

BEFORE THE
CALIFORNIA ENERGY COMMISSION

In the Matter of:) Docket No. 12-EPIC-01
)
Implementation of the) Webinar RE:
Investment Plans for the) First Triennial
Electric Program Investment) Investment Plan
Charge Program)

Joint Webinar on the Implementation of 2012-2014
Triennial Investment Plans for the
Electric Program Investment Charge Program

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

WEDNESDAY, DECEMBER 18, 2013
1:30 P.M.

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P R O C E E D I N G S

DECEMBER 18, 2013 1:30 p.m.

MS. DOUGHMAN: Welcome to the Joint Webinar on the Implementation of the 2012-2014 Triennial Investment Plans for the Electric Program Investment Charge Program.

This is a two-hour webinar, so we will go from 1:30 to 3:30. Our first speaker will be Cem Turhal with the Energy Division of the California Public Utilities Commission.

MR. TURHAL: All right, well hello everybody, my name is Cem Turhal and I'm an Analyst at the CPUC. And before I begin my introduction, I would like to thank everyone that's involved in getting the decision out, especially the CEC, PG&E, SCE, and SDG&E.

While we wait for our slides to get loaded up here, please save your questions for the end of my presentation so that I can have a nice flow with it and we can start as soon as the Powerpoint gets ready here.

MS. DOUGHMAN: Gem, can you see the Powerpoint?

MR. TURHAL: I think I'm still two slides down. All right, one more. All right,

1 excellent. Thank you.

2 So where to begin. In the series of
3 decisions the CPUC determined that the Commission
4 has a compelling interest in providing ongoing
5 support for the development and deployment of new
6 and emerging technologies in California. This is
7 despite the function of the Public Goods charge,
8 which was in December of 2012. To address the
9 gap in May of 2012, the CPUC adopted the Phase 2
10 EPIC Decision, establishing a framework for the
11 deployment of funds to provide ongoing support
12 for the development and deployment of next
13 generation clean energy technologies.

14 The EPIC program is focused primarily on
15 supporting pre-commercial efforts with some
16 additional support for more market facilitation
17 activities, which we'll discuss in detail later
18 in my slides.

19 The support the EPIC Program provides is
20 largely intended to help fill gaps in the funding
21 that exists for technologies forced to rely
22 exclusively on private capital.

23 In the next few slides, we'll cover the
24 funding amounts for each of the funding areas.

25 Thank you. I think someone is on the phone, if

1 you can mute yourself that would be great.

2 As you can see for the years between 2013
3 and 2020, the EPIC funding will be \$162 million
4 annually. I should note that in 2012, however,
5 the program budget is \$143 million, so \$143
6 million in 2012 between 2013 and 2020 is \$162
7 million. So this \$143 million was based on the
8 Commission's Phase 1 decision in the EPIC
9 Proceeding, with that amount to be allocated
10 across the different areas in the same
11 proportions as the budget shown in this table.

12 The CEC will have the Lion's share of the
13 budget with the ability to fund all three of the
14 funding elements, Applied Research, Technology
15 Demonstration and Deployment, as well as Market
16 Facilitation. The EPIC Decision limits the other
17 three program administrators, the utilities,
18 mainly PG&E, SCE, and SDG&E, to spend funds only
19 in the Technology Demonstration and Deployment
20 category.

21 Under the terms of the Decision, the IOUs
22 are prohibited from using the funding they are
23 administrating for generation projects. As noted
24 below the table, a minimum of 20 percent of the
25 CEC's funding for Technology Demonstration and

1 Deployment must be used for bioenergy projects.

2 Next slide, please.

3 Here, we'll take a look at funding by
4 each funding administrator. The table showing
5 the EPIC funding was directly taken out of the
6 November 14th EPIC Decision, which we'll get into
7 in a bit. As you can see, the total amount
8 authorized for the 2012-2014 Triennial investment
9 cycle is \$467 million, with only a year left to
10 make these allocations. Basically 2014 is it.

11 Given that shortened timeframe with the
12 initial Investment Plan cycle, and for the
13 purpose of the initial Investment Plan cycle,
14 ordering Paragraph 39 of the latest EPIC Decision
15 allows the uncommitted and unencumbered funds
16 that would under normal circumstances be returned
17 to ratepayers, be rolled over as if those funds
18 were encumbered or committed.

19 So if this doesn't make sense to you,
20 take a look at ordering paragraph 39 of the EPIC
21 Decision, which we'll discuss further, and that
22 should kind of alleviate any questions you may
23 have. Next slide, please.

24 Since November 1st of 2012, the CPUC and
25 the California Legislature have been bestowing

1 some exemplary regulatory delay on the EPIC
2 Program; however, as of November 14, 2013, we
3 have a final EPIC Decision that approved the
4 Proposed Investment Plans of the Program
5 Administrators. I'm sure, like you, we're very
6 happy to announce that the EPIC Program is
7 finally live, which is great, and now the program
8 administrators will award contract grants to
9 successful bidders, and report the award
10 recipients in their annual report filings, which
11 is due on February 20th of 2014, and will continue
12 to be February 28th until basically 2020. So next
13 slide, please.

14 The CPUC will continue to provide
15 oversight for the program and will begin its
16 deliberation on the second Investment cycle in
17 early 2014 once the Program Administrators file
18 their second round of Proposed Investment Plan
19 applications with the CPUC.

20 Let's take a look at the next slide for
21 the anticipated schedule for the EPIC Program's
22 approval activities, which was also directly
23 taken out of the CPUC Decision. So next slide,
24 please.

25 As you can see with the November 2013

1 approval of the first Investment Plan, we're a
2 bit behind, but I think that it will all work
3 out. If the assigned ALG does not change the
4 schedule, we can expect to have some public
5 discussions on the Program Administrator's second
6 Proposed Investment Plan filing some time in Q1
7 2014, after which the CPUC will deliberate on the
8 proposed application and, if all goes well, issue
9 a Decision in December of 2014, launching the
10 secondary investment cycle of the EPIC Program at
11 the end of 2014. Next slide, please.

12 As I mentioned before, the Program
13 Administrators will file annual reports starting
14 February 20th of 2014. The contents of this
15 report were proscribed by the November 14th
16 Decision and you can see that the contents of
17 this report on Attachment 5 of that Decision, so
18 if you scroll to the very very end of the
19 document, you'll see Attachment 5, which will
20 kind of give you a flavor for what's going to be
21 in the report. So briefly, the reports will have
22 an Executive Summary, introduction and overview
23 of the process, progress, and then discuss the
24 Program Administrator's budgets, and the
25 specifics of each project.

