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

In the matter of, )
) Docket No. 12-EPIC-01 )
Development of the California )
Energy Commission Investment )
Plan for the Electric Program )
Investment Charge Program )

Staff Workshop on the Energy Commission’s
Draft EPIC Investment Plan

California Energy Commission
1516 Ninth Street
First Floor, Hearing Room A
Sacramento, California

Thursday, September 27, 2012
10:00 A.M.

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Carla Peterman, Commissioner

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INDEX

Introduction

Laurie ten Hope, Deputy Director, Research & Development Division, Energy Commission 5

Opening Remarks

Chair Weisenmiller, Energy Commission 6
Commissioner Carla Peterman, Energy Commission 9
Commissioner Andrew McAllister, Energy Commission 10

Overview of the EPIC Decision

Andrew Schwartz, Procurement Strategies Supervisor, CPUC 11

Overview of Energy Commission’s Draft EPIC Investment Plan

Laurie ten Hope, Deputy Director, Research & Development Division 24
Erik Stokes, Staff, Research & Development Division
Pam Doughman, Staff, Efficiency & Renewable Energy 41

Public Comment 52

Summary Remarks

Chair Weisenmiller, Energy Commission 140
Commissioner Peterman, Energy Commission 143
Commissioner McAllister, Energy Commission 143

Adjournment 146

Reporter’s Certificate 147

Transcriber’s Certificate 148
CHAIRPERSON WEISEN MILLER: Good morning, welcome to our workshop today. This is our workshop on EPIC. We certainly -- first, I want to kick off today and Laurie, why don’t you go forward.

MS. TEN HOPE: Good morning. I’m Laurie ten Hope; I’m the Deputy Director for Research & Development here at the California Energy Commission, and I want to welcome you all to our staff workshop for our draft EPIC Investment Plan.

We’re really looking forward to public comments today. We’ve put the Investment Plan out last Friday. And there are copies of the Investment Plan out, as you walk in, along with agenda and presentation materials for today.

Before we get started I just want to mention a couple of housekeeping items for any of you who might not be familiar with our building.

We have rest rooms on the first floor. They’re sort of diagonally behind us by the exit door. But this exit door is alarmed. So, if you’re going out for a break or lunch, use the front door.

We have a snack bar on the second floor for coffee and snacks.
If there’s an emergency, follow staff out of the building, across the street to Roosevelt Park and we’ll return when it’s safe to do so.

I’ll give more of a context for today’s workshop after our Commissioners, so I’d like to turn it over for opening remarks to our Chair and Commissioners.

CHAIRPERSON WEISENMILLER: Yeah and thank you, welcome today. First of all I’d like to start out for thanking the staff for their hard work on this. We’ve had a pretty tight timeline and, actually, it’s not over yet in terms of tight timelines.

And so it’s taken a lot of work and, again, would like to thank them for that.

Certainly, innovation is key to California’s future and particularly on all these technologies we’re really looking at innovation to help drive the cost down or enhance the performance.

And we have very limited dollars, you know, and it should be the clear message.

Obviously, today, we’re coming up with pretty broad categories and we would anticipate in the future, as we go forward, each of those categories would be very competitive. And dealing with the very limited dollars we need to really maximize the benefits to the State, and particularly to the truly ratepayers.
And so as part of that, generally, we’re going to be relying on competitive processes and generally encouraging people to sharpen their pencils and to come in with ways to really provide high value to the ratepayers.

And, you know, one of the things we’re looking at today, it’s a pretty broad list and, again, going forward it’s important to focus on what are the relative to priorities. I’d sort of like to discourage people from saying here’s another 20,000 things to add to it, as much as how do we provide relative priorities and focus on this as we go forward.

Ultimately, when we close we’re certainly going to be encouraging people to provide written comments. We’ve had a very transparent process and we’ll continue to have a very transparent process for this effort.

And I would encourage people on the written comments to supplement on the ones you’ve done so far. There’s going to be a very short time for you to prepare your comments and a very short time for you to digest your comments.

So, you can assume the staff has already digested your comments that you filed previously and it would be good to really focus on how to supplement as opposed to reiterating that again.
So again, thanks for your help today, we’re looking forward to a productive workshop.

COMMISSIONER PETERMAN: Good morning. This is Commissioner Peterman, hello to all those in the room who have joined us, as well as everyone who’s on WebEx.

Again, as the Chairman noted, thank you to staff for the tremendous work they’ve done in developing this draft Investment Plan. They’ve done this work alongside all the other work that they were hired to do initially, and so we really appreciate the time commitment and the thoughtfulness that has gone into this plan.

Chair Weisenmiller has really explained well why we’re here today, what the process is, and the type of feedback we’re looking for from all of you.

Indeed, innovation is important and I will just add to that that we are in the midst of building out our clean energy sector as we speak. All of you have been actors in that.

And since we are in the middle of that right now, we want to make sure that, again, we’re focusing on opportunities that are going to help us in the near term, as well as some long-term opportunities. But, really, what can we do to make our renewable energy and our energy efficiency processes more efficient and more integrated in the immediate time.
Again, I echo the Chair’s comments about the need to maximize value, particularly maximize value to the ratepayers, considering the source of the funds. I look forward to your comments. I’ve appreciated the engagement you’ve had in our workshops so far, both here in Sacramento and in the Los Angeles area, and looking forward to the comments today. Thank you.

COMMISSIONER MC ALLISTER: I want to reiterate thanks to staff for all their hard work, and the stakeholders for commenting, and also Chair Weisenmiller and Commissioner Peterman for all their hard work on this as the Committee pushing this forward. And I’ve been on the sidelines on this but, nonetheless, very interested because PIER has funded so much important work and EPIC will continue to fund important work.

And it really is one of the seeds of our success in California in developing innovative technologies that have a place, that we believe can have a place in the marketplace. And helping that role get realized I think is a great role for the State and all the stakeholders to work together to play.

And primarily engaged in energy efficiency work right now as the Commissioner on EE and, you know, these
programs have funded so much fundamental work over the years and there is still a lot of heavy lifting to do. In the context of innovation, and market development for new technologies this is a critical piece of that puzzle.

So, I’m excited to learn more today and hear what many of the stakeholders have to say. Thank you.

ADVISORY COMMITTEE MEMBER SHEARS: Okay, let me just briefly, the agenda is up for your viewing and we’re first going to hear from the CPUC to provide an overview of the EPIC decision that provides the context for the rest of the day.

Then I’ll be joined by our co-managers for EPIC, Erik Stokes and Pam Doughman, to provide an overview of the Investment Plan.

And then we’ve devoted the afternoon for your comments in the room and on the line.

I hope you don’t leave early, but if anyone does leave early there is a handout that has the questions that we’re asking participants to respond to. The Chair spoke to those questions.

And he’s very interested in narrowing the scope.

If you have an additional project suggestion, there’s a template that we’d ask that you provide so we have sufficient information to consider any initiatives that
With that, I’m going to turn it over to Andy Schwartz.

MR. SCHWARTZ: Thanks Laurie. First, I want to also acknowledge the work that the CEC has put into this Investment Plan. So, Chairman Weisenmiller and Commissioner Peterman, thank you for your leadership in this area.

And I want to also thank the CEC staff for all the hard work and thoughtfulness that’s clearly gone into this Investment Plan.

It literally speaks volumes of the CEC’s commitment to making sure this is a robust and effective program.

Before I get into the bulk of my remarks, I thought it would be useful to also give people who aren’t familiar with my role in this to explain the CPUC, and my team’s role in the EPIC Program as it goes forward.

So, as Laurie mentioned, I’m a Supervisor of the Emerging Procurement Strategy Section at the PUC. It’s my team that has lead staff responsibilities in overseeing the activities related to EPIC when these plans are submitted to the Commissioner for formal approval at the Commission.
So, we’re the staff contact if stakeholders have questions. If internal stakeholders or external stakeholders have questions about the CPUC’s role, we’re really the staff you should come to.

In addition, we’ll be working with the Administrative Law Judge that will be assessing and reviewing these plans when they’re submitted in November.

So, that’s a little bit about our role. I wanted to start the presentation with a little bit of the legislative and regulatory context.

As many of you know, the Public Goods Charge sunset in December of last year. In the PUC’s view, and I think in many of your view, this left a fairly large policy gap in the energy space to the extent that the PUC had previously been funding a lot of activities to support emerging clean energy technologies.

To address that gap, in May of this year the Commission issued a decision that established a new program and framework for the deployment of public dollars to continue support for emerging clean energy technologies.

That program, which is going to be funded via the Electric Program Investment Charge, a non-bypassable charge, will provide $162 million per year to support
investments in clean energy technologies.

I should also note that this budget does -- this is an annual budget so every year $162 million will be collected. For 2012, the amount is actually $143 million. This was pursuant to the phase one decision which directed the IE’s to continue to collect monies consistent with what they’ve been collecting before.

Every three years that $162 million will be addressed and to account for inflation.

The next slide, please. So, as has been referenced, alluded to by the Commissioners and Chairman in their opening remarks, the primary focus of the EPIC program is to support investments or to provide public funds to support investments in emerging clean energy technologies.

And in particular to fulfill some of the capital gaps that exist when technologies move through their development cycle.

So, this is often depicted and many of you have seen this presentation before, so this won’t be new to you, but is represented via the technology maturation curve, which we show here and the notion that technologies, even very promising technologies, move through their development cycle there are certain areas where there isn’t really sufficient private capital to
allow a technology to move forward.

And the EPIC program is largely focused on filling those capital gaps.

In addition, I’ve focused and we tend to focus on the development of new technologies. That’s not the exclusive role of EPIC monies. The monies are also available to provide support for the development of the analytical tools that are needed, and the type of analyses that are needed to really inform legislative and regulator decision making to help us better understand how new technologies will interact with each other, the role they play in the market and things of that nature. But the primary focus is on the emerging technology front.

The next slide, please. So, when the Commission was evaluating the need to provide additional funding or supplemental funding for emerging clean energy technologies, there are really four areas that we looked at; so four broad categories which I’ve identified here with their respective definitions.

So, we looked at applied research, whether there’s a need to provide public support for technology demonstration deployment, whether we should provide monies towards market support activities, and then also whether there was a need for money to help technologies
actually get deployed once they are commercially viable through market facilitation.

In our view, ultimately, the Commission determined that three of these areas, so applied research, technology demonstration deployment and market facilitation merited support.

We determined, the Commission determined not to provide additional money for activities that had been previously supported via the PGC, that were deemed market support activities for various reasons.

I don’t want to belabor that, except to point out that in the Commission’s decision there was a strong, I think a policy position favorable towards ongoing support or continued support for the New Solar Homes Partnership Program, which had previously been funded via the PGC.

At the time the Commission wrote that decision our hands were tied, statutorily, in terms of being able to provide incremental support without adversely impacting the general budget for the California Solar Initiative.

Earlier this year Senate Bill 1019 passed, the budget trailer bill that appears to have provided additional flexibility there and so I think the CEC has appropriately, in their draft Investment Plan, suggested
augmenting the New Solar Homes Partnership budget.

The next slide, please. This slide obviously shows the breakdown of the budget by the broad funding categories. So, as you can see, $55 million has been allocated to the applied research area, for technology demonstration deployment activities $75 million in total.

Those monies are being jointly administered basically by the CEC, so $45 million of that funding is being administered by the CEC and $30 million being administered by the utilities.

A couple of notes on the technology demonstration deployment budget, of that $45 million 20 percent, a minimum of 20 percent of that money has to go towards bioenergy projects. That was deemed by the Commission to be an area where historically there has been under-investment and there are significant opportunities to deploy technologies in that area that need to be explored.

So, again, a minimum of 20 percent of that funding should go to bioenergy.

And then with regard to the utility budgets, the Commission determined that none of that money could be used for generation demonstration projects. The utilities are able to propose generation demonstration
projects using funds outside of the EPIC Program. But for purpose of EPIC funds, they cannot be used by the utilities to support generation-based projects. $50 million is allocated to market facilitation activities. So, this will focus -- the idea here is to focus on things like permit streamlining, you know, standardization of building codes and things like that that may impede -- or providing model codes that may impede the ability of new technologies to be deployed, as well as enabling those entities that are responsible for permitting and allowing these things to go forward to implement new systems to help facilitate that process.

And then, lastly, there’s sort of program administration and oversight activities, so roughly $17 million in total there, with the CEC and utilities having ten percent of the overall budget for -- of their individual budgets for program administration. And then the PUC, who has ultimate oversight responsibility for this program, has an $800,000 share of the total.

Next slide, please. This provides a little bit more detailed breakdown, just showing what the individual budgets are of the utility administrators. And so each utility is planning -- my understanding is
each utility is planning on submitting their own
investment plan addressing the technology and
demonstration areas that they’re interested in pursuing.
And they have slightly different amounts based on sort
of their pro rata share of the overall budget.

This is the schedule for the EPIC program. So,
the program has three investment planning cycles. These
are triennial investment plans, so the first one is
covering 2012 to 2014.

There will be a second investment plan covering
the period from 2015 to 2017 and then a third investment
plan covering from 2018 to 2020.

As you can see, for each investment planning
cycle the program administrators are required to develop
and then submit investment plans to the PUC for
approval. This is a pretty critical feature of the
program because the Commission is doing this program
under its own authority.

And in concept, the idea is for us to provide
up-front approval for the expenditures that will be
under those plans.

It’s absolutely essential that we have really
fully developed and fairly granular plans that the
Commission then approves, and then once those plans are
approved the program administrators will execute
In terms of the schedule for actual decisions, for the first investment plan cycle we don’t expect the decision until May 2013. Again, that’s, you know, in part a product of just the time it takes for a Commission proceeding to be open and to run through its process, in addition to give what limited time we have given to the program administrators to develop plans. For the investment plan and third investment plan there will be decisions for each of those, respectively, in December 2014 and then December 2017.

Next slide, please. I wanted to spend some time talking about what the expectations are for what’s included in these plans as that can inform both the program administrators’ efforts as they move forward prior to submission of those plans to the Commission, as well as inform the comments that stakeholders may have on those plans.

So, in providing guidance in the phase two decision, which established this planning process, the PUC identified key principles that the plans should reflect.

The overarching principle being that any expenditures provided by the EPIC program need to provide ratepayer benefits. Specifically, electricity
ratepayer benefits who are the source of funding for this program.

As I’m showing here, there are a lot of different dimensions or a lot of different things that could be considered consistent with the notion of providing electricity ratepayer benefits.

The decision identified a host of these that are -- that basically align with various legislative and regulatory mandates that the Commission is operating under. So, enhancing reliability and safety, reducing costs, advancing the loading order, promote economic development.

Obviously, near and dear to my heart, given the areas I work on, reducing greenhouse gas emissions, supporting clean transportation and, obviously, using ratepayer funds efficiently.

In addition, to sort of put a finer point or really underscore the centrality of providing electricity ratepayer benefits, any proposed use of the monies needs to be map-able to the electric utility value chain. So, we define the value chain, sort of the series of activities that take place, or that are conducted in order to provide energy services to end users as being -- you know, as consisting of operations, market design, generation, transition distribution and
then demand side management and, really, customer
behavior and use of energy.

Any activity that’s funded through the EPIC
program needs -- you need to be able to draw a line and
explain how it relates to one or more of these aspects
of the value chain.

The next slide, please. As I mentioned, the
Commission provided guidance, but is expecting the
program administrators to develop fairly robust plans
and then we can evaluate through a stakeholder process.

And in developing those plans we are expecting a
pretty substantial amount of granularity.

Again, this is critical because we are
providing -- right now the vision is that the Commission
will provide up front authority to the program
administrators and then execute these plans.

In order to do that and maintain appropriate
oversight responsibility we have to have very detailed
information about how that money is going to be
distributed.

