

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

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In the Matter of:)
) Docket No. 10-IEP-1G
Preparation of the 2010 Integrated)
Energy Policy Report Update)

Joint Committee Workshop on Clean Energy Jobs and Workforce
Development under the American Recovery and Reinvestment Act

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

THURSDAY, JULY 21, 2010
10:00 A.M.

Reported by:
Kent Odell

 **ORIGINAL**

Commissioners (and their advisors) Present (WebEx)

Karen Douglas, Chairman and Presiding Member, IEPR
Committee, Federal Stimulus Program (Ad Hoc) Committee

Panama Bartholomy, Advisor to Chair Douglas

Anthony Eggert, Associate Member, Federal Stimulus Program
(Ad Hoc) Committee

Laurie ten Hope, Advisor to Jeffrey D. Byron, Associate
Member, Integrated Energy Policy Report Committee

Staff Present:

Suzanne Korosec, IEPR Lead

Also Present

Presenters

Elizabeth Stuart, Lawrence Berkeley National Laboratory
Gail Brownell, Efficiency First
Elaine Gaertner, California Community Colleges Chancellor's
Office, Centers of Excellence
Dr. Robin Walther, California Public Utilities Commission
Chris Tilly, UCLA, Institute for Research on Labor and
Employment (PIER funded)
Barbara Halsey, Executive Director of the California
Workforce Investment Board
Leticia Barajas, LA Trade Tech College
Gail Schwandner, Dean of Workforce Development Fund,
Long Beach City College
Chris Graillat, California Energy Commission
Robin Purdy, Sacramento Employment and Training Agency
Barbara Cox, IBEW-NECA

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1

1 P R O C E E D I N G S

2 JULY 21, 2010

10:06 A.M.

3 MS. KOROSEC: Good morning. I am Suzanne Korosec.
4 I manage the Energy Commission's Integrated Energy Policy
5 Report Unit. And welcome to today's workshop on Clean
6 Energy Jobs and Work Force Development under the American
7 Recovery and Reinvestment Act (ARRA). This workshop is
8 being held jointly by our Energy Commission's Federal
9 Stimulus Program Committee and the Integrated Energy Policy
10 Report Committee.

11 Just a few housekeeping items before we get
12 started. The restrooms are out in the atrium through the
13 double doors and to your left. We do have a snack room at
14 the top of the stairs on the second floor, under the white
15 awning, and if there is any kind of emergency and we need to
16 evacuate the building, please follow the staff out the doors
17 and to the park that is kitty corner to the building, and we
18 will wait there until an all clear signal.

19 Today's workshop is being broadcast through our
20 WebEx teleconferencing system, so please be aware that you
21 are being recorded. The audio recording will be available
22 on our website a few days after the workshop and we will
23 also post a written transcript about two weeks after the
24 workshop.

25 We have a number of presentations today and will

1 have opportunity for Q&A after each presentation. And we
2 will also have an opportunity for more general public
3 comment at the end of the day. At that point, we will take
4 comments first from anybody here in the room who wishes to
5 speak, and then we will turn to the folks who are on the
6 WebEx. For those of you in the room, please use the center
7 podium when you come up to a make a comment or ask a
8 question, so that we can make sure it is captured on the
9 record. And it is also helpful if you can give our Court
10 Reporter a business card so we can make sure that your name
11 and affiliation are also reflected correctly.

12 For those of you joining us through WebEx, you can
13 use the chat function at any time to let the WebEx
14 Coordinator know that you have a question or a comment, and
15 we will open your line at the appropriate time. We do ask
16 the WebEx commenters to speak loudly and clearly so that
17 those of us here in the room can hear you. And I will
18 apologize in advance for any difficulties WebEx listeners
19 may have in hearing the speakers because our system here
20 sometimes is a little bit faint, even though it is very loud
21 here in the room. We are also accepting written comments
22 until the close of business on July 28th, and the notice for
23 today's workshop, which is available on the table out in the
24 foyer, and also on our website, explains the process for
25 submitting those comments.

1 Today's workshop is the fourth of six public
2 workshops that we are holding as part of the 2010 Integrated
3 Energy Policy Report, or IEPR Proceeding. Our first
4 workshop covered transparency and accountability in the use
5 of ARRA funds for energy projects in California. The second
6 focused on local, regional and state government energy
7 retrofit efforts that are being funded by ARRA, the third
8 focused on how the Energy Commission is using its existing
9 funding from its PIER and AB 118 programs, to leverage
10 additional ARRA fundings to help grow our clean tech sector.
11 Today, we will be hearing about the various clean energy
12 workforce and training endeavors that are underway
13 throughout California, to expand training and employment
14 opportunities in the clean energy field, to provide the work
15 force that is going to be needed to support all of the
16 energy efficiency renewable energy and transportation fuel
17 and vehicle development that is going on here in California.
18 Tomorrow, we will be covering Energy Commission's Clean
19 Energy Manufacturing Program, which is providing financial
20 support to businesses, technology developers, vehicle fleet
21 owners, to encourage production of clean energy
22 technologies, and fuels. Finally, in mid-August, we will
23 explore how ARRA funding is helping to increase the energy
24 efficiency of existing buildings in California, consistent
25 with the state policy of achieving all cost-effective energy

1 efficiency, and how those efforts can be a pilot and
2 foundation for additional efficiency efforts in the future.
3 So, more information on the upcoming workshops will be
4 available on our website with the workshop notices, and we
5 will also be posting final agendas about a day or two before
6 each of the workshops.

7 I will just give you some brief background about the
8 IEPR, itself. The Energy Commission is required by statute
9 to prepare an IEPR that examines California's energy
10 markets, including expected energy supply and demand, energy
11 production, delivery and distribution, and market trends,
12 and it makes policy recommendations to the Governor for how
13 we should proceed in moving forward. The report is prepared
14 every two years in odd-numbered years, and in the
15 intervening years, we prepare an IEPR update that provides a
16 progress report on those past topics and also identifies any
17 new developments or issues that may have arisen.

18 This year, with the large influx of Recovery Act
19 funding into California, the IEPR Committee has chosen to
20 focus the 2010 IEPR update on examining the impacts of that
21 funding, the benefits, the challenges, the energy policy
22 implications, lessons learned of this large investment of
23 funding into California's energy sector, and how these funds
24 are going to help us in achieving our long term energy and
25 environmental goals. Mr. Bartholomy will be talking in a

1 moment about today's agenda and what we will be hearing
2 about, but I do just want to note that today's agenda
3 reflects some additions and re-orderings of the speakers
4 from what was originally posted. The current agenda is the
5 one that is available on the table, and the one that is now
6 posted online. With that, I will turn it over to Chairman
7 Douglas for opening remarks.

8 CHAIRMAN DOUGLAS: Good morning. Thank you, Suzanne
9 Korosec. I would like to welcome everybody to the Energy
10 Commission today for this IEPR Committee and Federal
11 Stimulus Committee Joint Workshop on Workforce Training. It
12 has been increasingly clear to us at the Energy Commission
13 that the need for a trained workforce is one of the very
14 important critical path items to scaling up clean energy and
15 energy efficiency programs to the degree that state policy
16 calls for, and that the Energy Commission would like to see.
17 As we ventured into this area, really for the first time at
18 a high level, or the level that we have supported it this
19 year, we knew that we were not the technical experts, we
20 were not the agency with the experience in this area, and so
21 we did this by partnering with the state agencies and with
22 stakeholders who did bring that experience to the table and
23 we have been very pleased and very impressed with the
24 results of that partnership. We hope to learn from this
25 experience and that is part of why we are doing this, we are

1 focusing the 2010 IEPR on our efforts in implementing the
2 Stimulus funding, leveraging Stimulus funding, bringing the
3 greatest benefit to California, in part because we want to
4 learn from both the process that we have gone through to get
5 to the point that we are at today, and to learn from the
6 results. And so, while it is still early and these programs
7 - many, most are underway, but in some cases we are not
8 expecting results, certainly, by the time that we would have
9 drafts of this IEPR out on the street, or we expect to get
10 results and really learn about how these programs affect the
11 world in Clean Tech and in California on the ground. Over
12 the next year and several, we really want to begin
13 reflecting on what we have done and reflecting on how we can
14 do it better now. And so this is going to be a continual
15 learning process, but this is our first real opportunity to
16 sit down and reflect on how far we have come, and what we
17 have achieved, and what is next. So, we are very pleased to
18 take this time to do it. I would like to thank the
19 panelists and the speakers today and the members of the
20 public who are here in person, or on WebEx, or on the phone,
21 because of an interest in this topic. We would very much
22 like to hear from you, as well, if you have public comment
23 or you have something you would like to say at the time for
24 public comment.

25 So, with that, I have just been joined by

1 Commissioner Eggert, the Associate Member of the Federal
2 Stimulus Committee and, Commissioner Eggert, would you like
3 to make any opening comments?

4 COMMISSIONER EGGERT: Sure, thank you, Chairman
5 Douglas. Good morning, everyone. I am very happy to be
6 here and looking forward to today's workshop. I just wanted
7 to say maybe a couple of things. I think, you know, the
8 Commission is embarking upon a number of very exciting
9 programs in the area of clean energy and energy efficiency
10 with respect to building retrofits, deploying new clean
11 vehicle technologies, and low carbon fuels, and we really
12 are sort of building the infrastructure for this transition,
13 and part of that, of course, is the human infrastructure
14 that we are going to need to support those activities,
15 basically the workers that have the skills, the expertise,
16 the understanding, and the passion that are going to help us
17 sort of rapidly transition to an economy that is less
18 dependent on fossil sources of energy; that is going to help
19 us meet our energy security and diversity goals, and it is
20 also going to help us reduce greenhouse gas emissions to
21 meet our global climate goals. So, I am very much looking
22 forward to hearing the presentations today and I think I
23 would agree with several of your comments. I think we have
24 only been able to do this through partnership with many of
25 our sister agencies and those that have a great deal of

1 experience in setting up these programs, and so I am very
2 happy to be joined by them today and look forward to the
3 discussion. Thanks.

4 CHAIRMAN DOUGLAS: I would also like to invite
5 Laurie ten Hope, who is sitting at the dais to my right, she
6 is Commissioner Byron's advisor, and with that, Suzanne,
7 let's proceed.

8 MS. KOROSEC: All right, well, let's go ahead and
9 get started. Panama, would you like to come up and give us
10 a quick overview.

11 MR. BARTHOLOMY: Thank you, Suzanne. My name is
12 Panama Bartholomy. I am an Advisor to Chairman Douglas here
13 at the Energy Commission. Chairman Douglas, Commissioner
14 Eggert, Special Advisor ten Hope, good morning and welcome
15 to our workshop. I am just going to briefly go over the
16 agenda and some of the goals of the workshop today and then
17 we will get right into the panelists.

18 As was stated in some of your opening remarks, and
19 as you well know, we have very ambitious goals for the
20 energy sector and the future of the energy sector here in
21 California, whether it is the goals for the retrofit of 75
22 percent of the homes within the state and advancement
23 towards 33 percent of our energy from renewable sources, or
24 to be getting about half of our fuel sources for our
25 transportation sector from alternative sources. These are

1 very ambitious goals and, as the Chairman stated, they are
2 going to require significant scaling up of these industries.
3 And, in order for us to be able to scale these industries,
4 we are going to need a well-trained and educated workforce
5 on the technologies and the practices and the background of
6 these industries to be able to have us reach that scale,
7 achieve these goals, and all of its attendant benefits.

8 We brought together today's workshop to be able to
9 talk about some of the research that is looking into what
10 kind of workforce needs we are going to need, and the kind
11 of programs that are being implemented across California to
12 meet those needs. The Recovery Act represented a
13 significant opportunity for those of us in California and
14 across the nation to start to make significant advancement
15 towards meeting some of our energy, as well as our economic
16 goals. Here at the Energy Commission, we are implementing
17 about a little over \$30 million worth of Recovery Act money
18 and we are spending about six percent of it on workforce
19 training and education programs. We've been lucky, as the
20 Chairman noted, to be partnering with some absolutely
21 wonderful partners that have brought some of their own
22 resources, both institutional resources, as well as fiscal
23 resources, to the table, to represent a significant leverage
24 of the funds that we have invested into expanding the
25 benefits of these programs, moving forward.

1 So, the first part of the day, in the morning, we
2 are going to be hearing about some of the leading research,
3 and research centers, from trade associations, and from
4 entities looking at what are we going to need to build in
5 California and across the nation in the workforce
6 development area to be able to help us meet our goals in all
7 these different sectors.

8 We're going to start with a presentation from
9 Elizabeth Stuart, from Lawrence Berkeley National
10 Laboratory, and research they released just earlier this
11 year looking at the energy efficiency services sector,
12 broadly across the United States, and what kind of needs,
13 what the needs are for classifications, training programs,
14 and the occupations that are going to be experiencing the
15 most amount of growth across the country in the energy
16 efficiency services sector.

17 We are then going to be hearing from Gail Brownell,
18 from Efficiency First, a trade association of home
19 performance contractors and research they released about two
20 months ago, talking about the needs of the home performance
21 community, and what they are seeing from a workforce
22 development perspective and how to grow more jobs and the
23 kinds of jobs that can be grown within that sector.

24 We are then going to be joined by Elaine Gaertner on
25 WebEx from the California Community Colleges Chancellor's

1 Office, Centers of Excellence. The Centers of Excellence
2 provide wonderful resources to California's community
3 colleges and communities by providing a snapshot of the
4 growth in different industries across the state and the kind
5 of programs that are going to be needed to be offering in
6 our educational institutions within California to be able to
7 meet the workforce growth needs in each of these industries.
8 And, through Elaine's leadership over at the Centers of
9 Excellence, they have done a significant amount of work over
10 the last couple of years on the green economy and the
11 attendant workforce growth that will come out of it, and the
12 programs that we need. And Elaine is going to be covering
13 that in her presentation.

14 We are then going to finish up the morning with a
15 presentation from Chris Tilly from the Institute for
16 Research on Labor and Employment from UCLA, and this is a
17 PIER funded, or Public Interest Energy Research Report
18 funded report on the needs and the potential design of a
19 National Center for the Clean Energy Workforce. This is
20 work that PIER funded to look at opportunities to bring
21 together, in one place, a clearing house of resources and
22 best practices for the clean energy workforce, and the
23 access that it can bring for institutions within those
24 areas.

25 I skipped over Dr. Robin Walther. She is leading

1 research for the Public Utilities Commission on the
2 California Workforce Education and Training needs assessment
3 for the Public Utilities Commission, particularly looking at
4 energy efficiency sector and attendant sectors that can go
5 along with it, and basically looking at the clean energy
6 sector and what the needs are within California from a
7 training perspective in a job growth area. And the Public
8 Utilities Commission is funding this in order to allow the
9 results of this study to guide the next three years of
10 funding in the energy efficiency workforce development
11 program through the Public Utilities Commission.

12 So, that will round out the morning. Basically, the
13 morning's goal is to provide a context of the need for
14 workforce development in the areas we are looking for there
15 to be growth in workforce development. We will then have a
16 delicious lunch with fantastic networking, and we will come
17 back for an afternoon session. And, after we have laid the
18 groundwork of talking about the need for workforce
19 development in the programs, we are then going to talk about
20 the programs that are being implemented with Recovery Act
21 funds to meet those needs, and we are going to start off
22 with Barbara Halsey, the Executive Director of the
23 California Workforce Investment Board, talking about the
24 Governor's Green Workforce Initiative, and all the various
25 programs underneath it.

1 That is going to be followed by our very own Chris
2 Graillat, who is going to be talking about the Recovery Act
3 funded California Clean Energy Workforce Training Program,
4 some of the partnerships under that, and how we are
5 addressing the need for unemployed, underemployed, and
6 incumbent worker training, to scale up for the clean energy
7 economy. We are then going to go a little bit out of order;
8 we want to make sure that Leticia Barajas from LA Trade Tech
9 College can make her plane back to LA, so Leticia is going
10 to follow Chris and talk about one of the clean energy
11 workforce training program grantees at LA Trade Tech and
12 some of the fantastic work they are doing down there,
13 particularly around the energy efficiency sector.

14 We are then going to go to Darcy Chapman from the
15 Energy Commission's Fuels and Transportation Division to
16 talk about our transportation sector, workforce development,
17 and the funds we have been using out of Assembly Bill 118,
18 to fund growth in the transportation sector, and how that is
19 being leveraged with Recovery Act funds to expand workforce
20 development around clean fuels and clean vehicles.

21 We will then move into a conversation. Along with
22 Leticia, we are going to be hearing from Robin Purdy from
23 the Sacramento Employment and Training Agency, and Gail
24 Schwandner from the Dean of Workforce Development Fund and
25 from Long Beach City College, who, along with Leticia, are

1 three grantees under the Clean Energy Workforce Training
2 Program. And we invited them up because we really view them
3 as three of our particularly leaders in the clean energy
4 workforce training program. Of course, all 34 of our
5 partners under this are fantastic leaders across the state,
6 but these three, in particular, have shown significant
7 leadership in the programs they have been developing with
8 Recovery Act Funds and the partnerships they put together.

9 We are then going to round out the day, hearing from
10 Barbara Cox from IBEW-NECA, talking about the perspective
11 from organized labor in the energy sector in California, the
12 needs and the programs they are working on with the
13 California Energy Commission and others using Recovery Act
14 money to guide workforce development for organized labor and
15 to advance the clean energy economy in California.

16 We will follow-up with public comments and then we
17 will adjourn. And I think we can look forward to a
18 fantastic set of panels and a much expanded docket after
19 today's presentations. So, with that, I will throw it back
20 over to Suzanne, who will be running the rest of the day.
21 and I very much also want to thank all of the speakers and
22 the panelists for coming up. You are really some of the
23 leaders in the workforce development community here and we
24 very much appreciate you spending a day and sharing some of
25 your knowledge with us. I mentioned to each of you that, in

1 particular, we are hoping to hear about lessons learned from
2 the implementation, the Recovery Act with its incredibly
3 short deadlines, and incredibly large amounts of money,
4 represents an opportunity to learn a lot of lessons in a
5 very short amount of time, and so we are particularly
6 interested in those, to allow those to guide our policy
7 recommendations that will be coming out of this report. So,
8 again, thank you very much. I look forward to your
9 comments.

10 MS. KOROSSEC: Thank you, Panama. We will now be
11 moving to our first presentation by Elizabeth Stuart.
12 Elizabeth is joining us via WebEx. Elizabeth, I will go
13 ahead and run the slides for you, if you will just tell me
14 when you want me to advance them. So, your line is open.
15 Go ahead.

16 MS. STEWART: Great, thank you. And thanks,
17 everyone, for asking [inaudible] [19:14] this workshop. So
18 I will get started. So, this is a report on the energy
19 efficiency services sector, a specific segment, and this is
20 a national study of that sector around the country, and it
21 was funded by DOE, Department of Energy. And we actually
22 started this study prior to the Recovery Act. And after the
23 Recovery Act task, we did expand the scope of the study.
24 So, our report, as you mentioned earlier, was issued in
25 spring of this year and it is available in case anyone has

1 not read it. I will give the link to that at the end of the
2 presentation. Next slide, please.

3 CHAIRMAN DOUGLAS: Suzanne, can we maybe -

4 MS. KOROSEC: I am sorry, I am turning it up for
5 her, so anybody who talks in the room is going to blast
6 everybody out, so just be aware of that.

7 CHAIRMAN DOUGLAS: I hear that. I was just
8 wondering if Ms. Stewart was on her speaker phone, it might
9 be better to pick up the handset, because we are hearing
10 some distortion here.

11 MS. STUART: All right, let's see if I can do that.
12 Is that better? Does that help?

13 MS. KOROSEC: Yeah, that seems to be better.

14 MS. STUART: Okay, great. All right, thanks, and
15 sorry about that. So we are looking through the lens of it
16 being policy-driven, and in this report, we are looking
17 specifically at the parts of the market that consciously
18 self-identify as providing energy efficiency services
19 products. And so we set out to understand the occupations,
20 estimate the growth, and understand the current and future
21 needs of the employers in this sector, and also then survey
22 current educational approaches and identify potential
23 bottlenecks to growth and to training needs. From this
24 slide, you can take a look at the drivers for the energy
25 efficiency services sector. Let's go to the next slide, and

1 get a little bit more into how we define those aspects of
2 our study. So, this slide shows the energy efficiency
3 market supply chain, starts at the left with the
4 manufacturing and distribution of the products, the segments
5 that provide services, the energy efficiency service
6 providers, and all the way to the right there are the
7 customers, basically, of the energy efficiency service
8 sector, and the energy efficiency building O&M, Operations
9 and Maintenance and the Energy Management. So, our study
10 actually focuses on the four boxes in the middle. We did
11 not include manufacturing and distribution on the left side,
12 and we also did not include O&M, though O&M does have
13 training needs, and we did this for several reasons, one is
14 we had a limited amount of funding and time, so we had to
15 define the scope. And we did not think there were a lot of
16 energy efficiency job training impacts at the front end,
17 specific to energy efficiency. And then, Operations and
18 Maintenance, as we said, this is done by the service
19 providers, but they are basically customers to the chain, so
20 they do have training needs, as well, but we did limit it to
21 those four sections in the middle there.

22 So, the next slide, this gives you a look at one
23 sector in the energy efficiency services sector and
24 Commercial Institutional, and it shows entity type firms and
25 occupations serving that commercial/industrial market. So

1 we take a top-down view of the sector, with the policy
2 drivers in mind, so we start at the top with the Federal
3 Administrative Program Administrators to rate their
4 programs, the Implementation Contractors, and then we kind
5 of go down through there. The next level we look at are the
6 Support Firms in various sectors, design and Engineering,
7 Equipment Installers, Construction, Technical Support, and
8 we see the entities that work for those firms, so this is
9 our occupational landscape. ESCOs [23:11] are kind of an
10 interesting case because they provide turnkey services; they
11 encompass an array of occupations.