1 Furthermore, the Program Administrators
2 will file Excel spreadsheets -- this is kind of
3 new -- as per Attachment 6, you will see if you
4 again scroll further past Attachment 5, all the
5 specifics of Award of Projects that the Program
6 Administrators will file and the CPUC will remain
7 public after review. And, again, you can see the
8 contents of this report on Attachment 6 of the
9 November 14th Decision. Next slide, please.

10 Now that the program is live, I encourage
11 you to sign up with the EPIC Service List to
12 receive new information and updates on the
13 program. I thank the CEC for having a very up-
14 to-date EPIC webpage from the get go, and
15 encourage the IOUs to follow suit in a reasonable
16 timeframe. That being said, the CPUC is also
17 creating its own webpage and it should be up on
18 the CPUC's CPUC.ca.gov webpage before the end of
19 the year. I expect the IOUs to have something by
20 the end of the year, if not early January. Next
21 slide, please.

22 If you have any questions or comments,
23 here is my contact information. Feel free to
24 give me a call after reviewing the November 14th
25 Decision. I think that concludes my intro.

1 Thank you for listening. I'll take any questions
2 if there are any. Seeing none, I guess, Laurie,
3 Pam, this is all you.

4 MS. DOUGHMAN: Are there any questions
5 for Cem? If you have a question, please raise
6 your hand on the Webinar. Okay, let me -- Megan?
7 Megan had raised her hand?

8 MEGAN: Can you hear me?

9 MS. DOUGHMAN: Yes, please go ahead,
10 Megan.

11 MEGAN: Is this conversation going to be
12 available on line?

13 MS. DOUGHMAN: Can you repeat your
14 question, please?

15 MEGAN: Is the slideshow presentation
16 available online?

17 MS. DOUGHMAN: It will be available
18 shortly and also a recording of the Webinar with
19 the slides will be available, as well.

20 MEGAN: Can you give a location?

21 MS. DOUGHMAN: Sorry?

22 MEGAN: Can you give a location for that?

23 MS. DOUGHMAN: Yes. That is -- I'll
24 bring it up in a moment.

25 MEGAN: Thank you.

1 MS. DOUGHMAN: The location is
2 www.energy.ca.gov/research/epic. Are there any
3 other questions? Okay, so let me go over the
4 agenda.

5 So we had our introduction from Cem
6 Turhal. We will now go to the Investor Owned
7 Utility EPIC Investment Framework. Then, we will
8 have an overview from Southern California Edison,
9 Pacific Gas & Electric, and San Diego Gas &
10 Electric. Then we will have public comments on
11 the Investor Owned Utility Investment Plans.
12 Then we will have the Energy Commission
13 Investment Plan overview followed by public
14 comment on the Energy Commission's EPIC
15 Investment Plan.

16 So now I'd like to turn this over to
17 Ferhaan Jawed of Pacific Gas & Electric Company.

18 MR. JAWED: All right. Good afternoon.
19 I'm just going to cover the highlights of the
20 Joint Utilities focus in terms of the Investment
21 areas. There are about three slides before we
22 get into more details into each of the different
23 IOU program areas.

24 So I'm on slide 13, so for those
25 following along. So as we've talked about

1 earlier, the IOUs have about 20 percent of the
2 overall EPIC budget, while the CEC has the rest.
3 As you can see in the middle of the page, the
4 utilities will focus on Technology Demonstration
5 and Deployment, that investment area. Meanwhile,
6 the CEC will invest in this area, as well as
7 Applied Research and Market Facilitation.

8 At the bottom of the page, what we want
9 to talk a little bit about is where the IOUs are
10 focused; more specifically, that is, in the Grid
11 Operations/Market Design, Transmission, and
12 Distribution. The two categories that you see in
13 the gray color there are the ones which have a
14 little bit more elaboration, so as Cem had
15 mentioned earlier, the utilities cannot invest in
16 the generation only area, the CEC may. Then the
17 other note is about the demand side management
18 category, so while the utilities are not
19 precluded from investing in this area, there are
20 existing proceedings in the Demand Response area
21 and the Energy Efficiency area that already cover
22 this area. So the key here for the utilities is
23 to make sure the activities are coordinated and
24 they don't duplicate work with EPIC focus areas.

25 So let's move to the next slide here and

1 we'll talk a little bit in more detail about what
2 TD and D means. As you can see, the official
3 definition is there. As we've discussed, the
4 IOUs are focusing their investment in this one
5 area, they have more limited funds that are more
6 focused for that reason. The utilities' main
7 role is to conduct grid-specific demonstrations,
8 to evaluate the cost, benefits, and feasibility
9 of new technologies in real world applications.

10 So these factors are unique for a given
11 utility given their specific grid composition,
12 their IT landscape, their customer profile, and
13 their business requirements.

14 So, for example, demonstration would
15 validate compatibility of new technology within
16 an existing utility's IT infrastructure. This
17 could include things like the telecom network,
18 business applications, cyber security, and
19 related activities to inform what full
20 development costs would look like.

21 So utility-specific demonstration is
22 essential to inform real costs, benefits, and
23 feasibility at full deployment. Of course, the
24 utilities do need to stay engaged with the entire
25 technology maturation curve, meaning that that

1 would include all the way beginning with early
2 R&D to final deployment. And what that means is
3 that the IOUs expect to stay informed and
4 involved in the earlier stage research
5 activities. This would happen through
6 partnerships with research organizations,
7 academia, the business community, as well as the
8 CEC.

9 So, next let's turn to the IOU Program
10 Framework for organizing the various EPIC
11 projects. For those participating today, you may
12 remember this framework from previous workshops
13 and webinars. The framework was developed based
14 on significant collaboration with stakeholders
15 and others to really highlight the specific areas
16 that are important to long term development of
17 the 21st Century Electric Grid.

18 At a high level, the framework is
19 intended to do three things: first, it captures
20 the overarching EPIC guiding principles of
21 safety, reliability and affordability; second, it
22 demonstrates the direct linkage between the
23 utilities' proposed investment areas and key
24 policy requirements like the 33 percent renewable
25 RPS Standard, but it also links in major trends,

1 trends like infrastructure -- aging
2 infrastructure, that is -- workforce development
3 needs, and others that will significantly impact
4 the 21st Century Grid.

5 Finally, this framework outlines three
6 primary investment areas and one foundational or
7 cross-cutting category, which the IOUs have
8 identified as critical areas. So these are the
9 key areas that we believe require the focused,
10 sustained and collaborative TD&D investment in
11 order to modernize the grid and to provide the
12 long term benefits that Californians are
13 interested in.