So, in the plans there needs to be information
provided about what the specific funding areas, funding
priorities are for those plans, what those funding
amounts are for each of those areas, what the project
eligibility criteria will be, what the project selection
criteria will be and what the approach is.

So, are these projects going to be considered
via an RFO process? Are there instances where sole
source allocations might be appropriate?

Also, I think this also covers issues around
what would be any sort of funding look like? Would it
be provided on a pay-for-performance basis, or up front,
or how would that work?

Also, for project funding limits matching
requirements that may make projects more attractive.

Importantly, also, metrics for measuring the
benefits that a project provides and how we would define
sort of success of any projects that are funded.

And then another important area on how should
intellectual property for different projects be treated?

Actually, you know, one other thing I do want to
mention on the prior slide is one of the concerns that
was expressed throughout our proceeding was the need for
effective coordination with other activities that are
going on.

That is one of the reasons, one of several
reasons why, obviously, stakeholder input is critical so
that we have a -- we’re sort of putting feelers out so
we have a broad sense of what’s going on, generally.

But the expectation in the plans is that there
will be information that provides a sense for what are
the suite of -- what are the universe of activities that
are occurring elsewhere that relate to different funding
areas, and how does the funding that’s being proposed in
those investment plans dovetail and really leverage
those activities, whether those activities are happening
at the State level via other programs, at the federal
level or, conceivably, internationally.

And then, lastly, the decision that the
Commission issued does have a number of reporting and
sort of oversight components, so the program
administrators are required to file annual reports.

I believe the first decision is February 28th,
2014 and then annually thereafter through, basically,
the end of the EPIC program as currently envisioned in
2020.

Also, the CPUC will be hiring an evaluator to
conduct an independent evaluation of the program to help
provide guidance on how the program’s doing, are there
course adjustments that need to be made, and things of
that nature.

So, I think that’s my last slide. This is my
contact information. Again, I’m one of the staff leads
on this. My colleague, Jim Turhal, who’s not with us
today, but will be back in the office on Monday, is the
other primary contact.

So, if stakeholders do have any questions about the CPUC process and what to expect there, you know, we’re happy to entertain those questions.

So, with that, I look forward to a productive workshop and we’ll turn things back over to Laurie.

Thank you.

MS. TEN HOPE: Thank you, Andy.

Before I start, in addition to thanking the staff team, I also want to thank the stakeholders that participated in our Northern California and Southern California workshops and submitted comments. We had over 130 sets of comments and so those form the foundation for our plan and, of course, for those of you who came today.

This has also been a collaboration with the three utilities that also are responsible for administering portions of the funding and so, you know, we have been collaborating and sharing information on how we approach the Investment Plan so that we synergize each other’s efforts and these submittals are not duplicative.

And of course the CPUC, Andy and Jim have been extremely helpful and we appreciate that.

So, the next slide. We’re here to basically
review what we’ve put together. We took the CPUC’s
decision and put together an investment plan that we
thought reflected the criteria and requirements of the
investment plan, and also reflect the State’ policy
goals in a way to return value back to those who support
the fund.

Today’s workshop will review the plan and then
ask for your input on what you’ve heard and what you’ve
read in the Investment Plan.

After the workshop written comments can be
submitted up to October 1st. Then the staff will revise
the plan based on the feedback we hear today and your
submitted comments, and issue a revised plan in mid-
October.

The Energy Commission will consider the
Investment Plan for adoption at a business meeting
tentatively scheduled at this point for October 25th.

And following that we submit the Investment Plan
to the CPUC and you heard the schedule from Andy.

So we’ll move to the next slide. The Investment
Plan is organized in chapters, starting with the program
directives and how we approach the program directives
that Andy outlined.

What are the ratepayer benefits? How are you
going to avoid duplication? How is this connected to
the policy goals?

You know, how is this program going to be
developed and administered?

Then the next three chapters are each of the
funding categories that are established in the CPUC
decision, applied research and development, technology
demonstration and deployment, and market facilitation.

Then a chapter on proposed funding for New Solar
Home Partnership Program, and then followed by a program
administration and program benefits chapters.

Next. So, I think basically this context was
already set by Andy, with the exception of the last
bullet, which is kind of obvious. This process is
overseen by our lead Commissioner on R&D, Chair
Weisenmiller. And for the renewable portions
Commissioner Peterman.

The next slide. This slide might look familiar.

These are the criteria that Andy just showed and they
are reflected in the template. When you look at the
Investment Plan there’s a template that includes
purpose, background, and mapping back to the electricity
system and the identified ratepayer benefits, and the
sections in each of the chapters identify the proposed
funding limits for projects within each category,
proposed match funding within each category. And
intellectual property is included in chapter 7.

The proposed CEC budget is completely in line with the budget that was in the decision. We didn’t deviate or ask for any deviation from the budget.

The one addition is the funding for New Solar Home Partnership. The CPUC decision established, opened the door for NSHP and we are requesting funding up to $25 million. The funding amount would depend on the funding balance in the RRTF program. And you’ll hear more about that in a little bit.

So, after -- I mean the decision sets the framework and then the State’s policy goals set the vision for what is it that we’re trying to achieve in this clean energy future.

And I’m sure you’re familiar with most of these goals. Energy efficiency leads the loading order, demand response is included. Energy efficiency and demand response are at the top of the loading order.

Renewable energy and then the infrastructure, the infrastructure to support a safe, reliable, cost effective electricity system.

And so we take the framing that comes from the policies from the Legislature, our own Energy Commission, Integrated Energy Policy Reports, the policy documents from the CPUC and, of course, the Governor.
So, also added on this, in addition to energy efficiency, with the goals of achieving all cost effective energy efficiency and reaching ZNE targets for homes and businesses, we’ve added the transportation goals from the Governor’s recent Executive Order.

For those portions of transportation that are electricity related, and having the tools and technology to enable integration of electric vehicles into our electricity system.

And a driver for a large portion of the energy goals are the GHG reduction goals embodied in AB32.

Next. So, these are some policy statements that are illustrative. It’s not intended to be a full list of all the policy statements that drive efficiency, clean generation, smart grid, and then the cross-cutting area.

But we did pull out a few examples from the California Energy Efficiency Strategic Plan that establishes specific goals and also strategies for achieving the goals.

And each of these documents highlight not just the policy, but what are some of the gaps and barriers to achieving the goals?

For example, the middle one for energy efficiency, California will need new cost-effective
technologies, strategies and innovations for existing
and new buildings to reduce energy use, such as new
building materials, and fabrication techniques, and
smarter building operating systems such as visual
displays and real-time energy use.

There’s a lot embodied in that in terms of cost-
effective energy efficiency for new construction, a
focus on the retrofit market which has been certainly
lagging in terms of energy efficiency. Real-time
displays that help address some of the consumer behavior
challenges in perceiving energy use and being able to
respond to energy use.

And additional policy statements in the other
key areas, you know, including generation, smart grid,
and cross-cutting.

These are highlighted in more detail in the
Investment Plan and I just -- this is an important
framing for the objectives that -- for the strategic
objectives and the initiatives that you’ll hear about.

Next. So, we thought it would be helpful to
really establish an EPIC vision and an EPIC mission, and
you’re welcome to comment on this as well.

The vision just basically embodies the policy
goals. We’re setting policy goals of an electricity
system that incorporates a lot of changes from energy
efficiency to renewables that could be at the customer site, community site, at the utility scale, electrification of transportation.

And this really requires a highly flexible and robust transmission and distribution infrastructure to support that, along with some other enabling technologies like demand response, storage, and in communication and control strategies that underlie the sophistication of managing what could be a very clean and robust system, but a more complicated system.

And so the purpose of the mission for the Investment Plan that we put forward is what we anticipate the key gaps are, and tools and strategies needed to achieve that vision.

And so we really welcome your feedback on whether we’ve got those right, and have the right emphasis on the right needed technologies and strategies.

This is basically a visual to illustrate the electricity system we’re moving from, on the left, to a potential system that we’re moving to, on the right. And the power system we have now is more linear, it’s not quite this simple, but customers connected to a transmission distribution system and large power plants at the other end.
And I’m sure my utility friends would think that was a little too simple.

But in the future, looking at adding renewables that generate at different times of day, and different seasons, some of those at your business, or industry, or home are going to require sophistication in terms of our system operators, our utilities, or even customers that would be managing and balancing supply and demand at their level, and then throughout the utility system.

And so many of the initiatives that are included in the plan deal with the integration and interaction of this envisioned power system.

The next slide, please. This just basically reiterates the budget that we’re operating within the Investment Plan.

And the CPUC decision lays out an innovation pipeline. And we’ve given some thought to the technologies and strategies needed more in the applied research area where component innovation might be needed, or analysis is needed versus the technology demonstration area where scale-up and real-life field demonstrations are the challenge in moving clean energy into the marketplace.

And the final category is market facilitation, with technical assistance and outreach that support and
enable the transition to the marketplace.

This slide, it’s a little hard to read, but it basically lays the framework for the funding buckets along the top row and the policy drivers along the left-hand side, and then the featured technology areas within each of the blocks.

So, in the applied research area some of the priority areas for innovation are in the areas of plug load, lighting, HVAC and refrigeration, building envelope, existing building retrofit strategies in addition to components.

What are the cost-effective ways to basically retrofit, whether it’s improved maintenance and diagnostics in existing buildings, or cheaper packaging of retrofit strategies that make it more cost effective to reach that marketplace?

In the technology demonstration area we’re looking at the demonstrations of energy efficiency coupled with demand response, whole building retrofits, and ZNE or near ZNE building in communities.

I think, in the interest of time, I will not go through the entire chart. I do want to point out one area of emphasis. You’ll see the box for the investor-owned utility emphasis.

I’m not going to hold them to it and can’t
really speak for them. But in discussions at this point the investor-owned utilities, in their three plans, are looking at the focus of their research being in the technology demonstration and deployment area for smart grid so that the transmission and distribution system is ready to accommodate the policy goals that they’re required to operate under, as well.

And so it’s going to be important for us to feed the pipeline on smart grid technologies that would move into the technology demonstration area, and to collaborate on what’s planned in each portfolio because there’s so much integration that is important here.

The next slide. This is a new table that was not in the Investment Plan and it’s taking the budget that is in the plan, that had buckets for applied research, technology demonstration, deployment and market facilitation and breaking it down, one level down, to basically the policy goals of energy efficiency, clean generation, smart grid, and cross-cutting so that you can -- this is our preliminary thinking. This is very much a draft budget out for everyone’s consideration.

And it’s based on a few operating assumptions. One, we wanted the funding to reflect the loading order, so there’s a real emphasis on efficiency and renewable.
In applied research it’s a heavier emphasis on energy efficiency.

As you move into technology, deployment and market facilitation, the funding evens out or is exceeded by renewables because there’s a lot of energy efficiency money in the deployment and market area with the utility-administered incentive programs.

So, it’s important that the research here feed building standards, utility incentives and other paths to market.

It also reflects our understanding of where the emphasis would be in the utility investment plans, so there is very little demonstration money in the smart grid area.

Our focus in smart grid is proposed to be in applied research.

And in parentheses are the strategic objectives that are outlined in the plan and that you’ll hear a little bit more about today.

The next slide. Okay, the framework, in addition to policy we thought about some overarching guidelines for the initiatives that we would establish and then the policies we recommend for administration of the program.

So, number one policy goals. Number two is
accelerating home-grown technology innovation. We’re looking at supporting California research organizations, universities, entrepreneurs, businesses, homeowners, and with a focus on, basically, grants and awards in California.

We recommend a project selection process that’s, of course, designed to select the most promising technology solutions that are not duplicative, assert downward pressure on administrative costs and maximize in-State investments.

We’ve also tried hard to really reflect and embody ratepayer benefits in the entire plan and build on the lessons learned from the research programs and renewable programs that have existed prior to the EPIC program.

You know, it’s a new program, with new criteria, but build on lessons learned from previous efforts.

Next. Okay, this -- I think I’ve pretty much covered this in terms of establishing initiatives that tie back to the guiding principles in the CPUC decision, electricity value chain and the benefits.

We’ve also reflected stakeholder comments. We’ve tried to capture the state of -- you know, state of knowledge in RD&D, but without making it a tome. So, you know, each of the initiatives is only about a page.
and a half to two pages, and in there try to capture major research efforts or major deployment efforts to signal that this would not be duplicative, but in the -- you know, it’s not an exhaustive list.

But I would ask that if we missed some major efforts that you’re aware of, we certainly want to capture that and, you know, home the initiatives to the key areas that are not already covered in State or federal efforts.

Okay, now you have a chance to hear from somebody else for a few minutes. I’m going to turn it over to Erik Stokes and he’ll walk through, pretty quickly, the high level strategic objectives in chapter 3 and 4.

MR. STOKES: Good morning everyone. As Laurie said, there’s quite a few topics here so we’re going to try and get through these pretty quickly.

Okay, so this first slide’s a summary table for the applied research and development. One thing to point out is that for match funding requirements we’re not requiring matched funds but those proposals, when we do competitive solicitations, those proposals that provide match funding will receive higher scores.

So, the way the Investment Plan’s been set up is we have a high-level strategic objection. And...
underneath strategic objective we have a set of proposed funding initiatives.

So, this first strategic objective is for looking at technologies and strategies to reduce -- or improve energy efficiency and end-use sectors, including the building sectors.

Under this strategic objective we have areas such as lighting, plug loads, and also HVAC and refrigeration systems.

For the second strategic objective in applied research and development we’re looking to develop advanced technologies and strategies that can better enable customer side of that meter energy resources, such as demand response and energy storage.

The third objective is essentially developing better technologies, tools and strategies to increase the affordability of distributed generation.

In this objective we’ve identified three potential funding initiatives. The first is under combined heat and power systems, the second is bioenergy, and then the third is photovoltaic systems, but emphasizing more of the soft costs of these photovoltaic systems.

Strategic objective four is looking at development and improving utility scale renewable energy
generation. Most of the research in this area is going
to be foundational, especially looking at some of the
offshore resources and investigating potential long-term
strategies for those resources.

Strategic objective five is looking at
strategies and analytical tools that can help us reduce
the public health and environmental impacts of
generation. It’s also looking at ways to reduce the
impacts of climate change on the electricity
infrastructure.

Okay, for this objective we’re looking at
development better smart grid technologies, tools and
strategies with special emphasis on how do we better
integrate renewables into the grid.

Strategic objective seven is helping us develop
some of the better analytical tools and operational
tools so that we can better plan for grid resources and
how we better integrate these intermittent resources
into the grid.

The next objective is focusing really on the
storage, and storage at the grid scale, development
better storage technologies, looking at the ideal
applications for these storage technologies and ways to
utilize these within the grid.

Okay, this objective is focused on electric
vehicles. And, specifically, we’re looking at
initiatives that provide dual benefits, one in helping
improve the commercial viability of electric vehicles
and also using electric vehicles to benefit the
electricity system, such things like battery second use
and vehicle degrading.

So, S-10’s a relative new area for the Energy
Commission. This is cross-cutting. We’re looking at a
couple initiatives to help advance clean energy
technologies, one looking at ways to accelerate the
commercialization of novel technologies through
innovation clusters.

The second initiative is looking at testing
centers and how we can help verify some of these novel
technologies so they can be deployed easier into the
field.

Okay, so the applied research and development
section was focused on developing new prototypes. The
technology demonstration and deployment is now how do we
scale up these prototypes to demonstrate their real
world performance.

And here’s another summary slide. The estimated
minimum/maximum project’s going to be a little higher
than the applied R&D section. We’re looking at bigger
projects and we estimate that these projects -- the per-
project funding will be in the $1 to $5 million.

Also different from the applied R&D section is
the match funding requirement is set at a minimum of 20 percent.

So, the first objective is focused on efficiency
and scaling up efficiency and demand response
technologies in end-use sectors, with special emphasis
on the industrial, ag., and water sector.