12 So, an important thing to notice about this slide is
13 there are dotted outlines and solid outlines, and those
14 represent the two different primary paths for entering the
15 energy efficiency services workforce, which we think has
16 some implications for California, the sort of career ladders
17 that you are looking at developing. So, solid lines on this
18 chart represent existing occupations, for example, HVAC
19 Technicians, Construction Trades, the Project Managers, that
20 will need to be transformed into energy efficiency focused
21 types of positions that have some more of an energy
22 efficiency component to them. And then, the dotted lines
23 represent emerging occupations that are somewhat unique to
24 this services sector, such as Home Energy Raters and
25 Auditors, Commissioning Services, Energy and Home

1 Performance Services. We have similar charts and reports on
2 the residential, as well. For time, we will just move on to
3 the next slide.

4 So, this chart provides our assessment of the size
5 and the number of jobs in the energy service sectors
6 nationwide, and we provide the numbers and [inaudible]
7 [24:34] years of employment, and I will talk a little more
8 about that in the next slide. So, we estimated the
9 spending, in order to estimate the number of jobs, we base
10 it on spending dollars and we estimated the spending based
11 on current levels of ratepayer funded programs, ESCO
12 spending data, other sources of data, and government
13 spending data, then we developed the method to estimate
14 future spending and we ran it under low, medium, and high
15 scenarios. And so there are a couple of key things to
16 notice about this chart. Under the high scenario, we
17 estimate that the workforce in this sector will grow by
18 about a factor of four. And then, the work done by Program
19 Administrators, that is kind of a dark purple area, and the
20 ESCOs, they leverage and they drive the work that is done by
21 contract with the construction trade, they are correlated.
22 And then, another thing to notice is that there are a large
23 number of jobs in the installation area, and that is deduced
24 by codes, the policy driver, and a lot of this is mechanical
25 installations such as [inaudible] [25:43], which is

1 prevalent in the commercial and industrial sector. One
2 [inaudible] [25:48] assumption that is not indicated on the
3 slide is that our estimates do not assume carbon
4 legislation. So, if that should come into being, that would
5 change all the numbers. Next slide, please.

6 So, bottom line here, here is what we estimated.
7 And the work was done in late 2008, so things may have
8 changed to some degree, but our estimate was based in
9 information we had at that time. So our current size is
10 114,000 first needs [phonetic] of employment. So, the
11 distinction between number of individuals employed, jobs,
12 vs. person-years of employment is important to make, so the
13 number of positions, or number of individuals employed is
14 greater than the total person years by about a factor of 3:4
15 because so many of the occupations are part-time or
16 seasonal, or they spend only part of their working time on
17 energy efficiency activities. For example, I am a furnace
18 installer and I may install high efficiency furnaces 30
19 percent of my time, and standard furnaces the rest of the
20 time. So, based on a lot of triangulated information, we
21 determined that size in person year. Next slide, please.

22 So through our interviews, we interviewed over 350
23 representatives of industry and program administrators and
24 various ESCOs and various players in the field, and we found
25 three broad categories of bottleneck [inaudible] [27:28] go

1 back and we interviewed 350 folks in 11 states. So, we
2 found three broad categories of potential bottlenecks to
3 growth and you can see them here, we have a shortage of
4 Managers with energy efficiency experience, shortage of
5 years with energy efficiency expertise, and also the
6 building infrastructure industry having a lack of awareness.
7 So, these are important because Program Managers are kind of
8 at the top of one pyramid, they actually create and manage
9 those energy efficiency jobs. Engineers to project design
10 and also generating jobs and services, particularly in the
11 commercial and industrial sectors, and then, based on our
12 interviews with trade associations, we found that the
13 building construction industry as a whole - and it varies
14 from state to state - but it had a limited awareness that
15 the energy efficiency service sector was growing and that
16 there still would be a big piece of the puzzle that would be
17 needed to grow that field. Next slide, please.

18 I think for the interest of time, we will kind of
19 skip through these. We just found that, right now, energy
20 efficiency is not a primary focus of folks that entered the
21 engineering field, so there is definitely a need to shift
22 over from the traditional engineering field to energy
23 efficiency. Next slide, please.

24 And just the same note here, is that Managers of
25 [inaudible] [28:58], they thrive, the jobs, and firms did

1 state that limited availability of managers with energy
2 efficiency experience limited their ability to grow their
3 firms. Next slide, please. I think we will just skip
4 through this. I mentioned previously the building and
5 construction industries generally could not even estimate
6 the percent of their current workforce that was involved in
7 energy efficiency and they did not really have knowledge
8 about their role in the growth of the industry. And then
9 the next slide, please.

10 So, difficulties hiring. In California, we had to
11 focus on California, in addition to other parts of the U.S.,
12 but across the board, companies had difficulty finding
13 qualified workforce for most of these energy efficiency
14 services. Program Managers, the HVAC, Compliance Analysts,
15 different levels of difficulties depending on the state, but
16 like I said, across the board, most positions were hard for
17 firms to find people.

18 MR. BARTHOLOMY: Liz, this is Panama. We are having
19 some trouble in the room hearing you, so if you could just
20 make a real effort to project, we would really appreciate
21 it. We can hear usually the beginning of your statement,
22 but towards the end of the statements, we start to lose you.

23 MS. STUART: Okay, thanks. Sorry about that. So,
24 on this one, the point was that, across the Board, companies
25 had difficulties finding folks for pretty much most of the

1 positions. Next slide, please.

2 So, this shows examples of a variety of the energy
3 efficiency training efforts, and as you are all aware, they
4 are growing rapidly and in all different areas - community
5 colleges, four-year programs, weatherization, and then
6 associations [inaudible] [30:55]. So, I guess the real
7 question we want to sort of point out here is how are we
8 doing with it and that one of our recommendations is that
9 there is probably a need for greater coordination amongst
10 the training entities, the educational institutions,
11 workforce development agencies at a high level. Just
12 understand, how is this network working together? Where can
13 we leverage different capabilities and competencies of the
14 different kinds of training programs, to build a
15 comprehensive picture of training? And so, since ours was a
16 national study, the starting point for how to develop
17 training will be different, in different states. So, for
18 states like California that have been doing energy
19 efficiency for a long time, the training network is
20 obviously much more developed than the state, so they are
21 just beginning to ramp up.

22 So, we will go to the recommendations slide, next
23 slide. And these recommendations are more applicable, some
24 of them are more applicable in some states that are just
25 ramping up; different states will have different priorities

1 and starting points. So, we think that it is important to
2 fund and plan for workforce education development as a
3 separate programmatic element in energy efficiency program
4 plans. And rather than them being different silos and
5 components of various programs, as you do it as a
6 comprehensive program, you get a holistic view and you can
7 identify gaps and identify and leverage links. And then we
8 also urge states to conduct energy efficiency workforce
9 training needs assessments to create a baseline, which of
10 course California is doing, and Connecticut has also done.
11 And target energy efficiency training for the trades, as I
12 mentioned the trades folks are not aware that they are going
13 to be such a key piece of this. And integrating building
14 and industrial process efficiency into apprenticeship
15 curricula, which is happening, and combining that and
16 coordinating with community colleges and vocational schools.
17 And the short duration apply trainings are used for folks
18 who have a lot of experience in the field and they need to
19 increase or update their energy efficiency skills. And
20 trainers are going to be in short supply; they already are
21 in short supply in some states. I do not have a slide on
22 this, but a lot of the training programs that we identified
23 are at capacity, if not over-capacity, and there is a real
24 strain on capacity of trainers to handle the demand. And
25 then, preparing the next generation of professionals, this

1 relates to the engineers and the Program Managers, not a lot
2 of four-year colleges or universities offer energy
3 efficiency specific curriculum, so one of our
4 recommendations is to continue building those Appliance
5 Centers and Energy Efficiency Policy and Planning Centers,
6 such as the UC Davis Energy Center, which is a really prime
7 example. And California, of course, is already taking steps
8 on all of these recommendations. I guess, as I mentioned
9 before, a key consideration would be to take a look at how
10 all of the various training and education entities are
11 coordinated, and there could be potential for a lot of
12 coordination between the ARRA funded programs and the
13 ratepayer funded programs to get a holistic picture and
14 start building the career ladders, the lens that you are
15 looking at.

16 So, the lab is on an advisory for the effort and we
17 are really looking forward to participating in that
18 discussion with you. Last slide. These are the contact
19 folks, Charles Goldman is my boss and I know a lot of you
20 know him, and that is his phone number there. And this link
21 at the bottom is the link to the publication that we
22 released earlier this year. And that is it for the slides,
23 and I am happy to take your questions. Oh, actually, let me
24 add one more thing. I was asked to talk about lessons
25 learned from the study, and perhaps what we would have done

1 differently in retrospect. One main factor, as I mentioned,
2 was that it would have been great to have more time and
3 funding, and had we more time and funding, we would have
4 probably done something more akin to what California is
5 doing, looking at those career ladders. We had to rely on
6 associations as the proxies for getting information about
7 some of the sectors, so it would have - we would have liked
8 to have used firms with specific characterizations of some
9 of the applications and some more detail. And we probably
10 would also have liked to include the customer end of the
11 value chain, the facility operations and energy management
12 folks, because they obviously have a lot of workforce needs,
13 some no doubt similar and some probably distinct from
14 segments that we covered. So, with that, I will open it up
15 to questions.

16 COMMISSIONER EGGERT: This is Anthony Eggert and
17 thank you very much, Ms. Stuart for this very interesting
18 presentation. A couple of questions - actually, just one
19 question of an acronym here on your chart that looks at the
20 projected growth in these PYEs, there is a category which
21 says "Building and Construction Industry induced by PA
22 spending." What is PA spending?

23 MS. STUART: Sorry, that is Program Administrators.

24 COMMISSIONER EGGERT: Program Administration?

25 MS. STUART: Yeah, Program Administration.

1 COMMISSOINER EGGERT: Okay, yeah, I noted that one
2 seems to be a pretty substantial growth area. And is this
3 projection - is this what is possible with, you know, good
4 training programs? Is this anticipated to meet the need
5 over that period? Or is this just what is possible in terms
6 of ramping up those skill areas?

7 MS. STUART: Well, we did different scenarios. We
8 did low, medium and high, based on scenarios for funding,
9 including sort of ratepayer funded growth. We had another
10 previous paper that projected the possible growth scenarios
11 for ratepayer funding, so we think these are really based on
12 probable and possible different scenarios of actual growth.

13 COMMISSIONER EGGERT: Okay, that is helpful. I was
14 also very interested to hear about the challenges associated
15 with some of the management level and engineering skill
16 sets, and I know that is an area that we had not focused a
17 lot of attention on with respect to the ARRA funding. You
18 spoke a little bit to this in your recommendations, but do
19 you see the best way to address this field is as sort of
20 curriculum development for existing degree programs, like
21 Mechanical and Electrical Engineering, sort of Masters in
22 Business Administration, etc.? Or do you see that there is
23 a need for actual dedicated programs for Energy Efficiency?

24 MS. STUART: Well, in our paper, we kind of looked
25 at both. It is sort of - there are so many avenues that

1 need to be attacked, so, yes, to your first question,
2 certainly in the four-year and university programs, having
3 specific curricula or expanding curricula to include energy
4 efficiency. There is also the approach of a professional
5 development course work, getting the experienced managers
6 and the experienced engineers that energy efficiency
7 training through other types, either through four-year
8 institutions, but also short-term specific programs. There
9 are a lot of different avenues that you can bring to those
10 kinds of folks who have management experience into the fold,
11 and then, as you mentioned, people that are just starting
12 out as business administration folks, or engineers, then,
13 yes, that is a long term curriculum development program, as
14 well. Did that answer your question?

15 COMMISSIONER EGGERT: Yeah, that is very helpful.
16 And I guess you had mentioned that there are some potential
17 models out there. I believe you had mentioned UC Davis. In
18 your analysis, do you identify those models that do exist
19 that might be deployed across other programs?

20 MS. STUART: Not in great detail, we just gave a
21 couple of examples. And I would say UC Davis is probably
22 one of the best because they integrate so many different
23 aspects of it under one institution, Building Technologies,
24 as well as the policy side of things.

25 COMMISSIONER EGGERT: Okay. Again, thank you very

1 much. This is a very useful study and I will definitely
2 look forward to taking a closer look.

3 MS. STUART: Any other questions? Sorry about the
4 cutting out early. I hope people were able to hear enough
5 to understand it.

6 MR. BARTHOLOMY: Yeah, Liz, this is Panama. One
7 more question. I hope you do not feel this takes away from
8 your excellent presentation on your report, but I just
9 wanted to flip to one of your extra slides that you included
10 about jobs per \$1 million spending. As you can imagine, we
11 are pretty focused on jobs with the Recovery Act funds, and
12 you folks have done some good work on some of the most
13 recent studies of jobs created per dollars spent in this
14 area, and I was wondering if you could just briefly go over
15 some of the methodology you used to develop these numbers.

16 MS. STUART: Well, I did not actually work on that,
17 but what I can say is we have companion work that details
18 that, and we did approach the different - we approached each
19 of these segments, each of these activities, ratepayer
20 funded energy efficiency, low income, ESCOs installation,
21 with kind of a bottom step approach to really look at,
22 rather than just going by the DOE's X number of dollars
23 equals X number of jobs. So I cannot off the top of my
24 head, I am sorry, go into the details about those
25 methodologies, but we do have background on that and are

1 happy to provide it to anyone who needs it.

2 MR. BARTHOLOMY: Okay, thank you.

3 MS. [Unidentified Speaker]: I just had one
4 question. Your slides indicate that, you know, the biggest
5 driver for jobs is the funding level for energy efficiency
6 which seems obvious and not really surprising, but I am
7 interested if there were other drivers that you identified
8 that were significant in the variation between states on
9 levels of employment.

10 MS. STUART: I mean, the biggest driver really is
11 how long they have had ratepayer funded energy efficiency
12 programs and the associated efforts on the part of the
13 state, the general climate in a state as to how favorable
14 they are, how long they have been favorable to energy
15 efficiency. That is all tied hand in hand with, you know,
16 consumer awareness, which creates market demand, so there is
17 a lot of sort of closely integrated factors, but that is a
18 key factor, the legislative environment in each state and
19 the general level of awareness that kind of goes along with
20 those efforts.

21 MS.[Unidentified Speaker]: Thank you.

22 COMMISSIONER EGGERT: Actually, if I might, just a
23 quick follow-up on that. Looking back again at your graph,
24 your high scenario graph, the upper two bars are titled
25 "Induced by Codes," so building and construction and the

1 kind of installation induced by Codes. So, does that also
2 include "Induced by Codes" for existing facilities? Or just
3 new facilities?

4 MS. STUART: I believe it is existing, but that is a
5 really good question that I do not 100 percent know that I
6 am saying the right answer here, and you can follow-up with
7 us, but I believe that is also existing. I mean, there are
8 different Codes for when you have to do retrofits and things
9 like that, so I think that is involved with existing, as
10 well.

11 COMMISSIONER EGGERT: Okay, thank you.

12 MS. KOROSEC: All right, we do have one question
13 from a member of the audience. Mr. Rafski[phonetic], would
14 you like to just come up to the center podium and ask your
15 question directly? And make sure the green light is on in
16 the microphone so that it is on.

17 MR. RAFSKI [phonetic]: Yes, Liz, my name is Louis
18 Rafski [phonetic] and I was just wondering, the reference to
19 training the Trainers, did you look at all - at any of the
20 sort of extension courses that a lot of the universities are
21 offering dealing with energy efficiency? I know UC Berkeley
22 has been very active, and I believe also Davis, as well.
23 But, in those courses, are they strong enough to meet the
24 need of the managers and outreach people?

25 MS. STUART: Great question. At the time that we

1 looked at and surveyed the education, which is now over a
2 year old, in some areas it looked like there may not be
3 enough resources. California might be different and we do
4 not know because California has just changed so much and the
5 whole training landscape is changing quickly and
6 dramatically. But at the time, and we had a really tight
7 definition of what we considered a real energy efficiency
8 curriculum, so we did not find a lot that qualified in our
9 mind as being able to meet the requirements, but that could
10 very well have changed to a degree in the last few years.

11 MS. KOROSSEC: Great. Thank you so much, Liz. We
12 really appreciate you participating remotely. Next, we will
13 hear from Ms. Gail Brownell from Efficiency First.

14 MS. BROWNELL: Well, thank you very much for having
15 us here and to the other speakers, as well, from whom we
16 have actually learned things as part of the work that we
17 have done, and I know that Elizabeth Redman, another
18 Elizabeth, I think has either spoken to you, Elizabeth, who
19 just talked, or I know for sure we have looked at your
20 study, so that has been really useful.

21 I am Gail Brownell, as you said, and I am an
22 Environmental Engineer. I am also actually certified as a
23 Building Analyst by the Building Performance Institute and a
24 California HERS Rater and a GreenPoint Advisor. I am one of
25 those people who has been interested in environmental stuff,

1 obviously, my whole career, and after many years as an
2 Environmental Manager in HP and Agellon, I became involved
3 in the home performance industry, specifically, really
4 believing in the power of retrofitting existing homes and
5 what a difference it makes to the homeowner and to our
6 environment, and to the comfort and health of everyone in
7 the home. So, I really enjoyed the past months working with
8 Elizabeth Redman on this study about the Green jobs in the
9 residential energy efficiency industry, and I have also
10 working with the Efficiency First Workforce Development
11 Committees. And as a quick sideline, since you have been
12 talking about engineering programs and stuff, I can speak to
13 the fact that the UC Berkeley extension HVAC certificate
14 program is pretty interesting because, in my spare time, I
15 decided to go back and augment my environmental training to
16 go study that. And what I learned from talking to students
17 in that class that are many mechanical engineers, is that
18 they did mechanical engineering, which is where HVAC comes
19 out of, without doing much HVAC at all, they did all the
20 other parts of HVAC. And now they are coming back into it
21 because they see the promise in energy efficiency and are
22 very excited to be learning and they are saying it is really
23 different from what they learned in their normal mechanical
24 engineering programs. So, just an additional comment; there
25 are people out there, but you have got to shift them into

1 that expertise, so I make that comment.

2 What I will do today is give the presentation and
3 then I can answer questions after the presentation, to the
4 best of my ability. The person who has the most detail is
5 Elizabeth Redman, and I can follow-up with her, as well.
6 She is currently taking a well-deserved break out of the
7 country, but she will be back in the country in a little bit
8 and if there is any additional follow-up, I can also handle
9 that, as well. So, I am going to get started here. I will
10 also comment that a lot of the background information is in
11 a much more detailed paper that was written, it is a 73-page
12 paper and there will be a link that we put into the docket,
13 as well.

14 So, this study was sponsored by the Home Performance
15 Research Center, which is supported by Efficiency First and
16 the Building Performance Institute, and others. So, I
17 shortened the full presentation, which you can also get to
18 on the website links that are provided, and I am covering
19 the areas that have the bold print and the underline. Most
20 of the research overview and method is a little bit about
21 the job types, there is a lot more information in the study,
22 and then some of the recommendations that came on workforce
23 training for providers and policymakers. And this
24 information is all directly from the Home Performance
25 industry, those people out there who are willing and ready

1 and excited about retrofitting all those homes that Panama
2 mentioned. So, let me talk about that a little bit more.
3 And that is the members of Efficiency First. What is it?
4 It is a national nonprofit trade association, more than 900
5 and growing all the time, that is why the number is red, I
6 had to change it since the two months ago when this study
7 was issued, more than 900 U.S. Home Performance contractors.
8 And representing the industry and public policy discussions,
9 state and national level, promoting energy efficiency, one
10 of the key players in HOME STAR and that is where a whole
11 lot of attention of the organization is right now because
12 there is a lot happening in Washington on the HOME STAR
13 Program, which will help drive the industry.

14 So, I am going to move on to how the study was
15 conducted. There were interviews, face-to-face, with more
16 than 20 industry experts, and then a survey polling 161 home
17 performance companies in the 36 states, a look at the
18 literature, some of which we are just hearing about now,
19 just like Elizabeth's work, the other Elizabeth that just
20 talked, and the other people today, as well as attendance
21 and interaction with people at the National and California
22 Home Performance Conferences. And then, we have a Workforce
23 Development Committee as part of Efficiency First that we
24 did peer review of the work, as we went forward.

25 So, a quick little detour into exactly what is home

1 performance retrofitting, and there is a lot more in the
2 slide set. But, you know, what is a home performance
3 retrofit and how do you do it? Well, finding customers,
4 that is something that came up a lot when you talk to the
5 small businesses that are doing this, and you will hear more
6 about that later. Identifying the problems, doing audits,
7 doing assessments, you can guess what kind of jobs those
8 might be, as we talked about that earlier, presenting the
9 problems and solutions to the homeowners, and then working
10 on the problems, which involves all kinds of skills, many of
11 which are construction skills and some of which are enhanced
12 or retooled construction skills, doing construction with a
13 scientific background, looking at the whole house as a
14 system, looking at how the energy works, how everything fits
15 together. So, it is taking traditional jobs, as has been
16 said, and adding more to them, and then the quality
17 assurance.