14 This is our framework, one to organize
15 our various projects, but also to give context to
16 the value chain categories that we talked about
17 previously.

18 So now that you have a high level
19 perspective on how the IOUs are approaching EPIC,
20 we'll turn to each of the three IOUs more
21 specifically to understand how each of those
22 programs vary. So we'll start first with SCE.

23 MS. DOUGHMAN: So our next speaker will
24 be Percy Haralson.

25 MR. HARALSON: Good afternoon.

1 MS. DOUGHMAN: Can you come up to the
2 podium, please?

3 MR. HARALSON: Sure. Good afternoon.
4 Southern California Edison has organized their
5 projects into four different areas starting with
6 energy resource integration, grid modernization
7 and optimization, customer focused products and
8 services, and cross-cutting foundational
9 strategies and technologies.

10 We have a total of 14 projects that we'll
11 be executing in the EPIC project. The first
12 project that I want to talk about is our
13 Superconducting Transformer Project. The goal of
14 this project is to go ahead and test out a
15 superconducting transformer at the distribution
16 level, it's a 28 MVA Transformer that would be
17 installed in our MacArthur Substation. The
18 capabilities of this device cover a number of
19 different areas, one is the inherent increased
20 efficiency of a superconducting transformer, and
21 also the built-in or kind of natural fault
22 current limiting capability that would be built
23 into the device as during a fault when it is
24 pushed out of being super-cooled.

25 This project is the first of its kind and

1 originally this was a walk-a-shop project, it's
2 now SCX, and we'll go ahead and we'll be showing
3 the operational efficiency gains that we'll see
4 with this, associated with the losses that you'd
5 normally have in a typical transformer. And
6 again, we'll be testing out the functionality of
7 the inherent Fault Current Limiting capabilities
8 of this device. It will be liquid nitrogen
9 cooled instead of oil, so it also has some safety
10 advantages to it, also. And again, from EPIC
11 standpoint, its increased reliability, improved
12 power system performance, and lower operating
13 costs, increased safety, and efficient use of
14 ratepayer monies.

15 The second project is an Advanced VAR
16 Control Scheme for the SCE Transmission System.
17 And the basic concerns, problems and gap to be
18 addressed is to demonstrate efficient voltage
19 regulation of different voltage levels, we'll be
20 executing this at the Devers substation while
21 minimizing the number of switching actions.
22 We'll be monitoring and eliminating circular VAR
23 flows among multiple parallel transformer banks
24 in the substation, increasing efficiency, and
25 providing early detection of unusual operating

1 conditions in highly stressed system scenarios.
2 So we'll be reducing the switching events, or the
3 number of switching events, on equipment then for
4 increased reliability.

5 On the technology and strategy to be
6 demonstrated, we're increasing the renewables
7 integration by improving VAR resources, reserves,
8 and allowing for higher efficiencies for energy
9 transmission through the transmission system,
10 then. It also will reduce failures associated
11 with our load tap changers by reducing the number
12 of load tap changer operations that would occur
13 then.

14 And again, this fits into increasing
15 reliability, improved power system performance
16 and lower operating costs, increased safety, and
17 efficient use of ratepayer money.

18 Our third project is our Substation
19 Automation-3 Phase III. This is a continuation
20 of our new generation of substation automation,
21 that's Substation Automation-3, and this will
22 extend its capabilities into better managed
23 critical cyber security systems. This would be
24 using the Common Cyber Security Services would be
25 built into the Gateway as part of this project.

1 It will allow us to install the system with
2 legacy devices still in an existing substation,
3 so we'll be pushing new technology out to the
4 substation and letting it be able to meld with
5 legacy systems and to, again, one of the key
6 pieces that will be the gateway device which will
7 allow multiple protocol conversions, then.

8 As part of this project, too, we will
9 have enhanced alarm and intelligent alarming to
10 better allow the operator to control our system
11 and also recognize early detection of issues or
12 problems with the system.

13 The last piece of this will be to go
14 ahead and have an improved factory acceptance
15 testing methodology for it, and site acceptance
16 testing processes to more easily be able to
17 integrate this into other substations into the
18 future.

19 This is a continuation of the project
20 that we've started in the Irvine Smart Grid
21 Demonstration Project and will be a future phase,
22 then, or extension of that work. Again, this
23 supports increased reliability, improved power
24 system performance and lower operating costs,
25 increased safety, and efficient use of ratepayer

1 money.

2 Our next steps for Southern California
3 Edison for the EPIC Projects will be in Q1 of
4 2014. We will be releasing a large RFP for
5 Specialty Engineering and Technical Services,
6 which we will then out of that create a pool of
7 approved resources that can then be applied to
8 all of these different projects, all 14 projects,
9 then, that are in the portfolio. SCE has a two-
10 tiered approach and we believe this is consistent
11 with CPUC's and EPIC procurement requirements.
12 And RFI was previously released in August of 2013
13 for this reason, and the industry expressed
14 significant interest in it. So we expect the RFP
15 to go very smoothly. Thank you.

16 MS. DOUGHMAN: Thank you. Our next
17 speaker will be Suna Taymaz.

18 MS. TAYMAZ: Thanks, Pam. And hello,
19 everyone. My name is Suna Taymaz and I'm part of
20 the Smart Grid Research & Development Project
21 Management Office for PG&E. I will be walking
22 you through PG&E's EPIC project portfolio in a
23 similar fashion to SoCal Edison.

24 PG&E has proposed projects under the
25 Common Investment Framework shared by all three

1 utilities, and that was presented earlier. This
2 slide that you're seeing represents our current
3 portfolio projects broken out under the three
4 main investment categories, Energy Resources
5 Integration, Grid Modernization and Optimization,
6 and Customer Focused Projects and Services.

7 Like SoCal Edison, we are still at the
8 early stages of program launch with solicitations
9 coming in 2014. The EPIC Program was approved
10 just about a month ago, but we are still very
11 excited to take the next step to begin to execute
12 against this Technology Demonstration and
13 Deployment Portfolio.

14 We are continuing to evaluate, develop
15 and refine these projects as part of an ongoing
16 process, so these projects may continue to morph.
17 The first phase of each project is really to vet
18 out the specific requirements which will drive
19 scope, timing and feasibility.

20 I'd like to describe two projects that
21 are beginning to launch and heading into plan
22 analyze phase. The first one is from the Grid
23 Modernization and Optimization category and the
24 title is Safety and Reliability through New Data
25 Analytics Techniques.

