transform the
23 natural gas market than the widespread development of
24 shale gas by means of hydraulic fracturing, or
25 fracking. In 2007 California appeared to be facing

1 dwindling supplies and increased development costs.
2 Just five years later, the country is experiencing
3 sustained production of shale gas leading to the
4 lowest prices for natural gas in a decade.

5 The 2013 IEPR also discusses pipeline safety,
6 integration of renewable energy, new pipeline
7 development and increased interest in exporting
8 liquefied natural gas. Recommendations include
9 continuing to monitor and better integrate pipeline
10 safety with natural gas - with electric system
11 reliability needs, monitoring the national interest in
12 liquefied natural gas and its implication for
13 California, and staying abreast of the changing
14 revenue dynamics of natural gas in light of shale
15 abundance, generation away from coal and the
16 implications of expiring pipeline contracts for
17 maintaining necessary supply in California.

18 Another important part of California's energy
19 outlook is transportation. It accounts for nearly 40
20 percent of California's total energy consumption and
21 roughly 30 percent of its greenhouse gas emissions.

22 In September 2013 the California legislature
23 reauthorized the alternative renewable fuel and
24 vehicle technology program, Assembly Bill 8, as
25 Commissioner McAllister mentioned, that will extend

1 program funding through January 1, 2024.

2 The program was originally established by
3 Assembly Bill 118 in 2007; as of June 2013 the Energy
4 Commission funded 233 projects through the program
5 totaling more than \$400 million for categories such as
6 electric drive, hydrogen, natural gas, propane, bio
7 fuels, manufacturing and work force training and
8 development. This investment supports the state's
9 energy, clean air and climate goals.

10 Program investments are adding 7200 electric
11 vehicle charging stations, 205 E85 fueling stations,
12 50 natural gas stations, and 6 hydrogen fueling
13 stations, along with more than 26,000 electric
14 vehicles, 160 electric trucks, and over 1300 natural
15 gas trucks. California now has the largest network of
16 electric vehicle charging systems and hydrogen fueling
17 stations in the country.

18 The Energy Commission is required to include
19 an evaluation of projects funded by this program in
20 its biennial IEPR, including their expected benefits.
21 The results are expected to be available in the final
22 2013 IEPR and will be in a stand-alone Energy
23 Commission Contractor Report.

24 The Energy Commission is also required to
25 report on transportation fuel supply, demand and

1 trends each biennial IEPR.

2 For the 2013 IEPR, the Energy Commission
3 estimated plausible growth to 2020 for several low-
4 carbon alternative fuel options. Existing incentives
5 and regulations combined with alternative fuel price
6 advantages, expected economy of scale for vehicle
7 manufacturing, and technology advances could lead to
8 at least a threefold increase in alternative fuel
9 growth by 2020. This progress should allow California
10 to fulfill 2020 goals to reduce transportation related
11 greenhouse gas emissions, displace petroleum and
12 develop in-state biofuel production.

13 Recommendations to advance alternative fuel
14 vehicles and infrastructure include helping to
15 implement the Governor's Executive Order B-16-2012
16 advancing zero emission vehicles and the associated
17 Zero Emission Vehicle Action Plan, collaborating with
18 utilities, the CPUC and the California ISO and other
19 stakeholders to balance multiple policy objectives
20 with the electrification of transportation, supporting
21 national renewable fuel standard goals, developing a
22 multi-year strategy to fund electric, hydrogen and
23 natural gas vehicle rebates and incentives for related
24 infrastructure and expanding Energy Commission's and
25 Air Resources Board's joint data collection authority.

1 The need to reduce greenhouse gas emissions
2 is the driving force behind many of the energy
3 policies discussed in the IEPR. On May 13, 2013
4 Governor Brown joined more than 500 world-renowned
5 researchers and scientists from over 44 countries in
6 releasing a groundbreaking call to action on climate
7 change and other global threats to humanity. The 20-
8 page document translates key scientific findings into
9 a unified message to improve the nexus between
10 scientific research and political action on climate
11 change.

12 As part of the 2012 IEPR and the 2013 IEPR
13 proceedings, Energy Commission staff held public
14 workshops to discuss the latest findings on climate
15 projections relative to the energy sector, potential
16 impacts on California's energy supply, and responses
17 to prepare for climate change.

18 Further research is needed on the effect of
19 extreme weather-related events on the energy sector,
20 how California's energy system will need to change
21 over the next few decades, and improvements to climate
22 change indicators to allow better tracking, evaluation
23 and reporting on efforts to reduce climate change.

24 Achieving California's 2050 greenhouse gas
25 emission reduction goals will require substantial

1 transformation of California's energy system. These
2 challenges are being explored as part of the
3 California Air Resources Board 2013 scoping plan
4 update, with emphasis of potential targets for 2030.
5 The analysis will focus on three strategies to reduce
6 greenhouse gas emissions, the first being energy
7 efficiency, particularly in existing buildings;
8 second, expanded zero-emission vehicle deployment; and
9 third, decarbonizing the Western grid.

10 The Energy Commission and the California Air
11 Resources Board will also jointly develop metrics to
12 track progress against the 2013 Scoping Plan update.

13 So that's a very high-level summary of the
14 topics discussed in the 2013 IEPR, and just to very
15 quickly go over the next steps. Comments are due at
16 the end of the day on October 29. Instructions, as I
17 mentioned, are provided in the notice, for how to
18 submit comments. And we expect to release a draft on
19 December 23rd following comments received today,
20 verbal and written comments, and making any needed
21 adjustments to the report; and with final adoption
22 being on January 15. With that I'm happy to take any
23 questions from the Commissioner.

24 COMMISSIONER MC ALLISTER: All right. I'm
25 pretty familiar with the documents. So I think we

1 should just move on the agenda and give people a
2 chance to -

3 IEPR LEAD RAITT: So - again, if you wanted
4 to make comments please give your blue cards to Laura.

5 COMMISSIONER MC ALLISTER: Let's see, so far
6 we've only got six cards. So please, do let us know
7 if you want to speak.

8 I wanted to first offer opportunities to our
9 agency folks. The only one who so far has a comment
10 is from the ISO, Lorenzo Kristov.

11 MR. KRISTOV: Good morning, Commissioner.
12 Lorenzo Kristov, California ISO. I wanted to
13 basically -

14 COMMISSIONER MC ALLISTER: Okay. Go ahead.

15 MR. KRISTOV: I wanted to basically underline
16 and refer to comments you made earlier about the
17 inter-agency collaboration. I think all the
18 participants here are aware of the commitments we made
19 in the response to Senator Padilla last winter
20 regarding working together with the CEC and the CPUC
21 to better align our planning and procurement processes
22 as well as to reach agreement on what forecast would
23 be used for what purposes in planning and procurement
24 activities.

25 Folks who have been involved in the demand

1 analysis working group and some of those (puppies)
2 will be aware that the ISO staff people have been
3 participating in those activities to a much greater
4 degree this year than we have in the past. And in
5 addition, then having ongoing collaborative
6 conversations with corresponding staff, both at this
7 agency and at the PUC, and have made quite a lot of
8 progress with both the alignment of activities -
9 particularly the CPUC's LTPP and the ISO's
10 transmission planning process as well as agreement on
11 the forecasts themselves and how they would be used.

12 So while I realize that these activities have
13 not completely been visible to everyone I wanted to
14 just reaffirm to you and to the audience here today,
15 that a lot of very good work has been going on in
16 those areas and we have made a lot of progress.

17 I'm happy to answer any questions if you
18 would like.

19 COMMISSIONER MC ALLISTER: Well, I want to,
20 you know, call out the collaboration again. Thank you
21 for coming and making that clear. You know, my - I
22 have worked at the Commission and - both the Energy
23 Commissioner and the PUC from a lot of - from several
24 different perspectives, actually, before actually
25 stepping on the Commission, and I think just to the

1 extent that - you know, I don't have a complete
2 historical perspective, obviously, but you know, I
3 really do feel like the agencies are collaborating
4 more intensely than ever, and you know, even though I
5 might not have been aware of behind-the-scenes stuff
6 before, but certainly I am now and really feel like
7 it's a really good dialogue.

8 And you know, I just wanted to kind of maybe
9 ask you to elaborate a little bit.

10 My sense is that, you know, the staff-level
11 interaction, so both at the Commissioner level and the
12 staff level, you know, up and down the kind of, you
13 know, just across the staffs of the different types of
14 activities that we collaborate on, that there has been
15 a lot of information sharing and of self-education
16 within the agencies that actually is resolving a lot
17 of the alignment issues - certainly not all of them
18 but a good number of them, kind of naturally, just
19 through understanding where the other is coming from.

20 And I guess maybe if you could comment on
21 that a little bit. I think that has been a valuable
22 kind of side benefit of really our earnest efforts to
23 respond to Padilla's challenge, which is a legitimate,
24 valuable goal to have. You know, making that
25 explicit, I think, at those hearings was a good thing,

1 and certainly put our feet to the fire to make it
2 happen. And I think it's happening at various levels.

3 So we're seeing the fruit of that, in my
4 view.

5 But maybe you could sort of lift the covers
6 off of that a little bit more.

7 MR. KRISTOV: Sure. One of the things that
8 was a concern that we realized very quickly when we
9 looked at the LTPP process in the ISO's transmission
10 planning timeline and then putting that against the
11 IEPR is the - the IEPR demand forecast, of course, is
12 central to everything, because those are the demand
13 forecasts on which we build all of the studies in
14 these other processes.

15 And that's got a certain timeline to it. And
16 the ISO's transmission planning process also has a
17 timeline that is stipulated in our tariff and is an
18 annual process.

19 The LTPP has generally been a biennial
20 process and so one of the questions that's been raised
21 as an issue was the extent to which information flows
22 across and between these processes are timely so that
23 whenever any - whether it's a decision-making process
24 or a study that needs to be conducted - that it's
25 always using the most up-to-date information possible

1 and then consistent numbers are used across these
2 different entities and processes so that one entity is
3 not making a parallel decision based on different
4 assumptions than another entity is making.

5 So what we have done is basically charted out
6 those information flows and the timings, talked about
7 how do we get together on the assumptions and
8 scenarios that are going to go into the LPTT studies,
9 how many of which are conducted by the ISO for local
10 capacity and for flexible capacity, and then lay out
11 the timeline so that we're always using the latest
12 IEPR results and then doing studies built on those and
13 then those feed in in a timely manner to the LTPP
14 process.

15 So I think a lot of that work has still been
16 largely internally, but we have - to this point - but
17 we have at least among the agencies mapped out how
18 those information flows will work in a much more
19 consistent and reliable manner.

20 COMMISSIONER MC ALLISTER: Thanks for that.
21 So I think I will just highlight the timeline issue.

22 You know, you've got a lot of big years that
23 have a lot of weight in them - so we have the
24 different agencies cranking through what are our
25 responsibilities, too, and so I just want to highlight

1 that this alignment of timelines, making sure that
2 sort of one - one set of developments and outputs are
3 fully baked and sort of tied up in a bow and then
4 usable by the others - it is not a trivial thing to
5 just sort of click right in, you know, quickly.

6 And so I think those are sort of the - maybe
7 some of them are even more traumatic - at the staff
8 level, certainly, more of the traumatic discussions,
9 like, "Omigosh, we have to do this by when?" And you
10 know, how we have to readjust our schedule and our -
11 and our cycle time, and all that kind of stuff.

12 And I think - but it's happening; and it's
13 really - I think it's important to note that, you
14 know, on the transmission planning, the procurement
15 process, energy efficiency goals and implementation
16 and evaluations - and the forecasts trying to take
17 best available knowledge and incorporate that into the
18 next cycle, aligning all those timelines is not an
19 easy thing to do but I think we are all up to the
20 challenge, and it's actually happening, that we have
21 made some really big steps forward to make that
22 happen.

23 So I guess, you know, one of the - so just to
24 highlight the process here - you know - well, let me
25 say one more thing about the forecast. The forecast -

1 I think part of the process - part of what I have
2 learned through this process is that - is
3 understanding the forecast itself and what it is and
4 what it isn't. You know, forecasting is - it needs
5 the best available knowledge. It is inherently a
6 looking at what worked in the past, assembling it all,
7 putting the pieces together, and then making an
8 educated, rigorous projection forward.

9 And to some extent we're limited to modeling,
10 really, of limitations related to modeling, related to
11 information uncertainty. And so we've - the
12 forecasting team here at the Commission has tweaked
13 the process this year to I think better capture the
14 uncertainties on the high and the low end, and you
15 know, I think it's important - I mean, you know this
16 but I want to kind of say it for the record - it's
17 important to understand that that sort of rigor does
18 kind of depend on a certain level of detachment from
19 the current policy whirlwinds of the day. And - which
20 is not to say that it is ignorant of those
21 developments, but it certainly has to take a bit of a
22 long view and really use cold hard reason to figure
23 out, okay, what can we count on and what can we not
24 necessarily count on and if we can't count on it then
25 how do we incorporate or not that into the forecast?