The second initiative is looking at
demonstrating whole building retrofits and what are some
cost-effective ways to retrofit existing buildings.

The second objective is focused on the clean
energy generation. In the decision it allocates 20 percent of TD&D funds for the Energy Commission to go to
bioenergy. The first initiative is focused on the
bioenergy.

The second initiative is focused on deploying
novel CHP applications into the field.

And then the third is scaling up technologies
and strategies to improve the integration of
intermittent renewables.

And the next objective is fairly cross-cutting.
It’s looking at demonstrating zero net energy buildings
and communities. It’s also looking at how do we share,
take the next step with micro grids and sharing
resources across micro grids.
And then the last initiative is scaling up some
of these battery second use and vehicle-to-grid
applications.

MS. DOUGMAN: Hello. I’ll be talking about
market facilitation. Sorry, my name is Pam Doughman;
I’m the Technical Director for the Renewable Energy
Office.

So, the match funding requirements for market
facilitation proposed initiatives will be -- there will
be no match funding requirement, but those that provide
match funds will receive higher scores during proposal
evaluation.

So, the first objective under market
facilitation is an objective that focuses on providing
regulatory assistance and streamlining permitting. This
would be collaborating with local jurisdictions and
stakeholder groups in IOU service territories to
establish strategies for enhancing current regulatory
assistance and permit streamlining efforts that
facilitate coordinated investments and widespread
deployment of clean energy infrastructure.
And included among the initiatives is an
initiative that would provide funding for three pilot
demonstrations, one in each IOU service territory and
assistance in the development of general plan guidelines among other initiatives.

The second objective under market facilitation is to strengthen the clean energy workforce by creating tools and resources that connect the clean energy industry to the labor market.

We have two proposed initiatives under this objective. The first is to develop a standardized methodology to assess job creation and net jobs. The second is to provide grants for the development or enhancement of training and apprenticeship programs to support clean energy development programs in IOU service territories.

And the last objective in the market facilitation area is to guide EPIC investments successfully through the clean energy technology innovation pipeline by connecting stakeholder groups involved in the development, deployment and integration stages.

Among the proposed initiatives here we have a web portal that connects innovators, investors, educators, job seekers, and policymakers to facilitate widespread adoption of new clean energy technologies to benefit IOU ratepayers.

Also, we propose to hold technology forums to
connect innovators of clean energy technologies with potential investors, customers, job seekers, and policymakers.

In addition, we have some other initiatives here, including an initiative to conduct the IOU portion of the California End-use Energy Consumption and Saturation Characterization Survey.

Also, we have a proposed initiative to conduct market analysis of innovative strategies to facilitate clean energy storage, demand response, electric vehicles, and renewable energy.

Now, we’ll discuss the New Solar Homes Partnership. The New Solar Homes Partnership provides a one-time, up front incentive for eligible projects.

The NSHP requires that all projects exceed the energy efficiency requirements of the current Title 24 building standards by at least 15 percent.

The staff draft EPIC Investment Plan proposes up to $25 million per year in program funding for the NSHP. EPIC funds for NSHP would be in addition to the $162 million per year identified in the CPUC’s EPIC Phase Two decision.

The total NSHP funding, including prior funding and funding under EPIC would be capped at $400 million.

Now, Laurie will continue to discuss Chapters 7
MS. TEN HOPE: So, Chapters 7 and 8 are the program administration slides and we have provided some detail on the recommended selection criteria, including a preference for a competitive process. And we’ve proposed that that apply to both public and private applicants but they would be principally by grant awards.

We did not propose any incentive or pay-for-performance type agreements except, perhaps, under NSHP, which is an incentive-based program. The rest of the projects are envisioned as grants or contracts.

We proposed selection criteria that basically scores administrative costs and have come up with a template for that.

We’re interested in maximizing in-state investments through the solicitation selection criteria. We suggest that this is best done by a combination of minimum requirements and then scoring preferences over that.

Because in some cases, particularly if you’re looking at a technology demonstration project, your highest cost might be equipment and that equipment might only be available out of state and could preclude bringing, you know, innovative technologies in and
testing them within the State, and getting some real-life experience.

So, we think it’s important to have criteria that really rewards in-state entities and, you know, in-state research, but be a little bit flexible in setting that as a criteria, as opposed to a full requirement that 100 percent be spent in the State.

We are very interested in providing a set aside for federal match. We’ve found that with the economic stimulus funds it was very helpful to have some California funds available for applications that were consistent with the State’s policy goals and the funding sources.

Some of the ARRA match funding requests went to the CPUC and some came to the Energy Commission. That really helped California entities bring federal funds here for smart grid and other activities.

So, we would like to provide a set aside. One of our questions is how much? And it’s also -- you know, if you have suggestions on the mechanics, if we’re setting aside at this point for something that’s unknown in the future, can that money be reallocated to other areas within the plan should strong proposals not materialize for the full funding amount.

So, it is an area that you’ll see and the
Investment Plan has dollar amounts XX, so we’re looking for some advice there.

And we think it’s critical to coordinate with other RD&D efforts. We have ongoing relationships with Department of Energy. Our Chairman is reaching out for high level coordination with Department of Energy and, of course, our research institutions, utilities and private sector investments in this area.

So, we want that reflected now in the Investment Plan, but put the mechanisms in place that the coordination continues throughout the implementation of the program.

Okay, we’ve establishes some questions that we thought would be particularly helpful. You’re not wedded to these questions, if you have other comments for the plan.

But the first are around scope. You know, are the proposed initiatives the right initiatives? Should some be dropped so that we focus more on what you might consider the highest priorities, indicate which initiatives and why?

Are there critical initiatives missing? And if you think so, would you be so kind as to fill out the template so we’d have a little bit more information on how you see that initiative fitting and what the
ratepayer benefits are and, you know, what body of
knowledge that initiative is building on?

Again, if the scope is too narrow or too broad
in initiatives, we’d like to hear that.

And also, the balance of technologies that --
you know, we’ve assessed what we think the technologies
are that need new innovation versus those that need
scale-up. If you think that you have a different view
on that, we would welcome that comment as well.

Next is, in addition to program scope, funding
priorities. Today gave a first shop at funding by
policy areas, we will be providing another level down in
our final submittal and so comments on what strategic
objectives deserve the greatest amount of funding to
bring the highest benefit back.

Project match funding; this is the match funding
within the projects where you saw a target for the
requirements in market facilitation, TD&D and applied
research. Is that the right requirement?

And as well as -- sorry, I thought the federal
funding was next.

We have two of the same question. Oh, number
four is the match funding priority. So, again, I
already went over this. What do you think the minimum
and maximum amount of funds should be for the federal
funds?

   Intellectual property; we’ve put forward a strategy for intellectual property and it’s trying to balance between encouraging innovation so that people will apply for the funding, and utilize the funds and bring innovation to market, and while also returning applicable benefits to the ratepayer.

   We’re interested in feedback on an advisory structure. That would be one way to maintain ongoing communication with stakeholder, and community, and different consumer, and environmental organizations, research organizations that we continue to stay focused on the highest priorities and we’re not duplicative, and people who could use the research results are aware of it.

   So, we ask a question about structure and elements that would be important and, also, elements of what kind of coordination is most desirable between the four administrators?

   Finally, an open question on other comments that you think would strengthen the plan?

   This is the template for the Investment Plan Initiative.

   And we can move on to next steps. We would really ask that you submit your comments by October 1st.
so we can review all your comments and incorporate them
in the next draft. You can send your comments
electronically to the docket or mail a paper copy.

And with that, I would open it for questions
from the dais and then the audience for -- do you want
to do clarifying questions and then do public comment
after?

CHAIRPERSON WEISENMILLER: Yeah, what I wanted
to do was, first, let’s start with questions from the
dais, then clarifying questions from the room, and then
go to public comment.

In terms of the public comment, I don’t know if
people have gotten the blue cards, but that would be
the -- if we could pass those out and collect those,
that would organize that somewhat.

And the other question for you, Laurie, is on
the public comments whether we want to structure those
by area or general?

But again, I’ll warn people that you have three
minutes for public comment, so that will probably
encourage you to focus your comments here on the key
points but then, certainly, do written comments more
generally.

MS. TEN HOPE: Okay.

CHAIRPERSON WEISENMILLER: So, with that let me
start out with a couple of questions for you. I’ll at least ask you to talk about a couple of things for people.

One is, obviously, in the legislative review process and since then with the various audits we’ve had there’s a lot of focus from the State on royalties. And, obviously, we felt we could not include those here. Will you explain that to people?

MS. TEN HOPE: Okay. I’m not an attorney, but we have special legislative authority to collect royalties within the Public Interest Energy Research Program and there’s -- without some legislative authority we would not have that authority in the EPIC program.

Now, of course, legislation could be passed to change that so that’s basically the reason that there isn’t a recommendation for royalties within the plan. And I don’t see Alan Ward, he’s welcome to correct me, if he so chooses.

CHAIRPERSON WEISENMILLER: Yeah, and I don’t know, it’s a question for the PUC of whether there’s any way you could structure that. But at least at this point, as I said, under existing statute we have a way to do royalties and under the decision of -- at least our current opinion is we can’t. But, certainly, we’d
The other thing, Laurie, would you talk about the opportunity for multi-year contracts?

MS. TEN HOPE: Yes, I think that in some cases -- well, multi-year in terms of multi-year funding and also contracts that would extend over multi-year, I think you’re referring to both.

So, we would envision a lot of projects, actually, would extend over more than one year, particularly demonstration projects. And some, we would be interested in also doing a solicitation for research centers that are key areas of development, technology development and industry partnerships.

And in those cases we think it would particularly make sense to do sustained funding over multiple years.

COMMISSIONER MC ALLISTER: Just a quick question, I’m really mostly interested in hearing what all of you have to say in the room here.

But I guess on the match issue is there any background information that you could offer about -- you know, I assume the ARRA level of funding is not going to happen again. But do you have kind of a ballpark idea of what those potential federal resources might look like or is it kind of a gross estimation at this point?
MS. TEN HOPE: It’s challenging because, typically, Department of Energy, Department of Defense don’t release their solicitation plans in advance. So, targeting what solicitations are expected in what topic areas is difficult.

But that’s, you know, part of the partnership building that we’re working on now is to really look at how we don’t just coordinate after projects, but we have a better look ahead at where each other’s programs are going so we can be more definitive about what those opportunities are.

But even then, even knowing that it would be difficult to know what strong proposals are coming forward, how much competition there is for proposals, so there is a fair amount of uncertainty.

CHAIRPERSON WEISENMILLER: Okay, so in terms of if anyone in the audience has clarifying questions, would you line up by the dais?

Again, these are clarifying questions as opposed to comments.

Introduce yourself for the court reporter.

MR. HOWLETT: I’m Owen Howlett with the Energy Commission’s --

CHAIRPERSON WEISENMILLER: The green button.

MR. HOWLETT: Oh, okay, Owen Howlett with the
Energy Commission’s Codes and Standards Office.

In the description you use the word pre-commercial for the technologies that you’re interested in funding for applied R&D and for the demonstration projects.

When we look at adopting technologies and approaches into the codes and standards, we’re mainly looking at things which are already commercially available. So, I wanted to ask about the definition of pre-commercial. Do you mean things that are not commercially available, or do you mean things that are not yet mass market, or what’s your intention?

MS. TEN HOPE: Well, it’s -- I mean something could be commercially available but not cost competitive, and there may be more research needed to make the technologies more cost competitive.

We would consider that type of research activity.

MR. HOWLETT: Okay, we’re looking mainly at trying to figure out where existing technologies work well and where they don’t work well, so it’s more of an application-based research.

MS. TEN HOPE: Uh-hum.

MR. HOWLETT: And like I said, we’re dealing mainly with technologies that already exist and, in some
cases, have been available for years. So, I think we’d want to maybe discuss with you what pre-commercial means.

MS. TEN HOPE: Okay, and maybe provide some examples. Because, you know, research on applications could be within scope.

Incentives for wide mass market, we really don’t see in scope given other program emphasis.

CHAIRPERSON WEISENMILLER: Okay, again, if you have written comments for clarification, please submit those for the record.

Any other clarifying questions?

MR. GRAVELY: This is Mike Gravely from the R&D Division. I just want to provide a little clarification on the federal cost share because we have had companies come to us and say is there -- there’s an opportunity for them to bring business to California but they need help in getting the cost share.

So, the question for the audience today helps us understand, you know, should we have kind of an open solicitation where people can apply? We know that there’s always opportunities but, typically, as Laurie mentioned, we don’t get enough lead time to know way in advance. We typically have maybe two or three months, or three months, or two or three weeks’ notice that they
are doing this.

So, the question that’s been asked for us many times, some of the other states do provide this type of incentive on certain areas in federal government, so the question would be is there a value for us to having this federal cost share opportunity? And then, also, what would be the scope? And then, also, just want the interest is?

Because I think the answer to your question is, you know, ARRA was a big process but there are many projects and the federal government does provide opportunity and we typically respond at a very short time.

And we consider this as an area where we might provide an opportunity for California business to be able to compete more aggressively into federal awards by coming to us for this type of opportunity.

So, for the group today our interest would be what is the public interest and the interest of the companies that are here today about having that opportunity to apply for, through some type of open solicitation, to apply for matched funds that would allow them to then apply for a federal grant?

CHAIRPERSON WEISENMILLER: Thanks, Mike. I mean one of the things to be clear is, again, we’re looking
for a competitive process so that we can try to understand the opportunities there.

And, obviously, a lot of times, I know talking to the RP people, they will hire someone within six months and put the money out the door.

So, it’s often not anything that’s easy to identify, the coming opportunities, but we want to be sure that if we do provide that sort of match there’s a way to do that competitive process. Thank you.

MS. QUINN: Hello Commissioners, I’m Colleen Quinn with Coulomb Technologies.

And I just wanted to add, actually, more clarification. I just spent two days in Washington, the DOE has just hosted two days of what they called a -- they’re putting out an action plan addressing the electricity distribution system.

But it’s all about, essentially, they’re taking the Office of Electricity and also the EERE group and they’ve merged them together to really -- to state the R&D priorities going forward for all the renewable technologies in the U.S. and how they can integrate them into the grid.

I represented, I was pleased to have the opportunity to represent EV -- you know, part of the EV industry. GM was there as well. EVs are also going to
be part of this process.

What I wanted you to know is I think the timing is very good and that they are also trying to coordinate their efforts.

They don’t have a timeline or specific, you know, request for proposals out, yet.

But the timing, and I suggest that you all, and I can give contacts to the staff on who at DOE is actually leading this effort.

But it’s a very comprehensive look. The money has not yet been identified. They don’t know whether there’s going to be new money, right, because Congress is in the works.

But it may also prioritize their existing funding.

CHAIRPERSON WEISENMILLER: Okay, thank you for that information. Certainly, if you can get the contacts to the staff, we’re trying to complement as opposed to overlap with the federal funding, so that would be good.

MS. QUINN: Absolutely, yeah.

CHAIRPERSON WEISENMILLER: Thanks. Any other clarifying questions in the room?

How about on the line?

So, great job, Laurie. Let’s go on to start
taking public comments.

Let’s start with Holly Wyer, from the State Lands Commission.

MS. WYER: Good morning and thank you for the opportunity to provide comment on the draft EPIC Investment Plan.

My name is Holly Wyer and I’m a Sea Grant Fellow with the California State Lands Commission.

I’m here to provide joint comments from the State Lands Commission staff and Ocean Potential Council staff regarding marine renewable energy and the EPIC Investment Plan.

In addition to my comments today we will be sending you a joint comment letter by the deadline of October 1st.

In general, the State Lands Commission and Ocean Protection Council staff are supportive of the draft EPIC Investment Plan and the proposed funding initiatives to support marine renewable energy development.