1 So I'm sure you've all heard the term Big
2 Data, which is a hot topic in the utilities right
3 now. As part of this EPIC project, PG&E is
4 evaluating a very specific use case in this area
5 to see how we could apply new Big Data
6 technologies and strategies to enhance public and
7 system safety and reliability.

8 There have been significant advances over
9 the last few years in data mining, analytics, and
10 data correlation, and we seek to use these
11 technologies to feed into our Asset Management
12 and Investment Planning practices. With these
13 advanced data technologies, we believe we can
14 yield targeted methods that focus our spending
15 most effectively to increase the safety of our
16 system and the public safety.

17 So we've nicknamed this tool the Star
18 Tool, or System Tool for Asset Risk. The tool
19 will incorporate some of those newer data
20 concepts. It will take in various attributes
21 related to our assets, I've listed just a few
22 here. So for example, asset condition and
23 operating history. And then we can combine this
24 with external data, for example, geography,
25 weather, other geospatial data, and then, as part

1 of Phase 1 of this project, we may determine
2 other data available and also use some of the
3 advanced data techniques to look at data
4 correlation, unstructured queries, other methods
5 to better identify and prioritize safety and
6 reliability risks.

7 As I mentioned, we are in the very early
8 stages of this project, but very excited about it
9 was we look at exploring this new risk-based tool
10 and methodology that allows us to explicitly and
11 methodically target and lower risk across the
12 entire territory.

13 The second project I'll describe is from
14 the category Customer Focused Products and
15 Services. The project name is Appliance-level
16 Load Disaggregation. The challenge today is
17 customers can see their monthly energy costs on
18 their bill, but it doesn't necessarily tell you
19 at a granular level what's driving the energy
20 consumption. If the customer had this
21 information, they could perhaps make a different
22 decision, turn down a specific appliance, look
23 for a more energy efficient appliance, or take
24 other actions. So this demonstration project
25 would provide the customer with itemized

1 presentation of their energy usage. In fact,
2 itemized billing was ranked in customer research
3 in 2012 by 71 percent of residential customers as
4 the most valuable potential energy management
5 tool.

6 So walking through an example, a customer
7 would be able to log onto a dashboard, perhaps on
8 their mobile device, or on the Web, and look at
9 costs by major appliance. They could run
10 analytics, perhaps look for spikes in usage,
11 other anomalies. Perhaps they could access the
12 raw data and run their own queries. They could
13 project monthly usage or get sent alerts based on
14 what the customer defines as the criteria. It
15 could also set up or receive personalized energy
16 saving tips.

17 We believe this project has customer
18 benefits in terms of lower energy costs, as well
19 as societal benefits in terms of energy
20 conservation, and also spurring new technology
21 and innovation in the residential energy
22 management space.

23 So in describing these projects, as I
24 mentioned, they're all at the early stages, but
25 our efforts are underway to launch the EPIC

1 portfolio, making sure that the individual
2 projects meet our own internal project readiness
3 and governance controls.

4 Some of you will be interested in
5 procurements, and we will also be providing
6 information at the end of all three utility
7 presentations on how to contact us. We also
8 anticipate procurements, technology and services-
9 related procurement starting shortly and ongoing
10 through 2014, especially as you progress into
11 Phase 1 and Phase 2 of projects, and have
12 assessed feasibility and requirements in the plan
13 analyze phase.

14 Thank you very much and I'll turn it over
15 to San Diego Gas & Electric.

16 MS. DOUGHMAN: Our next speaker is Dr.
17 Frank R. Goodman, Jr. from San Diego Gas &
18 Electric.

19 DR. GOODMAN: Thank you, Pam. I'd like
20 to give a quick overview as the other IOUs did on
21 our plans relative to implementation of the EPIC
22 Triennial I program. And you see here on this
23 first slide a same structure as what we heard
24 from the other IOUs, and you see that San Diego
25 Gas & Electric has focused its activities in the

1 two areas from the original Chevron organization
2 that was shown at the start. And the first area
3 on the left is grid modernization and
4 optimization, and we had proposed in our first
5 Triennial Plan a bundle of five interrelated
6 projects on Advanced Distribution Automation.
7 And they cover the five major pillars of Advanced
8 Distribution Automation, which is actually the
9 heart of Smart Grid and was the original place
10 where the concept of Smart Grid evolved.

11 And I will get into a couple of the
12 illustrative examples from that list of five in a
13 minute, but I want to mention on the right side
14 you see Customer Focused Work, and this is on
15 this Electric Vehicle Submetering Pilot. There
16 was a separate order from the EPIC proceeding
17 that requested that the three IOUs in California
18 work together on a rather large Submetering
19 pilot, and in the course of the decision process
20 around EPIC, we were at first asked to use EPIC
21 money, and then encouraged to use EPIC money to
22 fund the pilot because we had no other way of
23 funding SDG&E's participation in that pilot. So
24 SDG&E plans to use the EPIC funds for the
25 Submetering pilots, but this is still tentative

1 and pending final approval, and it's gone up to
2 our executive level and, since we were encouraged
3 by the PUC to do so in the final decision on
4 EPIC, and we have no other source of funds for
5 the Submetering, we will redirect some of the
6 money from the left column over to the right
7 column, and that will mean shortening the list in
8 the left column. And we'll work our way up from
9 the bottom, the final estimate for the
10 Submetering requirement is still being made, but
11 we anticipate having to eliminate two or three
12 programs from the left column, working our way up
13 from the bottom and making those eliminations.

14 So the two illustrative examples that I'm
15 going to show you are going to be the first two
16 bullets on the left because those are the ones
17 that should survive this redirection of funds
18 and, as I say, all of that is still tentative and
19 pending final approval, and we have our legal and
20 regulatory people settling on the details of what
21 is needed working with the PUC at this time, the
22 CPUC.

23 Okay, so turning now to those two
24 illustrative examples, we have Smart Distribution
25 Circuit Demonstration as the first. And here, we

1 want to identify preferred circuit components and
2 designs for a more fully automated distribution
3 system, and we have by happenstance been going
4 out and fixing problems as we get higher and
5 higher level of photovoltaics, in particular, and
6 now also PEV, the Electric Vehicles coming in,
7 but the photovoltaics are well down the road in
8 giving us the problems of high penetration that
9 have been talked about, as in the future for 20
10 years or more; they're real and they're happening
11 now.