1 So I think the error bars around - you know ,
2 this sort of middle - okay, here's what we think
3 probably, maybe is going to happen, but if things go a
4 different direction then we need to be able to capture
5 that with alternative scenarios.

6 And so - you know, that's the Energy
7 Commission's job, to develop this forecast at large,
8 it is the high end, the low, and everything in
9 between, and really work with the stakeholder to
10 figure out assumptions; a lot of what the agency
11 staffs have worked on is figuring out okay, how do we
12 align on assumptions, and I think that is huge,
13 because that's - in my view that's probably the
14 biggest lift of this round.

15 It doesn't get us all the way there to
16 perfect alignment but it definitely is a big, big step
17 in that direction.

18 But at the end of the day the Energy
19 Commission has to own that big forecast, and then what
20 we - so we're going to adopt that, we're going to put
21 that to bed, you know, everyone who wants to should
22 definitely come and have the last - you know, we're
23 pretty much there on the big forecast, with all the
24 scenarios and the common assumptions and all that kind
25 of stuff.

1 So we adopt that. You know, the - the
2 forecast is going to be wrong. I mean, that's the
3 nature of forecasting, it's what we think is going to
4 happen. But the world always throws us curveballs.
5 And so - we have captured the uncertainty enough where
6 we think the actual pathway is going to be in there
7 somewhere and we're going to try to characterize it
8 and go with it as it evolves and as it unfolds in
9 reality.

10 The next IEPR will catch up with that, the
11 next one after that, and that's why we do forecasting.

12 But then - you know, within the
13 responsiveness to the Padilla process context, we
14 really need to hammer out the - adopt - you know, what
15 we're going to agree on, within that adopted forecast
16 what we're going to agree on going forward. And that
17 - we have a, you know, hopefully that we can make the
18 timing work out, because between December and January
19 - where we adopt the forecast and then we - we get to
20 Yes between the agencies - and then let the world
21 know. And I guess the question is whether we need,
22 you know, some public process to sort of let the world
23 know what we're doing in the meantime, and you know,
24 I'm certainly open to that.

25 I think since the Commissioners - since the

1 agency leads are the decision-makers here, I think
2 that would have to be a Commissioner level workshop.
3 And certainly would need to sort of confirm the -
4 develop the outline of that in agreement with the
5 agencies. So you know, the PUC and the ISO and the
6 Energy Commission would need to be in alignment with
7 what we're trying to accomplish with that, with that
8 sort of outreach.

9 But I think it's actually - it would be
10 useful in a way to demystify the process, because I
11 think part of - part of - this is highly technical,
12 it's highly specialized, and we have a lot of very
13 high-level professionals working on it that have
14 decades of experience, including yourself, our
15 colleagues at the PUC and certainly our forecasting
16 team, with Chris and his team.

17 So I think part of the - just to manage the,
18 you know, to be accountable and to manage the process,
19 and you know, I think there is some value in reaching
20 out and maintaining communication with stakeholders as
21 we go through this process, so that it doesn't look
22 like a black box, so that it actually does - so
23 everyone's clear on the fact that that we're being
24 intentional, because we are.

25 So I want to put that out there and just sort

1 of, you know - I think there is a potential to have
2 more interaction; it's not a second bite at the
3 forecasting apple; I want to be clear about that; the
4 forecast is going to have been adopted at that point
5 but it is development of, you know, communication
6 about the joint agency process to get to a single - to
7 you know, the quote, single forecast.

8 So I kind of want to - so anyway, I'm
9 throwing that out there as a possibility and I think
10 it does have some potential to sort of help bring
11 stakeholders along with the process and not just
12 having it appear out of nowhere.

13 MR. KRISTOV: Yeah, well, ISO management
14 definitely agrees with that. We support that idea.
15 We think there are a couple of areas where it really
16 does help to increase understanding among the
17 stakeholders who may look at the Padilla hearing and
18 the commitments we made and not quite see exactly how
19 we're fulfilling those commitments.

20 And so just understanding on a couple of
21 basics that may be obvious to us from having worked on
22 it but not so much to everyone else - that I think
23 would come out in some sort of a session like you're
24 suggesting. That would be beneficial.

25 And one of them is this notion of single

1 forecast, which I think people read those words or
2 hear those words, it sounds like "Oh, there's one
3 number that's a single forecast," and yet, you know,
4 we know that traditionally through our planning
5 process there are weather variants within each one of
6 the - the IEPR demand forecasts and those weather
7 variants, one in ten years, one in five years, one in
8 two years, are important as to how they are used in
9 different studies.

10 And that is part of what a single forecast
11 would comprise.

12 The other thing that I think is maybe less
13 visible to external parties and what - in discussions
14 we staff we have highlighted as a really important
15 effort going forward for the next cycle, something
16 which is being done after the Commission adopts the
17 IEPR forecast in December, but then we have some
18 disaggregation activities to get to the buss bar level
19 granularity, and to look at load profile impacts of
20 some of the different demand side modifiers.

21 This is an area where over the coming year or
22 two for the next cycle we would like to collaborate to
23 work on improving those methodologies.

24 So again, I think that's a good topic -

25 COMMISSIONER MC ALLISTER: Thanks.

1 MR. KRISTOV: (crosstalk) to understand.

2 COMMISSIONER MC ALLISTER: So, yeah, I mean,
3 the - certainly - I don't know if I mentioned it
4 earlier, but definitely getting down to the local
5 level and you know, more granular in the analysis is
6 certainly part of where we're going, and so the
7 forecast has to be able to respond to that,
8 absolutely.

9 And I think the, you know, the responsible
10 folks at - well, within our shops in the forecast
11 whenever certainly had a lot of discussion about that
12 and I think there is general agreement that we have to
13 move in that direction, and it's - the local
14 (crafting) areas are going to, you know, need - need
15 that analysis in order for that planning to be done.

16 And certainly, you know, it's all about
17 timelines and sort of route list and the forecast has
18 to be able to - I think, capture those issues moving
19 forward.

20 And so I think, you know, really, it's a
21 highly technical kind of consideration but it goes -
22 you know, there are existing planning efforts that are
23 well-characterized and I think making those a little
24 bit more transparent would help us get us where we
25 need to go, and I think improve the dialogue all

1 around. So thanks for being here, again.

2 MR. KRISTOV: Okay. You're welcome.

3 COMMISSIONER MC ALLISTER: You know, I don't
4 have a blue card for you, Simon.

5 MR. BAKER: (Laughs) I forgot about the blue-
6 card method.

7 Simon Baker, Program Manager for demand-side
8 programs at the PUC's Energy Division. I just wanted
9 to second the remarks of Lorenzo Kristov from ISO
10 about how got the collaborative process has been this
11 year in the IEPR. A lot of discussion about the
12 collaboration on the demand forecast, and that
13 certainly has progressed, I think, considerably since
14 when I first got involved in this back in 2009, and
15 the 2009 IEPR, when the demand analysis working group
16 was formed and we've come a long way since then.

17 I think that working group has done excellent
18 work. To your point made earlier about educating the
19 parties, the decision-makers, the agencies, about our
20 various different processes, at a very technical
21 level. I think that the demand analysis working group
22 has provided that forum for that to happen.

23 We've also had some cross-training
24 initiatives, where, for example, you know, we have
25 gone to the ISO and given them a full debrief on how

1 our evaluation measurement and verification process
2 works for our energy efficiency programs, and how our
3 potential studies and goal studies work.

4 I think that's been a really good educational
5 process, and they are reciprocating by offering us
6 training on their transmission planning process and so
7 forth.

8 So the collaboration has been very good.

9 There have been a couple of other fronts that
10 I have been involved with where the collaboration has
11 been good as well. One that comes to mind is the AB
12 758, The Existing Buildings Energy Efficiency Program,
13 and we have really appreciated the close collaboration
14 with the Energy Commission on the development of that
15 program. We recognize what a significant effort it is
16 to develop a program of that scale and the challenge
17 to address the - the needs that are out there to
18 achieve our climate goals with deeper energy
19 efficiency in existing buildings, while at the same
20 time trying to fit everything into one document that,
21 you know, packs a lot of punch and appropriately
22 prioritizes what we can do in the short- and medium-
23 and long-term.

24 And then thirdly, I would say that our
25 collaboration on the zero-net-energy definition has

1 been a very good one as well. Since the PUC adopted
2 the 2008 strategic plan and the Energy Commission in
3 2007 IEPR-established zero-net-energy goals for new
4 construction, we have had lengthy conversations about
5 the details of the specifics of what that definition
6 means, and it turns out that it's very important to
7 make certain clarifications to the marketplace and so
8 forth about that definition.

9 So I think this IEPR offers the needed
10 clarity on that point, and we know that there is more
11 work to be done but we're really pleased to have gone
12 through that process, working with the Energy
13 Commission at the staff level and at the Commissioner
14 level, to hopefully bring a good clarification to that
15 definition.

16 We interact frequently with the Energy
17 Commission on multiple fronts. I have - and the ISO.
18 I have weekly calls on the demand forecast
19 coordination; I have biweekly calls with the Energy
20 Commission management on energy efficiency
21 coordination, and we also have periodically, every two
22 months, we get the Commissioners thing to coordinate
23 on energy efficiency strategy as well.

24 So I think there are many examples where the
25 collaboration is active and positive and ongoing.

1 So thank you for your efforts on the IEPR
2 document.

3 COMMISSIONER MC ALLISTER: Thank you, Simon.
4 I would -- it's interesting, as we move through this
5 process and increase this collaboration, there are
6 also side benefits, and you know, the challenge -

7 I mean, right in the middle of us are these
8 huge challenges. So it's not like this is just kind
9 of going to be automatic, right? It takes, you know,
10 different kinds of will. It takes a very single-
11 minded approach at sort of all levels, you know.
12 Certainly at the staff level, the office manager
13 level, the - you know, on up to the Commissioner
14 level.

15 So we all have to kind of keep on point. But
16 it's very positive that it's happening. And I think
17 one of the - you know, I want to point out just a
18 really good evolution of energy efficiency programs
19 that the PUC is having, and you know, I'm not going to
20 say that's it's all falls out of the IEPR process
21 (laughs) - it certainly doesn't.

22 But you know, the idea you have that you
23 would - that the PUC is developing for longer
24 lifetimes built into some of the energy efficiency
25 programs that merit it, or than can support that,

1 means that we get longer forward commitments for
2 energy efficiency investment such that it makes it
3 simpler, more straightforward, to characterize it so
4 that, you know, as that gets worked out it's at least
5 possible that we can incorporate that to a longer
6 horizon for the forecast in the next round.

7 And so I think, you know, those sorts of
8 evolutions were sort of - those developments were kind
9 of - we can imagine them before the process, but
10 they're actually happening, and that's really, I
11 think, you know, one example of the sort of collateral
12 benefits of really just getting everybody together
13 regularly to talk about what they're doing.

14 And so I really appreciate your being a core
15 part of that process. Okay, thanks.

16 MR. BAKER: Thank you.

17 COMMISSIONER MC ALLISTER: I am multi-
18 tasking, trying to organize all these blue cards.

19 And let's see - I'm trying to figure out a
20 progression here. We have sort of some general
21 groups. I'm going to - I think probably what I should
22 do is group folks together so we keep relatively on
23 theme. So I have three - I have three utility
24 representatives - do we have anybody from an agency in
25 the room other than - other than the PUC and ISO? Is

1 there anybody who wants to speak from an agency, from
2 a state agency?

3 So I think I'm going to move on. I have got
4 three utility representatives. And I will sandwich
5 the public entity between the (IOUs), how about that?

6 So Valerie Winn, from Pacific Gas and
7 Electric.

8 MSS. WINN: Good morning, Commissioner
9 McAllister, and CEC staff.

10 We wanted to congratulate the IEPR team for
11 yet another IEPR document that's been issued. Always
12 a pleasure to work with the CEC team during this IEPR
13 process every year.

14 We did want to note that the IEPR - it's
15 certainly a very comprehensive document that's
16 touching on a wide range of issues and we're very
17 appreciative of the opportunities that we have had to
18 work with you and your CEC team in preparing this
19 document.

20 We do plan to provide more technical comments
21 on October the 29th, as you provide, but I did have
22 two topics that I really wanted to touch on today.
23 And those are questions and issues that we have on
24 Chapter 6, on nuclear issues, as well as with the
25 zero-net-energy definition that's been proposed.