18 Also in the study, although I am not showing the
19 slide, since there was some discussion about job estimates,
20 Elizabeth Redman also looked at some of the other research
21 and she did some job estimates, ballpark, took some averages
22 from various places, and one of the rules of thumb that she
23 was using was the 12 to 13 jobs per \$1 million of
24 investment, based on sort of cost of workers, cost of
25 programs, and came up with some estimates that, if we are

1 going to achieve a 25 percent reduction in residential
2 energy, there is maybe 40 of the 70,000 jobs per year by
3 2025, 600,000 or more jobs created to do that, and there are
4 a lot of existing homes out there. This is across the U.S.,
5 not just California. And here is a summary of some of the
6 job types that would be involved in this, the auditors, the
7 raters, estimators, the technicians that do the work,
8 overlaps with existing weatherization, but it often goes
9 beyond that because weatherization is focused on a certain
10 set of folks and this broadens to all the homes, everywhere.
11 Skilled laborers, quality assurance, and there is always
12 office support staff. So, these are the different kinds of
13 jobs and there is a lot more detail on the reports on that.
14 Where I was asked to focus is a bit more on what our home
15 performance business owners said they really see they need
16 from workforce and training organizations. This comes from
17 those people who do this every day and it talks about their
18 issues and their concerns and what they think will really
19 help.

20 So, one thing that came out, and I am going to go
21 through a list of slides with recommendations on them, one
22 that came out was pre-screening. It is really important if
23 we are going to spend these training dollars to make sure
24 that the people that come out of the training actually can
25 do the job, and want to do the job, especially in home

1 performance retrofitting. There are some really challenging
2 situations that you can run into if you are in a crawl space
3 in an attic. You have to be willing to work in heat. You
4 also have to be someone who likes the science and likes to
5 understand things as a system, that wants to see the whole
6 picture. And then, they are in people's homes, so you have
7 to be able to deal with people, you know, customer skills,
8 that sort of thing. So, there are a lot of pieces to this
9 and that is a challenge that many of the business owners
10 said they find, finding people who have kind of the right
11 combination of skills to do this work. And so, therefore,
12 all training programs - and I guess the real point there -
13 is you really want to pre-screen and make sure people know
14 what they are getting into.

15 In addition, industry approved standards - that has
16 been mentioned - you see many of these standards being
17 referenced in some of the incentive programs now. It is
18 important to design training programs to meet those
19 standards, so that businesses, when they are hiring someone,
20 can understand if someone has gone through a program and has
21 had that training and met that standard, they know what they
22 know - they know that they can do the work, they know their
23 knowledge, etc. Another thing about standardizing and
24 accreditation is that most of these organizations are
25 starting to share, you know, cross-license, work together.

1 BPI has just worked out an agreement with AMC [phonetic],
2 the National Standards body, to make sure they are more
3 standardized on that. So, I think there are a lot of things
4 happening there. Another important thing is the written and
5 field tests because you have got to have the knowledge, you
6 have got to be able to do it, and I will talk about that
7 more in a minute. And Elizabeth also came across the fact
8 that the Department of Energy is starting to work on some
9 programs to try to unify and standardize some of the
10 training.

11 Here is a big one that came out of, boy, a large
12 number of the home performance company owners, is that
13 training has to happen in the field, that classroom learning
14 is just not sufficient because no home is the same. You
15 really really need to expose employees to all the different
16 circumstances, teach them how to safely deal with the types
17 of residential energy and health problems you could find,
18 and make sure that they get a lot of skills in all these
19 different areas by doing them hands-on. Many of these
20 things are things that are really hard to learn unless you
21 do them really out in the field. Also, the successful
22 programs that were mentioned in their examples, in their
23 written report, often include a fast transition to field
24 work - bring people in, give them some basics, and get them
25 out in the field and, ideally, subsidize some of their time

1 there because small businesses do not have the cash flow to
2 spend a lot of time training, but they also need the people
3 out there in the field.

4 The next slide is about relevant skills. As I
5 mentioned before, because of this whole home approach in
6 building performance retrofits, and because the workers are
7 interacting with homeowners and following building science
8 principles, they really need to be able to do a lot of
9 different things. So, this is the list, and there are some
10 more on the report of the other relevant skills that will
11 really help them be effective in the job. Health and safety
12 is, of course, number one and that should always be in every
13 program.

14 So, during the survey, 81 percent of the people that
15 we talked to said that they would really like - these are
16 business owners, they are small business owners that are
17 really busy, they said they really would like to be involved
18 with the local training program and get more information
19 about them, but they are also really busy, so there is a
20 really strong desire to help and there is a really strong
21 desire in most of the training programs, and the training
22 providers, to have a linkage with employers because, of
23 course, what they want to do is get those people immediately
24 employed. But, it is a challenge because these are not
25 giant companies that you are talking about. The most

1 successful programs, which Elizabeth has some examples in
2 the study in which we talked to when we talked to some of
3 our people around the country, are ones that had ways to get
4 the people out to the employers, get the employers involved,
5 get feedback, you know, on what is happening. And we also
6 found that, as we talked to people, the idea of having an
7 industry advisory group working and developing employer
8 relationships with home performance leaders who can offer
9 information, hire from the program, be a source of advice,
10 and work with groups like Efficiency First, which is an
11 industry association, and therefore can tap into the
12 perspective of a lot of members. And one of the ways that
13 you can encourage the companies to get involved and provide
14 their time is all for other benefits, perhaps some kind of
15 marketing help or support to the businesses, you know, small
16 business support, help them as well as you are helping their
17 employees, help them with their business and make sure it
18 works well. And many people mentioned that it would help if
19 they got some compensation for what is essentially on-the-
20 job training, that there is some way to help support them in
21 that.

22 Tracking participants after training. This one came
23 up a lot because everyone seemed to wonder, how was it
24 working, how well are these people doing? And how many of
25 these training programs really hold someone's hand all the

1 way through, not just the training, but all the way through
2 getting a job and past that into actually working.
3 Depending on the type of persons that are going into these
4 jobs, this may be a new skill for them, this may be a new
5 type of work, they might need other support and you are
6 going to create success if you really have someone there the
7 whole time, not just having the training program, having it
8 end, and then drop them into the employer's area, and then
9 the employer is having to add more things to their list of
10 things to do to manage a new employee and teach them other
11 skills. So, that was something where some successful
12 programs that were documented were really useful, following
13 up with the employees and finding out what is happening. In
14 the report, pages 32 and 33, there is a whole table on pros
15 and cons of different training approaches and programs, so
16 that is something that is way too small to show here, but it
17 has a list of different types of training approaches,
18 community colleges, or online training, etc., and some of
19 the pros and cons of all those different kinds of
20 approaches.

21 So, now I am going to move into the recommendations
22 for policymakers. Again, this is from the surveys and the
23 discussions with the home performance companies. So, here
24 is a big one, creating jobs is the first step towards
25 workforce development. It does not sound too complicated.

1 Seventy-one percent of the companies said that, right now,
2 they expect it to take less than a month to fill vacancies
3 at entry levels. And 62 percent believe that they could
4 hire qualified building analysts or home energy auditors
5 within this time frame, as of right now, because that is the
6 amount of business they have, they are not growing so fast
7 that they are having a giant problem hiring people. They
8 are actually more concerned about getting more customers.
9 And that is going to be, I think, a continuing issue as we
10 try to get some of these programs like HOME STAR and PACE
11 out there, so that we can stimulate the demand side. We all
12 know the homeowners out there are just a little hesitant to
13 spend money on too many things, so this is one of those that
14 you have got to match these things and try to get the trains
15 going on both tracks at the same time.

16 There is some stuff in the report comparing the
17 amount of investment, and Panama also mentioned in his
18 introductory remarks, you know, how much do we invest in
19 each type of demand creation vs. training. I do not know if
20 there is a perfect match, but it is something that needs to
21 be continued to be looked at the whole time. Clear and
22 reliable information at the really simplest level, I have
23 seen this real time in being in home performance companies,
24 when they are talking about whether they were able to
25 convince a homeowner to actually decide to do something, and

1 the thing that stops you most of the time is if there is any
2 uncertainty at all, uncertainty as to whether they will get
3 a rebate, uncertainty as to are these people really
4 certified, uncertainty about quality, you know, any of that
5 kind of stuff, anything that is unclear really stops the
6 sale, and it is the same all the way through the business.
7 The businesses are not going to be hiring more people until
8 they are really clear about what standards and
9 certifications they need to have and what the timeline is
10 going to be for incentives or other things five minutes
11 makes. So, that is just going to be an ongoing thing in
12 making it really clear.

13 Also, for the smaller business owners, simplifying
14 the training access, really being sensitive to their cash
15 flow issues, finding ways to subsidize and help them as they
16 ramp up, so they can really keep the work going, and move
17 forward. You know, one of the things that came out in some
18 examples is that, rather than directing the training
19 incentives to employed workers and contractors to pay it up
20 front, any kind of policy designed to encourage business
21 creation and sensitivity of the cash flow, such that there
22 is an example in Wyoming listed in the report where they
23 give a grant of \$4,000 per trainee, but then the business
24 receives 75 percent of that right up front, and the
25 remaining 25, when they finish the training. So it really

1 changes the dynamic for the companies.

2 Supporting training with industry, which is a
3 detailed concept in how to really ramp things up quickly
4 came from World War II, it is on-the-job training on
5 steroids, essentially, but it is really developing a program
6 which gets people right out into the field with very minimal
7 training, it gets them working, and it gets them working
8 fast. And to really ramp up to the number of residential
9 retrofits that we say we want to do as a country, some kind
10 of program like this may really be what is needed, a massive
11 program like that. And there is some detailed information
12 in the report on that approach, which really gives getting
13 people out quick and getting them going.

14 The other thing that we heard is about choice,
15 making sure that if training rebates are provided or
16 offered, they do not force the business owners into one
17 particular program or, say, if you talk to this training
18 program, you have to hire from these training programs, or
19 you have to hire everyone who graduates. You have got to
20 give them a chance to be involved and to have some ability
21 to look across this, find out what works for their business,
22 etc. So, good, I guess, a way to think about partnerships
23 is you need to think about how you partner and give people
24 enough choice that they feel they have some control while
25 still supporting them.

1 And consistency, knowing that sometimes we have
2 government programs and other things which throw cash in for
3 a while and then it goes away, the idea of knowing that it
4 is going to be there for a while is an important thing to
5 everyone, knowing that we are going to be able to plan on
6 that as business owners. So, throughout the survey, these
7 were some of the questions that the company leaders were
8 asking themselves, or speaking out loud. Really, their
9 primary concern right now is staying in business and finding
10 new customers. That is really where the industry is. But
11 they are really ready. These people have been studying this
12 work, they want to do it, you know, they are very excited
13 about it, but figuring out how to get the demand up, then
14 being able to find the workforce, and then keeping people
15 once the economy rebounds, what is going to happen? Some of
16 these jobs are kind of tough to do; they are really
17 important and a lot of the people that are passionate about
18 it love doing them, but that is a reality.

19 So, overall, here are some conclusions. And
20 approximately two-thirds of the home performance companies
21 today have three or less years of experience in the home
22 performance industry and are currently re-training existing
23 employees for work in this field, or cautiously making new
24 hires as they grow their business. But we really need the
25 funds now to spur the customer demand, as well as offset the

1 cost of getting the current workforce up to speed on the
2 whole home performance principles and practices. We really
3 believe that, once the policies and programs at all levels
4 of government spur further customer demand, the companies
5 will have rapid growth. And, talking to people, it is
6 really likely that they will first hire former employees who
7 were laid off, or unemployed workers with residential
8 construction, remodel, home appliance weatherization
9 experience, and because this industry relies heavily on
10 subcontractors, growth will likely increase in work that is
11 farmed to underemployed subs or skilled tradesmen. But
12 then, as the industry scales, there are going to be many
13 more job opportunities for new entrants, especially those
14 who have taken the time to invest in their training, and
15 they hold the industry accepted certifications. So, it is
16 really important to lay that infrastructure now, allow for
17 the full range of occupations, have the training funds
18 following the investments, increasing the customer demand
19 for energy efficiency upgrades, and their awareness of the
20 benefits and incentives, so it is just as much a part of the
21 workforce development as the training programs. And then,
22 since the training needs of companies will change as the
23 industry evolves, reliable sources of long term funding
24 should be developed to provide a sustained source of support
25 to the industry as it grows.

1 So, this last slide here has Elizabeth's e-mail,
2 which is not currently being answered. But you can mail
3 Gail@EfficiencyFirst.org and I will provide that, as well,
4 or just actually any note into Efficiency First. And the
5 place where all this reported information is available is
6 www.hprcenter.org Home Performance Resource Center.org. And
7 if I am mostly on time, I guess we have got some time for
8 questions? Thank you.

9 CHAIRMAN DOUGLAS: Well, thank you very much for
10 that presentation, it was very helpful, very interesting. I
11 just had one question. You definitely gave the impression
12 that standardization in the industry is occurring, but also
13 it may be that more needs to be done there, and I was
14 wondering if you could expand on that issue.

15 MS. BROWNELL: Yeah, I think that is an assessment
16 of kind of what is happening. Efficiency First feels very
17 strongly about the Building Performance Institute's
18 Standards and approaches, they are up to 11 different
19 certifications now for everything from the Building Analyst
20 to the Insulation Installers. They have been working with
21 RESNET, another major player in the home energy rating
22 industry. And I think I am just saying that I can see that
23 more of that is coming. I do not even know if I am
24 qualified to give you an official position on where that is
25 headed, but just overall, having standards, and making it

1 easy for the business owners to know what they are is really
2 important to the people that are hiring.

3 COMMISSIONER EGGERT: Yeah, thank you very much.
4 This is a very nicely laid out presentation, very clear
5 recommendations. I want to pick up on your comments on
6 matching supply with demand, you know, Micro Economics 101,
7 you know, that is something that we definitely need to be
8 cognizant of, that these individuals coming out of these
9 programs actually have a place to land and then, so that we
10 can keep them in this industry. I guess, with respect to
11 the funding consistency, is there a model for this training
12 industry to become financially self-sustaining? And if so,
13 how long will that take? Or how big does it need to get
14 before? And are there other models where this actually
15 occurs? Or is this something that will continually need
16 feeding throughout the - I do not know if the question is
17 clear.

18 MS. BROWNELL: I am not sure if I can answer that,
19 based on the research because we were not really doing the
20 research to figure out what the long term sustainable model
21 is for training, we were more trying to find out what do the
22 home performance contractors need from training
23 organizations. But my sense is, in watching the Building
24 Performance Institute grow and establish, and get more
25 standardized, and make partnerships with ANSI, and things

1 like that, that you do get to some point where, if it is a
2 standard certification in the industry, and they have a
3 registration process and training, and all that kind of
4 thing, that there has got to be a business model that works
5 there, because there are other industries that have similar
6 things. But that is not really based on research, that is
7 just more on that it seems to be evolving that way and
8 becoming standardized. I just do not know what the timing
9 would be on that, that was not part of the research, really.

10 COMMISSONER EGGERT: Okay. And then, actually, just
11 a follow-up on Chairman Douglas' question with respect to
12 standards. You know, recognizing that there is the
13 possibility of, and in fact appears to be the case that some
14 work done in this area is done without standards, you know,
15 what should we be looking out for in the design of our
16 programs that we are using government money to sort of
17 stimulate activity to drive people towards those standards
18 programs, like - and if you are familiar with some of ours,
19 if you have any thoughts about specific activities?

20 MS. BROWNELL: Yeah, I mean, I know that everyone
21 who is in the Home Performance and Building Science
22 industries is passionate about doing the whole system
23 approach and worried about, if single piece solutions go in,
24 they could actually create hazards. But most of that gets
25 managed by compliance checks, you know, more Title 24

1 Building Permits and things like that, so I would think you
2 just need to keep following - compliance is the low bar,
3 right? If you are in compliance, you are not illegal, but
4 at least you want to make sure everybody gets there. And
5 then make sure that you support whatever codes need to be
6 there to make sure that the minimum level is hit, and then
7 move people to this much more effective whole home level at
8 the same time. That is my initial thought on that.

9 COMMISSIONER EGGERT: Yeah, I think those are all my
10 questions, so thank you very much.

11 MS. BROWNELL: Thank you.

12 MS. WHITE: I actually have a follow-on question for
13 the Commissioners. I recognize that you did not necessarily
14 do an analysis of what might be the sustainable market model
15 for these kinds of training programs, but did your study or
16 survey come up with any recommendations or examples of the
17 types of public-private partnerships for funding
18 sustainability that may either be currently utilized
19 somewhere in this industry, or be suggested as a possible
20 thing to pursue in the short run?

21 MS. BROWNELL: That is a more detailed question than
22 I would know, but I would be happy to talk with Elizabeth
23 and also go back through some more of the research and the
24 tables that we did, looking at the pros and cons of existing
25 approaches. I think some of that is a little bit in the

1 pros and cons of different kinds of approaches, but here is
2 where I really miss her being here because she has a little
3 bit more of the detail because she did all the detailed
4 research on that.

5 MS. WHITE: That would be appreciated. Thank you.

6 MS. KOROSEC: We do have a couple of questions from
7 the audience. First, we have Sandy from Los Rios Community
8 College.

9 SANDY: Good morning. Thank you for taking the
10 question. I am interested in asking if you might speculate
11 a little bit about industry accepted certifications. A
12 community college district is always looking to ramp up, to
13 invest in the right certifications, and we know how
14 important they are, and you mentioned several BPI, RESNET,
15 Home Performance with Energy Star. Is there any way you can
16 speculate with us, are all of these multiple kinds of
17 certifications going to persist? Do you see this, you know,
18 as often is the case, kind of shaking down to one or two,
19 but what do you think is going to happen here?

20 MS. BROWNELL: I think there is a lot of momentum
21 and good standardization work behind the Building
22 Performance Institute Standards, and it has been written
23 into the Home Star legislation, which - let's all cross our
24 fingers that it actually makes it through the Congress -
25 and, of course, there is language that says "or other

1 equivalent certifications," but I think that is a really
2 good one to look at as an example, not saying that the
3 others are not great, but just because of how it has been
4 written in and because of the work that has gone into that
5 for many years.

6 SANDY: As a follow-on, do you see across the
7 country investments being made by public education systems
8 like community college in these kinds of certifications? Or
9 do you see these certifications being offered through
10 association groups?

11 MS. BROWNELL: Well, maybe to be a little more clear
12 about it, BPI is a separate - it is a Standards
13 organization, so they actually write the standards to which
14 people get tested, and then they allow anyone who gets
15 approved by them to train to those standards so you can
16 become a BPI provider basically training towards their
17 standards. So, that would be the model that would happen.
18 They are going to stay like a Standards body that has the
19 official standard, and then they have the testing and
20 quality assurance, and they follow-up on some percentage of
21 all the certified people and companies sort of thing, so
22 then the community college and everyone is training towards
23 those standards, developing curriculum for that. And there
24 are groups - and this is in the report - that have already
25 developed curriculum that they are licensing out to various

1 organizations to use to train towards those standards, as
2 well.

3 SANDY: Thank you very much.

4 MS. BROWNELL: You must be Mark Hamilton, she says?

5 MR. HAMILTON: Yes. You mentioned the training, the
6 successful training programs, include fast transition from
7 the classroom into the field work. Do you have an idea for
8 that training, are we talking weeks, or months, or years,
9 typically, as a result of your study?

10 MS. BROWNELL: I am aware of some that are just
11 weeks or days, or like within - I am even aware of at least
12 a couple people who are very adamant that you should get
13 someone, maybe like an online test to make sure they can do
14 some basic things, make sure they have safety training, and
15 put them in the field right away because that is a great
16 hands-on learning. That is kind of one extreme, but it is
17 that short and it can be that short. That is actually what
18 companies who maybe are hiring people in that have not had a
19 lot of training do, you know, run them through a tiny bit of
20 safety orientation - not a little tiny bit - the essential
21 safety orientation, and then get them out there.

22 MR. HAMILTON: I see. And did your study cover
23 entry salary ranges for these types of positions?

24 MS. BROWNELL: Yeah, there is a table in the report
25 by job type with approximate wage ranges, it is just for

1 five job types, Field Technicians, Crew Leads, Billing
2 Analysts, Mechanical Systems, and Skilled Workers in Sales.
3 Do you want me to read the numbers?

4 MR. HAMILTON: Just so we get a rough idea.

5 MS. BROWNELL: So the Field Technicians, it was \$10
6 to \$20 an hour; Crew Leads, \$14 to \$20 an hour; Building
7 Analysts and Raters, \$15 to \$22 an hour; Mechanical Systems
8 and Skilled Workers, \$25 an hour and up; and Sales is
9 generally a salary or free plus a commission. That was from
10 surveying all the different companies across the U.S.

11 MR. HAMILTON: Thank you very much for your report.

12 MS. BROWNELL: Yeah.

13 MS. KOROSEC: We do not have any other questions.
14 Thank you very much.

15 MS. BROWNELL: Thank you.

16 MS. KOROSEC: Next, we have Elaine Gaertner from
17 Centers of Excellence. And I believe her colleague, Laura
18 Coleman, is going to be running her slide show for us.

19 MS. GAERTNER: Let me know when I can begin since I
20 am remote?

21 MS. KOROSEC: Yes, you can go right ahead now,
22 Elaine.

23 MS. GAERTNER: Okay. Thank you, everyone, for
24 inviting the Centers of Excellence to brief you on our
25 research work in the area of Clean Energy. It is a real

1 privilege to share what we are doing, which is slightly
2 different than the other colleagues that you have just
3 heard, and we have greatly benefitted from reports such as
4 these, that inform our work. My name is Elaine Gaertner and
5 I am the statewide Director of an initiative called the
6 Centers of Excellence, which is one of many initiatives in
7 the California Community Colleges Economic and Workforce
8 Development Program. With me today is Laura Coleman. Laura
9 is our Senior Researcher for the Centers of Excellence and
10 is hosted at Los Rios Community College District, which is
11 right in Sacramento.