12 Voltage is a particular problem. So
13 we've been going out and fixing the problems on
14 individual circuits to keep them up and
15 accommodative of more distributed generation. We
16 want to move toward an advanced circuit design
17 that incorporates features that make it easily
18 adaptive to a future type of circuit situation
19 with high penetrations of generation and electric
20 vehicles. For example, do you want to use the
21 distributed generation as a part of the solution
22 to some of the problems it creates, or bring in
23 other power electronic components to solve your
24 volt VAR problems, what mix of switch capacitor
25 banks or power electronic devices do you want to

1 use? Those are the kinds of things we're sorting
2 out in that project through some trials and some
3 simulation on what's called a Real Time Digital
4 Simulator. And some of the pilots may be done in
5 a laboratory environment, and some of them out in
6 actual circuits. And the primary and secondary
7 principles met are increased reliability,
8 improved performance -- and that includes lower
9 operating losses, electrical losses, increased
10 safety, and efficient use of ratepayer money.
11 And then, because you're reducing your electrical
12 losses, you actually will need less imported
13 power that might come from an emission generation
14 system. And then finally, it will encourage
15 economic development because it will make our
16 system more friendly towards customers who want
17 to have things like generation and electric
18 vehicles.

19 Finally, the Grid Support Functions are
20 the second illustrative example; this is Grid
21 Support Functions of Distributed Energy
22 Resources. And here we are trying to get at the
23 value proposition, in other words, we're already
24 testing smart inverters, if you will, to see if
25 the necessary functionality to enable grid

1 support functions of DER is there. But in this
2 program we have here, we want to get at the value
3 proposition because, if you're going to have your
4 DER used for non-traditional things other than
5 being a kilowatt hour source, using it as a part
6 of your overall integrated volt VAR solution, or
7 as a monitoring node, or status information on
8 the system at the location of the generation, or
9 other uses that have been identified, and I have
10 kind of a laundry list at the first bullet there.
11 You have to really have the value proposition and
12 some of these things may work in specific
13 applications and specific circuit situations, and
14 some of them may not in other situations. So we
15 want to find out what the value is of these
16 different functionalities that we could use DER
17 for in different application situations. And it
18 may be there are some things that are not going
19 to pan out economically, so we don't want the
20 industry to be getting too far down the road on
21 large-scale deployments of four quadrant
22 inverters with the hope that they will solve your
23 volt VAR problems, and find out that the value
24 just isn't there, or that there's some
25 practicality issue like do inverters fail too

1 often for you to be able to depend on using DER
2 that way.

3 And now, in both of these projects, I
4 have the same bullet list at the bottom, you're
5 basically doing the same thing in terms of what
6 the primary and secondary principles are, and in
7 both of these projects, and if we are able to
8 move to a third project in that column, depending
9 on how the Submetering price settles, we have the
10 underlying goal of informing our Smart Grid
11 Deployment Program. And we had worked out a
12 fairly elaborate cross-benefit analysis for these
13 programs I'm describing with our Smart Grid
14 Deployment Team because the information coming
15 out of these R&D projects are intended to guide
16 their choices in the deployment programs.

17 Okay, so that ends my presentation and I
18 am now going to move to speaking on behalf of all
19 the IOUs in kind of a wrap-up.

20 The next steps ongoing through 2014 will
21 be the implementation of our Triennial Investment
22 Plan, including project-specific solicitations.
23 All of the IOUs have a common approach on their
24 procurement process and the structuring of the
25 projects to where we first get our ducks in order

1 internally and get the teams that are at the
2 utilities lined up, and they will then move
3 toward a procurement process. But the ultimate
4 work is done in some cases as a combination of
5 utility and outside vendors.

6 And second, we have the second Triennial
7 planning process beginning. I skipped one there,
8 the first Triennial report being due, as already
9 mentioned by Cem in his presentation, but then we
10 move into the second Triennial planning process
11 with a stakeholder workshop in March and that's
12 where we present the plan the way we did for the
13 first Triennial last -- in 2012, it was, we had
14 presented it in about September and gotten
15 reactions through a Webinar process. We're going
16 to repeat that for the second Triennial plan and
17 shooting for March, and then for a final
18 submission of the second Triennial plan in May.
19 And all of these dates are tentative, but that is
20 our working timeline at the moment.

21 And then we'll move to questions now, and
22 this is questions for all of the IOUs and, while
23 we're doing that, we thought we would leave this
24 contact information up for those who want to note
25 it.

1 MS. DOUGHMAN: Okay, so we have a
2 question from Boar Ur, and I'll give the name to
3 the Court Reporter. By the way, we will have a
4 transcript posted and this is being recorded, and
5 the recording will be posted on our webpage, as
6 well. So the question is: "Are all EPIC funds
7 already allocated to projects the utilities are
8 describing? In the projects they are mentioning,
9 are they open to vendors? Or were those already
10 selected?"

11 DR. GOODMAN: Yeah, I'll take a crack at
12 that, and then I -- oh, sure -- Frank Goodman,
13 San Diego Gas & Electric, and I'll start, but I
14 encourage the other IOUs to chime in. Our funds
15 are fully committed; in fact, because of what I
16 described there with the two columns and an
17 unexpected addition to the customer area on
18 submetering, we've gotten more money and we're
19 having to eliminate or defer projects, as I said.
20 The way our programs work is we will be setting
21 up the internal team that a vendor would work
22 with, whether it's in a lab project or out in the
23 field in our system, but obviously the vendor, if
24 we're going to deploy their product, they need to
25 be working with our internal team to do that.

1 But it would lead, after we get the internal
2 stuff set up, to a competitive procurement where
3 we solicit a vendor for the needed equipment or
4 software, whichever it may be.

5 MR. HARALSON: This is Percy Haralson
6 with Southern California Edison. And again, our
7 14 projects that we have currently in the
8 portfolio are fully funded by the EPIC Program
9 and so all of those funds are accounted for. But
10 from the standpoint of whether there is a chance
11 for vendors to participate and things like that,
12 of course, as part of our RFP Program that I
13 talked about earlier we will be putting out RFPs
14 for participation in these projects with it, so
15 that's how they would be involved.

16 MS. TAYMAZ: And this is Suna Taymaz for
17 PG&E. So we do have a list of approved projects
18 from the original plan. That being said, we
19 still are in the plan and analyze phase to look
20 at those costs, look at the scope. All projects,
21 whether they be on this list, modified, or
22 potentially even new projects would also go
23 through a similar competitive procurement
24 process. And so the best way to get in touch
25 about those would be the contact info listed on

1 the slide, as well as the eventual webpages we'll
2 be putting up.