1 So on the nuclear issues, many of the
2 recommendations that are proposed in Chapter 6 address
3 radiological health and safety issues at nuclear power
4 plants, and those issues really fall within the
5 exclusive jurisdiction of the Nuclear Regulatory
6 Commission.

7 And so a number of the actions that have been
8 recommended - seismic hazard analysis and on spent
9 fuels storage transfer - those recommendations are
10 actually inconsistent and may actually conflict with
11 proposals that have already been adopted by the
12 Nuclear Regulatory Commission and that we're working
13 to fulfill.

14 Furthermore, the draft contains some
15 inaccurate and unsupported factual statements as the
16 basis for recommendations, and so we'll be highlighting
17 those as well in our comments.

18 In the areas of the recommendations that are
19 the exclusive jurisdiction of the Nuclear Regulatory
20 Commission and where we have prepared documents
21 responsive to the NRC on those issues we will be happy
22 to provide copies of those documents to the CEC, but
23 certainly we don't want to be duplicating effort and
24 certainly, the jurisdiction issues here should
25 prevail.

1 On zero-net-energy, we are very happy to see
2 the CEC address this issue in the 2013 IEPR but we do
3 have some concerns that the definition that has been
4 proposed is a bit too narrow, and we think that it
5 would be better for there to be more flexibility and a
6 more expansive definition of ZNE adopted. In
7 particular, we think there should be room in that
8 definition for both on-site - on-site generation as
9 well as off-site generation in a community, and I
10 think we still need to learn a lot more about how
11 zero-net-energy is going to work and we need to
12 evaluate a lot of different issues like the cost
13 effectiveness as well as operational issues.

14 And so we still really define - have a more
15 expansive definition as we start out, and as we learn
16 more we can certainly refine that definition. But if
17 we preclude options at the beginning that may not
18 serve California very well in meeting their clean
19 energy goals.

20 We were very pleased to see, in closing, that
21 the IEPR addressed many long-term energy
22 infrastructure issues and a lot of system planning
23 issues, and we look forward to continuing our work
24 with the CEC on these important things.

25 Thank you very much.

1 COMMISSIONER MC ALLISTER: Thank you,
2 Valerie, appreciate it.

3 COMMISSIONER MC ALLISTER: Jonathan Changus,
4 from NCPA.

5 MR. CHANGUS: Hi, great. Jonathan Changus
6 with the Northern California Power Agency, working
7 primarily with our members on energy efficiency
8 issues, which I will focus my comments on today. And
9 we also plan to submit written comments.

10 COMMISSIONER MC ALLISTER: Please do. I
11 neglected to encouraged people to do that. But I
12 think you kind of know the drill at this point.
13 (Laughs)

14 Mr. CHANGUS: And so I think as we have been
15 reviewing the draft IEPR on a number of the energy
16 efficiency focal points, there seems to be, I think,
17 kind of a thirty thousand-foot level issue that we
18 would like to bring into the conversation, and that is
19 kind of the prominent role of the customer in making
20 any of these initiatives successful.

21 There is talk of education and outreach to
22 the customers about how great energy efficiency is, so
23 we just assume that there are cost-effective benefits,
24 folks will just want to do it. And I think our
25 experience has been, is, you could be giving away

1 certain things that are energy efficient, and you're
2 still going to have some challenges getting that level
3 of participation.

4 And for our own part, we're seriously
5 considering doing additional work on a study of
6 customer behavior and what's driving decision changes,
7 what's going to motivate them to make the investments.

8 And it's not just investments for utility
9 programs. As we ramp up ambitiously with codes and
10 standards - you know, what's it going to take -
11 because it becomes more difficult as there's - (permit
12 visas) become more complicated measures - and
13 compliance rate could be a challenge, and it's really
14 important that we understand, what's it going to take
15 to make sure that customers are aware and that they
16 are going to be compliant.

17 And along the same lines, I think public
18 powers, looking to support and perhaps in new fashion
19 -- those efforts giving our closer relationships with
20 some of the building and planning departments within
21 our cities is, I think, opportunity that we can help
22 support in perhaps ways that we haven't as
23 aggressively in the past.

24 And it's a larger issue, I think - moving
25 forward is, Title 24 and Title 20 looks to ramp up -

1 we necessarily see that historically there is -- codes
2 and standards claimed as savings in utilities go above
3 and beyond (the capture).

4 Another part was, we really try and get as
5 much as that savings in codes and standards is (there)
6 and perhaps - a slightly different role in which
7 instead of having kind of separate efforts to use
8 [indiscernible] to participate more in the codes and
9 standard both from case studies and helping to do the
10 underlying research as well as the implementation, the
11 education, the working within the local communities to
12 make that happen.

13 I think another kind of monitor issue -
14 doesn't really touch on here but it's going to have
15 Prop 39 ramifications, it's going to have codes and
16 standards, definitely important for our utility
17 programs, is: the energy savings estimates, and
18 making sure that we have high-quality estimates that
19 reflect what's going on in our respective service
20 territories. The current year database is - is useful
21 - but as - we've realized and recognized through the
22 [unintelligible] efforts that it doesn't always
23 capture what's accurately going on, in some cases
24 there's some pretty significant differences. And so
25 what we've undertaken as an effort to get a technical

1 reference manual, we'll have a lot more transparency
2 about how the numbers and how the energy estimate
3 calculations are formulated so that folks can kind of
4 freely access - one of our major challenges not being
5 a part of a lot of the CPUC proceedings, not going to
6 ever have the bandwidth to do that, it's not always
7 clear how those changes came about.

8 So we're going to have a TRM rolling out and
9 I think we're going to have some 30-plus of the 40
10 publicly owned utilities on board with that initially
11 and we're hoping to capture more of those folks and we
12 really think that if you don't get the energy savings
13 estimate right up front then it throws off your cost
14 effectiveness calculations. You can do all the
15 verification you want to at the back end but if that's
16 not right, that's not accurate, that's not understood
17 then we really have program planning issues out the
18 gate.

19 So we're trying to tackle that issue.
20 Hopefully it'll be a resource that won't only be for
21 public power but could have larger ramifications. I
22 wanted to share that with you. More comments to come.

23 COMMISSIONER MC ALLISTER: Yeah, great. So
24 please, yeah, it'll be great to give your public
25 comments - or your written comments.

1 So you know, part of what we're going to do
2 today is talking about the particulars of this IEPR,
3 but you know, I think it's natural to also begin
4 thinking about, okay, what sorts of issues have we
5 mostly put to bed this time around and what issues are
6 still out there for incorporation in the scope for the
7 next IEPR.

8 So partly what we're talking about really, is
9 some of the issues you brought up, absolutely great
10 issues. And I think we need to keep our thinking caps
11 on and figure out how - you know, how to prioritize
12 those for incorporation into various proceedings here
13 at the Commission and elsewhere, but also - and
14 including the IEPR update for next year.

15 Just a couple of quick comments on that. I
16 get - you know, it's great that NCPA is looking at the
17 behavior side of things, because I think we are - it's
18 really an effort that needs - that needs resources and
19 smart people and knowledge that's based on actual
20 customer experience, and I think you know, the PA user
21 are extremely well-positioned to do that.

22 You know, I would - I would sort of urge the
23 pooling of resources and sort of utilizing as much of
24 the kind of developing and - fairly sophisticated
25 analytics, to work on that. Because I think you could

1 both help dealing with the bandwidth issue and also
2 get a better outcome.

3 And you know, data-driven understanding is
4 really key for good decision-making, and I think, you
5 know, to the extent that we can make that a statewide
6 endeavor that the peer use participation analysis is
7 very, very welcome, as it is on the case stuff. I
8 would love to have the PA use involved in the codes
9 and standards work more actively. So I think we all
10 benefit in California from it and - and it - you know,
11 the PA - definitely, you know, ought to have a voice
12 in that as well.

13 Let's see. So on the - you know, you brought
14 up a few issues about - that are really relevant for
15 existing buildings and I think (the sub V8) forum is
16 perfect for injecting those ideas. Certainly
17 permitting is one of the big ideas that - that we're
18 open to any and all comers to figure out how to make
19 that work better and be more consistent across the
20 state.

21 I know there's a great need for that. And
22 understanding what motivates customers, I mean, that
23 really - we got to do better at that. Because we're
24 not going to be able to pay direct installs for every
25 customer to do every measure. So it has to be choice-

1 based, to a large extent, looking at what - what are
2 the most appropriate arenas for disclosure and sort of
3 mandatory approaches; and what we can kind of expect
4 the marketplace to do on it and so on.

5 And I think those are hugely open questions.
6 So - anyway, I'm looking forward to your public
7 comments and certainly engagement on those other
8 proceedings - and next year.

9 So Manuel Alvarez from Southern California
10 Edison.

11 MR. ALVAREZ: I'm Manuel Alvarez from
12 Southern California Edison. Good morning,
13 Commissioner and staff.

14 I just wanted to bring up a couple of issues
15 for your attention and how we're going to respond [1-2
16 words missing from recording]. But first of all,
17 lumbar compliment you as leading this effort, and the
18 staff for its efforts undertaken. I know it's always
19 hard when you have personnel changes in the middle of
20 a project to keep the project going.

21 I personally experienced that internal
22 Edison, where we had major changes in personnel in
23 operations, so the challenges of not only the issues
24 and the substance you're dealing with but the people
25 who are looking at the issue play an important part.

1 There are three things I want to kind of
2 highlight for you to keep in mind when we prepare our
3 comments - and we're going to address them.

4 The first one deals - I guess I would put it
5 under the rubric of the forecast. But actually it's
6 more than that. It takes into account the issues you
7 raise in the report about data collection and need for
8 data; the precision one needs on the energy
9 efficiency, the look at the electric vehicle
10 transportation forecast, all those kind of wrap up
11 into a demand forecast activity.

12 So those are issues that we're still
13 struggling with and we'll be commenting on those
14 three, and try to get your attention on those matters
15 in our written comments.

16 But basically, overall I think we've made a
17 lot of progress. The collaboration that was discussed
18 earlier in the demand analysis working group has
19 beared fruit for us. Those of us who follow that and
20 monitor those activities are aware of the discussions
21 that go on.

22 Other folks, perhaps, don't see it, but I as
23 the utility representative do, and see that progress
24 that is being made, and I would just encourage you to
25 keep that going.

1 Times definitely some serious issues that
2 need to be discussed that are on the analytical side
3 and then ultimately we will look to the policy
4 framework that you need to decide.

5 The second item is I would like to reinforce
6 Valerie Winn's comment on the net-zero-energy home. I
7 think the question of off-site and flexibility are
8 paramount to the utility at this point. But we're
9 definitely looking at the definition you propose and
10 its implications and we'll respond to you in our
11 written comments there.

12 COMMISSIONER MC ALLISTER: Okay.

13 MR. ALVAREZ: And the final thing I want to
14 bring to your attention is in the strategic
15 transmission section.

16 I'm sure you're aware that we have been
17 wrestling with the question of where to put future
18 transmission projects for a number of years now, and
19 the report recommends the corridors identification
20 process. And we understand that's a legitimate area
21 for you to address, but I guess what I'm trying to
22 urge you is that the sooner you can do that the better
23 off you are.

24 You are aware of the long lead times for new
25 transmission projects and if we're going to propose

1 new corridors in the state, the sooner we can start
2 that dialogue at the local level, its implications for
3 land use and its biological impacts, the better off we
4 are going forward.

5 I know it's probably beyond the 2020 time
6 frame, and looking beyond 2020 and 2050 time frame for
7 new corridors. So - just asking you to kind of keep
8 that utmost in your mind and where you would plan
9 those facilities.

10 Thank you.

11 COMMISSIONER MC ALLISTER: Okay. Thanks for
12 being here, Manny, I appreciate it.

13 Okay. So going forward, I'm going to pick -
14 I think I'm going to pick sort of a - I've got a group
15 - well, let's see.

16 You know, I'll just use my discretion, how
17 about that?

18 So Bob Raymer from CBIA? I'm going to keep
19 them right on toes, so they don't know when they're
20 going.

21 MR. RAYMER: Thank you, Commissioner. I'm
22 Bob Raymer, senior engineer with the California
23 Building Industry Association, and I am also
24 representing the California Business Properties
25 Association.

1 My comments will be very brief today. We
2 will be submitting written comments on behalf of CBI
3 and CBPA and in particular with our support of AB 758
4 efforts and largely on energy efficiency and zero-net-
5 energy.

6 Taking a 30,000-foot level here, we like the
7 fact that in both existing and new construction the
8 CEC is focusing priority on education and training.
9 We're getting a very hard lesson that's coming out of
10 the economic downturn, as you have heard in a variety
11 of other forums.