12 In today's presentation, we are going to talk a
13 little bit about the Centers of Excellence, since there have
14 been some updated developments, and then go into a number of
15 the studies that we have done on clean energy research, as
16 well as upcoming projects that we will be doing in the
17 future. Please cue me if you can hear me adequately.

18 CHAIRMAN DOUGLAS: You are fine.

19 MS. GAERTNER: Okay. There are five regional
20 Centers of Excellence, and I want to emphasize that because,
21 in the Public Meeting Notice, it noted 10 regional Centers
22 of Excellence, which is not inaccurate up until the
23 beginning of this program year. As many of you know, the
24 Economic and Workforce Development Program was reduced
25 substantially last year, and then reorganized beginning this

1 year, so, to a smaller number of fully funded centers. And
2 on the slide in front of you, you have the centers that we
3 have currently. These centers will do statewide and
4 regional studies in an effort to continue to do the coverage
5 that we have had, and we are doing some specializations, I
6 will remark on these. In Northern California, Theresa Milan
7 is the Center Director. Theresa is going to be working in
8 partnership with EDD on a project that we will talk about
9 later in the presentation. Laura is actually our Project
10 Lead on the California Energy Commission's study that we are
11 doing in conjunction with the Advanced Transportation
12 sector. John Carrese is in the Bay Region, serving 26
13 colleges, and he is our Project Lead on a number of other
14 studies which, again, I will talk about in a minute. In the
15 Los Angeles Region, which covers Los Angeles and Orange
16 County, Audrey Reille is, in addition to being a Center
17 Director, is the Lead on a Career Technical Education
18 project that we have, where we use the information from our
19 scans and redirect it to Counselors and Program Developers,
20 in terms of making career choices.

21 In the Central Valley, Michelle Marquez is the lead
22 on a rural initiative that we have, it is in its second
23 year, last year it served 26 rural colleges with Labor
24 Market Information. Finally, in the Inland Empire, Virginia
25 Lindstrom is our Project Manager for a project that Dr.

1 Robin Walther will talk to you about after our presentation,
2 that has to do with the Workforce Energy Training Needs
3 Assessment. So, those are our personnel at this time.

4 So, let's move our slides to the Clean Energy
5 Research that the Centers of Excellence - oh, I am sorry, we
6 are back to a different slide. I want to go backwards and
7 talk a little bit about the Centers of Excellence mission,
8 for those of you who might not be as familiar as others.
9 Our mission is in partnership with Business and Industry, we
10 deliver regional workforce research that is customized for
11 community college and workforce system decision-making and
12 resource development. Essentially, the work that we do
13 draws heavily on the Employment Development Department
14 research and other industry studies, some of which have
15 already been talked about here. Our research is really
16 intended to be a supply and demand analysis that will inform
17 community colleges where and how many programs we will need
18 and answer questions such as, are we over-supplying or
19 under-supplying in various community college training
20 programs. And our research takes the focus on the types of
21 occupations within industries that are appropriate to
22 community colleges; that is, things that require more than a
23 high school degree, up to a two-year degree, that the
24 Community Colleges can be training partners.

25 Now, I will advance to the Clean Energy Research.

1 As I had mentioned before, our research is drawing upon
2 emerging occupations primarily at this point, and while we
3 are clearly very dependent upon labor market information
4 that has already been published, in some of the emerging and
5 evolving industries, the information is not always quickly
6 obtainable and may not even exist yet because of the
7 classification of jobs. So, this is particularly important
8 that we work with industry and industry associations to get
9 this information. Literally, sometimes we work with
10 associations to really carve out the database of companies
11 when this is emerging. This was true for us in solar energy
12 a couple of years ago. So, our industry partnerships, as
13 well as our workforce system partnerships, are extremely
14 important because they not only have a knowledge base, but
15 very often they are the people that push out our workforce
16 information surveys in a way that we could never do without
17 them. It is extremely important for us to do this quickly
18 and our scans primarily look at perhaps a shorter term, for
19 example, than traditional labor market information, like a
20 24-month to five-year window on whatever that industry is.
21 And we want to do this because the colleges are pretty quick
22 to cease upon new and evolving industry or occupation and
23 want to respond quickly, and we want to be sure that what we
24 are helping them with is to understand the industry
25 thoroughly, understand where the jobs are, and how many of

1 them there may be, and the nature of the industry. So, once
2 again, we are not over-supplying or under-supplying in terms
3 of the training programs that we develop.

4 So, one of the projects that we are going to talk
5 about is the Energy Efficiency. We did a study in each
6 region of a state that was completed about a year ago, and
7 we looked at a broad industry definition that included
8 utilities, building design, building operations, we wanted
9 to be as comprehensive as we could to identify occupations
10 that had community college relevance. You can access those
11 studies by region, as well as statewide, by going on our
12 website, which is www.coeccc.net/energy will take you to the
13 energy specific studies, as we do cover other industries, as
14 well. Very important to us in the energy efficiency study
15 were our partnerships with LBNL, PG&E, Southern California
16 Edison, the investor-owned utilities, as well as the
17 California Building Performance Contractors and the U.S.
18 Green Building Council Chapters. If you go and you access
19 these scans, you will see that there were a whole host of
20 other partners, again, very critical to our work. They
21 helped us in getting more than 2,100 employers to
22 participate in a Workforce Needs Survey and, out of that, we
23 identified eight occupations for which training was
24 important. Project Managers for construction and design,
25 HVAC Technicians, Building Performance Retrofits

1 Specialists, Building Operators and Engineers, Resource
2 Conservation Energy Efficiency Managers, Building Control
3 Systems Technicians, Energy Auditors and Home Energy Raters,
4 and Compliance Analysts and Energy Regulation Specialists.
5 Here, you also see how our information is used. We do a
6 survey once a year at the end of the year to see how our
7 colleges and also our external stakeholders have used the
8 information that we provided. Very often, it is to get a
9 grant from an outside source, for example, you see that
10 there was a \$100,000 energy grant awarded to Southwestern
11 College, community-based job training grants from the
12 Department of Labor have used our studies, and we have added
13 California colleges very successful in getting those kinds
14 of grants. So, getting outside resources is very key, use
15 of our scans from the colleges, as well as either starting
16 new curricula such as Norco College in Riverside developing
17 for-credit electrician programs that had a renewable energy
18 specialty, as well as updating programs, updating their
19 advisory committees because, in addition to our work, we
20 have program advisory committees that also inform the
21 community colleges, information about programs that they
22 should start, revise, or even retire.

23 Under the area of Renewable Energy, we have done
24 research projects in solar, wind, and water technology. Our
25 solar study is actually ready to be updated, was done out of

1 a lead from the Bay Region, and identified five target
2 occupations and, again, was leveraged for the ARRA grant
3 applications and for curriculum development. The five
4 occupations that were identified in the course of this
5 study, which was done in partnership with BW Research
6 Partners was PV Installer, Solar Thermal Installers, Solar
7 Sales Representatives, Solar Design Engineers, Installation
8 Managers, and Project Foremen. And I will not say a lot
9 about that because, as I mentioned, I think this field is
10 pretty well covered from our experience, and we are ready to
11 update that study.

12 In looking at wind energy, this study was a little
13 different from the other ones that I talked about because we
14 really relied extensively on industry validation and also
15 the partnership with the American Wind Energy Association.
16 This was different because we focused on a couple of small
17 regions that were within a 20-mile radius of wind farms and
18 the industry, and these areas were around the Bay Region,
19 around the Central Region, and in the Inland Empire Desert
20 Region. And what we found is, given the nature of the work
21 beyond construction of the wind farms, that there was not a
22 huge need for wind turbine technicians, maybe up to about
23 800 jobs across the state, because they are sort of an
24 itinerant workforce, as well as probably maybe one
25 technician for every 25 wind farms needed. So, in this

1 case, one of our key accomplishments was to limit program
2 development to colleges and to also not perhaps do the
3 traditional campus-based credit programs, but utilize not-
4 for-credit, our customized training mechanism, to meet
5 immediate employer needs because, the way that the
6 industry's workforce flow was going, there would be not
7 enough at any one given time, perhaps, to do it under a
8 credit curriculum out of the department at the college. So,
9 sometimes our accomplishments are even not to develop
10 curriculums vs. to develop it.

11 This past fall, the Bay Region took a lead on
12 Renewable Energy Water and Wastewater. And this was a
13 multi-county study of water and wastewater utilities and
14 agencies that was done in partnership with BAYWORK, which is
15 a Bay Area Water Wastewater Workforce Development
16 Collaborative, and it covered San Francisco, San Mateo,
17 Alameda, Contra Costa, Marin, and Santa Clara Counties, and
18 this BAYWORK was really invaluable to us, it included 77
19 water and wastewater agencies in those counties, and due to
20 BAYWORK's efforts to help us determine the need, 45 of those
21 77 responded to our survey. And that survey identified
22 seven occupations, water/wastewater treatment operator,
23 water distribution operator, wastewater treatment operators,
24 wastewater collection operators, mechanic and machinist and
25 electrician technicians, electronic maintenance technicians,

1 and instrument technicians. The latter, starting with the
2 electric and the maintenance mechanics are important because
3 for transitioning workers, those are skills that they may
4 bring, or transport to other industries, so very important
5 from the standpoint of a career latticing perspective. This
6 industry is, as many of you may know, a mature industry, and
7 so the emphasis really came on retirement rates and the need
8 for replacement workers, and it really - I think one of the
9 key outputs of this study was that it really informed
10 workforce education and planning efforts. The BAYWORK
11 member agencies are utilizing the survey results for
12 workforce planning, we are duplicating in other areas by
13 working with industry and regional planning agencies and,
14 again, on the slide that you are viewing, you will see that
15 there are community colleges that are doing revisions or
16 existing programs. Again, because of the workflow here,
17 recommendation in this study was to utilize a customized
18 training not-for-credit mechanism for this. We do have a
19 number of programs in existence here, and so we did not find
20 a huge need in this particular portion of the
21 water/wastewater to go beyond programs that we have in
22 existence at this point.

23 I will move now to Transportation. In the past, our
24 research has focused on the automotive industry and on
25 traditional occupations - automotive technicians, motorcycle

1 mechanics, logistics. To leverage into the study that we
2 are doing with the Energy Commission, we are beginning a
3 hybrid vehicle study with an emphasis on maintenance and
4 repair occupations, and it is on some employers in a small
5 subset of counties, and we are using it as a pilot for the
6 additional vehicle studies in other regions that we will do
7 as we move into the California Energy Efficiency Statewide
8 Study. So, the focus in this study is on evolving on-the-
9 job skills for auto technicians and to see what may need to
10 be incorporated into existing programs that we already have.
11 So, looking forward again, we are working on behalf of the
12 California Energy Commission through the State Chancellor's
13 Office to conduct statewide and regional research through a
14 study that began a while back, and the research objectives
15 here are to get a thorough inventory of existing
16 transportation programs offered in the community colleges,
17 an industry assessment to determine where the regional
18 concentrations of transportation employers are, so literally
19 to compare and contrast where are programs to where are the
20 employers, and make adjustments and make sure that we are in
21 alignment in that respect. And we will also do regional
22 research of the related occupations we identify, as well as
23 preceded by a statewide study. And, again, this is, as with
24 so many of our studies, a study to align transportation
25 education, training and development to labor market needs,

1 and will be done with one of our other initiatives, the
2 Advanced Transportation and Energy Initiative.

3 Just last week, my team met in Modesto, California
4 to look at where we will strategically invest our time and
5 our resources in the coming year, and we will be
6 contributing to the California Workforce Education and
7 Training Needs Assessment that Robin Walther will speak in
8 more detail about. We are going to conduct preliminary
9 research into utility-scale solar. We are also partnering
10 with the Employment Development Department LMI Division to
11 conduct in-depth research of the skills, tests and abilities
12 in the green occupations. I am sure a number of you are
13 familiar with the fact that LMID has been conducting a
14 survey here for a while in terms of quantifying the number
15 of green jobs, and they recently got a labor market
16 improvement grant from the Department of Labor, and we will
17 assist them in carrying out that grant. So, we are at the
18 end of this presentation and I want to thank Laura for being
19 in the room so that, if she can answer questions, as well as
20 I, that she will be able to do so. We do invite you to look
21 in more depth to the studies that we have mentioned today,
22 www.coeccc.net. What questions do you have about what we
23 have talked about here today?

24 COMMISSIONER EGGERT: This is Anthony Eggert. Thank
25 you very much for the presentation. I had a question

1 actually on the transportation piece for the folks being
2 trained on hybrid vehicle technologies. Is the expectation
3 that these people would be employed or hired at the
4 automotive companies, the mechanic facilities, or the
5 dealerships? Or what is sort of the target audience for
6 those graduates?

7 MS. GAERTNER: Well, a lot of those graduates will
8 probably go into fleets. We have a lot of relationships
9 with the fleet vehicles employers for the transit companies,
10 so we would hope that there would be openings for them
11 there. We have automotive programs, longstanding automotive
12 programs, and existing partnerships with, for example,
13 Toyota through our regular automotive programs in the
14 colleges. What we are wanting to do is, many of those
15 programs have already transitioned into hybrid technologies,
16 so, yes, we would want them to be available for dealerships,
17 but we want to go beyond that and look at the fleet
18 mechanics and other places where these skills will be
19 needed.

20 COMMISSIONER EGGERT: That is great. And are you
21 looking beyond light-duty, then? Are you looking at medium-
22 and heavy-duty applications like larger trucks, buses,
23 things like that?

24 MS. GAERTNER: Yes.

25 COMMISSIONER EGGERT: Okay. Sounds like a lot of

1 good activity.

2 MS. GAERTNER: Thank you.

3 MS. WHITE: This is Lorraine White. I had a
4 question on the Renewable Energy Water/Wastewater Study. In
5 particular, I am looking to make sure I did not miss
6 anything on what renewable energy you are specifically
7 having some of these programs target at the water/wastewater
8 facilities? I know that the Bay Region does have some
9 hydro-electric development; but, for the wastewater
10 agencies, is it just the biogas development, or what have
11 you?

12 MS. GAERTNER: You know, I did not do this work.
13 Laura, are you able to answer that question? Or resource,
14 John Correse, who actually did the work, is not with us
15 today. Laura, are you able to give more detail there?

16 MS. COLEMAN: I might be able to give a little more
17 detail. I think, including this one under renewable
18 energies might be a little bit of a stretch. Given the
19 traditional nature of water/wastewater industries, their
20 concern, when they approached us to do this study, was
21 really about the replacement need for workers, and John
22 likely has had that conversation with them about efforts
23 they are making that would more directly answer your
24 question as to the renewable part. It seemed, in my
25 opinion, that these positions are quite entrenched, very

1 traditional, and any changes that are made to skill sets
2 needed happen in the training and education, and that it is
3 not quite as dynamic in evolution as in other industries.
4 So, primarily what this report was trying to do was quantify
5 that replacement need as to whether or not their industry
6 partnerships with colleges is successful and needed because
7 a lot of water/wastewater certification is not done through
8 community colleges, and to try and estimate whether or not
9 this presents career opportunities and career ladders, as
10 the wage ranges for these occupations were quite healthy,
11 and so they do represent good opportunities for students.

12 MS. WHITE: So, to the extent that the study can
13 provide information on the need to expand the exposure of
14 those in any training program to new and evolving
15 technologies, bring them out of the traditional trenches
16 associated with this industry, is where you were headed?

17 MS. COLEMAN: Yes. I mean, I think we looked at it
18 as water efficiency, and what is this industry doing to make
19 their operations, you know, what element of that is evolving
20 or emerging, but the occupations themselves will stay
21 primarily pretty specific to that industry, although the
22 skill sets are transferable for, like Elaine mentioned,
23 those three.

24 MS. WHITE: Yes, thank you.

25 MS. KOROSSEC: Do we have any questions from the

1 audience? All right, we have nothing on WebEx, so I think
2 we will move on to Dr. Robin Walther.

3 DR. WALTHER: Thank you.

4 MS. KOROSSEC: And thank you.

5 DR. WALTHER: First, I want to thank you for having
6 invited me to do this presentation. The first point is,
7 this is an ongoing project and do not have any specific
8 results to present at this point, although there will be
9 results presented at next week's CPUC Workforce Education
10 and Training Needs Assessment Meeting. The project is an
11 outgrowth of the CPUC's Energy Efficiency Strategic Plan
12 that was adopted in September of 2008, so the project did
13 come and get started in terms of being planned prior to the
14 ARRA funds being released. ARRA funds, the implications of
15 ARRA funds, are being addressed at one level, not as much
16 detail as the CEC will be doing. The project - and this is
17 a result of the direction from the Commission, the CPUC's
18 commission, is being conducted by a third party, the
19 independent consultant, the Lead Consultant is from the
20 Donald Vial Center on Employment and the Green Economy, and
21 represents a number of individuals who are quite active in
22 the workforce area. Carol Zabin is the lead, and she is
23 also the lead for the project that is going to be discussed
24 in the next presentation. So, there has been a lot of
25 informal synergic relationships between the CEC and this

1 project as a result. The partners or subcontractors for the
2 team include, as Elaine mentioned just now, the Centers of
3 Excellence, both people at the San Francisco Office, as well
4 as people down in Southern California. Research into
5 Action, which is a consulting firm, that was a key
6 participant in the LBL study that was discussed at the very
7 first presentation, and then Public Private Ventures, which
8 has a very strong reputation in the low income area. The
9 process is being jointly managed by the CPUC and the
10 utilities. The CPUC representatives are from both the
11 Energy Division and Commissioner Grueneich's Office, and
12 Southern California volunteered or was selected, depending
13 on your point of view, to serve as the lead for investor-
14 owned utilities in the state. I am the Study Manager for
15 the utilities and, as a result, I am the day-by-day
16 interface with the consultant.

17 The project has been guided by the CPUC Vision
18 Statement for Workforce Education and Training, and I put
19 this up to make the point that our focus is out to 2020, not
20 just for the next couple of years. Our focus is on economic
21 energy efficiency and demand-side management potential, and
22 I will address that in a little bit more detail in a few
23 minutes. And we also are focused on the workforce and not
24 solely on education and training strategies.

25 One of the first steps in any project like this is

1 trying to make sure you have defined your project scope, and
2 there is always a danger of, whether or both, creep and
3 contraction. One of the first issues that came up was
4 exactly what did we mean by workforce development and what
5 was our focus going to be. There is a strong focus on the
6 developing resource inventories and doing assessments at a
7 fairly high level, community college, union, private
8 industry, and other workforce training and education
9 programs. There is also, in addition to that, though, there
10 is also an emphasis on fundamental and preparatory programs
11 for K through 12, and this actually was expanded once the
12 project got underway. The other area is employment
13 information systems with an emphasis on Internet-based
14 systems. We are doing that because the CPUC, as part of the
15 Energy Efficiency Strategic Plan, had identified workforce
16 education and training web portal as one of their
17 objectives, and the thinking was that this sort of
18 background work on employment information systems would
19 provide support as they move forward with that project. The
20 focus is on energy efficiency, as I mentioned earlier,
21 demand side management and distributed generation. I should
22 mention that, you know, there is an argument, and there was
23 an argument made, to just focus on energy efficiency, and
24 there was also an argument that, in order to support
25 collaboration within the state, this needs assessment should

1 have been even broader and it included renewables and
2 environmental services. And, in fact, when we issued the
3 RFP initially, it did have that broader scope, but because
4 of where the funds are coming from, the scope was narrowed
5 down to energy efficiency and integrated demand-side
6 management, which includes distributed generation. It is
7 focused on statewide workforce strategies and the idea is
8 that it is also going to be used for long term planning,
9 strategic planning, with a 2020 time horizon. It also has
10 sort of mid-term, short term, and mid-term stopping points,
11 as well. The project is definitely benefitting from the
12 Education and Workforce communities. The CPUC convened a
13 workforce education and taskforce right after the Energy
14 Efficiency Strategic Plan was adopted. That work taskforce
15 was involved in the initial design of the project and in
16 drafting the initial Scope of Work, and they are briefed on
17 a regular basis, quarterly at this point, on the status of
18 the project and preliminary results or interim findings,
19 however you want to put them. Also, one of the tasks as
20 part of the project, in order to ensure that the results are
21 disseminated, and that a dialogue can be started on how to
22 implement some of their recommendations, we are hosting a
23 summit in December. And as part of that summit and getting
24 ready for it, we have a planning committee with senior
25 representatives from the CPUC, the CEC, the State Assembly,

1 staff, unions and other workforce experts. And, in addition
2 to those, that reaching out, the research team has also
3 reached out to a number of entities, including LBL, to get
4 their advice and support and ideas on how to proceed on
5 various tasks. The project is composed of seven related and
6 concurrent tasks, and you can think of them as being in
7 three major categories, and I will try and - how much time
8 do I have - I will try and cover some of the status of where
9 we are on these projects at this point.

10 The first set of tasks deal with understanding
11 California's workplace and workforce, the second is to
12 assess California's workforce assets and infrastructure, and
13 the third is to identify gaps, develop strategies, and then
14 disseminate and get the results used. Under Task 1, there
15 is a paper being prepared on looking at the forces shaping
16 the overall workforce and workplace in California, such
17 things as unemployment rates, such things as the expectation
18 regarding the housing market, those type of areas. The
19 second task is one of the bigger tasks, and it includes both
20 a case study piece and a quantitative piece where it is to
21 be a comprehensive review of California's Labor Markets. A
22 lot of the methodology has been developed for that step, and
23 some initial results are available - or, they are not
24 available yet, but they are being reviewed at this point.