3 MS. DOUGHMAN: Okay, thank you. We have
4 another question. This is from Arthur O'Donnell.
5 "Could you please repeat the Decision number that
6 caused a diversion of San Diego Gas & Electric
7 EPIC funding to Electric Vehicles?"

8 DR. GOODMAN: This is Frank Goodman of
9 San Diego Gas & Electric. I don't have that
10 available right now. Perhaps that could be sent
11 out to you later. It's an OIR number. Ah, thank
12 you. D.13-11-002. D.13-11-002. So did that
13 answer the question? Thank you, Pam.

14 MS. DOUGHMAN: I see we have another
15 question coming. This question is from Daniel
16 Malarkey. "What advice would the IOUs have for a
17 vendor who thinks they have a product or service
18 that is relevant to a project that has been
19 described?"

20 MS. TAYMAZ: This is Suna Taymaz from
21 Pacific Gas & Electric. Part of the EPIC Program
22 is to understand what's out there, understand the
23 market, what potential services are out there,
24 what tools and technologies vendors are
25 developing. So right now the best way really is

1 to get in touch via the contact information
2 provided. I can speak for PG&E. We have a
3 procurement process. What we'd like to do is
4 make sure we understand which vendors are
5 interested in EPIC projects, and so what we're
6 looking for first is to send the contact
7 information via the emails provided, so that we
8 start to build that base of kind of vendors
9 interested in the EPIC space. Once you provide
10 us with your contact information, and perhaps
11 which specific project you're interested in, then
12 we can help connect you to those project teams.

13 MS. DOUGMAN: Okay, we're going to unmute
14 all the telephone lines. So if you do not have a
15 question, please mute your own line. If you do
16 have a question, please state your name and your
17 affiliation.

18 Okay, can you state your name, please?
19 Okay, it sounds like we do not have any questions
20 at this time on the telephone lines, so we will
21 mute the lines. And we will proceed to the
22 presentation on the Energy Commission's Triennial
23 Investment Plan. The speaker will be Erik
24 Stokes.

25 MR. STOKES: Thanks, Pam. My name is

1 Erik Stokes and I'll be presenting the Energy
2 Commission's portion of this Webinar. This first
3 slide here provides a visual of what we're trying
4 to help accomplish with the EPIC Program, and
5 it's really this transformation of the power grid
6 from a system in which power flows to customers
7 from a centralized fossil fuel power station to a
8 system that is cleaner, more decentralized, more
9 flexible, and less carbon intensive.

10 It's also a system where customers have
11 greater control and more choices over their
12 energy use, but it's also a system that's going
13 to be more complex and will require Smart
14 technologies to help manage this complexity in a
15 more optimal manner.

16 The next slide outlines the process we
17 went through in the development and the adoption
18 of the Investment Plan started back in August of
19 2012 with Scoping Workshops both in Northern and
20 Southern California. A couple of the key
21 milestones during this process, one back in
22 October, was the CEC adoption of the proposed
23 Triennial Investment Plan and its submission to
24 the CPUC. And then the next key milestone, this
25 was about a month ago when the CPUC adopted a

1 decision essentially approving a slightly
2 modified version of the Energy Commission's
3 proposed Investment Plan, which brings us to now
4 where we're going to start implementing this
5 Investment Plan.

6 One of the over-arching frameworks for
7 the EPIC Program is this concept of an invasion
8 pipeline, which represents the different
9 development stages that new technologies go
10 through on their way from research to a
11 commercialized product. Within this pipeline,
12 there's a couple funding gaps or Valleys of
13 Death; and one of the objectives with the EPIC
14 Program is to try and help fill these funding
15 gaps and also provide the information and data to
16 help de-risk these new technologies to potential
17 investors and customers.

18 So the next slide here represents at a
19 high level our proposed budget for the Applied
20 Research and Development Area. One of the
21 State's policy goals is the loading order of
22 preferred resources, starting with Efficiency and
23 Demand Response, followed by Distributed
24 Generation and Renewables, and finally
25 Infrastructure Improvements and Clean Fossil Fuel

1 Generation. And as you can see from this table,
2 our budget here reflects the loading order.

3 In the Efficiency and Demand Response
4 space, we're targeting some of the major end-use
5 areas such as lighting, plug loads, and heating
6 and cooling. The State also has some pretty
7 ambitious policies for buildings including Zero
8 Net Energy Buildings, so in this area we'll be
9 looking for some of the new innovative approaches
10 and technologies that can help us achieve these
11 building goals in a cost-effective manner.

12 Under Clean Generation, we have two kind
13 of higher level topics, the first is how we help
14 advance distributed and community-scale
15 technology such as bioenergy and high penetration
16 PV communities. Under Utility-Scale Research,
17 we're looking at areas such as being able to
18 better forecast variable output from renewable
19 facilities such as wind and solar, looking at the
20 role thermal energy storage can play in
21 supporting higher penetrations of renewables onto
22 the Grid.

23 Under Smart Grid, as I mentioned earlier,
24 this kind of system that we're trying to achieve
25 is going to be much more complex, and so some of

1 the technologies here are helping to manage that
2 system in a more efficient and optimal manner.
3 Under the Smart grid enabling clean energy, we
4 have initiatives for advancing communication and
5 control systems, looking at ways to advance
6 innovative storage technologies, as well as
7 developing advance planning tools that can help
8 identify what types of resources the Grid will
9 need looking out into the future, as well as how
10 we can better utilize customer-side resources to
11 better support the Grid.

12 We also have a new area in the Applied
13 R&D Area called "Innovative Clusters." This is
14 an area that probably needs some further
15 stakeholder outreach and it's something you can
16 expect in the future that we'll probably have a
17 workshop or some sort of request for comments to
18 get additional stakeholder input as we further
19 scope this initiative.

20 The next slide shows our high level
21 budget for the Technology Demonstration and
22 Deployment Program area. In the Applied R&D
23 area, we're primarily focused on developing and
24 proving out new technologies. In this area, the
25 focus here is really on scaling up new

1 innovations and beginning to create market pull
2 for these new technologies. We have three broad
3 areas, high level areas under this category. The
4 first is demonstrating emerging efficiency and
5 demand response technologies for the building
6 sector, as well as the industrial, agriculture,
7 and water sector.

8 In the next section for Generation
9 Technologies, one of the requirements of the
10 Phase 2 Decision is that we provide a minimum of
11 \$27 million for Bioenergy Demonstration, so
12 that's reflected in this initiative. Also
13 reflected here is storage and other technologies
14 that can help support the integration of high
15 penetration renewables into the Grid.