12 We lost about 80 percent of our workforce
13 back in 2009, so we have got two sets of energy
14 efficiency updates, the 2010 and the 2013 standards,
15 that we're trying to get tens of thousands of
16 subcontractors, building officials, designers and
17 builders up to speed on. And this is kind of being
18 brought home to me. Mike Hodgson is our energy
19 committee chair, and I have recently started a series
20 of seminars where we're trying to bring building
21 officials and builders up to speed on the green
22 building standards and the energy efficiency update.

23 Mike has prepared a short, 195-Powerpoint-
24 page presentation - that's his short version - and
25 that's just trying to get them up to speed, and of

1 course, you get Powerpoint poisoning from something
2 like that.

3 And so this is a huge hill; it's going to
4 continue to be a huge hill for the next six to nine
5 years. It seems that in terms of education, just as
6 development and adoption is a key thing, education
7 implementation should be the third part of that
8 process, and we like the fact that CEC is focusing on
9 that.

10 In terms of updating the energy efficiency
11 standards, we're always interested in cost, but we're
12 also looking at things that make major changes in
13 existing design, making sure that we're familiar with
14 these, and as a - as sort of a word of advice to the
15 CEC, in most years, with the exception of this latest
16 update, the CEC has also backfilled. When you take
17 the compliance option and move it over into the
18 mandatory side the CEC, up until this time around, had
19 always replaced those.

20 And replacing, backfilling these compliance
21 options that have become mandates is very important to
22 a smooth transition for future sets of regulations.
23 It sort of gives us an idea of where the Energy
24 Commission is headed, but it also provides us with
25 design flexibility that helps keep compliance costs

1 down.

2 So a strong support for that.

3 In terms of compliance tools, once again,
4 being a broken record, you have heard all of this
5 before. We need these tools, nine to twelve months in
6 advance. We're running into some serious problems
7 right now, but your staff is really helping us kind of
8 get over this hurdle. But for the next six months
9 it'll be a little bit rough.

10 In terms of EV charging, we're working with
11 the building standards Commission, most importantly,
12 HCD in the Energy Commission, to try to resolve some
13 infrastructure issues in terms of solar PV, we want to
14 make sure that as we go forward that regardless of the
15 definition of ZNE and the fact that it includes
16 societal value, it's got to be marketable. And so to
17 the extent that we are able to get in the face of the
18 home buyer, or the building owner-manager, and tell
19 them you're going to get your money back in reduced
20 utility bills - that helps us market ZNE.

21 If they're not going to get their money back,
22 you're going to see a huge pushback down the road,
23 from the marketplace.

24 And lastly, California Home Energy Rating
25 Service versus National Home Energy Rating Service,

1 this is becoming a growing problem. Most of our large
2 production builders in California do business in multi
3 states, in many cases, more than 10 states.

4 Taking KB Home as an example, they've got
5 projects of course, throughout California, and in
6 Arizona and Nevada. And they build a much more
7 efficient product in California, and that product gets
8 a worse HERS score - using the National versus
9 California.

10 And they want to be able to market things on
11 a national basis. And by having - California having
12 sort of its own California version of home energy
13 rating Service, that is counterproductive, and perhaps
14 a way to build upon the national HERS rating program
15 and have sort of a separate add-on for California.
16 But we've got to get this fixed.

17 And I'm now starting - I'm taking phone calls
18 now over this problem. I don't usually get calls from
19 builder members on these types of specific issues.

20 COMMISSIONER MC ALLISTER: So you're getting
21 a call from, say, a builder who is used to working in
22 Nevada and said, "Hey, this same home gets an 84 in
23 Nevada and it gets 120 in California," or something,
24 or -

25 MR. RAYMER: Yes.

1 COMMISSIONER MC ALLISTER: Interesting.

2 MR. RAYMER: As a matter of fact, Joyce Mason
3 from KB Home will be at a panel that we're doing - CBI
4 has got quarterly meetings next week, and we're doing
5 a ZNE panel - PUC and the CEC staff will be
6 represented on this panel.

7 One of the questions that pops up is this,
8 and Joyce Mason will be there to explain -

9 COMMISSIONER MC ALLISTER: Right.

10 MR. RAYMER: -- this exact problem.

11 COMMISSIONER MC ALLISTER: Yeah, great.

12 So we're - I think that Dave Ashuckian is on
13 that panel.

14 MR. RAYMER: Yes, he is.

15 COMMISSIONER MC ALLISTER: Yeah, so that's
16 great.

17 MR. RAYMER: Looking forward to it.

18 COMMISSIONER MC ALLISTER: Yeah, terrific.
19 And so you know, yours are exactly the kind of nuts-
20 and-bolts sort of market distortions that we want to
21 try to avoid, and we want, and where they seem to be
22 cropping up we want to try to fix them.

23 MR. RAYMER: Thank you.

24 COMMISSIONER MC ALLISTER: And I really
25 appreciate your comments, and certainly your effort on

1 this and also on the NSHP issue. You know, new solar,
2 new homes with solar are the future for California.
3 You know, sort of the ZNE definition is going to be a
4 work in progress going forward as the market evolves.
5 I think we all recognize that and staff's been working
6 really hard across the agencies to figure that out, to
7 put some - putting - to get a target there so we can
8 start shooting for something that is quantified.
9 We'll see how it goes. And I think you're a key part
10 of our discussions.

11 MR. RAYMER: We fully expect the incentives,
12 of course, to ramp down to zero.

13 COMMISSIONER MC ALLISTER: Yeah.

14 MR. RAYMER: And that will happen in
15 relatively short order, in the next couple of years,
16 and maybe even sooner.

17 And to the extent we can find other ways to
18 sort of, you know, incentivize - it doesn't need to be
19 the passing of a check back and forth.

20 COMMISSIONER MC ALLISTER: Yeah.

21 MR. RAYMER: There's a variety of ways, and
22 we'll with you on that.

23 COMMISSIONER MC ALLISTER: Yeah. And then
24 the only other thing I would say is I really
25 appreciate your comments on the permitting - education

1 training, and sort of related to local jurisdiction
2 issues. And I really, I feel that that is one of the
3 key issues of the day. And in order to decrease
4 transaction costs in the marketplace we have to figure
5 out how to, you know, give some certainly about
6 process so that folks can incorporate that effectively
7 into their businesses. And sort of developing the
8 kind of tools that local jurisdictions need in
9 developing the consistency, it's going to take some
10 resources, and we have buy-in at the highest levels of
11 the state on this; the convening power, I think the
12 convening - both the authority and the desire is there
13 to do kind of a task force on permitting.

14 You know, there was one on solar permitting
15 that I think was positive. And we're looking to
16 potentially do one for energy efficiency related
17 permitting but pretty quickly, that gets into
18 permitting writ large.

19 And so we're still scoping that out but I
20 think it's something that we want to do in the AB 758
21 context and I think it would have benefits all around.
22 But it's going to take some resources.

23 MR. RAYMER: And one note of positive
24 overlook here. The California building officials, you
25 know, a couple of times each year do their education

1 week. The one that they recently concluded - they're
2 about to do another one in Ontario, but the one they
3 recently concluded had 2400 attendees. This is five
4 times the number they had just a few years ago. So
5 economy is coming back.

6 COMMISSIONER MC ALLISTER: Yeah, great.
7 Well, thanks, Bob.

8 NRDC, and Lisa - is it "Hwey"?

9 MSS. XUEI: "Shu." Good morning. I'm Lisa
10 Xuei, sustainable energy cell at Natural Resources
11 Defense Council.

12 First, I would like to thank the
13 Commissioners and staff for your leadership and
14 willingness to discuss changes and clarifications
15 along the way, in drafting this year's report.

16 Today I would like to comment on five issues
17 covering the report. The first is demand forecast.

18 We really appreciate all your hard work in
19 collaborating with the PUC and ISO on energy
20 efficiency this year and we urge you to come to an
21 agreement on the single forecast as discussed earlier.
22 This is really essential to insuring that California
23 will not overprocure its supply side resources.

24 And we also recommend that the Commission
25 include a - (make a) scenario of additional achievable

1 energy efficiency in the final base forecast, since it
2 is conservative and reasonably expected to occur.

3 My second point is on statewide energy
4 efficiency goals. California has been very successful
5 in capturing energy savings over the past four
6 decades, and we really need to scale that up in order
7 to meet the state's climate goals.

8 So we recommend that the Commission get
9 started right away on the AB 2021 report to set
10 specific statewide energy efficiency targets over the
11 next decade.

12 And third, on public power, the POUs have
13 played a significant role in energy efficiency but as
14 the report notes, POU energy savings in investments
15 have been leveling off in recent years, and we
16 encourage the Commission to work with public power to
17 ensure that they continue to set aggressive targets to
18 capture all cost-effective potential in the future.

19 And fourth, on demand response, we support
20 scaling up clean targeted demand response to ensure
21 that we have a more flexible and reliable electricity
22 grid.

23 However, in order to ensure demand response
24 capture all the potential, we urge the Commission to
25 recommend concrete steps to ensure that dirty backup

1 generators were not included. This will ensure that
2 demand response is truly clean.

3 And on transportation we thank the staff for
4 incorporating our suggestion on adding information on
5 cost-per-mile for all fuels. We also encourage the
6 Commission to include overall fuel expenditure over
7 time to show the results and effects of statewide
8 policies like AB 32 and SB 375.

9 And lastly, the current travel demand
10 scenarios do not appear to reflect adoption of
11 sustainable community strategies that are coming out
12 of SB 375. So we recommend that these - we recommend
13 that the final report include a travel demand scenario
14 that incorporates these important changes as a result
15 of the new policy.

16 And again, we'll follow up with a lot more
17 details and elaborate on these points in our written
18 comments.

19 So thank you for the opportunity.

20 COMMISSIONER MC ALLISTER: Thanks for being
21 here. I'm looking forward to that.

22 Let's see, Tom Koehler from the California
23 Advanced Energy Coalition.

24 MR. KOEHLER: Great, thank you. Tom Koehler
25 of the California Advanced Energy Coalition. And

1 we're talking about permitting and wanting to help all
2 these industries. We'll just throw ourselves into
3 that hat - and love to help on permitting.

4 I just wanted to - a couple items today. One
5 is, we are very supportive of the basket approach that
6 the Energy Commission has pursued, and really,
7 California has pursued, in terms of reducing climate
8 change and displacing petroleum. It's clearly
9 working, and I think that's reflected in this IEPR
10 report.

11 So all - in terms of transportation all the
12 fuels have a very, very important role and we're very
13 supportive of all of them, and I think that we're
14 getting at - collectively as a state, to the point
15 where we are meeting - we can actually see ourselves
16 meeting these goals, both the low carbon fuel
17 standard, bioenergy action plan, and climate reduction
18 goals.

19 We are - we support, in terms of the
20 transportation recommendations, the bullet; in terms
21 of supporting the renewable fuels we would like to
22 reiterate how important that is and we appreciate that
23 being highlighted in the report.

24 Wanted also to highlight a little more that
25 the existing facilities in California - existing bio

1 refineries - are actually today processing a variety
2 of advanced feed stocks, and so we are today doing it,
3 and it will expand. The numbers you have in this
4 report, I think, are realistic and there will be no
5 doubt that we will meet them.

6 One thing that is missing that I think is
7 very important that I would like to have you consider
8 to include in the recommendation is a recommendation
9 for the state to move towards E-15. And this would be
10 in line with the renewable fuel standard and
11 essentially would double the increase by 50 percent
12 the ability of low carbon fuels to enter the market,
13 essentially syncing up with the - with the federal
14 government.

15 And I want to go back in history a little bit
16 because in 2010 the amount of ethanol in the gasoline
17 went from 6 percent to 10 percent, so essentially
18 almost another 50 percent, doubling, of low-carbon
19 fuels displacing petroleum. And that effort was led
20 by the California Energy Commission with some reports
21 and recommendations that had happened and then worked
22 with the ARB, and I think the same effort and
23 foresight from the Energy Commission on E-15 is need
24 today.

25 So we would appreciate that being included in

1 the IEPR.

2 COMMISSIONER MC ALLISTER: Thanks for your
3 comments, we really appreciate it.

4 MR. KOEHLER: Thank you.

5 COMMISSIONER MC ALLISTER: Let's see, Erica
6 Brand from the Nature Conservancy.

7 MS. BRAND: My name is Erica Brand and I am
8 project director of the California Renewable Energy
9 Initiative at the Nature Conservancy.

10 Thank you for the opportunity to provide
11 comments on the draft 2013 Integrated Energy Policy
12 Report. We're very appreciative of the opportunity to
13 be involved in this year's IEPR planning and
14 workshops.

15 Today I am going to provide real brief
16 remarks on the strategic transmission investment plan.
17 We really appreciate that the Commission has
18 recognized and elevated the need to better synchronize
19 generation and transmission planning and permitting.
20 We agree with Commission's finding that the key to
21 overcoming the synchronization challenge is to develop
22 a long-term transmission plan for the preferred
23 renewable generation zones.