25 The second set of tasks was really to understand

1 California's workforce assets and I will go to Task 4 first
2 because that was originally one of the real objectives of
3 this project, was to look at Resource Inventories for
4 training programs and this task involves an extensive
5 documentation and assessment of the workforce development
6 infrastructure, including training programs, and my
7 understanding at this point, we have an inventory of about a
8 thousand programs. We are going to be sampling some of
9 those programs from that set, and they are going to be
10 interviewing in certain cases, there will be some
11 interviews. There is also a study going on in the K-12
12 area, and then there has been this Employment Information
13 System Study; that project has identified maybe 40 green job
14 sites and has also identified a number of job sites that are
15 sort of best practices, and they will be assessing both
16 groups. The past three has involved interviews with
17 potential collaborators, basically state leaders in this
18 area throughout the state, and to totally understand what
19 people are doing, what strengths they have, what their plans
20 are going forward, and also possibly looking at what
21 barriers they face in terms of collaboration and working
22 together in that area.

23 Task 5 is focused on making sure that we have best
24 practices to support participation of minority and the low-
25 income community. This is an area that the utilities for a

1 long time have had active energy efficiency programs focused
2 on the low-income community and the thinking is, let's go
3 out and look at best practices beyond those programs and see
4 what we can learn that will benefit the utility programs in
5 this area. I probably should have mentioned, just in terms
6 of giving you a context, the utility budget for education
7 and training programs for energy efficiency is about \$120
8 million for the next three years, so it is not a trivial
9 amount of money, by any means, and that they operate both
10 education programs at all levels, as well as they maintain
11 the technology centers and offer classes in a number of
12 areas such as HVAC, lighting, restaurant equipment, a number
13 of areas.

14 Okay, and then the final step is you understand the
15 workplace and the workforce to the extent you can, you
16 understand as a snapshot the workforce assets, and then you
17 are at the point of Task 6, is try to look at gaps and come
18 up with recommended strategies. And I know, if Carol Zabin
19 was here today, she would be able to tell you about some of
20 the preliminary strategies and recommendations that she is
21 thinking of. One of them has to do with certification and
22 the need for some upper consistency in that area.

23 And then Task 7 is the effort to engage stakeholders
24 and make presentations to groups who are interested in it,
25 and then to do planning in the Workforce Strategy Summit.

1 And, as I said, work is proceeding on that, we have selected
2 a date, selected the site, selected - we have a committee.

3 In terms of the project timeline, like I said, we
4 had our kick-off meeting in December of last year. This was
5 after about a year of working together on trying to define
6 the scope. We have interim reports, they are going to
7 become available in the fall, and then in December most
8 everything is supposed to become available. I found it
9 interesting, the December 15th date, I think, is the same
10 date as the IEPR date.

11 One of the issues that I was asked to talk about is
12 how we plan on implementing the recommendations. The one
13 thing we are trying to do is we are trying to disseminate
14 the interim findings so that people will understand what we
15 are finding before and start being able to think about it
16 before we get to the end. We also are providing this forum
17 for discussion and advancement of recommendations at the
18 Workforce Strategies Summit, and at this summit, we are
19 expecting that the utility programs will be seeing just as
20 one part of a big picture, it is not going to be solely
21 focused on utility programs. And then, in January, within a
22 month after we have released the report, there will be a
23 workshop held that will be focused on discussing changes to
24 existing ratepayer funded training programs. These include
25 both the programs that are funded for training in the

1 technology centers, as well as educational programs and
2 various collaborative relationships that I know we have with
3 some of the colleges. And then, finally, you know, we are
4 working on pursuing collaborative and fund sharing
5 arrangements, particularly for issues such as the web
6 portal. There are certain areas where I think the energy
7 efficiency community that works through the CPUC has a lot
8 to add, but also can definitely work with the other
9 organizations that are involved in these areas.

10 One of the things I wanted to mention is there is a
11 lot of emphasis about collaboration and fund sharing, and as
12 a Study Manager, I have had the experience of trying to work
13 with - just with the utilities and with the CPUC, and with
14 some other groups. It takes a lot of resources to have
15 successful collaborative activities and it takes a lot of
16 communication going forward, and I just think that is worth
17 mentioning.

18 One of the things that this project has had to deal
19 with, and it is fortunate both for the state that we have
20 the ARRA funds available, but the project was planned and
21 designed before the ARRA funds were even a glimmer in
22 anyone's eye. So, you have to be flexible when those things
23 come up. And the other point is, and this is definitely my
24 own personal observation, this has not been discussed
25 extensively with anyone at the Commission or with the

1 utilities, extensively, but this needs assessment is a
2 snapshot and it is my view that, at the end of it, we are
3 going to have areas that we could have put more resources
4 into this task, or this task, or this task, and there are
5 also going to be areas where we need just to go back and
6 look because the study is done in 2010 and, by 2012, the
7 world will have changed again. So, it is not unlike the
8 very first study I was involved with, and probably the first
9 study I ever spoke here at the Commission on, the Energy
10 Efficiency Persistence and Potential Studies, it is very
11 similar and it needs to be updated. Thank you.

12 CHAIRMAN DOUGLAS: Well, thank you very much for
13 being here and this study or needs assessment is obviously
14 really impressive in its scope and will guide the
15 expenditures of a significant amount of resources in this
16 area. You know, I was pleased to hear you talk about
17 collaboration and the need to talk about and put, as you put
18 it, your real effort and energy into communication and
19 working with the various agencies that are out here doing
20 this kind of work, and I wanted to ask you how that has
21 happened in terms of the research design and in terms of how
22 you are looking at program delivery, going into the future,
23 you know, how you have been able to leverage or how you are
24 looking at the potential for leveraging some of the existing
25 workforce infrastructure in the state, whether that be the

1 state agencies or the Centers of Excellence, or other
2 resources.

3 DR. WALTHER: I can speak directly to how we have
4 worked together for the research aspects in that the team
5 that we have from Berkeley has worked directly with EDD to
6 obtain access to special tabulations from their survey that
7 have not been released at this point. And then we have
8 also, by involving the Centers of Excellence, we also have
9 had access to the data that Elaine was mentioning about the
10 Energy Efficiency Survey. So, from a research perspective,
11 we have definitely built the bridges. We also have to
12 mention, you know, the lead consultant team was selected
13 with the idea that we wanted someone who had relationships
14 already with some of the workforce community in California
15 and I think, you know, we definitely were able to find
16 someone who had that, and so that was positive. In terms of
17 workforce programs, the utilities do not stand still while
18 they wait for their needs assessment to get done, and so
19 they have been working collaboratively with a number of
20 organizations, and I know, you know, PG&E had a conference a
21 couple of months ago where they talked about their
22 relationships in Fresno. I think Leticia might be able to
23 mention the relationships they have with the Southern
24 California Edison Company and, so, there is a lot of that
25 already going on in terms of reaching out and collaborating.

1 COMMISSIONER EGGERT: So just a follow-on to that.
2 How much of the need might we expect the utility programs to
3 be able to cover going forward? And maybe just a question
4 to your comment about flexibility and adaptability, you
5 know, how should we be thinking about the design of these
6 programs in a way that they are adequately adaptable to
7 those changing conditions?

8 DR. WALTHER: Yeah, I mean, both of those questions
9 are difficult. At one point in my life, I was a workforce
10 expert, but most of my life I have been in the Energy
11 Efficiency world, and the first question, I think, really
12 takes a lot of thinking about because you really need to
13 talk about what you mean by "need" and what, you know, I
14 think there have been discussions already about the types of
15 need, you both have people who have existing skills that
16 need to be retrained, people who are getting retrained
17 someplace else. One of the issues that we are addressing in
18 our study is the fact that some of the people that we train,
19 particularly at the colleges and universities in California,
20 are not going to stay in California. So, you know, that is
21 just reality. And so that question is a big question, you
22 know, the utilities - their main focus up until now has been
23 their technology centers and the technology centers are
24 largely focused on training contractors and other owners of
25 like restaurants and those type of positions. But they are

1 also heavily involved in like the lighting center at UC
2 Davis, so that is a big picture. In fact, one of the things
3 I think this study has accomplished is trying to get a view
4 of all that is going on, and all the involvement where
5 utilities have been involved.

6 COMMISSIONER EGGERT: Thank you.

7 MS. KOROSSEC: We did have one question in the room
8 from Mr. Rasky. "Since you mentioned demand-side
9 management, did you analyze any of the outreach efforts by
10 utilities to inform consumers of those programs?"

11 DR. WALTHER: I am trying to - I really cannot
12 answer that question directly. I think we are focused on
13 workforce skills, we are not focused on community outreach
14 education, so I think that is the distinction. The
15 workforce education effort is more on do we have enough
16 people who can do that kind of work.

17 MR. RASKY: Okay, so that is what I was trying to
18 clarify. I understand. I am not trying to put you in a
19 difficult spot, and since you had mentioned it and you
20 specifically mentioned a program in dealing with the Smart
21 Meters, a criticism not so much in California, but
22 nationally, was that there was a lot of rebate programs, for
23 lack of a better term, that unfortunately were not being
24 fully utilized, and one of the areas that was mentioned that
25 needed to be improved was the outreach efforts. My guess is

1 that California, which has always been ahead of the game,
2 probably did not fall into that area, but given that it is a
3 potential issue in other states, I thought you may have
4 started to look at it, or maybe it is on the agenda for the
5 future.

6 DR. WALTHER: I mean, I think our focus is on
7 whether there are enough people trained to do that outreach,
8 it is not on whether there was adequate outreach done in the
9 Smart Meter Program.

10 MR. RASKY: Thank you.

11 MS. KOROSK: All right, we are butting up against
12 the lunch hour, but we are going to power through and try to
13 get through our final speaker before lunch, and then take a
14 little bit of a later lunch. I apologize, I do not seem to
15 have your presentation here, pardon me.

16 MR. TILLY: I am Chris Tilly, Professor and Director
17 of the Institute for Research, Labor and Employment at UCLA.
18 And I want to reiterate, as Panama said, this is a PIER
19 funded study that actually grew out of a short concept paper
20 that Panama had put together, and it is a team effort, as
21 Robin Walthers said, Carol Zabin at UC Berkeley is the lead
22 and her team, and then we also had teams with Chris Benner,
23 at UC Davis, and I fielded a team at UCLA. And I am going
24 to throw the outline of the talk up. And I am not going to
25 read what is on this screen, but just take this opportunity

1 to just say that our definition of Clean Energy basically
2 corresponds with the three sectors that Elaine Gaertner was
3 also talking about, so, Energy Efficiency, Renewable Energy,
4 and Alternative Vehicles. In practice, what we found people
5 focusing on in our research was construction and retrofit in
6 solar and wind, so, you know, the whole field is bigger, but
7 that is what most of the discussion turned out to be.

8 To sort of do this study that is looking at the
9 options for a National Center for the Clean Energy
10 Workforce, we of course looked at the literature, but we
11 also did over 100 interviews in two different communities;
12 one is the Clean Energy community, which includes government
13 entities, you know, the counterparts of the California
14 Energy Commission, also includes businesses and industry
15 associations, researchers, and nonprofits and environmental
16 advocates sort of working on that end of the Clean Energy
17 end of things. But we also spoke to the Workforce
18 Development community, so that includes people in secondary
19 and post secondary education, particularly the community
20 colleges, the Unions and their apprenticeship programs, non-
21 profits, again, various government agencies, State
22 Departments of Labor, and so on. So we cast a pretty broad
23 net. And our basic mission was to look at whether it made
24 sense, and if it did make sense, sort of how should it be
25 done, to have a National Center for the Clean Energy

1 Workforce. So, a workforce focused center dedicated to
2 clean energy. And so this talk in some ways marks a
3 transition between the morning's talks that were focused
4 mainly on what are the needs, what are the gaps out there,
5 the transition between that and the afternoon talks, which
6 are talking more about solutions. My talk is really going
7 to focus much more on solutions. There is just this one
8 slide saying about why might this be needed.

9 And we heard very consistently from both
10 constituencies, obviously the Workforce Development
11 constituency, but, as well, the Clean Energy Constituency,
12 about the importance of workforce issues. Now, as Gail
13 Brownell emphasized, we focused - well, I guess that is
14 further down on mid-scale jobs, at this point there are not
15 great shortages in the mid-scale jobs because, in fact, at
16 this point, the big burst of jobs that is expected is in
17 construction retrofit, and right now there is an excess of
18 construction workers out there because of the state of the
19 economy. But there is great concern about future shortages
20 as the economy ramps back up, and as the clean energy
21 economy takes off. The other concern on both sides, the
22 supply side and the demand side, was concern about mismatch.
23 Are we training the right people from the workforce
24 development community, are the right people being trained
25 from the clean energy community? Are the right skills being

1 provided? There was a lot of concern voiced about the
2 connection between adequate workforce training and product
3 quality. So, I have got a quote here from Mark Sinclair at
4 the Clean Energy States Alliance, basically saying consumer
5 confidence is at stake here. There are some issues where,
6 in fact, there hasn't been the kind of quality that was
7 promised by the industry. A lot of this can be traced back
8 to issues of adequate training and preparation of the
9 workforce, and so Mark Sinclair emphasized certification and
10 standardization and quality control, which is an issue that
11 we return to again and again. So, there is the product
12 quality issue, but there is also the job quality issue. Are
13 these good jobs? Are these jobs that connect to career
14 ladders that people can move up from job to job? And is
15 there adequate access to a whole range of communities to
16 these jobs? The context, of course, is the expectation that
17 increasing amounts of government resources are going to be
18 directed towards clean energy jobs, so the ARRA infusion is
19 obviously the current context, but I think the expectation
20 is, given the political and climatic realities that
21 government resources are going to be driving this process,
22 government resources and government requirements. And the
23 focus, as I touched on before, is mid-scale meaning between
24 more than high school, less than a four-year college degree,
25 that includes short certifications, two-year degrees,

1 apprenticeships, a range of things falling in between that
2 high school and the four-year degree.

3 One question that we did ask our interviewees is, is
4 a National Center for a Clean Energy Workforce needed? Or
5 is there enough going on out there already? And there was
6 not unanimity on this point. There were people that said,
7 "Well, you know, it is a pretty crowded field. There are a
8 lot of people already working out there on clean energy
9 workforce issues." Still, what we found is that a majority
10 of the people we spoke to did agree that some kind of
11 coordinating center was, in fact, a very important actor
12 that is missing in this field. And so, as I go ahead to
13 talk about the functions of a National Center for a Clean
14 Energy Workforce, I am going to focus on the functions that
15 people were saying, "Here is where the key gaps are that are
16 not being adequately met right now."

17 So we looked at three options for what this center
18 could do in terms of focus. The first option is to
19 basically focus on the workforce development community, how
20 do you build up that community's capacity to serve the clean
21 energy need? And so, it means looking - gathering the
22 information on what is needed in terms of workforce
23 development, what works, and disseminating best practices.
24 It is not just about talking to community colleges and
25 apprenticeship programs, and so on, it is also about

1 engaging employers in the discussion because, obviously,
2 they are the ones that have to specify what is needed, but
3 it is a primary focus on dialogue with the workforce
4 development community. The main disadvantages of this
5 option is that this does actually duplicate some things that
6 are already going on there, and in practice, it is a
7 reactive approach precisely because this is where the field
8 is relatively crowded. So, Option 2 is to work on
9 rationalizing the demand side of the clean energy market,
10 particularly through quality assurance mechanisms and skills
11 standards, and the obvious advantages here is, this is what
12 is driving the market, this is where the leverage is, and
13 there is a lot of government interest, including Federal
14 Department of Energy, on these kinds of skills standards and
15 certifications.

16 Again, there is a bit of a crowd in this field, and
17 what is missing here, we heard from many people, is the
18 focus on job quality mobility, equity, and access. So
19 Option 3, which is the one that we recommend is what we call
20 building the high road in clean energy sectors. The high
21 road is a terminology from sort of workforce development and
22 labor market analysis, that basically talks about jobs that
23 involve high commitment, high skills, high rewards. And the
24 idea here is to bring together the supply side and the
25 demand side, and focus particularly on linking the two.

1 Again, a key topic here is skills standards and
2 certification, but it is not just in terms of serving the
3 demand side, but also how do you make these credentials what
4 sometimes gets called stackable, and importable, so that
5 people can move up in career ladders, and so they can move
6 from job to job. Now, certification standards are not the
7 only things that will be discussed here, and obviously we
8 want a center to explore other mechanisms, as well. But
9 this seems like the key starting point. So, through the
10 rest of what I have to say, I am going to focus on this
11 Option 3.

12 We identified three key functions, research,
13 clearing house communication, and technical assistance. Let
14 me say a few words about each. In the research area, there
15 is a lot of research going on, we already heard about some
16 of it earlier this morning, and so what we would see a
17 national center doing is not primarily doing additional
18 primary research, but aggregating, evaluating, and
19 disseminating this research. So, part of it is this sort of
20 demand and forecasting research, but a lot of it has to do
21 with evaluating the kinds of skills standards that are out
22 there. I see that some of the bullet structure of my slides
23 has not made it through the transition to another computer,
24 but you just have to sort of bear with me and believe that
25 these are all sort of at another bullet level. But one

1 interesting fact that was thrown out there by Barbara Hins-
2 Turner, who is at Centralia College in Washington State, is
3 that there are 300 certifications for boiler operation
4 around the country. In solar installation, there is a bunch
5 of different standards, as was already said. In retrofit,
6 there are a number of standards, although there are some
7 process for a convergence. There is also an importance in
8 thinking about what are the leverage points that someone
9 like the California Energy Commission, or other governmental
10 agencies have, in terms of RFP language, in terms of
11 regulatory language, and so on, and what best practices can
12 we diffuse and disseminate in terms of that, as well as the
13 training programs and curricula, themselves.

14 The second key function is clearing house and
15 communication. This was, if anything, the function that was
16 mentioned by more and emphasized by more of the people we
17 talked to than any other. And each of these communities,
18 what we have called communities, the clean energy community
19 and the workforce development community, is in fact quite
20 diverse and quite fragmented in many ways, so that there is
21 important discussions that have to be promoted within these
22 constituencies, but the most important discussions are
23 between them, bridging that gap between supply and demand,
24 between the workforce development language and mindset and
25 the clean energy language and mindset. And on the demand

1 side, in particular, we think the most important focus is on
2 state and local government agencies, especially with a clean
3 energy mission, that are going to be playing a very
4 important role in driving this entire process.

5 The third key function is technical assistance, and
6 basically what people said to us is, if you are going to be
7 putting research out there, you have to have the technical
8 assistance to follow-up; you cannot just give people
9 information and say, "Here, go use it," people are always
10 going to be asking, "How does this work in other places?"
11 You need that kind of direct conversation. Now, to make
12 this work, you know, we are talking about a National Center,
13 it is a big country out there, it has to be targeted, and
14 the help has to be sector-specific, so the kinds of advice
15 that you give on solar installation is not necessarily the
16 same as in building windmills. So, that requires a certain
17 amount of expertise. You know, obviously you are going to
18 have to start small and roll out additional expertise. A
19 big piece of what we want to be doing, particularly on the
20 clean energy side, working with employers and employer
21 associations, is to do what we call assisting the assisters,
22 so working with existing workforce extension programs, small
23 business development centers, and so on to give them the
24 tools to be able to provide assistance, so that the National
25 Center is not the source of all technical assistance in the

1 country, but, in fact, is assisting the assisters in
2 providing this kind of necessary technical assistance on a
3 much larger scale.

4 In terms of the structure, I am going to move much
5 faster here, but a few points that emerged is consensus in
6 people that we spoke to, is that a center has to be a cross-
7 constituency of partnerships, it should not be based in any
8 one single institution. Nobody should own control or
9 capture a center of this kind. Not surprisingly, people
10 said, you need a small and agile decision making board, but
11 you want to be getting advice from a very large advisory
12 board, and they also said, if it is going to be national, it
13 has to be multi-locational, it cannot just be sitting in one
14 place, it has to be networked, and let's use video
15 technology and other forms of networking to make that work.

16 We lay out two options for how to roll this out, one
17 is to do a multi-state launch, you are not going to just
18 pull together 50 states, but pull together selected states
19 that are already sort of thinking along these lines, and it
20 includes some of the largest states out there, New York,
21 Illinois, and so on. And obviously, the big advantage is
22 you can have a much larger national impact. The trade-off
23 is that, in terms of time and energy for a start-up, this is
24 quite complicated. There are some existing national
25 coalitions that you could use as a springboard for this,

1 there is a question of what final institutional forum you
2 want this to take, whether you want it to be a non-profit,
3 to be in some existing kind of non-profit alliance, a
4 university consortium, or actually just do an RFP for who is
5 best equipped to do this. Option 2 is to do a California
6 launch, and then to build out from there. It is obviously a
7 lot easier and would also more definitely meet the needs of
8 California, and California, of course, is a huge state with
9 a lot of resources to work with. There are some interesting
10 prospects, if the Energy Regional Innovation cluster that is
11 being proposed by the Lawrence Berkeley Lab gets funded by
12 the Department of Energy, that would be a clear counterpart
13 for a Center to work with. On the other hand, the problems
14 and solutions are national, so at some point, you want to
15 figure out how to scale this up, whether by networking or by
16 expansion, to a national level. And again, there is a
17 variety of versions of an institutional home for this kind
18 of California-based center.