16 Under the third area, Energy smart
17 community demonstrations, we have three topics,
18 the first is zero net energy buildings in
19 communities; the second topic is microgrids,
20 looking at how we can further deploy microgrids
21 in IOU territories, and the fourth is
22 demonstrating electric vehicle to grid
23 integration.

24 The third program area is the Market
25 Facilitation area. And initiatives in this area

1 are primarily focused on how do we address the
2 more non-technical barriers to increased
3 penetrations of new technologies into the
4 marketplace, such as making sure there's a
5 trained and adequate workforce and looking at
6 ways to help overcome regulatory hurdles,
7 especially those that may unnecessarily stall new
8 projects. Part of the initiatives in this area
9 will also provide new information and data that
10 can guide new investments and decision making
11 that helps maximize ratepayer benefits.

12 This next slide shows project eligibility
13 criteria for the three program areas. These
14 criteria aren't set in stone and could change,
15 depending on the specific solicitation. But for
16 the most part, they are pretty accurate for what
17 you can expect in the three respective program
18 areas.

19 A couple things to point out: in the area
20 of Matched Funding, the areas of Applied Research
21 and Development and Market Facilitation, matched
22 funding isn't a requirement, but proposals that
23 do provide matched funding will typically score
24 higher. In the Technology Demonstration and
25 Deployment, the solicitations will require that a

1 minimum of 20 percent match funds be required.

2 The next slide outlines kind of what's to
3 come for the Energy Commission's implementation
4 of the EPIC Program, starting in early 2014, the
5 Energy Commission would begin releasing Program
6 Opportunity Notices for select funding
7 initiatives in the Investment Plan.

8 Typically, a Program Opportunity Notice
9 would be posted on the website and it will also
10 be sent out to a number of available Listservs.

11 And we actually have -- this was just
12 posted today, this is a six months look ahead of
13 upcoming funding opportunity announcements, as
14 well as opportunities for feedback on future
15 Program Opportunity Notices. And this is
16 currently on the Energy Commission website. If
17 you go to Research and -- it's up there, and
18 we'll make sure we include that in the Powerpoint
19 that is posted later.

20 So as I mentioned, over the next six
21 months, we'll be releasing Program Opportunity
22 Notices for select funding initiatives. We'll
23 also be having opportunities to get more
24 stakeholder feedback for certain initiatives,
25 either through workshops or requests for

1 comments.

2 Also in 2014, the Energy Commission will
3 start developing the second Triennial Investment
4 Plan which is due to the CPUC in May 2014.

5 And for more information, here is the
6 website for the EPIC Program. This includes
7 upcoming workshops, funding opportunity
8 announcements, and how to get on Listservs.

9 MS. DOUGHMAN: Thank you. Okay, now we
10 will turn to Public Comments and Questions on the
11 Energy Commission's EPIC Investment Plan. So at
12 the beginning of your comment, state your name
13 and any organizational affiliation name. If we
14 cannot get to your comment within the allotted
15 time, please email or mail your comments to
16 Docket@energy.ca.gov and copy
17 Otto.Tang@energy.ca.gov. Indicate EPIC in the
18 subject line and include Docket No. 12-EPIC-01.
19 Also, you can mail comments to the California
20 Energy Commission, Docket Office, Mail Stop 4,
21 regarding Docket No. 12-EPIC-01, 1516 Ninth
22 Street, Sacramento, California 95814-5512.
23 Written comments should be submitted to the
24 Docket Unit by 5:00 p.m. on December 23rd.

25 So first let's go to comments on the

1 WebEx. Okay, it looks like we have a question
2 from Scott Engstrom. "Does PG&E still plan to
3 sponsor a project for subtractive and additive
4 building?"

5 MS. TAYMAZ: This is Suna from PG&E. We
6 had an original plan filed a year ago. Since
7 then, we have removed some projects, which was in
8 our latest filing this year, due to we could not
9 see the benefits or, after further evaluation,
10 they were duplicative, or other items. So the
11 list of projects that we have are those that were
12 represented on the slide. That being said, if
13 there is something that was missed, or a
14 particular project that you either saw there or
15 didn't see there, please email the email link and
16 we can certainly get back to you.

17 MS. DOUGHMAN: Okay, thank you. We have
18 a question from Stephen Morrison. "If a
19 potential project is both Microgrid and Bioenergy
20 focused, what process resolves where an Applicant
21 ought to pitch the project?" This is for the
22 Energy Commission.

23 MS. tENHOPE: This is Laurie tenHope with
24 the Energy Commission. It will be important to
25 look at the details in each posted solicitation.

1 So if you look at the Investment Plan, it will
2 provide some guidance in terms of how each
3 initiative is approached, but really the
4 solicitation is where we outline what type of
5 projects we're looking for. It's possible an
6 application, you know, a proposal could fit in
7 more than one.

8 MR. TANG: Okay, so we have another
9 question from WebEx. This one comes from Elissa
10 Brown from Sierra Nevada Conservancy. Elissa's
11 question is: "Can you give more information about
12 this new category of upcoming funding,
13 demonstrating bioenergy solutions that support
14 California's industries, the environment, and the
15 Grid?"

16 MR. STOKES: Yes. I think the best place
17 to look for more information on that is going to
18 be in the Investment Plan, and I believe it is
19 S13.1 in the Investment Plan.

20 MR. TANG: Okay, the next question is
21 from Shawn Garvey: "Do I understand correctly
22 that in 2014 the funding of entire first phase is
23 available, but in future Triennials will be
24 released on an annualized basis?"

25 MS. TENHOPE: This is Laurie from the

1 Energy Commission. And I'm not sure I understood
2 the question, but I think it's in terms of how
3 funding will be released in the first versus the
4 second plan. The funding that you saw -- funding
5 is collected on an annual basis, and it was
6 collected in 2012, 2013, and 2014. Because we're
7 starting the program basically in January of
8 2014, funds have accumulated and we will be doing
9 more of an accelerated release -- well,
10 "accelerate is probably not the right word --
11 "accumulated release" in 2014. You know, I would
12 expect in the second Investment Plan, it would be
13 more aligned with, you know, slightly delayed
14 from the collection to implementation. But that
15 schedule will be solidified as we develop and
16 implement the second Investment Plan. If any of
17 the other Administrators want to add or does that
18 seem consistent with everybody's thinking?

19 MR. JAWED: Yeah, this is Ferhaan from
20 PG&E. The only think I would add is that there
21 is that capability of extending use of funds from
22 beyond the first Triennial period. So to the
23 extent that the delay in the regulatory process
24 resulted in delayed projects going beyond 2014,
25 there is that capability to spend first Triennial

1 period funds later on. Do you have anything to
2 add?