24 At the Nature Conservancy we are strong
25 advocates of using landscape-scale planning to

1 identify areas or zones to encourage the development
2 of renewable resources and an important part of that
3 is prioritizing transmission investments to those
4 areas.

5 So the draft report notes two specific
6 efforts to overcome the generation and transmission
7 synchronization challenge: the DRACP and the Energy
8 Commissioner corridor designation process. So within
9 the California deserts we're a stakeholder (subsidiary
10 CP) and we remain committed to its successful
11 completion - of the important landscape-scale planning
12 approach to energy generation and transmission
13 planning.

14 Within the Central Valley, which is noted
15 within the report, we support the Commission's
16 recommendation to apply a landscape scale planning
17 approach to this region. We've been doing a lot of
18 thinking about comprehensive planning here in that
19 area and we have recently completed the Western San
20 Joaquin Valley Least Conflict Solar Energy ssment.
21 It's the first comprehensive scientific assessment to
22 consider both biodiversity and agricultural
23 conservation values in the region.

24 The goal of our assessment is to identify
25 areas with high conservation value - both conservation

1 and agriculture - and important to avoid, as well as
2 areas of potential least conflict for solar energy
3 generation.

4 So our assessment has found significant
5 acreage within this region of potential least conflict
6 and we hope that the results can be used to start a
7 conversation around renewable generation siting in the
8 Central Valley.

9 So thank you for prioritizing that area. I
10 think it's important that the planning there begin
11 sooner rather than later.

12 To close I would like to thank the Commission
13 for recognizing the importance of integrating land use
14 and energy planning and elevating it as an important
15 topic in this year's IEPR. We feel strongly that
16 landscape-scale planning for both generation and
17 transmission is the best path forward for California's
18 continued development of renewable and we're very
19 happy to support it.

20 So, thank you.

21 COMMISSIONER MC ALLISTER: Thanks for coming.
22 I appreciate your comments.

23 Rob Hammond, from Biraenergy.

24 MR. HAMMOND: Rob Hammond, Biraenergy. Good
25 morning, Commissioner McAllister.

1 I have three comments that I would like to
2 make today. First has to do with the definition of
3 zero-net-energy as applied to homes.

4 I fully support the concept of ZNE homes and
5 the current obligation in single family new homes.
6 However, as stated by PG and E and Edison in their
7 comments, I believe that the current definition is too
8 narrow.

9 I think that it's important to look beyond
10 the current application in new homes and envision
11 moving the entire residential market towards ZNE.

12 On page 28 of the IEPR, the definition of ZNE
13 specifically references on-site renewable energy
14 sources. While this definition serves the new
15 construction market it does not serve the resident -
16 the retrofit market.

17 Recently Biraenergy analyzed over 75,000
18 residential rooftops in five Southern California
19 cities with established neighborhoods and found that
20 only 11 percent of the homes had sufficient rooftop
21 area clear of obstructions and with sufficient solar
22 access to accommodate approximately a four kW PV.

23 Four kW is used to represent the minimum PV
24 size needed to reach ZNE, based on our experience
25 developing ZNE packages for existing as well as new

1 homes.

2 The definition of ZNE is currently used in
3 the context of new homes and I have on a few occasions
4 heard that it's not meant to be applicable to existing
5 homes. However, on the IEPR on page 37 states that a
6 recommendation for comprehensive energy efficiency
7 program for existing buildings is to "coordinate new
8 construction and retrofit programs" and "achieve zero-
9 net-energy in both new construction and retrofit
10 applications."

11 The single-family market is a single market
12 consisting of new homes and existing homes. It does
13 not make sense to me to develop a key concept like ZNE
14 when it is applicable to only one to two percent of
15 the total single family market, that being new homes,
16 when it does not work for almost 90 percent of the
17 single family home market.

18 With the future in mind, we need to use all
19 the tools that are at our disposal to reduce
20 greenhouse gas including the most powerful concept of
21 ZNE consistently in both new and retrofit markets.
22 Therefore I strongly recommend that the phrase
23 "renewable energy sources" be removed in the
24 definition of ZNE and be replaced by "clean energy
25 sources."

1 My second is the HERS scale and rating. I
2 certainly support the home energy ratings and their
3 increased importance in the market. But I believe as
4 Bob mentioned, that we need to increase the value of
5 the market and I strongly recommend that California
6 devise a method to convert the rating values to the
7 rating values determined using the ResNET method.

8 I'm not recommending that we reduce
9 stringency of our code nor reduction in the rigor of
10 our method. I'm simply recommending that the effort
11 be made to relate California HERS scores to ResNET
12 scores, kind of converting Fahrenheit to Celsius.

13 If I may make one last point. That is,
14 regarding ZNE and HERS zero - our consumer messaging
15 versus policy is very important. Again, I support the
16 policies in ZNE and HERS as well as the logic of HERS
17 scores as the reference points of 2008 is 100 and ZNE
18 is zero. However, I strongly suggest that the Energy
19 Commission and Public Utilities Commission not drive
20 the term Zero Energy into the public lexicon. This
21 will likely engender consumer perceptions of zero
22 energy bills.

23 While we're currently close to being able to
24 design and build affordable homes that, on an annual
25 basis, draw zero electricity from the grid on an

1 annual basis, neither the gas bill nor the electric
2 bill are zero dollars. They never will be, at least
3 in my lifetime. There will be charges for connections
4 to and use of the distribution systems and grids, and
5 they will be increasing, not decreasing.

6 So while we should not tell voters how to
7 label and market their homes - except for the HERS
8 label, of course - it would be prudent to provide
9 alternative sanctioned terms and labels that convey
10 the messages surrounding the ZNE home but without
11 using the term "zero energy home."

12 Thank you for your time and consideration.

13 COMMISSIONER MC ALLISTER: Thank you very
14 much, Rob.

15 And I presume you're involved with staff and
16 in the relevant discussions. I know we have talked
17 somewhat about this, but I think your expertise on
18 some of the market assessment I think is important to
19 inject that in the process. So you know, the policy
20 that we -

21 MR. HAMMOND: Right.

22 COMMISSIONER MC ALLISTER: -- finally adopt
23 is sort of - matches the marketplace kind of need, and
24 where we can most effectively push it.

25 MR. HAMMOND: Yes, I'm involved in the

1 stakeholder process with - between the Commission and
2 the - the two Commissions -

3 COMMISSIONER MC ALLISTER: The two
4 Commissions, right.

5 MR. HAMMOND: -- and will continue there.

6 COMMISSIONER MC ALLISTER: Right. Thanks for
7 your input.

8 Phil Henry from California Geo.

9 MR. HENRY: Good morning, Commissioner
10 McAlliser, it's nice to see you again. I would like
11 to thank you for the opportunity to comment this
12 morning. I would also like to thank the Commission
13 for their effort to comply with the provisions of AB
14 2339 and the Commission's rather aggressive discovery
15 efforts, including the March 21 workshop and the
16 resulting working group, and I particularly want to
17 acknowledge the Commission for - and thank you the
18 Commission, for selecting Joe Loyer as the project
19 lead and industry liaison.

20 Joe's herculean efforts and tenacious
21 taskmaster - taskmaster - was instrumental in any
22 success that we had, so thank you and thanks again to
23 Mr. Loyer.

24 COMMISSIONER MC ALLISTER: Thanks.

25 MR. HENRY: So my oral comments are likely to

1 be somewhat fragmented. I didn't realize there was a
2 three-minute deadline, so just cutting to the chase:

3 Industry certainly appreciates the - and good
4 percentage of the GHP or geothermal heat pump, or GOE
5 pump - I'll use GHP - content within the IEPR - but
6 considering AB 2339, I question whether the Commission
7 has fully complied with the intent of AB 2339, at
8 least in terms of the work product. And without
9 taking time to restate some of the parts and pieces of
10 2339, the - AB 2339 working group proved to be a very
11 useful resource, but unfortunately there is a
12 significant disparity between the three pages of work
13 product contained in the draft IEPR and the 19 pages
14 or so of working group content summary.

15 And so if you don't mind, Commissioner, I
16 have a question to ask that you could handle it any
17 way you want to, but I'm curious if you would - you or
18 the Commission, would consider producing a full staff
19 report from the AB 2339 GHP working group and workshop
20 work product.

21 COMMISSIONER MC ALLISTER: I can't figure out
22 - some kind of a bandwidth and some sort of
23 prioritization issue. But I mean, I certainly can
24 comment that I found it interesting and I know staff
25 was, as you said, clearly engaged in it and we

1 definitely take that statutory mandate seriously, and
2 you know, California is a place where relatively new
3 technologies kind of come to kind of find a
4 marketplace that is significant enough to get going,
5 and I think that's been the intent of both the
6 legislation and certainly of the Energy Commission.

7 I would have to - I'll just have to think
8 about it, I've not heard this proposal before.

9 And let me just say, the idea was not to give
10 the topic short shrift in the IEPR document, you know,
11 the real estate in the IEPR is extremely precious and
12 hard to come by. You know, every bit of that document
13 was squeezed for brevity and clarity to the Nth
14 degree, so - so the three pages is actually pretty
15 large - a lot of column inches relative to many of the
16 other topics that are also, I think, important as
17 well.

18 So it's certainly not a slight to that
19 effort.

20 MR. HENRY: I appreciate the real estate that
21 we already -

22 COMMISSIONER MC ALLISTER: (Laughs)

23 MR. HENRY: -- occupy - and hopefully it
24 won't diminish as a result of this process.

25 There are a number of items that - not

1 including in the IEPR - particularly in the
2 recommendation section. They have a pretty
3 significant impact going forward, and so if you could-

4 COMMISSIONER MC ALLISTER: It would be great
5 to get written comments - you know, with specificity,
6 so we can take it under consideration.

7 MR. HENRY: Okay. I will do that.

8 And then - let's see - if I may have a little
9 latitude and speak to the recommendations themselves,
10 just briefly -

11 COMMISSIONER MC ALLISTER: Great.

12 MR. HENRY: -- and invite your comments.

13 The issues in the recommendations I believe
14 are correctly identified but I am concerned with - I
15 really am concerned with the overall burden the
16 Commission is placing on industry, particularly in
17 terms of the ACM option application. In my opinion it
18 places an onerous burden on an emerging technology,
19 and just to articulate some of those pieces, the
20 resource process today with staff and with industry
21 members and organizations that would take part in this
22 process, cost estimates run in the range of \$200,000
23 for that process.

24 Time frame as anticipated, would take two
25 years.

1 The instruction and pathway within the
2 Commission is not quite clear at this point to us.

3 There is no guarantee that this process would
4 provide a useful permanent result when we got down to
5 the end of the road. And then - and these comments, I
6 should have mentioned, refer to the non-res piece, and
7 not the res piece.

8 There's apparently a - the public domain
9 software on the non-res side does not have the
10 inherent abilities to model GHP. So that's going to
11 be a challenge if that ACM option application is built
12 around public domain software.

13 And over on the residential side, it's a much
14 - it's a much simpler, less expensive process. The
15 staff has already started engaging around that, and I
16 think I it could be done in a rather straightforward
17 way if we can keep the ability to directly input COP
18 and EERs within the CBEC res.

19 COMMISSIONER MC ALLISTER: I do think staff
20 is, you know, aware of these issues. And I obviously
21 don't have full recall of the conversations that I
22 have had about this but certainly I think they
23 appreciate the challenges - you know, obviously on the
24 standards and the tools we are really focused on the
25 absolutely critical pathways to get them ready for

1 prime time in the near term so that everything can
2 start functioning on January 1st - but going forward,
3 you know, I think could be in the bin of, okay, things
4 that could be added going forward and the timeline for
5 that is - you know, certainly it's up in the air,
6 still, but - you know, I think there is an openness to
7 make it happen. So we should just - we should
8 continue to offer that path.

9 Maybe sort of in the first quarter of next
10 year is probably the time when people will be able to
11 listen to it. Once things are - hopefully - hopefully
12 things go smoothly enough and in the first quarter we
13 can actually take on some of these additional paths.

14 MR. HENRY: Okay, and if I may, just a last
15 comment.

16 My last comment is the industry's position on
17 the Title 24 compliance problem, or specifically, who
18 should fix it. And it's been that the Commission
19 should really have lead and be addressing this
20 problem, and staff has countered with the various
21 statues and cited the - the protocol for a new
22 product.

23 And when they - as I have thought about this
24 and seeing it in the recommendation, and then - and
25 then reading a particular part in the IEPR dealing

1 with GHPs, quite frankly I'm quite confused. Because
2 the GHPs are certainly not new; they have been -
3 again, being installed in California in the mid-
4 eighties. In the downtown area, actually.