We are supportive of the funding initiatives to investigate the economic, environmental and technological barriers to offshore wind and wave energy in California, as well as the initiative to develop analytic tools and technologies to reduce energy
stresses on aquatic resources and improve water energy management.

Both wind developers and wave energy developers have express interesting in testing their technologies in California.

However, as you mentioned in the draft Investment Plan, permitting, as well as knowledge surrounding potential environmental impact from emerging technologies have been identified in the --

COMMISSIONER PETERMAN: Can you slow down just a little bit?

MS. WYER: Sure.

COMMISSIONER PETERMAN: Thank you. I want to make sure I really hear this.

MS. WYER: As you mentioned in the draft Investment Plan, permitting, as well as knowledge surrounding potential environmental impacts from emerging technologies have been identified as a few of the barriers to the advancement of marine renewable energy.

Funding these three initiatives would help overcome these barriers and build upon current and previous work undertaken by the State Land Commission and Ocean Protection Council staffs.

We also support the initiative to develop
demonstration testing and verification centers. Many marine renewable energy technologies are in the testing phase and would use the testing and verification center, if available in California.

The State has a number of resources in its university systems for facilities, marine engineering and scientific expertise, and military resources to support the development of a test center.

Finally, we are supportive of the initiative to provide cost share for federal awards.

As you mentioned, the Department of Energy and Department of Defense both provide opportunities through grants to advance marine renewable energy in California.

Using the EPIC program, as a cost share opportunity, will leverage additional funding for marine renewable energy development and will make California more competitive when applying for federal funding.

Thank you again for the opportunity to comment and I will look forward to reading the revised Investment Plan.

CHAIRPERSON WEISENMILLER: Yeah, thank you for being here. I was going to suggest that you participate in -- I don’t know if you are participating in the REAT Agency discussions.

Certainly the Department of Defense, both the
Air Force and Navy, have expressed concerns about offshore facilities in terms of potentially interfering with some of their stealth testing.

COMMISSIONER PETERMAN: So, that’s the Renewable Energy Action Team.

MS. WYER: Okay, thank you.

CHAIRPERSON WEISENMILLER: It’s the joint state and federal agencies. So, it would be good to be part of that conversation.

MS. WYER: That sounds great, thank you.

COMMISSIONER PETERMAN: And you can reach out to our offices if you need more information on how to do that.

MS. WYER: Okay, thank you.

CHAIRPERSON WEISENMILLER: I think in terms of agencies, I believe you’re the only agency here, so I’m going to take you first.

In terms of other parties, I guess the first question is if there’s anyone that, you know, will not be available after lunch, certainly I’d be happy to sort of take them out of turn. With the notion if you do go forward, please don’t show up at 4:00 o’clock saying you want a second bite of the apple. This is just your one shot.

But anyway, if anyone has a scheduling
constraint -- sure, why don’t you introduce yourself?

MR. LYTE: Yes, my name is William Lyte. I’m with Protean North America, which is a wave energy firm. In general, I support the comments of the California State Lands Commission. I’ve been on a California State and Federal working group for the last ten years, the California Marine Intermodal Transportation System Advisory Council, representing all of California’s engineering firms.

And we are all very excited, around the world actually, about the EPIC program. And so to help implement that we are building the kinds of collaborations with the California State University system, the community colleges, and already with the U.S. Navy and Department of Energy.

We’re focusing those on innovation clusters which was identified in the plan. I’m speaking on that subject at a California State Lands Commission program on October 26th.

We certainly can bring the matching funds to the table.

And I would also like to support the water and energy management aspects of this because that’s what helps fund the California State University research activities that fully evaluate these wave and offshore
wind programs. It provides the funding for them.

So, thank you very much for this opportunity.

COMMISSIONER PETERMAN: Sir, a quick question for you. Can you say the name, again, of the working group?

MR. LYTE: Oh, the working group I’m on is the California Marine and Intermodal Transportation System Advisory Council, it’s called --

COMMISSIONER PETERMAN: I got the intermodal and then --

MR. LYTE: It’s managed out of State Senator Lowenthal’s office.

COMMISSIONER PETERMAN: Thank you.

MR. LYTE: Thank you.

CHAIRPERSON WEISENMILLER: Okay, no one else, Bob Raymer, you want to go next?

MR. RAYMER: Thank you Mr. Chairman, Commissioners; I’m Bob Raymer, representing the California Building Industry Association.

And as you well know, CBI is in strong support of the New Solar Home Partnership Program.

In terms of background, California’s housing sector is slowly rebounding from the worst economic downturn in 60 years.

We hit rock bottom in 2009, producing 36,000
units that year. That’s combined multi-family with single family, and that puts us at about 19 percent of normal.

And while we’re slowly rebounding, 2010 and 2011 proved to be the second and third worst years in record, and it looks like 2013 will be in line to be the fourth worst year. So, we’re coming out of it very slowly, but we’re still in that area of making records and that’s not a place that we want to be and, hopefully, we’ll be moving out of that.

In terms of the labor market, between 2004 and 2009 the building industry lost about 80 percent of its workforce.

That brings us to today’s subject, the New Solar Home Partnership. As the housing sector slowly climbs out of the worst downturn in 60 years, the New Solar Home Partnership has proven to be one of the bright spots.

It has allowed production-style builders to incorporate solar as a standard feature on entry-level housing and both of these points deserve repeating.

Entry-level housing is the primary focus of the production building industry right now and for the near future. Given the extremely tight lending rules in place right now, coupled with the fact that lending
institutions want large down payments, in the range of 10 to 20 percent, production-style builders have zeroed in on the entry-level housing market as their primary target.

And major builder companies, as you well know, are now installing solar on 100 percent of their homes as a standard feature, as opposed to offering it as a design option.

Offering it as a design option might result in a market penetration of about four to five percent, given past practice, as opposed to the 100 percent level that we’re seeing now.

The striking change in construction design has created a problem for the CED in that the New Solar Home Partnership has become an enormous success in a relatively short period of time and has put a lot of stress on your financing.

We have seen extraordinary growth in the past 18 months and that leads us to a few concerns. The reliability of the program is incredibly important for the short term and I’m talking about, particularly, 2013 and 2014.

As production builders, who are looking at doing hundreds, perhaps thousands of homes in the coming three- to four-year period, they’re looking at their
design constraints right now. They’re making the decisions today of what those homes will have in them tomorrow in terms of standard features or what they may be offering as design options.

The availability and reliability of the New Solar Home Partnership has allowed them to effectively assume a financing package that utilizes this fund as a key leverage.

And with that, I’d also indicate a concern, the average that you’re looking at, $25 million for the years 2013-2014, we’ll be using all of that. And for whatever that’s worth, if that’s the money that’s going to be there, we will utilize that.

Any questions?

COMMISSIONER PETERMAN: I have a follow-up question or two, Mr. Raymer. Your last comment about all the funding, you know, will be used, what are the estimates of the need as you see it, I know you’ve been talking to the various builders and the home companies, over the next couple of years for this program?

MR. RAYMER: Well, on a positive note we, once again, will be very supportive of seeking the repayment from the Legislature. I think there’s $95 million out there, of which about two-thirds would be coming back by June of 2013.
But as you well know, under the budget circumstances that we find ourselves, the fact that it’s supposed to come back and the fact that it will come back may be two different things.

So, we’ll be supportive of that. But as far as the industry’s needs, we’re probably looking at an increase of overall production in the range of two to five percent per year. That’s sort of a very slow emergence.

But in terms of 2012 we did about -- we’re doing about 25,000 single-family homes which is, of course, the primary market here.

That will probably raise to about 30 to 35 thousand by 2014.

We’re not going to be back to normal production until 2017. And so, as the Governor’s indicated in a couple of his speeches relative to the budget, employment normalcy will probably be the last quarter of 2016.

That being said, $25 million a year, I don’t want to say it -- it’s not a small amount, but the fact here is that right now there’s such enormous interest in this program I’d have to say we’ll use every penny of that, without question.

COMMISSIONER PETERMAN: Thank you.
CHAIRPERSON WEISENMILLER: Okay, Laurie, do you want to clarify the footnote you had on New Solar Home Funding, just to make that clear for people?

MS. TEN HOPE: I’ll leave that to Pam.

CHAIRPERSON WEISENMILLER: To Pam, sure.

MS. DOUGMAN: Oh, the repayment?

CHAIRPERSON WEISENMILLER: Yes.

MS. DOUGMAN: Oh, okay. So, in the Investment Plan we describe that if we receive repayment of the outstanding loans and that then the money that would come from EPIC will not be needed and will be adjusted accordingly.

COMMISSIONER PETERMAN: I’ll just also add the comment that we received a loan repayment in June, of $25 million. There’s been, I don’t have the exact number in my head, but over $150 million borrowed from the ROTF fund. And faced with the general challenge of not having funding within this program, and so appreciate the legislative lift and the work by the different agencies to find and continue opportunities to fund this program.

But to the extent those monies are repaid, then instead of the total budget concerns around EPIC, the request would be for less coming out of EPIC if those other monies are available.
And for those who are interested in seeing more about this program, it is an active program at the Energy Commission. There’s a website, a list serve you can become active in and we’ll be moving forward, as part of that program, to do some workshops later this year just in terms of looking at where the industry is now.

As Mr. Raymer’s noted, we’ve received a lot of public comment on that program about new business models, builders’ interest, and we want to make sure that the program design really captures the need, so stay tuned for that.

CHAIRPERSON WEISENMILLER: Okay, Mr. Boccadoro?

MR. BOCCADORO: Good morning Commissioners, Michael Boccadoro on behalf of the Agricultural Energy Consumers Association, today.

Let me start by thanking CEC staff for an excellent product and a first draft. Obviously, a lot of hard work has gone into this and much more is going to be necessary as we finalize a plan.

I wanted to focus some comments today on bioenergy. It’s an exciting time for bioenergy, frankly. The release of the Bioenergy Action Plan a few weeks ago, and last night’s signing of Senate Bill 1122, Rubio, which provides a 250 megawatt procurement program
for bioenergy in California, as well as the signing of 1900 and 2196 to, hopefully, remove some of the issues related to biomethane injection.

Getting back to the proposal before us though today, let me focus a couple of points. Interconnection issues remain a very, very significant problem for small community-scale bioenergy projects. I’m not convinced it’s just bioenergy, but for small projects in general that we’re really seeing an impact from interconnection issues with bioenergy projects in California, currently.

I’d suggest to you that they’re even more significant than permitting issues in the State regarding these projects. We can get them permitted, only to find that we run into interconnection issues that are precluding them from being built, cost mostly.

We strongly recommend that in addition to permitting and regulatory streamlining in the Market Facilitation Program that we add interconnection streamlining and facilitation. We think that’s a particular area where the Commission can be helpful on bioenergy projects moving forward.

I wanted to touch briefly on the pre-commercial conversation that occurred a few moments ago and this issue of what is pre-commercial. We’re very aware of the cost-competitive issue.
It’s not just research that will bring down the cost of bioenergy projects in California. I’d argue that a bigger piece of the equation is actually experience.

One of the biggest cost drivers for bioenergy projects in California right now is capital costs. And those are only going to come down when the uncertainty about getting these projects built and operational, and keeping them operational in California has been resolved.

And so financing uncertainty drives those costs of capital and so we really need to focus on, actually, not just doing additional research, but actually get projects built and operational in the State.

I think that’s a good prelude to the next point, which is in signing 1122, one of the provisions in that legislation would require that the agencies in the State, that have jurisdiction over bioenergy, including this Commission and the CPUC, as well as others, to coordinate, to the maximum extent feasible, the subsidies that are being provided as part of the 1122 procurement program.

So, we would like to very much work with the Commission and the CPUC moving forward to find ways to maximize the facilitation of any funding under EPIC that
is being provided to bioenergy projects going forward, so that we’re achieving true ratepayer benefits by providing subsidies to the projects that are going to get -- get contracts, excuse me. Under 1122 we’d be directly reducing ratepayer costs and I think that’s a very important intent of the Legislature when they passed 1122.

And then, finally, the plan should clarify that the CPUC decision requires a minimum of 20 percent for bioenergy in the technology demonstration and deployment category.

It could be read in the current draft that it’s a maximum of 20 percent. And I think it was the intent that that be a minimum by the CPUC.

We have a number of technical points that we’ll also be submitting in writing, given the short time frame.

I very much appreciate the opportunity and we look forward to working with you to get bioenergy going in California. Thank you.

CHAIRPERSON WEISENMILLER: Thanks. Any questions?

Peter Miller, NRDC.

MR. MILLER: Peter Miller for NRDC and thanks for the opportunity to comment today.
I wanted to just start by voicing our support for this initiative, for R&D in general and for this initiative in particular. It is so essential.

I didn’t bring my pom-poms today, but it is really exciting and important for the State to have -- for this initiative be underway.

I want to express an appreciation for the CPUC for their work in getting the program where it is today. And I note the importance of the collaboration between the two agencies, and the effective collaboration.

It’s a substantial administrative transition from the PIER Program to EPIC and it’s run pretty smoothly and on time, and I think that’s something to be noted.

I wanted to highlight what I think is the top problem that we’ll face going forward and that’s the abundance of opportunities.

It’s what you might call the Mother’s Day buffet problem, where you walk in and there’s endless items to choose from. And you certainly want some of the crab, and you want some of the eggs benedict, and you definitely want to leave room for the dessert buffet. But it’s hard to choose and prioritize.

And being effective is going to require a balance between focus and flexibility.
I think the number one solution to deal with that problem is having an open, public process, with lots of input from stakeholders and agencies, and entities that care about this program, and they’re going to have to implement the technologies.

And I think the bywords are going to have to be collaborative, synergistic, and connected. I think that’s going to be critical.

I will note, and I want to give a shout out to your Deputy Director Laurie ten Hope, who, in her tenure on this program, has done a fabulous job of doing just that, of staying connected to stakeholders, to the Legislature, to the utilities, and to industry.

I think there’s a real value in having a strong advisory group. An advisory group, not a decision-making body, but a group of stakeholders that can have that important information flow which needs to go both ways; both stakeholders saying, hey, these are where the areas are that you have to focus on, that they’re important to us, that represent the problems we’re facing in the energy sector, but also as a way for the program to communicate back out to those entities.

Hey, we got this new technology we just brought out, can you try it out? We’re doing good things, letting the Legislature know all the successes that this
program is able to achieve.

So, a strong vote of support for the Advisory Group, I thought there was a pretty good structure in place recently, and I want to encourage that to be revitalized.

I want to highlight a couple of items. We’ll submit more detailed comments, but I want to note that we have strong support for the research on environmental impacts, both adaptation and mitigation of those impacts, particularly on climate change.

I like the idea of a federal match, I think that’s a great way to help lead Washington and provide some leadership with DOE.

And note that the Energy Innovation Small Grants Program, which was a feature of the PIER program, I thought was a great program and a good way to use money effectively to feed the pipeline. Thank you.

CHAIRPERSON WEISENMILLER: Well, thank you. We certainly want to express our appreciation for NRDC’s efforts in getting this to where we are today. You’ve certainly been a key player with us all the way through, obviously, the PGC debate and, now, in the development of EPIC. So, we certainly appreciate that.

And we certainly agree that one of the things we were trying to deal with is not spreading the peanut...
butter too thin, but trying to find those high priority areas where you can get some payoff.

And, of course, everyone has different sense of which those are. But certainly appreciate NRDC’s thoughts on those priorities.

MR. MILLER: Thank you.

COMMISSIONER PETERMAN: I’ll just agree that, you know, it’s a very comprehensive plan that lays out the scope of all the different activities that one could work on. You know, but like a menu you have to figure out what to eat first, and so we appreciate some feedback on that.