3 DR. GOODMAN: Yeah. Frank Goodman, San
4 Diego Gas & Electric. In addition to the
5 comments already made, I would add that in the
6 case of some of the programs, and in the case of
7 San Diego Gas & Electric, it was all of our first
8 Triennial Programs, our multi-year projects, and
9 so you won't have annual release of funds, you
10 would have procurements to pick vendors or
11 contractors to do the entire project, which might
12 span the whole three-year execution period for
13 that Triennial Plan.

14 MR. TANG: The next question is from
15 Robit Salve: "Are environmental impacts of
16 renewable energy not considered by the Energy
17 Commission?"

18 MR. STOKES: Yes, they are. They will be
19 in the strategic objective as five of the Applied
20 R&D Area.

21 MR. TANG: The next question comes from
22 Jeff Presley: "What is the deadline for new
23 proposals?"

24 MS. TENHOPE: This is Laurie tenHope.
25 For the Energy Commission, each of the

1 solicitations will list when proposals are due,
2 and so that will vary across the year because
3 they will be released across the year and then
4 the due dates will be specified. If people are
5 interested in being able to provide input for
6 future Investment Plans, that process will begin
7 in the spring of 2014 with an anticipated
8 workshop in March of 2014, and the Final Plan is
9 due May 2014. So if you're interested in kind of
10 shaping direction, you want to participate in the
11 second Investment Plan; if you want to submit a
12 proposal, watch for solicitations.

13 MS. DOUGHMAN: And I just wanted to add
14 that we encourage you to join the email Listserv
15 that is located at
16 www.energy.ca.gov/research/EPIC. We will be
17 distributing information to this Listserv and so
18 it's very important that you sign up to receive
19 messages from the EPIC Listserv.

20 MR. TANG: So the next question comes
21 from Chris Meyers: "Has the CEC consulted with
22 the State Treasurer to establish terms to be
23 imposed as a condition to receive funding, or the
24 State to accrue any intellectual property
25 interest or royalties pursuant to Public Resource

1 Code 25711.5?"

2 MS. tENHOPE: Yes, we have. But the
3 person who has done that follow-up is not
4 available on the Webinar, so that is one of our
5 requirements as part of SB 96 and we have begun
6 those conversations.

7 MR. TANG: The next question comes from
8 Brian: "Will there be clauses in the RFP that
9 prohibit for profit entities from profiting from
10 EPIC funds?"

11 MS. tENHOPE: There are different
12 requirements in a contract versus a grant, and so
13 if the Energy Commission is releasing Program
14 Opportunity Notices for grants, profit is not
15 allowed; if we're releasing an RFP for contract
16 services, it is, so you'll need to pay attention
17 to the solicitation type and what's allowed.

18 MR. TANG: The next question comes from
19 Daniel Malarkey: "Where does one locate on the
20 full webpage the fully approved EPIC Investment
21 Plans for the Utilities?"

22 MS. DOUGHMAN: For each utility, I think
23 -- go ahead, Suna.

24 MS. TAYMAZ: I was going to say I believe
25 they're on the CPUC site right now, I don't have

1 the exact link, it's probably in Cem's
2 presentation here. We will also -- CEC, I
3 believe you may have yours on your website?

4 MS. tENHOPE: Ours is on our website, but
5 I don't believe yours are on our website.

6 MS. TAYMAZ: And then the IOUs, as Cem
7 mentioned, are working to set up a website with
8 this information, as well.

9 MR. TURHAL: If I can chime in, as soon
10 as the CPUC has their website up, this will all
11 be included in our website, as well as links to
12 all the utilities, as well as the CPUC's website.

13 MS. DOUGHMAN: And I want to add that, at
14 the Energy Commission's EPIC webpage, there is a
15 link to the most recent EPIC proceeding,
16 A1211001, as consolidated. And if you go to that
17 link, then you can find all the documents from
18 the proceeding, I believe the IOU Investment
19 Plans are posted here. But as Cem said, the CPUC
20 is also preparing an EPIC webpage, and the IOUs
21 will be preparing EPIC webpages, as well, going
22 forward.

23 MR. TANG: The last question that we have
24 comes from Cathy Higgins: "Why was technology
25 defined as not yet commercial versus the previous

1 California ET definition that included under
2 adopted, thus commercially available, but not
3 new, or not yet being widely used?"

4 MS. DOUGHMAN: This is Pam Doughman. So
5 for bioenergy there are things that are not
6 widely used in California; for example, some air
7 pollution control technologies that the EPIC Plan
8 indicates may be eligible under S13.1. But in
9 general, it's part of the Energy Innovation
10 Pipeline in the technology demonstration and
11 deployment area, so the focus is on providing
12 demonstrations and providing data that can help
13 emerging technologies to become more broadly
14 utilized in California.

15 MR. TANG: The next question comes from
16 Brian: "Regarding the table of upcoming funding
17 opportunities, will some or all of those funding
18 opportunities limit profit?"

19 MS. TENHOPE: I can't answer that at this
20 point.

21 MS. DOUGHMAN: Okay, so we have no more
22 questions on the WebEx. Now, what I'd like to
23 do, we're going to open the lines again, but just
24 before we do, I want to encourage everyone to
25 mute your own telephone line unless you are

1 planning to provide a comment. If you would like
2 to provide a comment, then state your name,
3 organizational affiliation, and then proceed with
4 your comment. Okay, we're going to open the
5 lines.

6 It sounds like there are no questions
7 over the telephone. Okay, so there are a few
8 people here today. Is there anyone in the room
9 that has a question? So if you have additional
10 questions that you would like to raise later, as
11 indicated on this slide you can send them by
12 email to Docket@energy.ca.gov and cc
13 Otto.Tang@energy.ca.gov. Please submit written
14 comments to the Docket Unit by 5:00 p.m. on
15 December 23rd of this year. Laurie, did you want
16 to have any closing comments?

17 MS. TENHOPE: I just want to thank people
18 for their participation online and for the fellow
19 Administrators who are here in the room. I think
20 all of us are really excited to be at this point
21 now where we can launch the program and excited
22 to be starting the work and to work together on
23 these transformational research. Do any of my
24 fellow Administrators want to make any closing
25 comments? Hearing none.

1 MS. DOUGHMAN: Okay, we'll adjourn for
2 today. Thank you, everybody.

3 (Whereupon, at 2:44 p.m., the
4 Webinar adjourned.)

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