5 And quoting from the draft, "Geothermal heat
6 pumps have existed in the United States for more than
7 fifty years."

8 So I'm confused as to what constitutes a new
9 product or new technology. And with that I will thank
10 you.

11 COMMISSIONER MC ALLISTER: Please do submit
12 written comments. I mean, I think that will be
13 important. And you know, really - I think - you know,
14 in the industry that we're going to -

15 Well, I think it's, you know, we got to sort
16 of figure out where the expertise exists to actually
17 bring it to bear in developing the module - and you
18 know, I think our preference, certainly, is that
19 industry find a way to take the lead on that. And
20 probably that's a - you know, it's clearly a
21 collaborative process; there are a lot of stakeholders
22 in this ecosystem, but sort of who is to lead on it, I
23 think, is an open question.

24 But I appreciate your comments and look
25 forward to your written recommendations.

1 Ray Pingle, is it? From the Sierra Club.

2 MR. PINGLE: Good morning, Commissioner
3 McAllister. I appreciate the opportunity to comment.
4 Ray Pingle of Sierra Club, California. I wanted to
5 comment on a couple of priorities for us, and we will
6 be submitting some written comments as well.

7 The first has to do with climate science, and
8 we are all aware that climate change is happening more
9 rapidly and causing more severe adverse impacts than
10 was forecast, certainly, ten years ago, even just a
11 few years ago. In fact, the scientific consensus
12 report that Heather referenced in her presentation has
13 a quote in there that is something to the effect that
14 a child living today, if we continue business as
15 usual, by the time they are an adult, there is a high
16 probability to live in a world in which irreversible
17 damage has occurred to the climate, greatly impacting
18 our habitability of the climate.

19 So I think to some extent we are at risk of
20 developing a false sense of security when we have
21 goals like 80 percent GHG reduction by 2050, or if we
22 stabilize climate at some arbitrary number, 450 parts
23 per million, or something, that it will be okay.

24 But the simple truth is, the more fossil
25 fuels that we take out of the earth, gigatons, and

1 burn every day, that's increasing the damage to the
2 atmospheric and climate and system.

3 And so it what's very important is as the
4 Energy Commission, working with others, continues
5 deliberations on targets, that we really should look
6 at doing - look at every opportunity where we could
7 still further accelerate the progress, the excellent
8 progress whenever made, frankly; it's been very good.

9 But I think we can and need to go even
10 faster.

11 When we look at - so the more greenhouse
12 gases get out there we're increasing on a daily basis
13 the future financial liability of less-than-optimal
14 action and we're increasing the habitability
15 liability, and certainly another simple truth is, in
16 this case, it applies: Prevention is cheaper than
17 repairing the damage, you know. The investments that
18 we make today will prevent far greater economic losses
19 and other losses in the future, for higher-cost later
20 mitigation for adaptation and repair.

21 So the Sierra Club in the electricity sector
22 is recommending consideration of adoption of a 40
23 percent RPS by 2020 and 70 percent RPS by 2030. We
24 think, for example, if we had a 70 percent RPS by 2030
25 that in combination with other energy efficiency, a

1 (higher rate of) generation and so on we could
2 actually reduce greenhouse gas by 80 percent.

3 So our request to the Energy Commission,
4 working with the other energy agencies, is truly
5 revisit - don't assume that the things that made sense
6 and in fact, were bold ten years ago, really apply
7 today in light of this new climate science.

8 The second thing we wanted to comment on was
9 the implications for the retirement of SONGs to the
10 OTC plants, and the current draft continues to
11 reiterate the assumption that 50 percent of any net
12 generation needs as a result of these retirements has
13 to be met with conventional generation. We believe
14 that 100 percent of any net generation could be met
15 with preferred resources

16 Looking at the demand forecasts and as our
17 NRDC colleague mentioned, we would recommend also
18 adopting, at least in this case, AAEE assumption. And
19 when you look at that, the demand curves are
20 essentially almost flat. And certainly if we even
21 progressed higher than that, to the high case, the
22 demand curves decrease.

23 So we don't think that demand warrants a lot
24 more generation, but we do need more resources to
25 intergrate the increased renewable.

1 We think that the demand forecasts and
2 generation forecasts need to include the impact of AB
3 327, which essentially removes uncertainty around the
4 PUC cap of over 5,000 megawatts of net energy metering
5 generation, which will with very high probability,
6 that will be achieved by 2017, and that could have a
7 very material effect on reducing load and mitigating
8 generation requirements. And also, part of that bill,
9 327, creates what's generally known as the NEM 2.0
10 program, which could again create very large
11 additional increases to renewable generation even by
12 2020 and beyond.

13 And then also the other thing that should be
14 included in the calculations is the SB 43, the shared
15 renewables bill, which [indiscernible] 600 megawatts
16 of new generation out there.

17 So our recommendation would be - and we're
18 pleased - and also observe the improved collaboration
19 between all the energy agencies. We have another
20 opportunity here, which is we would recommend that the
21 CEC lead the formation of a public-private task force
22 consisting of the state's energy agencies, SDG and E,
23 SCE, and LADWP, focus on Southern California needs and
24 to put together a comprehensive, well-considered plan
25 to achieved any net integration generation needs with

1 100 percent preferred resources.

2 We think if that - we think it's premature to
3 make the assertion that we can only do 50 percent
4 preferred, and we have to do 50 percent, without
5 really going through the deliberative process of
6 putting such a plan together.

7 And then just one last comment on that. Just
8 one possibility, for example, on the OTC plants, is
9 that they could be re-powered but not be re-powered
10 with gas-fired generation, but instead be re-powered
11 by converting generators into synchronous condensers,
12 which is already starting to happen. And also with
13 some large battery arrays, 25 to 100 megawatts, that
14 could provide the integration services that would
15 replace that function for the gas-fired plants, and
16 could also provide some increased transmission support
17 so that it would be possible, potentially, to import
18 additional energy from the surrounding areas without
19 having the increase in transmission facilities.

20 But anyway, thank you very much for your
21 consideration.

22 COMMISSIONER MC ALLISTER: Thanks for your
23 comments. We appreciate your interest and
24 involvement.

25 Let's see. So McKinley Addy, from AdTra.

1 MR. ADDY: Good morning, Commissioner.

2 I'm with AdTra, as you mentioned in the
3 introduction, a company that is focused on the
4 deployment of low-carbon high-efficiency technologies
5 at scale. For example, more efficient power trains
6 combined with smart fuels, representing a portfolio
7 size of about 35 (billion miles) or the equivalent.

8 Thank you for the opportunity to comment on
9 the IEPR report, and I want to commend the staff and
10 the Commission for this latest iteration. I think it
11 strikes the right balance across several policy
12 objectives.

13 My comments are particularly on the
14 transportation chapter and I would like to talk about
15 three areas.

16 First, I am particularly pleased with the
17 continued emphasis and treatment that transportation
18 energy receives and particularly with respect to the
19 potential increase for alternative fuels. I recommend
20 my former colleague, Tim Olson and his team for the
21 strategies that they laid out.

22 With the additional influx of funds to the
23 CEC through AB 8, it's especially important that the
24 policy objectives articulated can be achieved. And I
25 would just like to note that in the report - the IEPR

1 draft report - it talks about the fact that California
2 now has achieved an 8 percent use of non-petroleum
3 fuels in the transportation sector, and I think that's
4 a really good outcome to build on.

5 The outcomes laid out in the transportation
6 chapter for natural gas and bio fuels are reasonable
7 and they can only be achieved by attracting greater
8 private capital and expanding product availability -
9 for example, more efficient energy-at-lower-cost-
10 right-price natural gas engines.

11 One way to do that is to improve, perhaps,
12 our fuel policy objective - the leveraging ratio of
13 the AB 118 program which the IEPR report has currently
14 less than two times - and I think this is important to
15 meet the transportation energy goals called out in the
16 IEPR -- and as well as some of the other policy
17 reports like AB 20 - 2076 - and AB 1007.

18 I have a couple of other observations. One
19 of them is about a recommendation that the Energy
20 Commission and Air Resources Board reconcile what
21 appears to be a difference in views about the
22 increased use of motor fuel natural gas in the
23 transportation sector.

24 The ARB's AB 8032 draft updated scoping plan
25 envisions a phasing out of natural gas as a

1 transportation fuel due, in that agency's view, partly
2 to the marginal GSU benefits. But I think that view
3 is partly based on the poor efficiency of existing
4 natural gas engines, which we understand is going to
5 be improved with newer technologies.

6 A final recommendation is that the Energy
7 Commission's greenhouse gas analysis of life cycle
8 emissions reflect the most current research, including
9 consideration of fugitive methane emissions, which as
10 you may know, some environmental groups have
11 highlighted as possibly offsetting the potential
12 increased use of natural gas in the transportation
13 sector.

14 And one way for the Energy Commission to do
15 that is to look at perhaps improving the - or renewing
16 the Energy Commission's work on life cycle analysis
17 that was done under the AB 1007 proceedings; much that
18 work was of course transferred to the California Air
19 Resources Board - that is now being used as part of
20 the low carbon fuel standard regulatory proceedings.

21 Finally, I think acting on these observations
22 can ensure that the IEPR's goals of a threefold
23 increase in alternative fuel use by 2020 is more
24 likely than not to be realized.

25 Thank you.

1 COMMISSIONER MC ALLISTER: Thank you for your
2 comments.

3 Two more cards. I believe it's Kate Kelly,
4 from Defenders of Wildlife.

5 MS. KELLY: Good morning. Kate Kelly on
6 behalf of Defenders of Wildlife.

7 We would like to thank the Commission and
8 staff on their work on this IEPR and the process as
9 well, including the hearing today. We will be
10 submitting, of course, more technical comments by the
11 29th.

12 COMMISSIONER MC ALLISTER: Great.

13 MS. KELLY: Defenders supports renewable
14 energy as a key tool to address climate change and we
15 are strongly supportive of the use of landscape
16 planning tools for smart from the start renewable
17 energy development. My comments today will be brief
18 and will focus just on two pieces within the IEPR.

19 The discussion related to location-based
20 transmission planning for future transmission and
21 valley-focused renewable energy conservation planning.
22 Both of these concepts were things that Defenders
23 advocated in our 2012 Smart From The Start report,
24 which was included in the 2013 IEPR update, and we
25 appreciate the Commission's consideration of those

1 comments.

2 Transmission planning is the key to the
3 future of renewable energy development, but we need to
4 see a shift in paradigm, as suggested within this
5 draft IEPR, where areas that are most appropriate for
6 renewable energy development and energy development in
7 general that are low-value habitat, low-value
8 agricultural lands, smart from the start sitings for
9 renewable energy development are identified and then
10 transmission is planned to service those areas rather
11 than the method that we currently have, where
12 renewable energy development is often sited where
13 transmission exists.

14 This will allow us to move to a more
15 streamlined approach to renewable energy development
16 and reduce both the costs and the time associated with
17 it.

18 Secondarily, a valley-focused renewable
19 energy conservation planning approach. Defenders has
20 been deeply involved in the Southern San Joaquin
21 Valley and renewable energy development in the last
22 few years, and this is a key area that is in desperate
23 need of this type of planning at the landscape level.
24 Frankly, it's greatly overdue and we would encourage
25 that it be implemented as quickly as possible.

1 There's a number of studies and documents
2 going as we currently speak that would support that
3 process, including the Nature Conservancy's work in
4 the western San Joaquin Valley.

5 We encourage the Commission to move forward
6 sooner rather than later, to further that on given the
7 sheer volume of projects that have currently been
8 proposed or have been permitted in the Valley as well
9 as the intense interest that remains in the Valley for
10 that type of work. We need the framework of planning
11 now, not some time in the future.

12 With that I would be happy to answer any
13 questions.

14 COMMISSIONER MC ALLISTER: Great. Thank you
15 for -

16 MS. KELLY: Thank you for your time today.

17 COMMISSIONER MC ALLISTER: Thank you.

18 Okay, and last but certainly not least: Ben
19 Davis, Jr., from the California Nuclear Initiative.

20 MR. DAVIS: Thank you. It was kind of you to
21 refer to me as certainly not least.

22 I am Ben Davis, Jr. I am formerly a SMUD
23 Rate Advisory Board Member and I also drafted the
24 initiative that led to the closure of the Rancho Seco
25 Nuclear Power Plant.

1 I am currently the proponent of two statewide
2 initiatives that are cleared for circulation that are
3 germane to these proceedings, one of which would close
4 the Diablo Canyon Nuclear Power Plant, and the other
5 would create a statewide electrical utility based on
6 the SMUD model, and basically put much of the
7 jurisdiction of the Energy Commissioner and PUC and
8 Cal ISO under one roof.