COMMISSIONER MC ALLISTER: I meant to say this before and I will just reiterate what you said that I think it’s a great opportunity and it’s going really well for collaboration between the two agencies. I mean the PUC and the Energy Commission have very complementary activities and viewpoints, and I think it’s just fabulous that we have, now, this sort of platform to collaborate much more explicitly on and come up with -- you know, ensure that we’re all aligned on what the sort of purpose and goals are behind all this. So, it’s a great opportunity and thanks to Andy for representing that.

MR. MILLER: Thank you.
CHAIRPERSON WEISENMILLER: Alex Leumer, Nature Conservancy.

MS. LEUMER: So, Alex Leumer from the Nature Conservancy. Thank you very much for this opportunity to provide comments and I definitely want to echo Peter’s comments, as well.

The Nature Conservancy strongly supports the proposed Investment Plan, specifically the funding initiative 5.4 to develop tools and technologies to plan for and minimize the impacts of climate change on the electricity system.

In the past, the PIER Program has been critical to addressing issues related to the demand, supply, transmission and reliability of power, as well as cost containment and general well-being of ratepayers.

Understanding these characteristics of the energy system is critical to helping the State develop policies that provide for ratepayer protections, effective alternatives, adaptive management and a safe, reliable energy system.

To this end, EPIC research funds should focus on the barriers and basic conditions that influence siting, energy consumption, generation and demand patterns, local State and federal permit conditions, general location capacity, and power interruption instability.
As well noted in the draft plan, California’s electricity system is highly vulnerable to climate change and extreme events.

The workshop held here on April 30th, entitled “California’s Energy System Prepares for Climate Change,” highlighted a number of PIER-funded studies that demonstrated how climate change is affecting and will have an ever greater effect on the State’s energy system.

The third assessment from the California Climate Change Center, entitled “Our Changing Climate 2012,” described specific threats posed to California’s energy system from climate change, such as increased energy demand, increased vulnerability of hydro-powered facilities, and the vulnerability of the electricity transmission corridors.

The plan states this ongoing evolution of our energy system should be guided with information that facilitates the creation of a more climate resilient energy system. And it well notes that it’s unlikely that programs, other than EPIC, would provide -- would be able to generate this critical scientific and engineering research.

Given the emerging climate-driven threats to California’s energy system, the State must continue to
fund and prioritize scientific research to analyze the
impacts of California’s energy generation consumption on
its environment and ratepayers.

We, therefore, strongly urge the CEC to adopt
the proposed funding initiative 5.4, and we’ll be
providing written comments as well.

So, thank you very much for this opportunity.
CHAIRPERSON WEISENMILLER: Thank you. Thank
you.

Todd Maki, from EPRI.

MR. MAKI: Hi, Todd Maki with the EPRI, Electric
Power Research Institute.

First of all, I want to thank you for the
opportunity to provide comments.

And second of all, I want to commend the CEC on
the excellent job well done putting together an
Investment Plan under such a short timeline. I
understand the IOUs and the CEC are both under quite the
crunch. And I think you did a quite -- a good job in
putting together a thorough Investment Plan and setting
forth a strategy for this first funding.

I want to focus my comments on appreciating,
first of all, the emphasis on minimizing the amount of
duplication in R&D that these funds will go to, and as
well as maximizing the amount of leverage that these
funds can provide to activities that are already going on both nationally, in the U.S., as well as internationally.

The technical issues that the California energy system and the California IOUs face are common across or similar to those that are faced throughout the country and throughout the world.

So, it’s of critical importance that the issues of clean energy, energy efficiency, demand response, and cross-cutting technologies, like smart grids or other issues that are funded through the California EPIC Program and, particularly, with the applied R&D funds are invested in areas that are building on top of the progress that’s already been made, whether it be it in California collaborations, or national collaborations, or international.

And it’s also important that not only are we building on top of the foundation that’s already been established, but the stakeholders in California, so the Energy Commission, as well as the three IOUs, are able to actively participate in those collaborations.

So, this is a suggestion, and recommendation and encouragement for the California Energy Commission to really emphasize not only the funding leverage, but also the collaborative participation of both its own
employees and members, but also of bringing along the investor-owned utilities as partners in those collaborations, as well.

In the EPIC framework we all know the California Energy Commission has the entire applied R&D portion, so I think it’s important to make sure that as part of the collaborative process between the CEC and the IOUs that there’s a dedicated, I guess, process or opportunity for the IOUs to engage directly in some of that applied R&D as well, in the areas as relevant.

Obviously, some of them it may or may not be relevant, but in areas of the smart grid technologies, energy efficiency, or demand response technologies it’s going to be critically important with the IOUs also working alongside with the Energy Commission on some of those projects and, particularly, in some of those collaborations.

That said, again I want to commend the Energy Commission on a job well done so far in the Investment Plan. And on behalf of EPRI, we look forward to continued collaboration with both the Energy Commission, as well as the IOUs, going forward.

CHAIRPERSON WEISENMILLER: I was going to ask Laurie, or Andy, or if any of the utilities want to comment on the collaborative issues -- the collaboration
MS. TEN HOPE: I mean I think basically there’s an intent to collaborate. I think it’s critically important that we collaborate on the areas that you mentioned and, you know, and beyond. I mean not just applied research and the smart grid, but we’re talking about distributed renewables at a customer or commercial site. There’s, you know, collaboration with the utilities and associated grid issues as well, so very much our intent to do that.

MR. SCHWARTZ: I don’t know if I really have much more to add to that. I think Laurie is exactly correct, and I think the comments the EPRI representative were also correct that there is a critically important role for the IOUs. And to the extent that we’ll be evaluating or looking at new energy technologies and how those will relate to their systems, they’re a critical partner in all of this.

So, throughout this process we’ve been emphasizing the need for effective collaboration, recognizing that ultimately a lot of these technologies will be interconnecting to a system that is operated or owned and operated by the IOUs.

CHAIRPERSON WEISENMILLER: And again, certainly if any of the utilities want to comment on this that’s
fine, or not, either way. You don’t have to.

We’ll move on. Okay. Andrew, okay.

COMMISSIONER MC ALLISTER: I would just highlight I’m really impressed with the report as well, or with the plan as well, and think it’s a fabulous job on short notice. It was really -- and Laurie and team really deserve a lot of kudos for that, along with the PUC counterparts.

I definitely appreciate the comments from the EPRI representative and in particular would just highlight that these demand side efforts are extremely challenging.

And particularly, you know, bringing demand response into it’s kind of rightful place on the loading order, or at least investigate how that might look, and those deployable resources and interconnecting them all really cross many, many jurisdictional, and technological, and many boundaries, and on time scales we’ve never really seen before. I think they’re fairly complex.

And so there are a couple of initiatives here, particularly in strategic goal 2 that will just require a lot of collaboration across agencies, and I think it’s a very exciting opportunity to do that.

You know, if you’re going to get individual
customers access to ISO markets that's -- you know, that's a short phrase that means a lot.

So, I think that kind of collaboration is essential and really important, so thanks.

MS. TEN HOPE: Could I just add that I mean one of the questions for follow up is the form that that collaboration takes. I mean we have been talking among the four administrators and we’ve had various forms of technical advisory committees, and project advisory committees, or more strategic policy advisory committees in our programs in the past and I think, you know, what kind of form does that collaboration take?

One, with the utilities, as EPRI was mentioning, and with -- you know, with other interested stakeholders, as Peter Miller was mentioning.

So, it seems that there’s certainly an interest, so the form, how often, who’s on this, what’s the scope? You know, provide us some thoughts on what provides the most value, specifically.

CHAIRPERSON WEISENMILLER: Okay, Chris Carney, a Union of Concern Scientist.

MS. CARNEY: Hi, good morning, thank you. Chris Carney, Union of Concern Scientist.

Thanks very much for the opportunity to comment and just want to also note that to start, UCS also very
strongly supports the direction of the draft plan.

As the staff proposal notes, California leads the nation on climate change research. And as we all know, federal funding for climate monitoring research is under continued attack, making it all the more critical for California’s research to continue.

And additionally, as the draft report also notes, the need for continued research with a focus on California and the west, which is critical given that even when fully funded, national research efforts cannot always address the unique challenges another climate change presents to the State.

So, we strongly support the proposal to dedicate resources to efforts to better understand how changing climate and related extreme weather events pose threats to the State’s evolving electricity system and to instruct our decisions for how we’re going to adapt to those climate impacts that are already locked in.

We also strongly support using EPIC research funds to develop and refine tools, models and simulations to enhance our energy planning to meet our 2050 emission reduction goals.

Given the time that it takes to develop specific policies, as well as clean and environmentally benign infrastructure and generation resources, we encourage
the Commission to look beyond the 2020 horizon and prepare for an energy grid that can support higher levels of renewables, far beyond the current 33 percent mandate, as well much higher overall electricity generation needs to accommodate the widespread electrification of our vehicle fleet.

We also strongly support the use of EPIC funds for technology demonstration and deployment. And we believe that using the funds to help clean technologies prove themselves at a commercial scale, hopefully in partnership with utilities and balancing area authorities to an extent that such collaborative relationships break down barriers to commercial deployment so that we can address a critical funding gap and bring these technologies closer to market.

We support the strategic funding initiatives identified in the draft proposal, but urge the Commission to focus on defining current operational challenges and deficits, rather than choosing technology winners in the draft plan.

We strongly support the proposal to fund research into the expansion of electric vehicle infrastructure, including lifecycle of batteries, the potential for second life storage applications, research into charging technologies, and approaches to integrate
plug-in electric vehicles into the grid, and research into the potential for vehicle-to-grid storage.

We also encourage the Commission to communicate the activities funded through the EPIC Program to the general public as much as possible. We like the idea of the Advisory Committee and want to see that more fully expanded.

You know, these broader communications will enhance the public’s understanding and support for California’s R&D investments, help avoid funding duplication, and encourage collaboration with the scientific community.

And we don’t think that the 10 percent administrative cap should cover outreach efforts. And the outreach effort should be expanded to include at least one opportunity for the CEC to present the activities currently funded under EPIC in a public forum.

And, finally, we will be submitting comments which will cover the rest of our remarks.

Thanks very much for your time. We, again, support the direction of the plan.

CHAIRPERSON WEISENMILLER: Great, thank you very much.

We’re at noon. We had scheduled public comments.
at 1:00. We have in the room about eight more comments. I don’t know how many are on the line. So, my preference would be just to keep going and, obviously, we’ll -- and wrap things up as opposed to taking lunch. That’s also consistent, I think, with Commissioner McAllister at some point this afternoon, so this would allow him to participate more broadly in the whole thing.

So, anyway, that’s what we’re going to do. I’m just going to keep marching through the comments.

Anyway, Carl Blumstein?

MR. BLUMSTEIN: I’m Carl Blumstein, I’m the Director of the University of California’s California Institute for Energy and Environment.

I want to begin with kudos to Laurie ten Hope and many PIER staff, and now EPIC staff in the room. It’s a good job and under quite constraining time limits.

So, I do have a suggestion. I saw for the first time the budget, it went by pretty fast. But I would note that it didn’t have a line for evaluation and I think you should consider putting an exclusive line for evaluation into the budget.

And I think that it’s important for the Commission to think about evaluation somewhat in a
different way, that it shouldn’t be just trying to assess benefits of the projects, it should also look at process and so that you can try to establish, to some extent, continuing feedback of evaluation and program improvement.

And I know that’s easier to say than it is to do, but it is important to try it. And I think that you have an opportunity to set aside some funds for evaluation.

And that given the very tight constraints that you have on program administration costs, which don’t include evaluation costs, you have an opportunity here to think about doing this in a somewhat different way. Thank you.

CHAIRPERSON WEISENMILLER: Thank you. Any questions?

Now, Laurie, could you put that one, the fast slide up for people? The more detailed budget, we might as well just leave that up since people hadn’t seen that before.

MS. TEN HOPE: Rachel’s going to pull it up.

CHAIRPERSON WEISENMILLER: Okay.

COMMISSIONER PETERMAN: Laurie, regarding the comment just now, can you provide any more information about how program evaluation is being considered?
MS. TEN HOPE: I welcome my market facilitation team to help on this. But there’s two levels, one, there will be a program evaluation that’s done by the CPUC, periodically.

But I think that the market facilitation includes market analysis and data collection that would inform measurement and evaluation.

We didn’t call it out specifically, but did see that market facilitation was an important place to have baseline information on the marketplace, the tracking of the programs and feedback between the programs and changes in -- basically, changes in your baseline.

So, I think it could be more explicit, so it’s a good comment for us to reflect on. It’s not precluded in the decision.

COMMISSIONER PETERMAN: Thank you. You know, I appreciate that comment because in the plan we have a number of things we’re trying to do. We want to make sure that we’re correcting, self-correcting and being aware, and so I appreciate looking at the plan and seeing how, specifically, we can be more explicit about evaluation opportunities.

MS. TEN HOPE: Uh-hum.


I want to first start by saying that we support the comments earlier by Bob Raymer.

That said I want to first thank the Commission for its inclusion of funding for the New Solar Homes Partnership. We were pleased to see that as part of the Investment Plan.

The proposed funding does signal to us that the Commission clearly recognizes the importance of this program in achieving the goals of the California Solar Initiative and the Governor’s 12-gigawatt distributed generation goal, and others.

However, I’m also here to request that the annual funding levels be increased in the final plan in order to comply with established statutory requirements, as well as ensure that available incentives match the program demand.

As the construction industry continues to rebound, builders need confidence that a consistent, transparent funding stream will be available in order to both maintain the progress toward increased energy efficiency and on-site solar, as well as avoid sending chilling signals to the development marketplace.

This confidence is, however, contingent upon a
guarantee that the New Solar Homes Partnership will be
fully funded at its $400 million total through 2016, as
has been previously mandated by statute.

However, at this point the draft plan does not
explain how the CEC will comply with this statutory
requirement.

The draft plan’s proposed allocation of up to
$25 million annually, in the event that repayments are
not made to the Renewable Resource Trust Fund, appears
to conflict with the CPUC’s phase 2 decision, as well,
which stated the CPUC would authorize that funding for
the funds that had not previously been collected through
the Public Goods Charge, they estimated this to be about
$250 million.

So, to comply with statutory mandates and to
remain consistent with the CPUC’s prior decision, we
suggest annual funding be increased.

In addition, the CEC’s proposed funding level is
not commensurate with recent demand. The draft plan
indicates that since 2007 the New Solar Homes
Partnership has issued incentive reservations at an
average rate of about $24.8 million annually.

In 2011, however, this number was $32 million
and, thus far in 2012, we’ve seen this number at $40
million.
So, based on this sharp increase, SEIA believes a more appropriate annual allocation would be one based on 2011-2012 reservations. So, using an average annual allocation that includes years in which the housing market was really hurt by the mortgage crisis is not truly reflective of a level that we believe will be adequate going forward.

So with that, I just want to thank you for the time to make these comments and we look forward to working with the CEC further on this issue.

CHAIRPERSON WEISENMILLER: Thank you.

Questions?

COMMISSIONER PETERMAN: Thank you. No questions, I’ll just make a comment. You know, thank you for your comments and, you know, report back on where you see the industry.

I’ll note that the statute, though, for New Solar Homes Partnership also calls for a target of 400 megawatts. And as lead Commissioner on renewables, I am interested in seeing how quickly we can get to that target and at the least cost.

And for those of you who are less familiar with the program, like our other incentive programs we have a declining incentive schedule. So, the expectation we have seen continued and, as you’ve noted, significant
even update in interest, even as the incentive has declined over the last year.

And so we’ll be looking, again, for industry and for customers to have continued and increased skin in the game in terms of these system costs. As solar costs are coming down we expect to get more megawatts with less money.

So, I ask that when you file your final comments to keep that consideration in mind, particularly if you have any information to provide how those costs are coming down, as well as we go into workshops going forward, about appropriate incentive levels going forward that would be appreciated.

MR. ZURETTI: Great, I appreciate that. We’ll work to do that. Thank you.