19 So just to close here and to let us proceed to
20 lunch, there is a lot of choices here. We have some ideas
21 about which choices would make the most sense, but the
22 purpose of this report really was to lay out a range of
23 options. I do want to say that we come down quite strongly
24 on behalf of Option 3, this idea of promoting high road
25 strategies, bridging between the supply and the demand side,

1 with the goal of ensuring both product quality and job
2 quality, and that we do see, as some other people have
3 emphasized is, well, the standards and certifications --
4 workforce skills standards and skills certifications -- as
5 probably the most important single starting point in moving
6 on this option. So, I will stop there.

7 CHAIRMAN DOUGLAS: Well, thank you very much for
8 this presentation, it was interesting. It is obviously a
9 report that we have been looking forward to for some time,
10 and so we are really pleased to be able to hear about it
11 today. I just have one question, is you have talked about
12 what you see as the ideal structure for this kind of
13 national center, you know, and I sort of wrote down here, a
14 national center, multiple locations, small and agile
15 decision making, large stakeholder community, or advisory
16 board capturing that diverse stakeholder community in, of
17 course, multiple states, and so on, and avoidance of
18 capture, either by an institution or obviously by a
19 constituency, and I was wondering if you are aware of any
20 models that you might be looking at that would match those
21 kinds of needs and governance.

22 MR. TILLY: Well, I actually think that the Clean
23 Energy States Alliance is a pretty interesting model. It
24 involves 18 states, it is oddly enough based in Vermont,
25 which is just because of the nonprofit that it grew out of,

1 but it mainly functions in Washington. It functions as an
2 independent nonprofit, but it works very closely with the
3 states, and so that is sort of, the fact that it is
4 accountable to the constituencies, but exists as an
5 independent nonprofit, seems like a very workable solution.
6 That is not the only model, but we are very impressed with
7 them, so I would point to that, in particular.

8 CHAIRMAN DOUGLAS: All right, well, thank you.
9 Other questions?

10 COMMISSIONER EGGERT: As part of this assessment,
11 did you look at the scale of the resources that would be
12 required to make this operational on an ongoing basis?

13 MR. TILLY: We did not because it does depend
14 crucially on some of the choices that we laid out in
15 structure at the end. You know, I think what you can say is
16 that it is scalable, and particularly on a technical
17 assistance side, that is quite resource intensive, and so
18 there is really some serious choices and tradeoffs about how
19 much you want to provide technical assistance directly vs.
20 providing resources for technical assistance. Research,
21 there is, you know, does not require a huge amount of in-
22 house capacity, brokering discussions, I think, is a step up
23 in terms of having the possibility of convening discussions
24 around the country, and technical assistance is the most
25 resource intensive. We are planning to do an extension of

1 this study that would pursue particular recommendations and,
2 at that point, I think we would have a more specific answer
3 than the very vague one I just gave you.

4 COMMISSIONER EGGERT: And then I guess the next
5 question is, what would you suggest in terms of next steps?
6 Where does this go from here?

7 MR. TILLY: Well, we think it is really exciting
8 that the California Energy Commission is taking some
9 leadership on this, and basically we think that this concept
10 is ripe, there is interest in the Department of Energy, the
11 Department of Labor, a lot of states around the country,
12 and, you know, if the leadership can come from the Energy
13 Commission either alone, or in partnership with similar
14 parties around the country, you know, we think this can
15 happen. It may not be able to happen at a large scale
16 starting up, but we think this can happen pretty much as
17 soon as people are ready to get moving on it.

18 COMMISSIONER EGGERT: Thank you.

19 MS. KOROSSEC: All right, if we do not have any
20 questions from the audience, I think it is time for us to
21 take our lunch break. I suggest you return here at 1:30.
22 Thank you.

23 [Off the record at 12:34 p.m.]

24 [Back on the record at 1:37 p.m.]

25 MS. KOROSSEC: All right, we are going to go ahead

1 and get started again here. Welcome back from lunch,
2 everybody. I hope everybody was able to wolf down food and
3 not get too much heartburn here in a short period of time.

4 We are going to start out this afternoon's session
5 talking about some of the activities that are being
6 implemented through taking advantage of all the research we
7 heard about this morning, and we are starting with Barbara
8 Halsey from the California Workforce Investment Board.
9 Barbara does not have a PowerPoint presentation, so we are
10 just going to get the generic slide here so you have
11 something to stare at on the screen while she speaks.

12 MS. HALSEY: Good morning - good afternoon, sorry.
13 I missed that little lunch break thing there. If you do not
14 mind, I would prefer to sit here so it feels more like a
15 conversation than a presentation. I am a little out of
16 breath, I am one of those eat at your desk kind of people,
17 so when I have to go out for lunch, I am completely out of
18 my element, finding a place to eat, eating, and getting back
19 to work is definitely a challenge.

20 So, the California Workforce Investment Board has
21 had the great privilege of working with the Energy
22 Commission over the past 12 plus months. And I have to say,
23 as I sat and listened this morning to the presentations that
24 were being given, I had a sense of satisfaction that the
25 efforts we have undertaken together have been the right

1 kinds of efforts, a realization that we have much farther to
2 go, and a certainty that we have to continue to work
3 together in order to ensure that the paths we take are
4 complimentary and not running parallel to one another
5 without the kind of integration necessary in order for us to
6 effectively prepare the workforce that we need for a clean
7 energy economy.

8 So, with that, I want to provide you just with an
9 overview of some of the activities that we have undertaken
10 at the California Workforce Investment Board over the past
11 year. And rather than do a PowerPoint, I chose to put
12 together a booklet that really provides high level Fact
13 Sheets on the kinds of activities that we have undertaken,
14 understanding, again, that we are working at the tactical
15 level and we are working at the strategic level in all of
16 the activities that we are involved in.

17 So, the first thing I want to talk about is what we
18 consider our Economic Competitiveness Strategy. The State
19 Workforce Investment Board in September of 2008, as a charge
20 to develop statewide workforce development strategy, adopted
21 Sector Strategies as a framework for the work that we do,
22 and you heard presenters this morning talk about the need to
23 closely connect with industry, the need to understand
24 demand, the need to align workforce preparation with demand
25 as it beings to emerge, that is really the premise behind

1 Sector Strategies. It is about targeting specific
2 industries or clusters of industries, it is about using data
3 driven planning methodologies, it is about developing a
4 finely tuned knowledge of the interdependence between
5 business competitiveness and the workforce needs of targeted
6 industries, and that is really the approach that we have
7 used as we have rolled out the programs that we have engaged
8 in with the Energy Commission. We have been very specific,
9 very deliberate, about building regional partnerships
10 because we know that, in order to effectively manage the
11 kinds of workforce efforts that we need to have throughout
12 the state, they have to be regionally defined and locally
13 delivered. So, we have had a great deal of time spent over
14 the past year on nurturing the kinds of regional
15 partnerships and building that kind of language into the
16 solicitation for proposals that we have offered over the
17 course of the past year. Sector Strategies are effective in
18 the energy economy because they do specifically address the
19 workforce needs of employers, and not just the entry level
20 needs, but the career level needs, the advancement needs,
21 the transition needs that you see with particular industries
22 as they begin to respond to a clean energy economy. And
23 most importantly, given the current economic condition of
24 the nation, certainly California, we wanted to set ourselves
25 on a path to bolster economic competitiveness at the

1 regional level, and we really believe that sector
2 strategies provided a good foundation for doing that. The
3 final thing that really resonated with me in terms of the
4 approach we are using and the comments that were heard this
5 morning was the idea that sector strategies can really be
6 used as a foundation for systems change. And I think, over
7 and over again, and imbedded in the conversations in the
8 presentations that you heard this morning, was that thread
9 around systems change, bringing systems together to work
10 more effectively together, to align, to leverage, to really
11 begin knitting together a fabric that supports the clean
12 energy economy, the workforce training needs, and the
13 business needs that we are beginning to identify in that
14 economy.

15 So, sector strategies was our foundation. The first
16 thing that we did with the Energy Commission as a willing
17 partner, thank you very much for being entrepreneurial and
18 adventuresome with us, was we began talking about what kinds
19 of training programs should we be operating in the state,
20 and how could we launch some very tactical activities that
21 were still connected to regional and economic demand, and
22 that begin to address the emerging workforce needs that we
23 saw coming out of energy efficiency specifically.

24 So, we launched what we called California's Green
25 Workforce Initiative. And, with funding from the Governor's

1 15 percent Discretionary Funds under the Workforce
2 Investment Act, with funding from the ARRA money that came
3 to the Energy Commission, and with some of the AB 118 funds
4 that are available, we launched a set of training programs
5 that spoke to energy efficiency, renewable fuels, and
6 alternative vehicle workforce development. We have 34
7 training programs that are up and running right now. In
8 addition to those 34 training programs, the CEC also made
9 investments in the Employment Training Panel so that
10 incumbent workers, those whose skills are needing to
11 transform in order to manage new processes in their work
12 environments, have access to the kind of training that they
13 need in order to upgrade skills sets for new work that is
14 coming their way. There were also critical investments in
15 the K through 12 system, through the Career Partnership
16 Academies and Technical Education, and we are hearing over
17 and over and over again that we cannot lose sight of that
18 investment in the individuals who will be hitting the
19 workforce in 2014, 2018, 2021, 2025. If we do not emphasize
20 the relationships at the high school levels right now, we
21 lose potentially the momentum that we are starting to build
22 in making people aware of the kinds of occupations and
23 career opportunities that will be available in a clean
24 economy.

25 So, the Green Workforce Initiative, from the State

1 Board perspective, has three primary components, the first
2 of those components is the Clean Energy Workforce Training
3 Programs that I spoke about; the second component is a
4 Regional Planning Grant that we did. The Regional Industry
5 Clusters of Opportunities Grants were released to 10 regions
6 throughout the state, and there is a separate Fact Sheet on
7 those regions, so if you turn to page 7, you will see that
8 we took \$2.2 million in funding from the American Recovery
9 and Reinvestment Act out of the Governor's WIA 15 percent
10 discretionary budget, and we also utilized funding from AB
11 118, the Alternative and Renewable Fuel and Vehicle Program.
12 Those funds are supporting work that is going on in 10
13 regions throughout the state. The regions are listed on
14 page 8 of the handout that you have, Fresno County and the
15 consortium of counties they are working with is focusing on
16 Health; Humboldt County is focusing on diversified health,
17 agricultural, building construction, management, and
18 innovation; the Northern Rural Training and Employment
19 Consortium is focusing on Health Care, Renewable Energy, and
20 Alternative Fuels; our North Valley Job Training Consortium
21 is focusing on the convergence between the Health industry
22 and the Information Technology Industry; San Diego Workforce
23 Partnership has a similar focus; or Pacific Gateway
24 Partnership is focusing on energy efficiency, green
25 building, energy generation, transportation, energy storage,

1 water and wastewater; Sacramento Employment and Training
2 Agency is focusing on energy generation, energy
3 infrastructure, energy efficiency, storage, green building,
4 and transportation; the San Bernardino County Consortium is
5 focusing on energy generation, green building, recycling,
6 transportation, and water technologies; our Santa Barbara
7 Consortium is focusing on agriculture, energy generation,
8 green building, resource conservation, green products and
9 transportation, and last, but not least, our Contra Costa
10 County Consortium is focusing on renewable energy and water
11 technologies.

12 If you will turn to the following page, page 9 and
13 10, you will see some great bubble charts and they are
14 fascinating because they are beautiful. But, more
15 interesting, because of the story that they are starting to
16 tell us. For a very long time, we have looked at how we
17 develop workforce training programs purely from a labor
18 market demand perspective, and we have not set that in the
19 context of a regional economy. What we are trying to do
20 with our Regional Industry Clusters of Opportunity Grants is
21 give context to how training programs are being developed
22 and deployed at the regional and local level. So, the first
23 thing we did with our 10 Grantees is we provided them with a
24 deep diagnosis of what their standard typical everyday
25 economy looked like, and then, for those focusing on clean

1 technology and the green economy, did a deeper dive into the
2 15 segments of the green economy that had been identified
3 through Next10 and its many shades of green report. So you
4 see at the top of your page Alameda, Contra Cost, and Solano
5 Counties, and their traditional economy, each of those
6 bubbles has a slice of green in it that represents how green
7 their traditional industries are, or the percent of green
8 jobs currently in their traditional economy. The graph
9 below depicts what their green economy looks like, and
10 specifically speaks to the concentrations that they have of
11 those 15 green segments of that economy, so they can start
12 to understand where they should be focusing on, and where do
13 they already have access. You can see energy infrastructure
14 is something that is apparently an emerging industry in
15 their area that they should be paying attention to. They
16 did not know that ahead of receiving this report. Now, when
17 I look at this, and from my past experience as a local
18 Workforce Investment Board Director, given this information,
19 I would start looking for where innovation funding was
20 coming in to that energy infrastructure sector, I would want
21 to understand what businesses made up that sector, I would
22 want to understand what career pathways existed within those
23 businesses. I would begin to look at my Community College,
24 Adult Ed., ROP and University partners to see what might be
25 going on in terms of research and development, where do we

1 already have programs or training offerings that align with
2 the needs of this industry, business industry, one that is
3 forming out of a traditional industry? And so I should be
4 concerned about whether or not those folks are going to be
5 laid off unless we re-skill them? What does that mean in
6 terms of a business retention strategy for me? So, looking
7 at your economy in this way, and putting your workforce
8 development needs in the context of your regional economy,
9 gives you a platform for a broader conversation with the
10 partners who need to be at the table, with the businesses
11 whose needs your are trying to solve for, and hopefully a
12 broader conversation around what really is the future
13 economic competitiveness of our region going to be based on,
14 and how do we begin nurturing the kinds of businesses that
15 we see represented in this green employment snapshot, how do
16 we support them as they grow? How do we understand what
17 their business needs may be? And ultimately, how do we
18 answer their workforce training needs? So, we are really
19 excited about this body of work. The key with the work that
20 we are doing is it is not just about looking at data and
21 understanding some really interesting bubble charts, it is
22 about bringing together the right kinds of partnerships at
23 the local and regional level for collaborative priority
24 setting, and we heard speakers this morning talk over and
25 over again about how important it was to begin approaching

1 this in a different way, to develop the kinds of
2 consortiums, the kinds of leadership bodies, the kinds of
3 structures, organizational structures, that allowed for
4 individuals coming from multiple disciplines to apply their
5 lens to what the needs in this industry are going to be, and
6 begin setting priorities for their regions in a very
7 collegial and collaborative way.

8 The second phase of our Cluster of Opportunity work
9 is around designing investment strategies. We heard again
10 from the speakers this morning, there is something that we
11 have to address around sustainability and is it
12 sustainability from a government funding perspective? Or is
13 it sustainability with government funding providing the seed
14 money to start programs, and then leveraging that investment
15 against existing funding within local communities so that
16 that money is being directed to specifically address the
17 workforce training needs of critical industries? We think
18 it is a combination of the two. We think, ultimately, if we
19 start having the sustainability conversation early on, as we
20 are planning, we can engage private business and utilize
21 their funding mechanisms, as well, as part of the mix in how
22 we solve for the continuance of programs that are critical
23 to meet the workforce needs of specific industries in an
24 area.

25 The third part - or, I am sorry - the fourth phase

1 is sustainable implementation, so we have 10 groups
2 currently, they have all received the deep diagnosis, they
3 understand now what their economies look like in the
4 particular areas of focus they were studying, they have
5 begun to do their collaborative priority setting, we have
6 brought them up to Sacramento for action clinics, we are
7 providing them with intensive technical support with
8 assistance from collaborative economics, they are beginning
9 to design their cluster of opportunity investment strategy,
10 and we are helping them identify where they can go for
11 competitive funding. Some of that funding may come from the
12 innovation grants that the CEC is releasing, some of that
13 money may come from the Department of Labor, some of it may
14 come from Federal sources through the Department of Energy,
15 depending on where they see their opportunities, and then we
16 are asking them to give great thought to how they are going
17 to sustain the investment strategy and the priorities, the
18 industry priorities, that they have identified. So this is
19 not a short term solution, this is long vision, what does it
20 look like in the future, what does it look like done, what
21 do you need to do in order to organize your education
22 systems, your economic development partners, your union
23 partners, your workforce partners, and your businesses in
24 your region to ensure that you actually realize the
25 competitive advantage that you appear to have. So, we are

1 really excited about that and think it is foundational work
2 for what we will be doing in the future.

3 The third piece that we have is the State Energy
4 Sector Partnership Grant. This grant is a \$6 million grant
5 that we received from the Employment and Training
6 Administration. We have been as careful as we can about
7 making sure that we are aligning, so if you look at the
8 Clean Energy Workforce Training Program, those grantees had
9 to have employer councils attached to them, we wanted to
10 make sure people were moving into employment, that employers
11 were guiding how those programs were developed and rolled
12 out. We have also asked them to come together, they
13 participate in webinars and action clinics, and I am sure
14 you will hear more about that as you hear presentations
15 after mine. Our Regional Industry Cluster Grantees also
16 come together as action teams, so they are working in their
17 own areas, but they are also coming back in, sharing ideas
18 about best practices, and we really hope that we can speed
19 the bringing to scale a good practice through that kind of
20 interaction with our grantees. The State Energy Sector
21 Partnership is sort of the wrap around for all of that. We
22 know that we have particular areas in the state that have
23 not looked at what their green economy holds, they do not
24 understand what the energy efficiency opportunities may be,
25 or what the clean economy opportunities may be within their

1 own economy. So, we are providing assistance to the San
2 Joaquin Valley to do a deep diagnostic on what their economy
3 looks like, so they can start working with their education
4 and business partners to align strategies, to support that
5 economy. We are working with Alameda County to really look
6 deeply at what we can do for the folks who have been
7 displaced from NUMMI, and what opportunities there may be as
8 that NUMMI plant is re-purposed. We are working with San
9 Diego County at what opportunities there are within their
10 economy to support energy efficiency and other clean
11 industries, so we are very excited about the way the State
12 Energy Sector Partnership grant funding can provide us with
13 that next layer of strategy development. We can build off
14 of what we have done in the clean energy workforce program,
15 we are using our regional industry clusters of opportunity
16 to begin guiding the six areas receiving funding under a
17 State Energy Sector Partnership to that next level of
18 development, how do you start engaging with your four-year
19 institutions, how do you bring to scale new programs that
20 are appropriate in areas where you have not had program
21 development yet, and how do you knit together, again, the
22 kind of fabric necessary to support bringing or helping
23 California realize its competitive advantage around the
24 green economy. So, I will stop with that and take any
25 questions you may have.

1 CHAIRMAN DOUGLAS: Well, thank you, Barbara, for the
2 great presentation. And it reminded me, yet again, how
3 pleased we are to be working with you to really bring these
4 programs to fruition together. One question I have is, I
5 really see how we are creating foundational programs for
6 clean energy workforce development in key regions of the
7 state, and what do you see as some of the next steps to
8 really build off of that potential?

9 MS. HALSEY: Well, one of the things, one of the
10 entities that I did not mention, and I am sure my Board and
11 my staff will razz me about it when they hear this
12 presentation, is the Green Collar Jobs Council, and we are
13 really pleased with the passage of AB 3018, that we have the
14 opportunity to form the Green Collar Jobs Council as a
15 collaborative entity, where multiple interests could come
16 together to chart out a future. And we have, in the past
17 couple of months, really been focusing on where we need to
18 revise our strategies. We just finished our Version 2 of
19 our one-page business plan, and our mission currently states
20 "accelerating business investment and job creation in
21 California's green economy through strategic actions at the
22 state, regional and local levels, collaborate with
23 investors, employers, regulators, and public sector partners
24 to connect business and the trained green collar workforce."
25 The objectives that we have identified as critical for the

1 next year are the evaluation of our initial training
2 programs. We need to understand what did work and what did
3 not work, what can we learn, what can we build on for the
4 future, looking at ways to ensure the continuation and
5 evolution of those programs that are relevant training
6 programs through sustainable planning, and then supporting
7 California's businesses by facilitating access to resources,
8 which will spur innovation and/or support their transition
9 into the green economy. So, we are shifting a bit to the
10 business focus, which matches nicely with some of the
11 comments around the demand issues that we are seeing. If we
12 do not create demand, businesses have really no need to
13 create job opportunities, so there is something about
14 fostering demand and creating that kind of environment that
15 will define how we take next steps.

16 CHAIRMAN DOUGLAS: Okay, and on the actual training
17 programs, what are some of the main parameters that we are
18 measuring, going forward, that help us measure the success
19 of the programs, the success of participants who have gone
20 through and been trained, and the extent to which the
21 curriculum that we are able to offer matches up with the
22 needs?

23 MS. HALSEY: Admittedly, that is challenging right
24 now. There is a timing issue, I think, that everyone is
25 well aware of. We want to make sure that we are producing

1 workforce supply that is in relationship to the demand that
2 is out there. Unfortunately, with the current economic
3 situation, that demand is slow to come. We were very very
4 careful about designing the Clean Energy Workforce Training
5 Program so that it called out the need for nationally
6 recognized certifications in all of the curriculum that was
7 being delivered under that training program. And I think
8 that is one of the things that we can take away as a best
9 practice. If we are going to fund with public dollars the
10 kinds of training programs that will meet the demand we
11 expect to come, then we need to fund programs that answer to
12 those nationally recognized standards. Where we are
13 tracking now, or beginning to track the employment of
14 individuals coming out of those programs, again, because we
15 are not seeing the economy come bounce back as quickly as we
16 all hoped it would, we expect that there may be some longer
17 periods of unemployment for people. But, at the same time,
18 we are also in some of those programs seeing some amazing
19 results because of the employer connections that have been
20 made, so people going through training programs, some of
21 them being picked up ahead of finishing training programs,
22 so that is encouraging. The most critical thing for me is
23 making sure that, on a regional basis, the individuals who
24 are responsible for designing and delivering training
25 programs understand what their economy is going to demand.