9 Therefore, much of my interest is in the
10 nuclear part of these proceedings.

11 At the workshop on nuclear power I brought up
12 the issue - I want it noted that there has basically
13 been only a focus on the problems with nuclear power
14 through the entire workshop. And there was no
15 evidence in those proceedings that there was any
16 benefit to the State of California from nuclear power.
17 In response, Chairman Weisenmiller suggested that PG &
18 E would likely have a response to my statement, but
19 unfortunately they had already left during the day.

20 I would note that within - evidently, a week
21 of when I made that statement, they came out with a
22 70-page report - and by they, I mean PG & E did -
23 entitled, "The Benefits to California From Nuclear
24 Power at Diablo Canyon Nuclear Power Plant." And your
25 staff adopted portions of that, or at least mentioned

1 portions of that, in these proceedings, in this
2 current draft.

3 One of the reasons it's very important to
4 have this involves what one of the preceding speakers
5 mentioned. She questioned whether or not the Energy
6 Commissioner to raise and make the safety
7 recommendations concerning nuclear power that they
8 have. She noted that the NRC basically has
9 jurisdiction over all safety issues.

10 However, the Energy Commission does maintain,
11 according to the courts of our land, the traditional
12 authority of a state to balance the economic
13 considerations of power with the benefits - or the
14 benefits and the risks of power. And in order to do
15 that you have to have exactly what I asked for, and
16 exactly what PG & E provided, which is a statement of
17 the benefits of nuclear power.

18 So now, you do have in these proceedings,
19 some statement of benefits. However, it's an
20 inadequate statement of benefits because it comes from
21 the only person who benefits clearly from nuclear
22 power, which is the owner of the nuclear power plant.

23 So I am going to make some written
24 recommendations in these proceedings that will give
25 year firmer financial basis from which to balance your

1 risk-benefit analysis. And I will be doing that soon.

2 There are two other things I would like to
3 bring up.

4 On the risk side of nuclear power, Fukushima
5 is going through problems at the moment that are being
6 reported in the press, but not nearly enough. From
7 what I am told there are still containment issues
8 there that could affect our entire hemisphere, and I
9 would like to see some analysis of that in your
10 nuclear record - nuclear analysis of the IEPR.

11 My last comment - or my last question - is --
12 -- basically involves the earthquake preparedness from
13 studies that are ongoing for Diablo Canyon.

14 As you're aware there are studies going on
15 that are going to have some resolution in 2015 and
16 2017 that will state whether or not Diablo Canyon is
17 safe enough to continue operation.

18 My question is, is Diablo Canyon safe enough
19 to continue operation today, until those studies are
20 concluded? I hope that's clear; I notice you're a bit
21 distracted. But whether or not Diablo Canyon is safe
22 enough to operate while studies are underway to
23 determine whether it's safe enough to operate is a
24 fairly obvious question for which there does not
25 appear to be any evidence in these proceedings.

1 So I would hope, if there is a reason to
2 conclude that this power plant is safe enough to
3 continue to operate while we're determining whether
4 it's safe enough to continue to operate, some
5 statement to that effect will be in the IEPR.

6 And I would ask you for one thing, today, if
7 I may.

8 COMMISSIONER MC ALLISTER: Wrap it up,
9 please, thank you.

10 MR. DAVIS: Certainly. If you understood. I
11 noticed you were a bit distracted.

12 But I would love to hear that you recognize
13 that it's a reasonable question. The fact that you're
14 doing studies to determine whether this plant is safe
15 given the earthquakes around it, that won't be
16 concluded until 2017, raises the question whether or
17 not the findings you'll get in 2017 show that today
18 it's not safe enough to operate -

19 COMMISSIONER MC ALLISTER: I heard you the
20 first time. Thanks.

21 MR. DAVIS: I'm just asking you, it's not a
22 rhetorical question -

23 COMMISSIONER MC ALLISTER: Well, certainly -

24 MR. DAVIS: Is that a reasonable question -

25 COMMISSIONER MC ALLISTER: It is a slightly

1 circular question, and you know, we certainly learn as
2 we go forward.

3 I think - certainly, new information is
4 important to consider it and studies are creating new
5 information. But you know, the fact is, nuclear - as
6 you obviously know - nuclear is a risk that - the risk
7 assessment of nuclear is kind of unique in the energy
8 world, and you know, the probabilities are low, the
9 potential impacts are high, and therefore they create,
10 you know, a lot of that generates wildly divergent
11 opinions about how big a given problem might be,
12 because some people focus on the - the potential
13 impacts and some people focus on the low risk, and
14 that's a big spectrum.

15 So - so I'm not going to answer your question
16 directly, because I think, you know, it is a little
17 bit circular.

18 But - you know, it is functioning, it's a key
19 part of our electricity system as we go forward. If
20 there are reasons to pull it offline, which, you know,
21 new information could present, then that's a decision
22 that the various agencies would take up.

23 But you know, at the moment I think we have
24 made some pretty aggressive recommendations about what
25 should happen, and PG & E's comments on jurisdiction

1 notwithstanding, I think it is our obligation to point
2 out things that we believe are necessary and work with
3 other agencies that do have the proper jurisdiction to
4 sort of make that happen.

5 So I feel that we have done quite a bit of
6 due diligence on both of our power plants, one off-
7 line and one still operating, in the IEPR. You know,
8 I think that's where I believe we stand right now.
9 But thanks for your comments.

10 MR. DAVIS: Thank you. I think you fell
11 short of saying it's a reasonable question, but
12 "circular," I think, was in the ballpark.

13 Thank you very much.

14 COMMISSIONER MC ALLISTER: Thanks.

15 We've got one more blue card. It's - let's
16 see - Richard Myhre, from WESTCARB.

17 MR. MYHRE: Good morning Commissioner, staff.
18 My name is Rich Myhre -

19 COMMISSIONER MC ALLISTER: "Myhre," you know,
20 I -

21 MR. MYHRE: My writing.

22 COMMISSIONER MC ALLISTER: People's
23 handwriting, it's - I'm sorry.

24 MR. MYHRE: It's all right.

25 COMMISSIONER MC ALLISTER: You're not a

1 doctor, though.

2 MR. MYHRE: No, actually I'm a vice president
3 of the consulting firm Bevilacqua Knight, or BKI. I'm
4 a mechanical engineer with a background in power
5 generation technology, economics and point source
6 emissions control, and I'm a member of the West Coast
7 Regional Carbon Sequestration Partnership, WESTCARB
8 research team, which is managed by the Energy
9 Commission.

10 That research team also includes Lawrence
11 Berkeley National Lab and the University of
12 California's Institute for Energy and Environment, who
13 have helped me prepare the comments that I can make
14 here.

15 And my comments address specific sections of
16 the IEPR covering coal and natural gas power plants
17 with carbon capture utilization and storage, also
18 known as CCUS.

19 My first comment is specifically related to
20 footnote number 396 on page 218.

21 COMMISSIONER MC ALLISTER: Could you be more
22 specific?

23 No, I'm just kidding.

24 MR. MYHRE: Yeah, if you want to follow
25 along.

1 And here is what it is. I think that that
2 footnote presents some misleading dollars per kilowatt
3 capital cost figures for the proposed hydrogen energy
4 California plant near Bakersfield. And the
5 Mississippi Power, Kemper County, IGCC plant,
6 currently under construction. And this is because
7 electricity is only one of several commercial products
8 produced by these multi-function facilities, also
9 known as poly-generation plants.

10 Yet the figure in that footnote takes the
11 entire cost of every aspect of that plan and divides
12 it only by the net electrical output. So that yields
13 an artificially high dollars-per-kilowatt value.

14 Both of the plants incorporate full-scale CO2
15 capture and compression units that reduce the net
16 electric output but provide the environmental benefit
17 of major reductions in greenhouse gas emissions, and
18 further, both of the plants are going to sell their
19 captured CO2 commercially to oil companies, who will
20 use it in the process of enhanced oil recovery before
21 it is securely stored away from the atmosphere in deep
22 geologic reservoirs.

23 And in the case of that Hydrogen Energy
24 California facility, that plant also includes a large
25 fertilizer manufacturing plant.

1 So an accurate comparison of these plants to
2 power-only facilities would deduct the cost of
3 equipment unrelated to electricity generation.
4 However, that information is not readily available.
5 So my recommendation would be just to omit those
6 dollar-per-kilowatt cost values from the footnote with
7 some more specifics.

8 The last paragraph on page 210 characterizes
9 CCUS technology as being in its infancy, whereas the
10 footnote I just mentioned talked about a full-scale
11 580 megawatt power plant under construction in
12 Mississippi and US Department of Energy Electric Power
13 Research Institute technology developers, pure
14 research organizations in Canada, Europe, Australia,
15 have been funding pilot scale CO2 capture
16 demonstrations for about a decade, and China has begun
17 funding pilot scale capture demonstrations as well.

18 Commercial scale demonstrations of geologic
19 CO2 storage have been underway in Norway, Canada and
20 Algeria for over a decade, and research on improved
21 monitoring techniques being conducted at those large-
22 scale projects and at smaller-scale CO2 storage
23 projects in the United States, Canada, Australia,
24 Germany, Japan and elsewhere.

25 Thus, I believe it would be more accurate to

1 characterize the technology's state of development as
2 "market entry" rather than "in its infancy."

3 Similarly, the last paragraph on page 217
4 characterizes CCUS and other technologies as immature.
5 I suggest a better term would be "emerging."

6 And lastly, the first paragraph on page 218
7 states that the CCUS technology is at the "pilot"
8 stage of development, and while the footnote, which is
9 the one I referenced earlier, is talking specifically
10 about full-scale plants under construction in
11 Mississippi and then the Hydrogen Energy California
12 project, which is currently before review for
13 certification by the siting division - so again, I
14 think a better characterization for that state of
15 technology would be "market entry."

16 COMMISSIONER MC ALLISTER: Okay.

17 MR. MYHRE: Thank you.

18 COMMISSIONER MC ALLISTER: Thanks for your
19 comments. Normally I say, "Could you submit that in
20 writing?"

21 But I think you've been so specific that
22 actually we can just transcribe, and we'll be good.
23 So -

24 MR. MYHRE: Thanks again.

25 COMMISSIONER MC ALLISTER: -- thanks very

1 much.

2 Let's see - so a couple of cards keep
3 trickling in here. Tim Carmichael? From the CNGVC.

4 MR. CARMICHAEL: Thank you very much,
5 Commissioner. It just takes me a little bit longer to
6 get my thoughts together.

7 I'm with the California Natural Gas Vehicle
8 Coalition and I just was sitting there - well, first
9 of all, as a reminder, I also get to sit on the AB 118
10 advisory committee, and through that venue, get to see
11 a lot of updates on what's happening with different
12 alternative fuels in the transportation sector.

13 And I was sitting there a few moments ago
14 appreciating how significant the IEPR story is, in
15 that there are so many different moving parts here in
16 California, whether there's a low carbon fuel
17 standard, the AB 118 funding - or the bigger picture,
18 AB 32 program - but the collective story here, this
19 threefold growth in alternative fuels in
20 transportation over the next seven to ten years, is
21 really a remarkable, tremendous accomplishment for
22 California.

23 I know that a lot of hashing still needs to
24 happen, and I'm not an eternal optimist. But I really
25 think we have made some great strides, as is captured

1 in IEPR, and that these programs that we have fought
2 for and have not always been easy to implement, are
3 making a material impact.

4 I know natural gas is going to see
5 significant growth, but clearly, as reported in the
6 IEPR, and in other, you know, reports, it's not just
7 natural gas in the transportation sector that's going
8 to make great strides over this next decade.

9 And one interesting note. Back five or six
10 years ago, when the 10-07 report came out, one of the
11 scenarios, the moderate growth scenario, was 26
12 percent alternative fuels by 2022. 26 percent
13 alternative fuels in transportation by 2022.

14 We're at 8 percent today. If we do in fact
15 triple that over this next seven to ten years, we're
16 going to be pretty damn close to 26 percent in 2022.
17 And that is - you know, a very significant - you know,
18 goal for this state, and I think it will be a tipping
19 point, you know, somewhere between now and then we
20 will see even more rapid growth than we're seeing
21 right now.

22 So I guess my short comment is, a lot of
23 appreciation for the Energy Commission's efforts and
24 the value of having the IEPR every couple of years,
25 you know, sum up all the different moving parts and

1 where we see these trends taking us in the not-too-
2 distant future.

3 COMMISSIONER MC ALLISTER: Thank you for your
4 comments. And there are - statutorially, actually
5 staff is producing - to comply with statute, a
6 benefits report for AB 118.