CHAIRPERSON WEISENMILLER: Chris Murkens,

MR. MURKENS: Hi there, my name is Chris Murkens, representing CALSTARTS today.

First of all, again, I just want to echo the thank you to the CEC staff for pulling this Investment Plan together under short time constraints. We really appreciate it and we’re generally supportive of everything in the Investment Plan.

My comments today are going to focus on the
transportation electrification sector.

Transportation electrification is obviously an increasingly important area for R&D funding, with major challenges and opportunities.

The ratepayer benefits in this field are substantial; they include grid reliability, reduced cost, and greatly improved air quality, as you know.

We really like the inclusion of the vehicle-to-grid investments and battery reuse investments, including S9 and S13. These are really valuable investments and will ensure that EVs will be successfully integrated into the grid in the future, which we think will provide environmental benefits and ratepayer benefits to Californians.

We’re going to provide more written comments on Monday, but we see a couple of areas that maybe could be improved upon. The first would be strategic objective 9.3, which talks about vehicle electrification technologies. We think there are a number of other types of areas that -- under this section that could be widened to include a number of other technologies. And again, we’ll provide more substantial comments, written comments.

We do think there is some need for funds for outreach and education to facilitate the electric
vehicle rollout. We see that as an area where there is
a lot of consumer misunderstanding, oftentimes, about
electric vehicles and we think that would be useful.
And we do see the ongoing need for vehicle buy-
down funding. This would help support the market,
itself.

And again, we’ll provide greater written
comments on Monday. And again, thanks for your time.

COMMISSIONER PETERMAN: I’ll make a comment,
Chris, that I appreciate, one, you being here. But two,
in your comments we want to make sure, again, that our
funding is not duplicative. So you are, of course,
familiar with the 118 program.

And if you have particular observations of
things that are not being funded under 118, that you
think are appropriate to fund during EPIC, that would be
appreciated.

MR. MURKENS: Okay, thank you.

CHAIRPERSON WEISENMILLER: Chuck White, Waste
Management.

MR. WHITE: Thank you very much, Commissioners;
Chuck White representing Waste Management.

Like others, I really have to give great kudos
to the staff for an amazing job of developing a plan
that we think is well structure but is reasonably
flexible, and allow consideration of a wide range of technologies to be incentivized.

Two areas I’d like to talk about. One is biomethane. Waste management currently generates over 30 megawatts of energy from landfill gas and the problem we’re facing is that they’re coming under increasingly stringent controls from the Air District, primarily because of NOx and CO.

We think technology exists to be able to remove that concern, but it’s very expensive, and so we’re hoping that we can maintain this 30 megawatts and expand this 30 megawatts in air districts like the Bay Area, South Coast, and San Joaquin. And we hope the EPIC funds can be used, we believe it can as I read the plan, to help cover some of the costs of this yet not-completely-demonstrated treatment technology for lowering emissions from these sources. And we’ll be submitting comments to that effect.

And as Michael Boccadoro mentioned, AB1900 was passed by the Legislature signed, I think, yesterday by the Governor, that allows injection of biomethane -- encourages the injection of biomethane into pipelines. And we would like to, hopefully, be able to demonstrate the technologies suitable for allowing that to occur by the use of EPIC funds going forward. That’s
dealing with biomethane.

The second concern we had is with respect to diversion of municipal solid waste and converting it to energy. It’s a very controversial issue in California. We are investing in a lot of technologies nationwide to develop solid, liquid and gaseous fuels from municipal solid waste.

We’re not really doing much in California because the uncertainty of how those kinds of municipal solid waste from -- energy from municipal solid waste technologies are going to be viewed now and in the future.

The Plasco Energy fiasco kind of gave a lot of pause to a lot of folks within waste management; do we really want to invest in these kinds of technologies?

We don’t see those same kind of restrictions that affected Plasco in your current draft plan and we encourage that to continue.

The good news about municipal solid waste conversion technologies to energy is that they can be very low emissions, they can be very clean. They’re urban-based, that is they’re right where you want the energy to be used is right in the urban environment. they’re very low carbon. It is a base load type energy and it does encourage landfill diversion and beneficial
use of waste-based materials.

So, we’re hoping that the plan, as we read it now, continues in its current form to allow funding for some of these expensive conversion technologies to demonstrate their efficacy and ability to help California meet its energy needs. Thank you.

CHAIRPERSON WEISENMILLER: Thank you.

Aaron Lewis, National Asian/American Coalition.

MR. LEWIS: Commissioners, thank you for the opportunity to speak today and I’d like to thank the staff for a very well thought out and thorough report, as well as the CPUC for all their hard work, as well.

My name is Aaron Lewis. I’m appearing on behalf of the National Asian/American Coalition, Black Economic Council, and the Latino Business Chamber of Greater L.A.

We were originally parties to the rulemaking before the Public Utilities Commission and appreciate the opportunity to be here today.

We’re very encouraged by the inclusion and the staff proposal of energy-efficient demand side technology among the strategic objectives, specifically LED technology.

Lowering the cost and expanding the use of LEDs can provide a dramatic benefit to low income communities in the form of lowered electricity bills.
We also applaud the awareness in the proposed plan with regard to incentivizing the refit of multi-family dwellings. As noted in the proposed Investment Plan, the incentive is not always there and low income families and individuals are more likely to rent, and it greatly can affect their budget.

Finally, with regard to workforce development, we’re very pleased to see that mentioned in there. But we would just like to just mention, for the record, that green jobs are often out of reach for low income communities and communities of color, and training for skills for those jobs is often unavailable. And so I really applaud the inclusion of and the mention of workforce development and job training in the proposed Investment Plan.

In conclusion, I’d just like to say and I know everyone here is aware of it, but it’s vital to ensure that under-served communities are able to be a part of California’s energy future and able to feel the benefits of job creation.

And so we will be filing more detailed written comments, but we appreciate the Commission and its efforts, and we look forward to further leadership from the Commission for economic and environmental justice.

So, thank you very much.
CHAIRPERSON WEISENMILLER: Thank you for being here today.

Commissioners comments? Why don’t you stay at the dais for a second, we have questions or comments.

COMMISSIONER MC ALLISTER: Yeah, so I wanted to thank you for coming and also point out that the Commission, in several proceedings of the Commission -- this conversation is relevant, really, in all of them in some way.

But the 758, the AB758 proceeding is implementing a law requiring the Commission to develop a comprehensive statewide retrofit program for existing buildings, both residential and nonresidential.

Some workshops are happening on the 8th and 9th of October and it’s really critical, since workforce development and the other issues you mentioned are all kind of in that conversation. There’s a chapter in the scoping plan about workforce. There’s another about residential programs and nonresidential programs.

And in particular, you know, you mentioned some hard nuts to crack, which is how do we get opportunities, how do we get -- you know, encourage the private sector in the right ways such that small businesses can form, grow, and thrive, and be selling something that consumers want?
And, in the best case, is actually accessible to moderate income and lower income families and residents.

So, we will be talking about those issues. Definitely be interested in -- if not at these particular workshops, this will be an ongoing conversation and there will be future opportunities to get the Latino contractors, to get the black contractors into the conversation in ways that are productive and, you know, try to establish a pathway.

You know, the green jobs discussion is many things to many people and so getting concrete about how that might work in the real world I think is really important.

So, thanks for coming to this one and hope to see you again.

MR. LEWIS: Just if I can speak to that for just a second, I’d like to echo the comments that the Union of Concern Scientist offered, and NRDC with regard to the Advisory Panel. I think it would be a good step to having community-based organizations and small business representatives there as well. Thank you.

COMMISSIONER PETERMAN: And let me just let you know about -- again, Commissioner McAllister mentioned opportunities in energy efficiency.

Let me just speak to what’s happening in the
renewables and transportation space, as well, at the Commission on some of these issues.

In the renewable space we’ll be coming out with a draft of the 2012 IEPR in October and we have a series of workshops to develop a renewable action plan for that.

There was one workshop that was focused on workforce development, as well as economic development opportunities.

Throughout the workshops we had representative from more community-based groups, environmental justice groups. I’d like to see more of that. So, it’s great to have you here, you’re representing quite an array of folks and appreciate you starting to participate more in our forums.

In that action plan, some of the actions do pertain to workforce development, identifying preferred geographic areas, including criteria related to disadvantaged communities. And so appreciate your review of that plan, as well as the folks you’re representing, and the comment on that.

Also, we manage, at the Commission, the AB118 program, a program for alternative fuels vehicle infrastructure. And that is approximately $100 million a year annually that we deploy to a number of types of
projects.

We have an Advisory Committee as a part of that. We put out a notice last week explicitly requesting participation from environmental justice representatives and community-based groups, as well as, you know, any other stakeholder group that is not seemingly represented on the Advisory Committee.

So, there’s a real commitment, as Commissioner McAllister noted, at the Commissioner level to having a more inclusive process and more representation from the groups that you mentioned.

MR. LEWIS: Well, we certainly appreciate the attitude and conscientiousness.

COMMISSIONER PETERMAN: And you can find out, you can send an e-mail to AB118 at energy.ca.gov if you want to get a copy of that request for Advisory Committee representation, and there is a couple of meetings a year for that.

MR. LEWIS: Great, thank you, I will.

COMMISSIONER MC ALLISTER: you know, I’m going to have to get the AB715 its own e-mail, that’s slick.

COMMISSIONER PETERMAN: Try to do the best we can.

MR. LEWIS: Thank you, Commissioners.

CHAIRPERSON WEISENMILLER: Great. So, Kristen
Carter from the Grant Management Associates.

MS. CARTER: Good afternoon, thank you. My comments have a lot less to do with the actual proposal and more to do with the solicitation process because my company works with a variety of clients that hit all the various sectors that you’re working in.

And there are some common themes that come about. We own a grant writing company that works with a variety of clients and when you’re thinking about the match requirements that go into this type of a solicitation, especially with research and development, R&D type activities, often it is difficult, if not impossible, for our clients to meet the requirements to produce a letter of commitment in the short time frame of this solicitation.

So, something that you might want to consider doing and we’re seeing this coming up on the federal level, and elsewhere, is that you could award more points in the solicitation process for letters of firm commitment that are submitted with the application but -- however, it’s not required as part of the application process.

So, that will allow for companies that don’t have an ability, on a short notice, to come up with those letters but could, potentially, come up with the
Because we agree that matching funds are a smart way of investing these dollars is to maximize those opportunities.

So, that’s something that the staff may want to consider in the solicitation process.

The other thing is a pre-proposal process which really helps to guide the applicants. It’s a lot less burdensome on the application process to -- and a lot less costly, time wise, to participate in a pre-proposal solicitation process.

But if the staff could then give some feedback to those applicants, as they go into a full application, in the areas that they would like to see strengthened, that also helps quite a bit for our clients to produce an application that is really, clearly in alignment with what you hope to get is to get that feedback.

And we saw that just recently in the Sun Shot application process. It was really incredibly helpful for our clients.

So, those are two areas that I think would be really helpful.

The last one would be with royalties. I know in the past, with the PIER program, that some of our successful applicants have had to pull their potential
contracts because of the royalty clauses. So, if you do anticipate trying to obtain that, those clauses into this process, I would, you know, second guess that. Because I know that for many of the companies that we worked with that was a burden, it wasn’t going to happen for them. Okay.

CHAIRPERSON WEISENMILLER: Thanks. Again, I would note we’ve had two audits done on royalties, one at PIER and then one statewide, and it’s been a very strong push from the Legislature. You know, those are the facts.

MS. CARTER: Yeah, and I realize that.

CHAIRPERSON WEISENMILLER: Laurie, do you have any comments on those questions, on those suggestions?

MS. TEN HOPE: I think they’re good suggestions. We’re entertaining ways that we might do our solicitations in a more expeditious way and this is actually not going to necessarily be faster to do a two stage. But, yes, we’ll take it under consideration. We’ve done two stages for some of our solicitations. We did it for the IAW demonstration projects and I think it was helpful for both the applicants and for ourselves.

CHAIRPERSON WEISENMILLER: Great. Blair Swezey from SunPower.
MR. SWEZEY: Thank you, Chair Weisenmiller.

Commissioner McAllister, good morning, Kevin.

First, like others, I want to recognize the tremendous effort that obviously went into this plan to put it together in such a short time frame.

Second, I want to echo the comments of Andy Schwartz on the appropriateness of including NSHP funding in the Investment Plan based on the CPUC’s previous determination and the passage of SB1018.

Clearly, NSHP contributes to the achievement of the CSI program requirements, in addition to the government’s 12-gigawatt goal for California, and for distributed generation, and the CEC’s goal of zero net energy homes by 2020.

And so I commend -- we want to commend the CEC for including NSHP in the Investment Plan.

We do have a couple concerns that we’ll address in written comments. The first, echoing both CBIA and SEIA is the -- both the amount and the timing of the funding, particularly with uncertainty about payback of the previously borrowed funds.

I appreciate Commissioner Peterman’s previous comments about the declining incentive schedule and such. But the goal here is to avoid program interruption and the uncertainty that goes along with
that for the market, and for the building industry.

And then the second are proposed changes in the incentive reservation term. And I’m not entirely clear on what’s driving that, something with the funding and the appropriations schedule for EPIC versus PGC.

But, you know, the current reservation term really was based on a lot of work that had previously been done with the industry in determining the proper approach for the program.

So, we’d like to understand a little more about what is driving that because the builders really do need an adequate planning period in order to implement the program effectively.

So with that thank you and we will be submitting written comments.

CHAIRPERSON WEISENMILLER: Great, thank you.

Pam, do you have -- do you want to talk about that aspect?

MS. DOUGMAN: Sure. The NSHP currently has continuous appropriation authority and that allows us to work out a time frame that works best for the building industry, the PV providers.

But now, under EPIC, we do not any longer have continuous appropriation and so that will affect the time that we have available to hold -- to encumber the
money before we -- so, it looks like a three-year reservation period may be difficult to continue.

CHAIRPERSON WEISENMILLER: Colin Plumb, Coulomb Technologies?

MS. QUINN: I was already able to provide some input and we’ll be putting in written comments, thank you.

CHAIRPERSON WEISENMILLER: Okay, thank you.

Paul Mason, Pacific Forest Trust.

MR. MASON: Good morning, thanks for the opportunity to make some comments; Paul Mason with Pacific Forest Trust.

And I also want to just echo the comments that a lot of other folks have made this morning about the amount of work that the staff has put into this report. I think it’s very impressive and very helpful, and we’ll provide additional comments by Monday.

I just want to take a moment and look for some clarification around biomass, in particular, and the use of forest biomass. And I’m hoping that some of the areas where the document calls for some assessments that we can be sure that we’re leaving the opportunity to do some sustainability assessment.

So that as we’re looking at additional facilities utilizing forest biomass, that we’re being
careful and clear that the sourcing of that fuel is helping the forest and the surrounding area become more resilient and better prepared for the changing climate and that we’re not drawing excessively on those forest areas and, you know, causing adverse environmental impacts.

I think those sorts of assessments will be very helpful. It’s probably also worth looking at, if we’re providing other sorts of support to some of these facilities, that there are some requirements that, even if we’re not specifically funding assessments, that they are meeting some sustainability criteria so that we’re not investing in a facility that is not advancing these other broad goals of leaving the forested landscape more resilient, rather than less. Thanks.

CHAIRPERSON WEISENMILLER: Okay, thank you.

Questions?

COMMISSIONER PETERMAN: I’ll just add the comment that in the 2012 Bioenergy Action Plan, which came out last month, that mentioned kind of these issues of the importance of sustainability and sustainable harvesting have come up.

And so I would encourage staff to look at that plan to get a sense for some of those overall considerations that have been raised. Thank you.
MR. MASON: Okay, thank you.

MS. TEN HOPE: I’ll just note that we have good crossover with the staff involved in the Bioenergy Plan and the EPIC Plan.