1 We could really miss the mark if we are not very very
2 studious about the way we are looking at how this economy is
3 emerging in regions throughout the state. I know that there
4 was a point in time when there was some concern about all
5 the training programs being delivered for solar panel
6 installation training programs, when indeed, what we may
7 have needed to be doing for the solar industry was
8 developing their sales force, or developing their financing
9 people. So timing is really critical and I think we have to
10 continue to step back, make sure we are doing the right
11 projects at the right time, and use the data that we have to
12 guide how we are investing those dollars.

13 MR. BARTHOLOMY: So, Barbara, thank you for an
14 excellent presentation. I had a question about the State
15 Energy Sector Partnership Training Grants. As you said,
16 because of the work we all did, that many of us in the room
17 did together around the Clean Energy Workforce Training
18 program, five of the six areas were able to build off of
19 those partnerships for the SESP grant. The one area where
20 we were not able to provide clean energy workforce training
21 funds, but you folks are directing some money towards, is
22 the San Joaquin Valley Regional Team. I was just wondering
23 if you could spend a couple minutes talking about your plans
24 and your activities around the San Joaquin Valley Region
25 Team when we have been asked to testify on Recovery Act

1 funds to the Legislature, there has been significant
2 interest of legislators.

3 MS. HALSEY: Right. You are absolutely right. In
4 each of the grant funding opportunities that were released
5 over the course of the past 12 to 18 months, we saw an
6 absence of applications coming in from the Central Valley.
7 We have had conversations with our Workforce Investment
8 Boards, we have eight boards in the Central Valley, there
9 seems to be a lack of understanding about what currently
10 exists within that region that can be tied to or that
11 supports a clean energy economy, and we really felt the best
12 utilization of the money that we had under the State Energy
13 Sector Partnership would be to provide an opportunity for
14 that region to come together, take a very deep look at what
15 industries existed that supported a clean economy, and then
16 begin to strategize around what was already there. So, that
17 is the work that we are doing. The Stanislaus County
18 Workforce Investment Board will be serving as the Fiscal
19 Agent for that grant, and we will be utilizing the San
20 Joaquin Valley Partnership as a vehicle through which we are
21 convening our workforce partners and our economic
22 development partners, and the intent is to bring workforce
23 economic development, education, and business together for,
24 again, this very deep diagnostic piece that helps them
25 understand what does their clean energy economy look like

1 currently, how did they build on that, and where can they
2 realistically make investments now that will help that
3 economy grow into the future.

4 CHAIRMAN DOUGLAS: Thanks for that and I am glad you
5 asked that question because that is an important part of the
6 picture. Is there a place where members of the public can
7 go to get more information on the results of these
8 assessments of the different regions?

9 MS. HALSEY: We are in the process of updating our
10 website and including status reports on the projects that we
11 have available, but you can go to the State Board's website
12 which is CWIB.CA.Gov and, under our Special Committees,
13 click on the Green Collar Jobs Council and see report-outs
14 of progress and activities there.

15 MS. WHITE: Thank you for your presentation. I just
16 have one last question. From some of the work that you have
17 done to try and address the timing issue ensuring that your
18 workforce development is consistent with the market needs at
19 any time, are there some takeaways that you can provide
20 today that people need to be cognizant of? Because in the
21 earlier discussions that we had today, there were a couple
22 of mentions about this timing issue and making sure that
23 your curricula is consistent with the market needs so that
24 you can actually do placements. And you speak about the
25 partnerships with the industries where you would like to see

1 the placement. What does that partnership look like? How
2 does that exchange take place? And what value added do we
3 bring into this dialogue with some of the marketers other
4 than, "We are trying to train people to assist you in your
5 industry?"

6 MS. HALSEY: I think the thing that stands out most
7 prominently for me is, well-implemented, these projects are
8 as close as they can possibly be to industry. And unless we
9 have that close close connection, we are going to miss the
10 mark. We have to be demand driven in the way that we are
11 structuring and delivering the training services that we
12 provide. So, unless we have - and I mean industry, not
13 particular business, we have to be less transactional about
14 the way we are training people, and more transformational.
15 We have to speak to broader industry need. I think one of
16 the speakers this morning talked about the alignment of
17 investments for multiple sources, we have common goals, they
18 are common goals for energy workforce development with the
19 CPUC and the CEC, there are common goals that the Workforce
20 Investment Board has in developing workforce supply to broad
21 industry demand throughout the state, and we need to look at
22 what those broader training needs are. It may not be
23 training someone to do weatherization in a weatherization
24 program, but it may be doing a broad certification program
25 that prepares individuals to work in multiple utilities. It

1 gives them that base training they need, and then the
2 finishing work happens on-the-job where they are actually
3 getting the hands-on experience. So, the timing issue is
4 going to be a challenging one for a while. And it is a
5 challenging one because I do not know that our educational
6 system is necessarily aligned to do the kind of work that we
7 may need it to do, that is why how we invest is so critical,
8 and what we call out as the components of our solicitation
9 for proposals can really drive our education partners to act
10 in certain ways, within certain economies; but, ultimately,
11 the connection has to be between your workforce, your
12 education, and your business.

13 MS. WHITE: And that has to start at the beginning?

14 MS. HALSEY: It has to start at the beginning.

15 MS. WHITE: Thank you.

16 MS. KOROSSEC: All right, thank you very much. We
17 are going to make a slight change in our agenda to
18 accommodate an air flight and get Leticia Barajas up here
19 from LA Trade Tech.

20 DEAN BARAJAS: Thank you so much to the entire staff
21 here and for the presenters who are going to follow me, for
22 their flexibility in terms of changing the time.

23 Let me start off with today's presentation, and the
24 whole component of the meaning is slightly different than
25 what I had originally envisioned, which actually works out

1 quite well. So, while you can follow along in the
2 presentation, there will be some comments that I will be
3 making throughout the presentation to really give you what I
4 think is the spirit of today's meeting, which is, now that
5 we have this for future, for the next year or two, what
6 changes can we make to better improve and to better align
7 our systems?

8 So, with that, let me introduce myself, I am Leticia
9 Barajas, I am Dean of Academic Affairs at Los Angeles Trade
10 Tech College. And for those of you, I wanted to start off
11 with an overview because I am trying to follow the
12 recommendations that Chris gave us by e-mail, you know, tell
13 us about your program. We are one of several awardees in
14 terms of community colleges for the Clean Energy Pre-
15 Apprenticeship Programs. We were awarded \$1 million
16 basically to train 150 participants. What we set out, in
17 terms of our goals, is that 128 would complete the training,
18 that we would actually do outreach and training 75 percent
19 of our participants would be low-income and from special
20 populations, which include foster care populations and
21 limited English proficient students. We responded to the
22 component on solar clean energy in terms of solar and
23 distribution, electrical distribution components and utility
24 large-scale components. So, we were very specific, when we
25 read the RFP, on how we were going to respond. And in a

1 bit, I will talk about some of the challenges with that
2 because of the job market and then the demand side, more on
3 the energy efficiency component.

4 Our performance goal was that we would place 98
5 people in unsubsidized employment and 70 would retain their
6 employment six months after training. So that is what we
7 envisioned. But, for those of you who are not familiar with
8 Trade Tech, Los Angeles Trade Tech College is one of nine of
9 the community colleges in the Los Angeles Community College
10 District. We are located right in the heart of the southern
11 part of downtown Los Angeles and we, at the beginning, we
12 are really where South L.A. begins. And so, to tell you a
13 little bit about our community and the background and the
14 participants we serve, I have got some stats up here which
15 basically, the population we serve, 55 percent do not have a
16 high school diploma or a GED, that is an issue if you are
17 trying to get into working for Socal Gas, or you are trying
18 to work for Edison, or other utility companies. So, we have
19 got that to start off with, 55 percent do not have that.
20 And 35 percent of our individuals in our community actually
21 have less than a 9th grade education. So we are in one of
22 the lowest and the lowest performing, academically speaking,
23 communities in the nation. So, I want to make sure you get
24 that picture in mind. We also have a big challenge in our
25 community in that we have one of the lowest, what we call,

1 college point cultures, where only 35 percent of 18-24-year-
2 olds are actually enrolled in post-secondary education. So
3 we rank in the top five in the nation in terms of that
4 statistic. Again, we serve a predominantly immigrant
5 community, but since we are located in a very central
6 location where we are served by over 38 bus lines and we are
7 now centered where the Blue Line, and now the Expo Line will
8 be built, we actually have people who are commuting to our
9 campus because of our unique programs, with over 25-40 miles
10 away. So, we consider ourselves a regional training
11 provider, not just the community college that serves South
12 L.A. Also, a little bit of information, 70 percent of our
13 programs are career technical education and 30 percent of
14 our programs are really the traditional transfer track, so
15 that gives you an idea of what we are.

16 So, we were really happy to respond to the RFP, we
17 said, "Let's do it. We can do this. We will be ambitious,
18 this is great, we are already set up for it." We actually
19 have a very strong construction design and manufacturing
20 department that leads the state in degrees and certificates
21 in all the building construction trades. So now we said,
22 "Well, how are we going to pull in the participants?" In
23 our proposal, we actually noted a number of partners that
24 included the Work Source Center providers, it included our
25 Local WIB, it included both the County WIB and the City WIB,

1 and a lot of nonprofits. What we never imagined is that
2 this would never be an issue. We actually, the strategy we
3 had is we started a Web Portal, we just put it on our web
4 page and we did a very quick sign-in, that you can see up
5 here, where participants were just told to put their name
6 down, if they were interested in training, you know, tell us
7 what you are interested in and tell us a little bit about
8 yourself. I can tell you today, we have already met our
9 quota of 150 participants, and we probably already exceeded
10 it, and that is one of the challenges and one of the
11 recommendations I have, because if you are a Grantee, even
12 though you have the ability to serve more participants,
13 there is almost an ethical dilemma that I talked about in
14 one of the conference calls, which is, do we want to
15 continue training even though jobs are not there, but there
16 is a hungry public who wants to be trained with the hope
17 that maybe the retrofit side is going to kick up in a couple
18 of months? So, it is a balance, because, even as a grantee,
19 will you be judged by your performance where you are going
20 to say, "How many people did you place in jobs?" So, we are
21 ready and willing to continue training, however, if we have
22 to look at a long term strategy, if we will be judged by how
23 many jobs, if we train 400 people, and only 100 jobs
24 actually come to fruition, what is that scale? What are we
25 going to be evaluated by? So that is something I would like

1 to give you to consider. So, our Portal's mission is here
2 on this slide.

3 Let me tell you a little bit about the topics that
4 we are actually now training on because we actually revised
5 working with our EDD regional advisors and just the
6 marvelous stuff at EDD, who I think have done a tremendous
7 job considering the challenges in terms of how this program
8 has changed, what the RFP spoke to and the spirit of the
9 intent of that, is maybe different because the job market is
10 different, the demand is different, so I want to give kudos
11 to everyone involved.

12 We started off and we envisioned focusing primarily
13 on our electrical lineworker, and I think what separated our
14 proposal from probably any other is that we proposed and we
15 are currently training female lineworker program, and so we
16 started off with 32 participants in the female Lineworker
17 Program, and we are now to 26, and we have a great deal of
18 interest from Socal Edison, also San Diego Gas & Electric,
19 as well as DWP, in terms of recruiting. For those of you
20 who are not familiar, the Lineworker Program is
21 predominantly, 99.9 percent, male. So this would be a huge
22 change for the State of California and for both the investor
23 owned utilities and the municipal utilities, so we are
24 really proud of what program. In addition, we have in
25 response to the RP, we did the Solar PV Installer, and I

1 think Barbara mentioned it earlier, that is great, everybody
2 wants to be an installer, but where are the jobs? So we
3 have actually now integrated in our installer program even
4 more electrical concepts so that they can actually increase
5 the likelihood of being actually employed in another related
6 trade. We have also incorporated at the Solar Thermal
7 because that is, we found out, after the fact, talking to
8 our industry partners and employers, this is the next big
9 thing, everybody in LA has a pool who lives north of the 10,
10 so that is something we really have to get on. And that is
11 interesting because that is not necessarily the same skills
12 as an electrical person, this is really someone who is more
13 multi-faceted, that has both the plumbing aspect, you know,
14 some electrical, and a lot of can-do attitude, so it is a
15 very different type of training. And, you know, we have a
16 plumbing program, so why not incorporate green plumbing?
17 Again, our strategy is to incorporate and make an individual
18 as better prepared as possible so they can have an
19 exceptional chance of actually being employed. And one of
20 the areas that we are growing more and more famous for is
21 our Weatherization and Energy Efficiency Installer Program.
22 We are now, proud to say, that we are a Department of Energy
23 Official Weatherization Training Center. We are hoping that
24 our State of California colleagues, through the Community
25 Services Division or Department, will actually now allow us

1 to provide training in this because you have to be both
2 state certified, even though you are nationally recognized,
3 and we are working on that. There has been a change in
4 leadership there, so we are really hopeful of that soon. In
5 addition, we recognize that everyone needs soft skills, so
6 even on the weatherization side, someone said you need to
7 grow the demand side. What we found from some of our Energy
8 Efficiency Weatherization providers is that, well, okay,
9 great, you have a lot of installers, but nobody is selling
10 this to the customers. So I am really also proud to report
11 that this is an area that we have very good collaboration.
12 We are one of the grantees for the CPUC's workforce
13 education and training program, a pilot program, or one of
14 two community colleges, City College of San Francisco is the
15 other, where we are working on developing curriculum for the
16 low-income energy efficiency weatherization program, which
17 is the investor-owned utility component to the Department of
18 Energy funds for the weatherization. So, I know that is
19 complicated, but basically our goal is to be able to do any
20 type of weatherization or to train for that. And what has
21 been great about this, as a trainer, and as a community
22 college, we are now able to speak to you and say what it is
23 like to work with two, three, or four government agencies,
24 or state agencies, and some of the challenges that comes
25 with that because, although I believe in May of 2008 or

1 2009, there was an MOU that was designed through the PUC
2 and, you know, the CSD, in terms of working together to
3 align these competencies, I am not sure that a lot of work
4 has been done towards that. So, we take that on as our goal
5 to get this work done, to make sure that, for any future
6 college or training entity that wants to get into this
7 business, there will be very clear competencies, and there
8 will be very clear dos and don't dos. So that is in and of
9 itself one of the other recommendations I have, where we
10 really provide more collaboration and clear leadership, and
11 all the state agencies that are doing related work, there
12 either has to be one lead, because task forces are great,
13 joint commissions are great, but who has the last word? So
14 that is a challenge for us, so I just want you to know that
15 because I am being very honest today. Because you told me,
16 you told me it is all about recommendations for the future...

17 So, we also have a Sustainability Lighting
18 Technician Program, we actually have a lab facility, our
19 faculty we are training, I think it is something that IBW
20 and NECA and others were involved in developing statewide
21 curriculum and actual training that is standardized, so we
22 are doing that, as well. That is all part of our clean
23 energy. And we are getting into the Energy Auditors, we are
24 working with some nonprofits and doing some, you know, free
25 audits. In addition, because of the work that we have been

1 doing and because of the heightened attention we have gotten
2 through this \$1 million grant, we are proud to say that,
3 actually, DWP is now working with us, and so, as of a couple
4 of weeks ago, they have formally said that they wanted to
5 work with us on this aspect, so that has been great in terms
6 of being able to leverage some of our partners, some of both
7 our private investor-owned utility partners, and with public
8 partners, as well. So, that tells you what are the topics,
9 what the workshops that we are leading. So, we are going to
10 do all this and we have actually already booked all our
11 trainings for this, and we will be done with the training by
12 the end of August, on all of them, and that is, again,
13 training - our goal was 150 - we now have officially 160.
14 With that, I am also going to tell you one of our
15 challenges, even though I am not at that slide. One of the
16 challenges is how do you know that I actually have 150 or
17 160? And I know my colleagues at EDD are probably saying,
18 well, if they are in JTA, one of our biggest challenges for
19 community colleges is that we are not set up to do that, so
20 if you ask me to report on very specific criteria, we are a
21 college agency, we have firewalls, we have all these
22 technical components that, if you ask me to log in or to
23 directly connect, we are not able to. So it has been very
24 difficult, it has been a big challenge to actually be able
25 to enter all this data so that you can be able to see it at

1 any given times in terms of the grantee and participant
2 plan. We are not a Work Source Center, however, because of
3 the rules of engagement with this grant, and as a grantee,
4 in a sense, we are as accountable, or even more so because
5 we are doing the training, than a traditional Work Source
6 Center would do. So, I ask that, when you think of what is
7 success and how do you measure participants or reports,
8 reports, reports, you think about it because I know we asked
9 for it because we wanted to be part of the grant, but the
10 big challenge is you want to do quality training, however,
11 you are also needing to do job placement and you are needing
12 to do reporting that you are held accountable for, so it is
13 very difficult to kind of contract that out to a third party
14 when you know that you are the one that is going to be
15 audited. And another component I want to add here, one of
16 the challenges is to know, if I have a State Monitor visit
17 tomorrow, ideally, what do you want the file to look like?
18 I know that is a question I have asked in one of the
19 conference calls; I do not know if that has been clearly
20 articulated to all of the grantees, so, again, we have done
21 a tremendous job in terms of getting the funding up and
22 running, and just getting going, but I think my big fear is,
23 one year down the line, how will it be evaluated? When you
24 come audit, what will you look at? And how does each agency
25 - are we all consistently saying this is correct or not

1 correct? Because even that was a little unclear in the
2 beginning. And I know that is just part of ARRA, but just
3 food for thought. Okay, so this slide just tells you what
4 our facilities are, and this is just to tell you we are
5 legitimate, and we are proud to say also that, through our
6 bond program, in three to five years, we will be building a
7 new Construction, Design and Manufacturing facility right
8 across the street. But, again, you know, we have the
9 facilities, we have the history and the know-how, so we have
10 been able to respond to this RFP. There are other Grantees
11 that may not be in this fortunate situation. And I think
12 you have Long Beach here, you have Trade Tech, and as
13 community colleges, we can tell you, we have a history of
14 providing this. You probably have some community college
15 grantees that are barely ramping up, and it is very
16 difficult if you do not have full time faculty and the
17 expertise. So, while your RFP was a competitive one, and
18 you wanted to go statewide, perhaps in the future you want
19 to think of regionalizing it in a sense that, even though
20 you want to be the lead, you must work with three or four
21 colleges that are maybe outside of your district to really
22 forge that collaboration. I think I can stand here and say,
23 as a community college Dean, I collaborated with my
24 colleagues outside my District, and I do. But, in the end,
25 when we talk about, as Barbara says, sustainability, we get

1 funded by apportionment. That means, if I have a student
2 and Gail does not, I get funding. So, if we are looking
3 really at long term strategies, we need to think about even
4 a different mechanism for statewide apportionment funding,
5 or statewide funding for some of these very unique CTE
6 Programs because, right now, you really have to be kind-
7 hearted or really into doing good things to do a lot of
8 collaboration. Because, in the end, when this is all over
9 in June of 2011, we only get funded for who we are serving,
10 so that is just something to think about, so it is a
11 competitive advantage for me to have it, only me have it,
12 than others to have it. I am being honest.

13 So, also, faculty and program certification. Again,
14 I mentioned this before, but you asked for it, you were very
15 clear, and I was very good, I was very happy when whoever
16 wrote that part of the RFP said, "We want that third-party
17 certification," because sometimes, as community colleges, we
18 can sit here and say, "Oh, we have a skilled certificate for
19 that, we have a nice certification," these are industry
20 recognized. However, we chose the NABCEP for the solar, so
21 I think that is more of a West Coast thing, so, you know, we
22 are going to keep that there. We actually gambled and I
23 think we gambled on the right one on BPI, so all our faculty
24 are certified in BPI, and it is just one more district
25 paperwork on insurance that we have to do to become an

1 actual official site, an affiliate. So, we have all the
2 third-party certifications where they exist. There are some
3 other areas that we are really unclear of, like the HERS and
4 RESNET, I mean, do we do it? Do we not do it? How much
5 training is too much? You know, those are some things to
6 consider. Our training program is really based on the
7 competency model framework, so this is just to tell you that
8 some thought went into it and we really are looking at
9 training as a holistic model, from personal effectiveness,
10 from that work ethics skill, all the way to, I think, a
11 couple of colleagues mentioned it earlier on the research
12 side, stackable degrees and certificates, which I will get
13 to. We are very clear on what our goal is. Our goal is to
14 make sure that students can either transfer to a four-year
15 and pursue something in some related area, or they attain a
16 job, or they get a degree and pursue a job, and then pursue
17 additional education. But that is our goal, we understand
18 not everyone wants an immediate job, and that is an issue
19 for us, too, because we actually have some people who come
20 in and say, "I really want a job tomorrow," then they catch
21 what I call the "education and training bug," they are in
22 there and they go, "You know what? I know if I pursue and I
23 continue on at Trade Tech, I can get my A.S. degree and
24 make more money, or transfer, then, to UCLA, or potentially
25 UC Berkeley in Engineering." However, how is that going to

1 be - how am I going to be evaluated on that? Because, in
2 the end, I am looking at my EDD and WIA colleagues, it is
3 jobs, jobs, jobs. Okay, so what does that mean for that
4 participant? Do I discourage that person and go, "Whatever
5 you do, go get the job?" You know? So, again, for
6 community colleges, I think it is somewhat of a challenge in
7 that. We do not have any issue getting participants
8 engaged. We have actually - we have been very fortunate
9 that we had Los Angeles Infrastructure Jobs Collaborative,
10 and when we brought in the utility partners in 2007, and we
11 did a lot of work in our utilities and construction program,
12 so we had a basis to do a lot of our work. And so, we
13 prepared students for entry-level occupations, and while
14 they were getting prepared, we also helped them get a GED.
15 Our biggest problem and our challenge is, if you really want
16 to serve the hardest to serve and those in the communities,
17 communities like South Los Angeles, in some of these
18 industries, we are going to have issues with employability
19 and priors, and prior records. So, you know, I know that is
20 a discussion at another end, but I do not know how either
21 utility companies or, especially the investor-owned
22 utilities and others, can come up with some format of
23 saying, you know, maybe 10 percent or 20 percent, if they
24 have gone through X number of years without having any
25 criminal history, it is going to be okay. Or, we are going

1 to consider them, or we are going to put, you know, more
2 probation time on the worker, something. Right now, it is a
3 problem for us to tell especially our men in our program,
4 "You know what? There is no way you're going to get hired
5 because they have already said that to us." I mean, you
6 know, you are not going to get hired by a utility company if
7 you had a felony, even if it is 10 years ago. So, that has
8 been an issue for us.