7 So we have hinted at that in the IEPR, but
8 there is much more to come on that. There was a lot
9 of material that we didn't include in the IEPR, to
10 sort of just slim it down. But that is my no means
11 saying it's not important, and I think there's a good
12 opportunity to tell the world about the benefits of
13 118 going forward. And implicitly, suggests ways that
14 the new road forward is not clear and relatively long-
15 term, now that the reauthorization happened, that we
16 can begin to - or to continue down that path, to plan
17 and execute.

18 So I appreciate your comment.

19 MR. CARMICHAEL: This is especially
20 important. When the programs are working we need to
21 say and tell people they're working, because you take
22 a lot of knocks on the chin, but when they - when
23 things are going well, let's make sure people know
24 they're going well.

25 COMMISSIONER MC ALLISTER: Yeah, point taken,

1 absolutely. You know, as a regulatory agency we don't
2 always do that very well. So - but that's kind of my
3 job and the other Commissioners' job, is to make sure
4 the world knows what we're doing so that, you know, if
5 there are misconceptions out there, we can correct and
6 we can really, you know, look above a little bit the
7 sometimes unsexy day-to-day work that we have, and
8 really focus on the big picture and tell the world
9 that story.

10 Because I agree with you, it's very, very
11 important.

12 We're doing a lot of ground-breaking things,
13 and developing markets and helping them, nurturing
14 them along, isn't always perfect, but we get the job
15 done, I think, in this area.

16 So I see Tim nodding his head over there. So
17 thanks for your comments.

18 That's all the blue cards I have. We do have
19 some WebEx and potentially one phone call.

20 IEPR LEAD RAITT: Right, so we have three on
21 WebEx and one written comment from WebEx, and I will
22 just go ahead and read that one first.

23 This is a comment from Russ Teall. He says:
24 This IEPR could not be more timely. Tomorrow marks
25 the 40th Anniversary of the 1973 Arab oil embargo.

1 "On October 16, 1973 OPEC announced a
2 decision to raise the posted price of oil by
3 70 percent, to \$5.11 a barrel. The following
4 oil, oil ministers agreed to the embargo in
5 production by 5 percent from September's
6 output, and continued to cut production over
7 time by 5 percent increments until their
8 economic and political objectives are met.
9 Let's hope we never are in this position
10 again."

11 So that's the end of his comment.

12 So next I will open it up to Joe Gershen.

13 MR. GERSHEN: Good morning. Can you guys
14 hear me?

15 IEPR LEAD RAITT: Yes, thanks.

16 MR. GERSHEN: Great. Good morning,
17 Commissioner McAllister. Joe Gershen, California
18 Biodiesel Alliance.

19 I apologize for not being able to be there in
20 person today. I guess in the spirit of the event I
21 figured I would conserve some fuel.

22 We would like to thank all of the Commission
23 staff for their hard work in preparing this draft IEPR
24 report, but we also have a few concerns and
25 corrections.

1 We are still digesting the draft IEPR - it's
2 a long document, as you guys know -

3 But we have a couple of overarching comments,
4 and a few specific ones. And we'll be submitting
5 those in more formal written comments to the docket
6 later this week.

7 In general, we have found that there were a
8 few factual errors that we would staff to correct
9 concerning biodiesel. This was sort of concerning to
10 us because in the past we have informed staff on
11 numerous occasions about these same errors, and yet
12 they still managed to make their way into the draft
13 report.

14 Additionally, we are quite concerned about
15 the fact that there are still no metrics or analytical
16 rationale reported in the AB 118 benefit section of
17 this draft report, which is specifically required in
18 AB 109. We had also brought this fact up at the IEPR
19 workshop on July 31st earlier this year.

20 And finally, the IEPR seems to focus on
21 electric and hydrogen transportation as the primary
22 options for 2020 to 2050. We think ultra low-carbon-
23 intensity biofuels should also play a leading role as
24 well, with funding commensurate to their contribution
25 and cost-effectiveness.

1 So that's all I've got for now but we will be
2 submitting more comments later this week, as I said.

3 Thanks very much.

4 COMMISSIONER MC ALLISTER: Thanks for your
5 comments. And certainly I think staff would be open
6 to direct interaction with you on the points that you
7 raised.

8 MR. GERSHEN: Thank you.

9 IEPR LEAD RAITT: Okay.

10 The next person on WebEx is George.

11 MR. NESBITT: Can you hear me?

12 IEPR LEAD RAITT: Yes.

13 COMMISSIONER MC ALLISTER: Yes.

14 MR. NESBITT: Yes. George Nesbit,
15 Environmental Design Build. I'm a HERS rater energy
16 consultant building performance contractor.

17 I burned my carbon over the weekend going to
18 the Solar Decathlon and I have been running a fever,
19 so better to stay home.

20 Our past efforts have managed to keep a
21 relatively flat per capita electric and gas
22 consumption, although it has lately increased. But an
23 increasing population has meant an overall increase in
24 demand.

25 The forecasts call for a continued increase

1 in demand and then the call to electrify the
2 transportation grid, of course, would add to that
3 demand as well as the perception with zero-net-energy
4 homes that we need the fuel switch to electricity.

5 So without real decreases in demand,
6 especially on the electric grid as well as in other
7 fuels and energy uses and sectors, we will not reach
8 our goals.

9 As I mentioned, I'm an HERS rater, yet there
10 is very - there is almost no mention of HERS raters in
11 the IEPR. Not under energy efficiency; yet we're
12 relied on for energy code enforcement and with every
13 code cycle, increasingly.

14 No mention of the IOUs, yet, for California
15 Advanced Homes - the new solar home partnership,
16 California Multi-Family Home Program, as well as all
17 kinds of other programs, we play a very important role
18 on the compliance end. No mention under AB 758, yet
19 the HERS rater will obviously have to play - and the
20 HERS rating system - play in that.

21 Yet we did get mentioned under ground source
22 heat pumps. Go figure. Something that is, you know,
23 very small.

24 Zero-net-energy. So I certified the first
25 new single family home as zero-net-energy in

1 California about a year and a half ago, using the
2 HERS-2.

3 Five years ago I had actually recommended
4 that we calculate national code compliance as well as
5 a ResNET HERS rating. What's happening - actually
6 ResNET just got accepted as a compliance path under
7 the 2015 International Energy Conservation Code; there
8 is over 200 jurisdictions, local, county and state
9 that are requiring HERS ratings. And by doing so,
10 that includes HERS verification of the actual install,
11 to make sure it's credible - as well as hundreds of
12 regional and national builders who have committed to
13 rating 100 percent of their homes using the HERS
14 rating system.

15 I would agree, we should have had the
16 capability, and we could have the capability to have
17 parallel rating systems, and compliance for specific
18 national programs, based on those standards rather
19 than on California.

20 I just want to make one last comment on ZNE.
21 Currently solar domestic hot water plays in, and PV is
22 really the only renewable we can get credit for, and I
23 definitely agree, and we suggested five years ago,
24 that it not be purely on-site, and if you think about
25 it from a - if we're going to require ZNE yet not all

1 projects can do it on-site, it would be unfair to
2 require those who can and give those that can't a
3 pass. They should be able to somehow purchase offset,
4 buy, invest, whatever, something off-site, so that
5 they are meeting the same requirement.

6 Thank you.

7 COMMISSIONER MC ALLISTER: Thanks.

8 IEPR LEAD RAITT: Okay. One more from WebEx,
9 is Andy Foster, Aemetic Advanced Fuels.

10 MR. FOSTER: Thank you very much. Thank you,
11 Commissioner and staff.

12 I would like to reiterate what Tom Koehler
13 said earlier. We appreciate the broad approach you
14 have taken (garbled) appreciate all the work that has
15 gone into this process.

16 I would like to also thank the Commission for
17 continued support for California's low carbon biofuels
18 companies, not just ethanol, but biodiesel and other
19 segments are growing. As you (audio breaks up) for
20 our fuel standards. We appreciate your support and
21 hope to see that continue.

22 Regarding the California low-carbon ethanol
23 industry, we have and continue to make significant
24 investments and progress on reducing our carbon
25 intensity overall, and we are transitioning, as you

1 know, to advanced biofuel feed stocks. In fact, this
2 summer Aemetis alone ran somewhere in the neighborhood
3 of 30 thousand tons of grain sorghum, otherwise known
4 as milo, which equates to about 2 months of our yearly
5 production. So a significant investment there.

6 As a I understand it we are going to be
7 seeding our first local California-grown to the plant
8 this week; it's not a large amount but it's the
9 beginning of what we hope would be a very successful
10 California growing program for advanced biofuels seed
11 stocks. And we - you know, again, appreciate the
12 support that the Commission has demonstrated, to
13 encourage that transition to advanced biofuel seed
14 stocks and to - (not only through what you've done
15 publicly)but in terms of some of the programs (it
16 identifies) as well.

17 I notice - I will speak for us alone on this
18 one, but I know the other plants are pursuing similar
19 goals. We were approved a month ago by the US EPA as
20 the first domestic ethanol producer permitted to
21 produce D5 RINs for advanced biofuels, which is a
22 combination of grain sorghum, landfill gas, and
23 (garbled) power - a pretty significant milestone, not
24 just for us as a company but I think just to have a
25 California ethanol plant as the first to receive this

1 approval from EPA - again, further underscores that
2 our growing and succeeding low-carbon biofuels
3 industries here in California is not just talking the
4 talk but we're actually actively and very aggressively
5 pursuing pathways to low-carbon fuel.

6 To reiterate real quickly what Tom said
7 earlier, we encourage the CEC to support - and
8 appreciate you including it in one of the bullet
9 points in the renewable fuel standards, especially
10 around E-15 and encouraging the Air Resources Board to
11 get that practice underway.

12 And we would also like to continue to urge
13 you to support programs that enable our transition
14 (garbled)

15 So thank you very much.

16 COMMISSIONER MC ALLISTER: Thank you for your
17 comments.

18 IEPR LEAD RAITT: Okay. I think that's it
19 from WebEx.

20 So now we'll open up the lines, the phone
21 lines. But first I will ask everybody to put it on
22 mute, unless you have a comment you would like to
23 make.

24 I think we do have one caller who wanted to
25 make a comment.

1 COMMISSIONER MC ALLISTER: Go ahead, please,
2 the caller who wants to speak.

3 IEPR LEAD RAITT: I guess - all right -
4 that's all our comments.

5 COMMISSIONER MC ALLISTER: Okay. Going once,
6 going twice.

7 I think that's it. So we've gone through all
8 our cards and really appreciate all comments, and the
9 attention and presence you have all contributed.
10 We're not quite at the finish line yet but we're just
11 a few steps away from it, and really want again to
12 congratulate staff in getting the draft out and
13 commend them for a job - many jobs - well done.

14 Certainly encourage those who spoke today and
15 those who did not, anybody who has an issue or notices
16 something in the report, you know, certainly if
17 there's an error or inaccuracy that you want to
18 correct or a perspective that you feel is left out, or
19 one you want to clarify, whatever the comment is,
20 absolutely want to hear that.

21 And the opportunities to get edits are pretty
22 quickly here coming to a close. We have got to get
23 this zipped and on to the agenda in the next, what,
24 let's see, comments by the 29th and then - what's our
25 noticing requirement for the December business

1 meeting? Sort of early December, I think we need to
2 be - we need to be posting the final before the
3 business meeting.

4 IEPR LEAD RAITT: Well, it was the January
5 business meeting -

6 COMMISSIONER MC ALLISTER: Oh, I'm sorry, I'm
7 getting confused with the forecast.

8 IEPR LEAD RAITT: Right.

9 COMMISSIONER MC ALLISTER: There's a lot of
10 that going around.

11 IEPR LEAD RAITT: We expect the post by
12 December 23rd.

13 COMMISSIONER MC ALLISTER: Yeah, okay, so we
14 have a little bit of time, but still we're in the
15 final iterations here, and so I would encourage
16 everybody to get their work in as much, as quickly as
17 possible.

18 You know, I'm not going to wax poetic here; I
19 definitely could do so, but I think respecting all
20 your time and also, we're getting up towards the noon
21 hour, and I believe at 1:00 o'clock the ARB scoping
22 plan and workshop starts, so I want to give those of
23 you interested in that the time to get lunch and head
24 over there.

25 So thanks again for coming and we'll look

1 forward to working with you going forward to get this
2 done.

3 Have a great afternoon.

4 (Whereupon proceedings were adjourned at
5 11:40 a.m.)

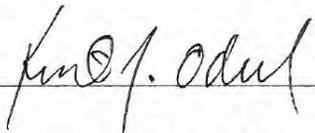
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REPORTER' S CERTIFICATE

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

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

my IN WITNESS WHEREOF, I have hereunto set hand this 26th day of November, 2013.



Kent Odell
CER**00548