And, Gary, do you want to make any comment to clarify?

MR. O’NEIL: We can definitely add a clarification in the plan, but it was our thought that it would fit within the description of some of the applied research for bioenergy.

MR. MASON: Oh, thank you.

CHAIRPERSON WEISENMILLER: A representative from ReVision.

MR. PREVISO: Thanks for having me. I, equally, am -- it’s nice to be back.

I equally have been impressed by the plan, itself. And in particular I was very impressed by the inclusion of marine energy, namely offshore wind and wave.

I’ve been working on these topics for over a decade now in California, in Sacramento. We’re a small company, five technical engineers on staff.

And we do a lot of support for the U.S. Department of Energy, for National Labs Sandia and NREL.

We work a lot with universities.
And I think it just is important here to outline the opportunity here. When we look at resource assessments for California, we can see that the potential for generation of electricity from offshore wind and waste combined actually exceeds the States potential or the State’s electricity consumption. So, a tremendous opportunity here to actually tap into an unexplored utility-scale, renewable energy source which really hasn’t been done before in California, so I’m glad that California’s waking up to this.

I just want to sort of outline, maybe, the high-level points of what I think is important, as you said, of going down this road.

And the first one is it’s really important to get some demonstrations out into the water. And that’s important, both from a technical perspective, but also to explore the environmental effects that these technologies may have to develop a better understanding of the public perception of these technologies.

So, it’s sort of what brings everything together in a sense.

And I want to point out, and I’ve said this before, but there’s some opportunities in Southern California, in particular, to develop something like
that close to an offshore oil and gas installation, like Platform Irene, or some of these installations down there.

It would cut down tremendously in cost. It would also eliminate some of the permitting hurdles.

But we’ve done a little bit of preliminary assessments and we think within a three-year time period, which is this next period of the Investment Plan, I believe you could actually fully permit a site and get it shovel-ready, in a sense.

The second point I want to make, just looking at your road maps, obviously, a lot of work remains to be done in terms of looking at sort of R&D type work that needs to be done.

And I want to outline some of the areas that I identify as high --

CHAIRPERSON WEISENMILLER: You know, you’re going to have to summarize, briefly, and then file written comments.

MR. PREVISO: Okay, sure. So, basically, research activities are going to focus around resource characterization, infrastructure characterization, environmental studies and take economic assessments.

And, finally, I’m very supportive of developing some sort of a California technology cluster.
And I will close at that and we’ll have some
detailed written comments on everything.

CHAIRPERSON WEISENMILLER: Yeah, thank you very
much. Although, again, I would note what we’ve found
putting wind machines in solar thermal throughout the
State is eventually the military comes in and says not
there.

MR. PREVISO: Uh-hum.

CHAIRPERSON WEISENMILLER: And they have similar
cconcerns on the offshore that one needs to factor into
the planning.

MR. PREVISO: Yeah, that’s actually a very good
point. What I would encourage you to do is really look
at what the Navy’s doing in this field, that they’re
very interested in marine renewables, and maybe there
may be some partnership opportunities.

CHAIRPERSON WEISENMILLER: There may be some
partnership. But again, they’ve also put areas where
they’re doing Stealth testing, which they do not want
wind machines in, period.

MR. PREVISO: Yeah, absolutely.

CHAIRPERSON WEISENMILLER: Okay, thank you,
looking forward to your comments.

Leonard Devanna from Clean Energy Systems.

MR. DEVANNA: Good afternoon. I would like to
thank you for the opportunity to provide comments today. And I’d like to congratulate the Commission and the staff for putting an excellent report together as far as an Investment Plan. It has very many positive features and I recognize under a tight time constraint.

I would like to just use Clean Energy System as an example of what funding of companies can do. Clean Energy Systems was founded with two PIER grants several years ago. Today we have a market cap of $100 million Fortune 500 Company investors, and have created many jobs in the California area.

The reason for my comments or coming here today is there was another report done earlier, funded by the California Energy Commission, and it was called “California Energy Future: The View to 2050.”

And this, as I understand it, was done by the California Council on Science and Technology, and it was report, a two-year study as far as what technology advancements had to be made in the energy system to achieve AB32 reduction requirements. And as I looked over this report and compare it with this, there are at least 8 to 10 initiatives that they said there should be advances in these fields, such as achieving 100 percent carbon capture utilization, achieving zero emission load balancing plants, achieving
net zero greenhouse gas emissions with biofuels, and de-
carbonizing technologies that de-carbonize natural gas
to hydrogen.

And as I looked at this plan my concern was if parties propose projects in these areas, which kind of this independent study identified as important, I wanted to be certain there was a match.

And my request is can you look through this report and be certain there was some place that the technologies they identified here kind of have at least a tag place where they could be funded under this grant program?

CHAIRPERSON WEISENMILLER: Again, that’s a good point, but part of our concern is focus. So, it helps to identify that things drop out as we add things.

MR. DEVANNA: That’s correct. This is a pretty precise eight recommendations, I’ll leave that to your staff.

And I suggest, perhaps, it should be a strategic objective to identify, to achieve the AB32 reductions because this crosses all fields, whether it’s photo, biofuels, et cetera. Thank you very much.

CHAIRPERSON WEISENMILLER: Thank you.

COMMISSIONER PETERMAN: I just wanted to quickly interject, in case we lose some people on the phone or
in the room, that we just consulted with staff to see if
we can give at least one more business day for comments.
Is that okay, Director ten Hope?

MS. TEN HOPE: Yes, although everyone on the
team is looking at me like what? Yes.

COMMISSIONER PETERMAN: It’s an incredibly tight
schedule and, frankly, we could have used these comments
a week ago. But just acknowledging that it would be
good to have one more working day so people can reflect
a little bit on the conversation today and not spend all
your Sundays together trying to file your comments, so
if we can make that Tuesday as the deadline, much
appreciated. Thanks.

CHAIRPERSON WEISENMILLER: Good. Dan Chia,
Solar City.

MR. CHIA: Chairman, Commissioners, Dan Chia
with Solar City. Thank you for the opportunity for me
to testify today.

Solar City’s a leading, fully integrated, clean
energy provider in the nation and this State, with over
1,000 California employees, and 11 warehouses and
facilities throughout the State.

We’re an active participant in the New Solar
Homes Partnership.

It has submitted and reserved almost 1,600
systems on new homes and hope to build zero net energy
homes in the State, including about 300 at the West
Village Project on the UC Davis campus.

So, thank you to the PUC and the Governor for
their leadership on the EPIC program in general and for
your leadership in folding new solar -- taking the
orphaned New Solar Program under your wings and
recognizing the importance of it in meeting both CSI and
the Governor’s DG goals.

I wanted to associate my comments with Bob
Raymer at the Building Industry, as well as my two solar
colleagues at SunPower and SEIA.

I would add that SEIA requested $40 million a
year in funding based on a simple sort of math, the
balance of the statutory authorized budget, which is
$400 million, and the remaining years of the CSI program
through 2016. So, it was a very basic sort of
arithmetic.

So, we would request clarification on how the
$25 million was arrived at and how it, importantly,
relates to the statutory goal of $400 million for the
program.

And I would know that it’s -- the way I
interpret the statute, an absolutely number and not a
ceiling.
So, new solar is, I think, unique in the EPIC Investment Plan in that the budget has already been set by the Legislature. And while we certainly support the notion that incentives should reflect declines in prices, we ask that there be some semblance of association between the budget amount and the demand.

As Mr. Raymer has mentioned, we are on the cusp of market transformation in this program. Solar, as a standard feature, on homes, just like granite countertops, is unprecedented and a phenomenal achievement that we hope to expand throughout the building industry in California.

So, clarification on that number is important to us. So, if you deduct the $50 million from the balance, which estimated about $200 million, you arrive at about $150 million for the last two years of the program.

And we would submit that the opposite would be appropriate given the cusp of where we are on the development, and decline those numbers or budget as the market is transformed.

We believe this is a consistent approach, or an approach consistent with the PUC’s phase 2 decision and, in fact, the decision precisely supported this approach.

Finally, we thank Commissioner Peterman for your leadership in overseeing this program and look forward
to working with you on future changes to the guidebook
and, certainly, participation in a working group to
guide further changes of the program. Thank you very
much.

COMMISSIONER PETERMAN: Thank you for your
comments and we’ll see what additional clarification we
can provide.

Appreciate, again, you’ve been a very active
member in our New Solar Homes Partnership Program, Solar
City has.

I’d just reiterate my other comment that the
statute does have a $400 million budget in it, although
there was no -- as you know, no funding associated with
that funding stream which is now how we’re in this
position. And it also has a 400-megawatt goal.

And so, again, we’re looking at what does it
take in terms of dollar amount to get to that 400-
megawatt goal, but I think there could be some more
clarity in the plan on that. So, we’ll take those
considerations under advisement. And appreciate your
comments you’ll submit, thank you.

CHAIRPERSON WEISENMILLER: Okay, Valerie Winn,
PG&E.

MS. WINN: Good afternoon, Valerie Winn with
Pacific Gas & Electric Company. As one of the other
parties who is putting together an investment plan for EPIC, I can truly appreciate the time and the effort that’s going in, that the CEC has committed to this process.

And I have to say the work on your plan is actually, you know, helping all of us because we’re able to look at your very robust plan and look at ours, and try to figure out where there are overlaps, where we might want to streamline things and to, you know, reduce any duplication. And that’s been very helpful.

It’s been a very collaborative process with sharing of information and we look forward to continuing, over the next few weeks, to have those discussions.

And once we have the Investment Plans, you know, move forward as we implement these things. So, we really feel that those efforts to reduce any duplication will really help us ensure that our customers’ money, that’s going towards these research efforts, is going to be spent most effectively.

One other topic that’s been mentioned today is the New Solar Homes Partnership. And as you know, PG&E does work with the Energy Commission in administering that program.

And we are encouraged by the idea of additional
workshops to look for ways to streamline some of the
efforts there and to reduce some of the burdens. And we
look forward to working on those later in the fall.

Lastly, for those who aren’t aware, there’s
going to be a webinar tomorrow that the three IOUs are
having to talk about their investment plans. And so if
anyone needs information on that webinar, I’m happy to
take their cards and share that information with them.

Thank you.

COMMISSIONER PETERMAN: Valerie, to the extent
that there’s folks who are on WebEx, who might be
interested in the webinar, is there a website I can go
to find information?

MS. WINN: They can just send me an e-mail and
it’s Valerie, Valerie.winn@pge.com, and I’ll get that
information to them.

COMMISSIONER PETERMAN: Thank you very much.

MS. WINN: Sure thing.

MS. DOUGHMAN: There’s a link to the notice for
the webinar on the Energy Commission’s EPIC webpage as
well.

COMMISSIONER PETERMAN: All right, then go there
first and don’t pester Valerie at her personal e-mail.

EPIC webpage, if you want more information about the
utilities’ webinar. Thanks.
CHAIRPERSON WEISENMILLER: Okay, do we have any comments on the phone?

MS. TEN HOPE: We do. I have one comment that a gentleman asked to be read and Rachel may have some additional ones.

This is from Boaz, who asks, “Is there currently an initiative that supports demonstrations of technologies that protect birds and other animals from being harmed by electric infrastructure and/or wind turbines? These same technologies obviously increase reliability.”

And so I would call his attention to the strategic objective S5 and, specifically, the initiative S5.2, which is research on sensitive species and habitats to inform renewable energy planning and deployment.

So, it’s certainly envisioned that work on sensitive species and science that would inform renewable development and fossil generation be part of this Investment Plan.

We also, we have one comment from Arthur O’Donnell, at the CPUC, who’s asking “whether any awards have been made in 2012, besides the KEMA Tech support contract since the CEC approval of the plan is not expected until May 2013, and how will 2012 funding be
guided by this proposed plan, and will uncommitted funds be carried over to 2013 solicitations?"

So, first of all I want to clarify that the -- there have been no awards made for EPIC Program funds. The KEMA contract that’s referenced is PIER funds and was approved last May.

So, we have some support funds to develop the Investment Plan, but program funds won’t be expended until the CPUC approves the plan in 2013 and we have budget authority to spend the EPIC funds.

The 2012 funding, it’s our understanding that this is a three-year plan and that the solicitations we would roll out in 2013, basically a year and a half worth of funding and pick up the remainder in 2014.

So, the 2012 would be expended over the course of the next two years, once the plan is approved and authorized.

And I believe we have some other questions. Is this Sashu? Sashu Constantine wants to make her own comments on market facilitation.

MR. CONSTANTINE: His comments.

MS. TEN HOPE: Sorry.

MR. CONSTANTINE: Thank you. Good afternoon.

MS. TEN HOPE: I’m sorry.

MR. CONSTANTINE: That’s okay.
Good afternoon, this is Sashu Constantine, I’m the Director of Policy for California Center For Sustainable Energy. Chairman, Commissioner Peterman, Commissioner McAllister and everyone, thank you for this opportunity to comment.

I want to join the growing chorus of folks who are lavishing praise on staff and both the CEC and the CPUC for the excellent work on this Investment Plan. It covers a lot of areas that we are very supportive of and I will speak to a few of them, and we will also submit written comments highlighting what we think are some of the priorities going forward.

I do want to echo some of the comments earlier today, especially from Peter Miller at NRDC, but only in his tone, which have also just reflected a support, and praise for the collaborative elements of this plan; but also to his comments about the sort of smorgasbord or menu-like qualities of this proposal. We are looking for sort of a list of chef specials, if you will, on that menu.

I think we really like the transportation elements and some of the renewables. We were very supportive of the NSHP element, echoing what the solar folks have said, Blair at SunPower, and Dan at Solar City.
The bulk of our comments and the bulk of our interest is on the market implementation side, both the website and the portal information, but also the analysis and the dissemination of information.

One of the things that I think could be prioritized here is the consumer-facing, or ratepayer-facing, or public-facing dissemination of that. And not just for program evaluation, but for use out in the market.

We have a number of historical programs that provide data, but they’re not necessarily unified, there isn’t a single web portal.

We have statewide brands, Energy Upgrade California, California Solar Statistic, which is part of the CSI Program and the Go-Solar California brand and website.

This is a widely used database, with a lot of really useful information, but it’s not necessarily fully coordinated with information from ERP or from the New Solar Homes Program, for example.

And this EPIC Investment Plan provides a great opportunity to build a platform that can consolidate and coordinate that kind of information. We think that will be tremendously useful to the market going forward, and consumers.
Also, want to really highlight what NAAC said about workforce development and targeting communities, disadvantaged communities.

And I was particularly encouraged to hear earlier today, and I think in a written comment, that there’s an opening for longer-term funding.

I think when we talk about investment in workforce development, and in training centers, and in demonstration centers, and targeted areas it isn’t quite as useful to think about one-off funding. We want to think about long-term sustained funding, so that the investments that we’re making in this plan really carry through to future policy.

So, thank you again for this opportunity and we will look forward to submitting written comments on Tuesday, rather than Monday, so thank you for that.

CHAIRPERSON WEISENMILLER: Thank you.

Commissioners, are there any questions or comments from this gentleman?

Next on the line?

MS. TEN HOPE: Carol Zabin from UC Berkeley.

Carol Zabin?

Do we have any others? That’s the last I have from you.

MR. MC HUGH: Can you hear me?
CHAIRPERSON WEISENMILLER: Yes, go ahead.

MR. MC HUGH: Thank you very much, Chair Weisenmiller and Commissioner McAllister. This is a well-done portfolio of various measures and advanced technologies to continue to look at.

I just had a few comments on an otherwise excellent portfolio.

The first one is in the -- I don’t know what you call it, area one, which has to do with efficiency. By the way someone’s -- can you guys hear me?

CHAIRPERSON WEISENMILLER: Yes, we can.

MR. MC HUGH: Hello?

CHAIRPERSON WEISENMILLER: We can hear you, keep going.

MR. MC HUGH: In S1 there’s discussion of building efficiency, but no segment for process efficiency, you know, industrial process efficiency.

And if you look at, you know, just as an example, there’s a huge amount of opportunity for savings with compressed air systems, you know, and there’s a variety of other processes that are used widely across the State that this just seems like a gap that, you know, should be addressed.

The other one is I’d like to give a special emphasis and support to the recommendation about indoor
air quality because I actually see that, especially for residential buildings, issues associated with indoor air quality are probably a key barrier to having ultra-efficient buildings because of the amount of toxics in building materials.

And prior work done by Offerman, for a joint PIER CARB study showed that 100 percent of the new buildings in their sample actually exceeded the Prop. 65 exposure values. You know, theoretically, you should actually be putting a Prop. 65 label on every new house for formaldehyde.

And in addition that there’s a substantial amount of benzene, you know, which is in gasoline, found in two-thirds of those houses, which kind of indicates that maybe the California Energy Commission approach of de-pressurizing houses for indoor air quality is perhaps not a great idea.

So, I think there’s a huge amount of research that needs to go into actually identifying are there any buildings out there, new buildings that are essentially non-toxic.

So, anyway, I think this is a huge area and I wanted to emphasize that.

In addition -- can you guys still hear me?

COMMISSIONER PETERMAN: Yeah, but I want to let
you know that you have a three-minute limit, so you’re approaching that.

MR. MC HUGH: Okay, I’ll be quick with all these.

COMMISSIONER PETERMAN: So, I’m going to ask you to start wrapping up, but make sure you submit -- feel free to wrap up some comments, but also submit some of the detail you just talked about in your written comments, as well. Thank you.

MR. MC HUGH: Sure.

COMMISSIONER PETERMAN: Uh-hum.

MR. MC HUGH: So the next thing is in terms of clean energy --

CHAIRPERSON WEISENMILLER: Actually, make it the last thing.

MR. MC HUGH: -- I would recommend that the Commission look at learning from other countries. You know, Germany has, you know, installed 300 watts per person in their country, whereas California has around 25 watts per person installed.

And so if we’re looking at what are the grid impacts and those sorts of things, certainly some research learning from those high penetration countries would be fantastic.

CHAIRPERSON WEISENMILLER: Okay, again, as you
wrap up -- you’re out of time. But we do have a KEMA study that looked at Germany versus Spain.

MR. MC HUGH: Okay.

CHAIRPERSON WEISENMILLER: But your three minutes are shot. Thanks.

COMMISSIONER PETERMAN: You can find that study on our website, we commissioned it last year.

MR. MC HUGH: Okay.

CHAIRPERSON WEISENMILLER: Okay, next.

MR. MC HUGH: Okay, um --

CHAIRPERSON WEISENMILLER: No, you’re done.

Next.

MR. MC HUGH: Okay, thank you.

COMMISSIONER PETERMAN: Sir, thank you for your comments.

MS. TEN HOPE: I’m going to try one more time for Carol Zabin. So, going once, Carol?

COMMISSIONER PETERMAN: We’ll look for Dr. Zabin’s written comments, as well.

MS. TEN HOPE: All right, I have a couple more.

CHAIRPERSON WEISENMILLER: Sure.

MS. TEN HOPE: From Rajat Chakraborti, from CH2M HILL, is asking “if there is any research planned on the fate of invasive species due to climate change?”

I wouldn’t consider -- this is not in scope of
what we’ve proposed in the Investment Plan. We do have climate science related to electricity, the electricity system. So, if this ties back to the climate impact on electricity infrastructure or directly, electricity infrastructure on climate, we would be looking at research in that area.

But I would mention that there is a broad coalition of State agencies that are looking at climate mitigation and adaptation across all sectors. So this is a potential topic for, you know, some statewide research, but probably not in the EPIC Investment Plan.

The next question is from Tom Faust. “Will there be a set-aside for small business under 500 employees? This sector always finds it difficult to provide matches, thus eliminating them from nearly all awards.”

This is an area that I would confirm with our contract attorneys, but I don’t believe we’ve set aside preferential -- preferential set-aside for small businesses or other entities.

We do have a preferential credit as part of the scoring criteria within our solicitations. But that question, I’ll confirm these questions that came over WebEx to make sure that people have the right answers.

Any other WebEx participants?
Haresh Kamath from EPRI wants to make a short statement. And we will be unmuting you here.

MR. KAMATH: Very good, thank you. I’m Haresh Kamath from the Electric Power Research Institute. We are a nonprofit research organization in public interest research in energy and environment, and I actually work in the energy storage area.

Just commenting on the energy storage part of this plan, we believe that this is a very comprehensive plan in energy storage, both in technology development, as well as modeling, and in actual grid deployment of technologies.

And we think that this is a very effective way of developing the technology further.

I would like to point out that one of the areas here, really, in terms of energy storage, is making sure that it is a viable option for utilities and for other stakeholders to manage the grid in a way that makes sense, both from a safe and reliable standpoint, as well as the cost-effective standpoint, both the technical and the economic considerations are important.

One area that I think was mentioned in the Investment Plan, but may not have a lot of detail, was the development of very specific tools to understand what the value of the storage is in specific context and
understand how those tools can be used by utilities to
determine the best place for storage and how they best
can be used.

This is an area of research that really does not
have a lot of practical experience behind it because the
grid technologies have not been deployed very widely.

But there’s a lot of interplay between
development of those tools and the actual deployment of
storage that is going to be important as this research
area evolves.

At the same time it’s very important, also, that
utilities in California and elsewhere have opportunities
to actually deploy storage on their grids which is a
rather difficult prospect right now, given the expense
of those technologies.

Although many of those technologies are being
developed in the State of California and so we have
local vendors that can support their development, it’s
certainly advantageous if there are research programs
that are developed by the California Energy Commission
to actually aid in the deployment of such technologies,
and in the long-term operation of those technologies so
that we get data back and are able to influence our
models to more accurately understand where the values of
storage are and how they can be deployed in the most
Finally, I think it’s well understood that the technology for energy storage today is good, but it can always get better and there are underlying technologies that can be very important in making storage more effective and more economical in the future.

So, it’s very important that the research portfolio include some basic research that could be applied in the many research institutions in California to develop new technologies for the future, looking at the long term in the -- you know, beyond the ten-year horizon to make sure that a future generation will have even more cost-effective storage and, ultimately, a more reliable and affordable source of electricity for the future. Thank you.

CHAIRPERSON WEISENMILLER: Thank you.

Anyone else?

MS. TEN HOPE: Oh, yeah, sorry, Carol Zabin is now on the line.

MS. ZABIN: Hello?

MS. TEN HOPE: Hello. Please go ahead.

MS. ZABIN: Can you -- okay, you can hear me, now?

MS. TEN HOPE: Yes, we can hear you, yes.

MS. ZABIN: Okay, great. Okay, thank you very
much for hearing my comments and, again, I also commend
the hard work that the Commission and staff has invested
in this plan.

I want to limit my comments to the workforce
education and training section, and I appreciate you
guys referencing our study that we did for the CPUC and
the IOUs.

I do want to suggest, my overall comment is that
it would be really beneficial to immediately create a
task force, even in the rewriting of this plan that
brings in the labor agency.

With really all due respect for your vast areas
of expertise, the way this plan is written does, once
again, show that workforce is not a core competency of
the Energy Commission because there’s still a lack of
understanding of how the workforce system works.

And so I have three very specific comments.

One, we commend you for recognizing apprenticeship and
making sure that those -- that we align our training
investments with apprenticeship.

And in our written comments we’ll point out the
inaccuracies of the way you have framed that component.

Second, on the study, you know, the study that
we did really did carry out many of the tasks that you
have -- that you have outlined for that study.
So, our feeling is that it might not be the best use of resources to do another study when, in fact, a lot of the recommendations in the study can need resources to be implemented.

The two areas that haven’t been addressed are really looking at the costs and benefits of standards and certifications, and the actual, rather than the predicted, job impact of the energy investment.

Those were the two that are highlighted in the CPUC decision and could be an area for EPIC funding.

And, finally, real quick, on the web portal, we have a factor in the needs assessment about how hard it is to do job-matching services and how any web portal that is trying to match job openings with people looking for jobs really should be part of the millions of dollars of resources that the Employment Development Department spends on trying to do job matching. And that one more investment in a jobs board, on an Energy Commission site, is probably a wasted resource.

Okay, thanks a lot.

CHAIRPERSON WEISENMILLER: Carol, thank you very much for your comments. Certainly, any real -- the more specific your comments are and, again, there’s a very short time, the more we can incorporate those.

COMMISSIONER PETERMAN: And I’ll just add,
Carol, that we’ve been talking to the Employment Development Department about their portal, you know, following up with some of the workshops we had this summer on -- for the Renewable Action Plan.

And to the extent that we can leverage an existing resource, maybe get more other Agency input, you know, get the word out about that portal and maybe even prove the ability to search for clean energy jobs there, I think that would be useful.

So, I think your point is well-taken about not creating a duplicative measure and we’re talking about how we can coordinate better with them. So, thanks.

COMMISSIONER MC ALLISTER: So, I guess I would just point out that from the Commission’s perspective it seems like, Carol, you’re up here with a different group of Commission staff and Commissioners reasonably often, I think, so maybe we should try to consolidate our coordination and make it a bit more of a cross-cutting discussion, both at the staff level and at the Commissioner level so we can -- I know I need some education about how the agencies -- how the other agencies that you work actually structure their activities, and what resources are actually available out there. So, maybe I need that education just personally.
But I kind of feel like there’s very spotty information in both our stakeholders and definitely within the Commission, at some level, about what infrastructure’s already available out there, you know, so maybe --

CHAIRPERSON WEISENMILLER: Within the Bagley-Keene context, we will be complying with that.

COMMISSIONER MC ALLISTER: Yes. No, absolutely, of course.

But this same discussion is being had in other proceedings and I think to the extent it’s duplicative and we can actually streamline just a little bit, within the Bagley-Keene constraints, we should. So, thanks.

CHAIRPERSON WEISENMILLER: Others?

MS. TEN HOPE: No others.

CHAIRPERSON WEISENMILLER: Okay. So, this may be repetitive, but are there any public comments?

Okay, it’s like everyone’s busy, ready to write. So, let’s talk about concluding remarks on this. We got a lot to absorb this morning and I want to thank everyone for their comments.

You know, the reality, as I’ve said, is staff’s put a lot of work in, there’s a very limited time between now and when this is going to be done.

Certainly, we appreciate comments from people to help us...
sharpen these.

One of the things that I think is important, maybe reflecting on some of the comments today, is that the Energy Commission’s role in R&D, we always have to look at how that fits into a much broader context.

You know, there are certainly federal funds, there’s EPRI, there’s any number of things and we have our own unique niche that we’re trying to deal with.

And in that construct we are really driven by where our competencies are and by basically a State policy framework.

So that, you know, I think there was an allusion to a report that we co-funded, but the reality is that our contractors don’t set State policy. The Governor does, the Legislature does, certainly, the commissions do.

You know, and as part of that we have to focus on the things that we can do, which tend to be not a lot of hardware stuff, there’s just not a lot of money for any of the big demos on carbon sequestration, or whatever.

But we have to really look on what we really need in California, you know, and that tends to be what types of resources or issues the State is facing.

My classic example is geothermal. I remember
talking to people on a federal who say that’s very
insignificant to the U.S. It’s very, very significant
in California, so that our dollars have to be focused on
those sorts of things. We have very unique air quality
issues, very unique renewable integration issues that no
one else in this country is facing, certainly is facing
elsewhere.

And so we really have to focus on those. And by
policy we have a very high emphasis on energy efficiency
as part of our future so that, again, it’s very
important that we spent our dollars there, that we
certainly not overlap with what’s going on more in the
federal or EPRI level where, you know, again, certainly,
in the first Brown administrative I would say the
emphasis was much less on energy efficiency and
renewables on the Department of Energy, or EPRI, or the
utilities.

So, again, that’s where our dollars go and we
have to figure out how to maximize the value of that
since obviously the State has -- you know, we need
innovation but, also, these are very tough times budget-
wise.

You know, we have to be able to justify to the
Legislature, and to the ratepayers, ultimately, that
these dollars are well spent. That at a time when the
State is going through horrific cutbacks, you know, that this has to be a real model of maximizing value going forward.

COMMISSIONER PETERMAN: I’ll just add that, following up on the Chair’s comments, I support and continue to support this plan, including opportunities across all the categories, not only for technologies, but strategies, tools, analysis that can get you to those goals, as well.

And so when you’re looking through the strategies and the plan think about what can fit in that broader set of contexts.

And, indeed, this is an incredibly important program. The research the State has done to date, the public interest research has been very important. I think it’s had a lot of payoffs. We want to continue with that under the EPIC mission.

And looking forward to your comments; I thought your comments today were very focused. It shows you paid attention to the plan and reviewed the draft, and that was very appreciated.

And I look forward to the comments we’ll receive from you, filed on Tuesday. Thank you.

COMMISSIONER MC ALLISTER: I just want to reiterate a job well done to everybody, and thank Chair
Weisenmiller and Commissioner Peterman for their leadership on this.

And then, again, just point out that energy efficiency -- you know, even if an idea doesn’t get funded I mean I think staff does such a good job of keeping on point and knowing what the sort of cutting edge looks like that that benefits the Commission and our programs in a much more near-term way, I think, and could do so even more.

And I think on the energy efficiency side there’s actually stuff in this plan that I’m going to be on the edge of my seat, you know, seeing the results of. And I think, you know, working with Laurie and her team on this could actually benefit our programs, just in ideation, actually, in the near term.

Particularly, I’m thinking AB758, but there are other opportunities. So, I think this plan really lays out a lot of good stuff in the future and I’m looking forward to the implementation and results. So, thanks.

MS. TEN HOPE: Could I just make a couple of quick comments?

I first want to just take a minute and acknowledge the team and clarify that there are two divisions that are involved in putting this plan together, the Research & Development Division, and also
Energy Efficiency & Renewable Division, particularly the Renewable Energy Office.

And so it’s been a nice collaboration across both divisions.

And I just want to acknowledge Erik and Pam that you heard from today, but also Sherrill Neidick. And so people know you, just raise your hand; Michael Sokol, Silas Bauer, Jamie Patterson, and Beth Chambers, and Joe O’Hagan, who’s stepped away, so he’s not here.

But, you know, feel free to talk to these individuals about the plan as well, and some of the initiatives that went into it.

And now we’re going to call you out. There he is, okay.

And I just wanted to mention that the presentation is out and it includes this budget right here, which is not in the Investment Plan online.

If I could underscore what the Chair and Commissioner said our -- you know, several people have talked about this as a menu. We are going to -- we’ve heard that and, basically, sort of know that ourselves, that we need to signal in the plan that’s submitted the priorities.

So, you know, if you can identify, you know, your top three or the bottom three, you know, we’re
going to be doing that in the next plan.

Oh, I’m sorry, I missed Garry O’Neil. How could I do that? So, the last EPIC member that -- thank you, Pam.

And Garry’s made really significant contributions, so I apologize for not mentioning you.

And, finally, I think I said the three things, the presentation, the team, and focused comments would be really helpful.

CHAIRPERSON WEISENMILLER: Yeah and again, I think you should assume you don’t have to repeat your prior comments.

MS. TEN HOPE: Correct.

CHAIRPERSON WEISENMILLER: But, you know, certainly in terms of the more specific you can be, the better, you know, as an edit as opposed to something that’s fairly general that the staff won’t be able to respond to quickly.

But, certainly, all comments are appreciated.

So, this meeting’s adjourned. Thanks, thanks again.

(Whereupon, at 1:17 p.m., the Workshop was adjourned.)

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