9 So, again, this slide just indicates to you
10 something that I think Chris mentioned earlier in his
11 research, which is really talking about stackable degrees
12 and certificates. We have that, we are going into that
13 framework now, and we will be presenting what we call a Mega
14 Program to our local consortium in September. So, we
15 recognizes that, we think this whole idea of having 25
16 different certificates is not doable because if a student
17 wants to continue on, we really reengaged our whole
18 curriculum and seen what are we duplicating, what do we have
19 too much of, and so forth. And so community colleges are
20 evaluating what they are offering.

21 So what I did put up were some of the training
22 challenges, which are the jobs. Where are they? And
23 secondly, how do you address and how do you remediate, or
24 accelerate, or get someone employed who is testing below a
25 7th grade or at grade level? And, again, you said you wanted

1 to focus on the communities, so how do we do that in this
2 short period of time and get them a job when the job market
3 is such that the employer really is going to go - and many
4 times, they are going to select people who are better
5 educated and more, you know, they are not going to have so
6 many remediation situations. So, that has been an issue for
7 us. The work ethic and the technical background, we can
8 take care of the technical background, it just takes longer
9 for us, but that is not an issue. One thing to know, also,
10 is that innovation can be problematic. We found that out
11 with, when we got our females - we want to buy boots for
12 them - they do not carry their sizes. So, it is amazing,
13 you think about it, there are special boots that our female
14 lineworkers have to have, but they do not carry that size.
15 So that is an issue to think about. So, when you ask
16 sometimes that we be innovative, or that we think of really
17 who we are serving and tailoring it, you never think about
18 those things until you are faced with having to buy them.
19 And the big one is limiting the participants. Again, you
20 know, it is an issue for me because it is an issue of
21 access, especially in our community. So that is something
22 else.

23 I want to tell you a little bit about how we do our
24 employment and placement because I was thrilled, I wanted to
25 jump out of my seat earlier today when someone recommended

1 that bring the employer to the table, have more direct
2 employer engagement. However, think about that, if
3 community colleges were to do that, then what is the primary
4 role, then, of the Work Source Center? I mean, in a
5 historical context, the Work Source Center is the
6 intermediary, or has historically worked as the
7 intermediary, where they are working with the employer, they
8 are getting the students enrolled in terms of the WIA, and
9 then the community college just does the training. And
10 then, there are headed over to the Work Source Center so
11 that they can actually do the placement. This has changed.
12 You have actually changed the rules of engagement here,
13 completely. So, I think it is going to be interesting. I
14 am glad Barbara is here and others that we really look at,
15 you know, the role of community college is changing, we are
16 having to be more accountable, and it is going to be
17 interesting on how we have those conversations. We are very
18 fortunate that we work with multiple Work Source Centers, so
19 we do not have so much of an issue, however, it is a little
20 problematic to see who gets the placement number in the end
21 for the accountability side and the reporting side. What we
22 do at Trade is we have actually had to develop rubrics and,
23 again, we were ahead of the game because of the work that we
24 did with the PUC, and we are still engaged in that work.
25 And I like to joke that, if you can do it well for the PUC,

1 we will probably do it well for you. Because, you know, we
2 have the given curriculum and that includes a rubric of
3 training skills and how does the employer know who they are
4 getting and how well they are? So, I mean, that is just
5 something to think about. We have that information. We
6 actually require our participants to get the DMV print-out
7 because you do not get hired if you have more than one or
8 two points for some employers. We actually have opened up
9 our campus for the interviews, we do it directly with the
10 employers, and we enroll all our students who actually
11 completed training into cooperative education, and we do
12 that so we can monitor student progress. Somebody talked
13 about, what do you do with the students when they leave?
14 Well, we monitor them. We have what we call the
15 "Satisfaction Guaranteed" component, where employers get up
16 to one month of on-the-job training, that is the line item
17 we use, so they get it for one month, so it is free of
18 charge, and if there is something you did not like about
19 that employee, but, you know, you want them to be remediated
20 on, we will fix it, we will bring them back to campus, we
21 will get them to work on that component, and then we will
22 send them back out. But, this has been something very
23 helpful to us. Okay? And with that, I think I mentioned
24 some of the recommendations already throughout the proposal.
25 You know, we have been very fortunate that we had Darcie

1 come out because, even though today I spoke about our
2 category 2B funding, where LA Trade Tech is the Lead, we are
3 actually involved with both the City of Los Angeles grant,
4 they actually have a grant for 1A, and we are also involved
5 with the County of Los Angeles, Category 3 funding, as well
6 as the 2A funding. With that, I do not know if there are
7 any questions.

8 CHAIRMAN DOUGLAS: Well, thank you, Dean Barajas.
9 That was a great presentation and it was really interesting
10 and we learned a lot, and thanks for being so candid because
11 it helps us a lot, actually, when people do that. And so,
12 you asked a number of questions and, of course, they are
13 questions that we would immediately spout out the answer to
14 if we were the ones who determined all of the answers, but I
15 think that we will convey them to some of our staff who work
16 on ARRA. Your question about, you know, what should an
17 audit file look like? You need to get the guidance that you
18 need there, so we will look at it. We, I believe, have two
19 different federal agencies in here today auditing us, and so
20 we may learn something even more from that. But, in any
21 case, we will make sure that we get guidance on that and
22 other questions. I was really interested to hear the
23 thinking that goes into who gets the job placement number
24 and that is very similar to the world I am more familiar
25 with about who gets credit for the energy savings. And you

1 know, I think the philosophy that we have here is that those
2 who participate and do work, and assist in making progress
3 towards the energy savings, or the job credit, the job
4 placement, ought to be able to talk about that contribution,
5 and not to be able to say that they, in fact, claim credit
6 for that. And that does sometimes result in what we look at
7 as double-crediting, but that is different than double-
8 counting, so long as you do not lose track of how many of
9 these touched multiple points, I guess. But you ask some
10 very very good questions and I have got notes and I think
11 others up here have notes, so we will try to get back to you
12 on that. I do not have any questions, particularly. I was
13 really impressed with the presentation. It sounds like you
14 are doing fantastic work. I do see that my Advisor has a
15 question. I just wanted to thank you for being here.
16 Panama.

17 MR. BARTHOLOMY: Thank you very much for the
18 presentation, Dean. We have been joined by Commissioner Jim
19 Boyd in the back of the room, and he is the Presiding Member
20 over the Transportation Committee, and particularly
21 overseeing AB 118 funds, and you mentioned that you are also
22 a grantee under that program. And so I just wondered if you
23 would spend a couple minutes talking about progress you are
24 making on implementing that program while we still have him,
25 as he is on a recess from another proceeding going on in the

1 building.

2 DEAN BARAJAS: Sure, and I know Darcie is going to
3 follow me, as well, but we are actually not the Grantee, so
4 this is kind of an interesting component where the County of
5 Los Angeles is the Grantee, but they have asked us to train
6 in very specific alternative fuels, very specific systems,
7 and we will be ramping up this month and next month, because
8 this is another issue. When you actually want to have
9 different grantees, like both the County WIB or the City WIB
10 and all that, what that does is we are ready to train, but
11 we can only train once we have a contract, so that is
12 another little component. I think, on the transportation,
13 we have the opportunity to do a lot of great work. I think
14 where one of the challenges has been is we have to be very
15 clear as to what we cannot do, and for community colleges,
16 that is somewhat of a challenge because our role is to bring
17 in incumbent worker or a new person, and in order for you to
18 learn about alternative fuels, you have to know basic tool
19 use and you have to know safety, so if you tell me that I
20 cannot teach that, that is very restrictive because how do
21 it get to the alternative fuels, and how do I get to get
22 under a car and work on a hybrid vehicle, or a hybrid engine
23 if I do not know the fundamentals? So, I only - I ask you,
24 I understand - I am not sure where that exactly comes from,
25 but from a community college and from a faculty perspective,

1 you are sitting there and you are thinking, "Wow, how do I
2 get there?" So that is just one of the challenges that we
3 have. That will also lead to - and one of the things I
4 wanted to mention - is that we do not want to cherry pick
5 our participants, we do not want to just - we want to focus
6 on serving those who are in our communities who really need
7 the training, who we got extra points, or we got extra
8 consideration because we said we are going to serve 75 of
9 the low income, you know, needy individuals. If we follow
10 that mechanism, it is easy for me, given the job market
11 right now, that I say, "Everyone who wants training, come
12 over here," and then I pick those who are most likely to
13 succeed," but that would take away from, I think, the spirit
14 of this, which is also to train members of our community and
15 those that are in need. So, it is just something to
16 consider with the transportation because, if you tell me
17 that I can only train on these dollars with very specific
18 funds, it is going to limit the audience. It is just a
19 comment that I wanted to make. One other recommendation,
20 because I thought about it when I was there, I know we are
21 all into saving and we are green about doing a lot of WebEx,
22 in the future, it would be very helpful or even now, to
23 convene an all grantee meeting so we can all clearly
24 understand the rules of engagement, including the reporting
25 requirements, including what you can and cannot buy with -

1 we have 15 percent, and what you can and cannot buy with
2 SEP, because we were lucky in that I had other grants so I
3 can buy my equipment with, but I do not know that other
4 grantees were equally as fortunate, so I know that slowed
5 other grantees down, but to buy something, to buy, you know,
6 a window, or an engine, it is going to take forever if we
7 have to go through the normal procurement process. So that
8 is just also something else to consider. But I do not want
9 to leave on a bad note, I want to tell you that we are up
10 for the challenges, this is what community colleges are
11 supposed to do. This is one of our charges and it is part
12 of our mission. And the other thing is, I want to actually
13 say thank you to everyone because all the state agencies, I
14 know everyone is doing the best job they can, and had we had
15 more time, as Barbara said earlier, this is the blueprint
16 for something that can really work. Thank you.

17 MS. KOROSEC: We do have one question on WebEx.
18 "Can Leticia speak in more detail about the stackable
19 curriculum?"

20 DEAN BARAJAS: What I am going to do is I actually
21 put a website there, we will post the stackable curriculum.
22 What we have done is take all the elements of what is core
23 to what a Weatherization Installer needs to do, what is core
24 to Safety, what are all the common elements? OSHA is one of
25 them. Basic tool and safety use and hand tool use, and so

1 forth. So what we have done is we have identified those
2 classes and we are now taking them away from those specific
3 disciplines and we are making them, like these are your core
4 classes, but if you add two more classes, then you will be a
5 solar installer assistant, if you add these other two, you
6 will be a utility pre-craft helper, or something like that.
7 So we will post all of those on our site. We will not take
8 them for our curriculum until September at our meeting, but
9 the website is there, so you should see it within a day.

10 MS. WHITE: Before you leave, I just have one
11 question, now that you have brought up the stackable
12 curriculum. You had talked about the soft skills and we
13 heard earlier today about there were times when we had
14 focused perhaps the training on one topic, when we really
15 needed multiple skills within our workforce, and soft
16 skills, customer service, sales, those kinds of things,
17 whether you are technician or not, can always come in handy,
18 so is that part of your basic or part of your stacked?

19 DEAN BARAJAS: It is definitely part of what we have
20 to do with what I call SEPA because we want that person
21 employed, so we are actually doing the sales side for solar,
22 in addition to the actual installer side. On the
23 Weatherization, the same component. In our program, it is
24 going to take a little more time to get our traditional
25 fielding and construction faculty to say, "I am going to

1 integrate this as a required course," because it is not
2 necessarily in their discipline, per se. But, the other
3 thing is that, in a sense, our faculty are already doing
4 this every day with a mere work ethic, they lock the room at
5 7:00 a.m., you cannot come in after because you have to show
6 up to work on time. So, we actually add bits and pieces, so
7 the actual work readiness component, we have it as a
8 separate stand-alone certified through our non-credit
9 division, however, in this training, we embedded it. But it
10 is something that, I am glad it is going to be memorialized
11 so I can go back to my construction faculty and say, "Look,
12 you need your own class in this." Thank you.

13 MR. BARTHOLOMY: And while we are doing the
14 changeover, I think we have a change in the agenda and I was
15 going to make an announcement, as well. So, to Leticia's
16 comment about getting all of the Grantees together, we have
17 had one regional event like that, but we are going to be
18 having another one on September 7th at the Meeting of the
19 Minds California Workforce Association Summit in Monterey,
20 where we are going to bring all the Clean Energy Workforce
21 Training Partnership Grantees together and other interested
22 parties to talk about common issues that we are facing and
23 common opportunities moving forward, and the changes in the
24 marketplace that have happened since the awarding of the
25 grants.

1 MS. KOROSEC: Yes, and as you mentioned, Panama, we
2 have a slight change here. We are doing another airline
3 accommodation here, so we will be hearing now from Gail
4 Schwandner, who is Dean of Workforce Development at Long
5 Beach City College.

6 DEAN SCHWANDNER: Okay, I am Gail Schwandner. I am
7 the Dean for Workforce Development for Long Beach City
8 College, and I will tell you that the wonderful woman who is
9 the architect of this program and does the running of the
10 program day to day, had a family emergency in Egypt, so I am
11 the player to be named later, and you have me. My expertise
12 is actually in Green Transportation and Alternative Fuels,
13 but because I helped write this grant, I do have a good
14 basic understanding of what is going on and can probably
15 answer most of your questions. Okay, I am going to scroll
16 down. All right, our key messages for the grant and for I
17 believe what we are trying to do through all of these
18 efforts is that I think the economic recovery really depends
19 on what we are able to do with the green economy. And we
20 have to build a skilled workforce that is going to fill
21 these jobs that are jobs of the future. Probably one of the
22 basic things for us that has made us successful so far is
23 the partnering, and Leticia and I live in the exact same
24 world, and it is not exactly our partnering with other
25 community colleges that has made us successful, it is our

1 partnerships with our WIB, with our SBDC, that has been
2 major for us, it took us a little while, it was rocky
3 figuring out how to work with the SBDC, but that has become
4 very major for us. Our local government, our Utility
5 Commission, all of the different organizations and
6 businesses around us, are proving to be the reason why we
7 are able to make headway on this grant.

8 We have said a lot about this so far, but federal
9 and state and local government initiatives are really what
10 is driving the market transformation and what are going to
11 make this sustainable for us. And I put down here "feed
12 forward and feedback," and the feet forward is that, you
13 know, feedback is usually after something has happened, we
14 would really like to have some impact on what is going to be
15 happening in the future, and so some of the things, when
16 Panama said if he would like to have us talk about lessons
17 learned, I thought that was a really good opportunity for us
18 to give you some ideas about things that we have
19 experienced. We have stackable credential training in green
20 building and efficiency upgrades for both incumbent and new
21 workers. Long Beach was the only single community college
22 in California to receive more than one of these grants, and
23 with our WIB, we received all three. My scars and bruises
24 just are places where it does not show. This has been quite
25 an adventure. I was going to say, I have, like the people I

1 talk to every day right out there in the audience, it is
2 pretty wonderful that your EDD and CEC and WIA people are on
3 your speed dial. We do incumbent training in green vehicle
4 and this truly was at a time when community colleges are
5 getting cut back in every place that you can imagine, to
6 receive \$2.4 million in grant funding to start something
7 new, it allows us at a time when many things are being
8 stopped, in any new technology issue that we are working on,
9 it allows us to build something forward. So, we are very
10 appreciative of this.

11 Targeted industries in greater Long Beach, design
12 and construction of new buildings, and I put down as
13 examples the Port of Long Beach has a Middle Harbor project
14 that is going to be a totally green project. And the new
15 Long Beach Airport, they are calling it a renovation, but
16 actually there are many new buildings being added on to the
17 existing historical structure, and this all going to be
18 green, also. Retro-commissioning of existing buildings, and
19 transit and heavy-duty Port of Long Beach and LA Municipal
20 Buildings - I am sorry - Vehicles. And so, what we are
21 finding is that we have a portion of the program that is
22 green transportation, but the majority of this program is
23 green building and energy efficiency.

24 One of the things we think really has to happen is
25 that - and several people have said it - we need new job

1 forecasts. What we built the program around, we are not
2 even nearly to that point.

3 Local Initiatives and Green Collar Job Creation.
4 These are some of the things - we talk about what drives the
5 industry; California is requiring new public structures to
6 be built by the U.S. GBC Standards, well, that enables us,
7 then, to have people train to those standards, and that
8 makes our graduates much more competitive for those jobs.
9 The City of Long Beach has a Municipal Green Building
10 Policy, there are green building requirements for private
11 developers. There is an Office of Sustainability for both
12 Long Beach and LA County, and we are working with both of
13 them. I know that the PACE Program is having a few issues
14 right now, but this is one of the places where we are
15 looking at multiple opportunities for employment for our
16 graduates.

17 The Port of Long Beach, as I said, they adopted a
18 Green Port Policy, they also adopted a Clean Air Policy, and
19 that is, that Clean Air, Clean Truck Policy, is what drove
20 the purchase of the new LNG CNG trucks and the new hybrid
21 electric, or all-electric vehicles that they are using
22 there.

23 And, you know, just a side note, on the Port's Green
24 Air Plan and their Green Truck Plan, when they did that and
25 required that 80 percent of the new vehicles that are

1 purchased for the Port of Long Beach in LA be LNG or CNG, we
2 called the truck providers, Kenworth was the major one that
3 we ended up working with, and said to them, "How many
4 technicians do you currently have that will be working on
5 these new trucks that are coming in now?" And then said
6 none. "We have none." And so they were requiring the
7 manufacturer to give them training. Well, the manufacturer
8 called us and said, "We don't want to develop a training
9 arm, that is not our core competency." So we became this
10 wonderful three-legged stool with West Port Fuel Innovations
11 being the manufacturer of these LNG engines, and Kenworth,
12 the trucking company, and we now have the only LNG Industry
13 Certified Program in the United States. Just to give you an
14 example, these are some of the buildings right now in Long
15 Beach, on your far left-hand corner is our Convention
16 Center, and as you can see, you can barely see the
17 Convention Center for the solar panels.

18 Implementation at LBCC. We have a Sustainable
19 Technology Education Program, then we have two to three
20 weeks of Introduction to Environmental Literacy, Green
21 Building and Energy. Then people choose a specialty area to
22 train in. We have job placement services and then we have
23 access to the SBDC for Small Business Development. This
24 slide is relatively small, I am going to see if I can - this
25 is for incumbent workers, so I can tell right now that what

1 you are seeing is that everybody goes through the Green
2 Building overview, the Title 24 Overview, and then they get
3 to choose, they can either go through the Certified Green
4 Building professional, they can take the LEED Green
5 Associate Prep course, that is done by US GBC, they can do a
6 Home Energy Rater that is done by CALCERTS. We are just
7 bringing online now the BIM, the Building Performance
8 Analyst - I am sorry, the Building Performance Analyst that
9 CBPCA is doing, and the Building Information Modeling
10 Analyst, the BIM, using AutoCAD, is just coming online for
11 us in August.

12 For the people who are taking the Pre-Apprenticeship
13 Program and those in the New Entrance to the Workforce, they
14 go through the Environmental Training and Introduction to
15 Green Building and Energy Fundamentals, and then I will tell
16 you the same thing that Leticia told you, people who are
17 unemployed and perhaps have been out of school for 10 years
18 or so are not testing at even the 10th grade level in reading
19 and math, and so it is very difficult for them to be
20 successful in programs with the textbooks and the reading
21 material are at a much higher level. So we are and have
22 been using a contextualized basics skills class for Green.
23 We are working with the Workplace Learning Resource Centers
24 to develop Contextualized Basic Skills in Green for the
25 State, to be distributed to all of the community colleges,

1 but we have to pull people out of the original training, do
2 the contextualized basic skills, bring them up to a certain
3 level, and then put them back.

4 We have a actual Green Technology Lab, let's see if
5 my next picture is actually - yes, it is of that lab, it is
6 of the people that we are actually building a building in
7 the courtyard of our construction area, and it is now
8 completed, but it is where we do the weatherization field
9 training. And the people who take the HERS certification
10 actually take it in this building. The HERS certification,
11 successful participants come from diverse backgrounds, to
12 say the least, and that is not - you know, sometimes when we
13 say diverse backgrounds, we mean that they are multi-
14 cultural. People are coming to us for their HERS rating
15 that are coming out of, say, real estate, or they have had
16 jobs in an architectural firm, or it is any sort of other
17 employment where they see a transferable skill, they are
18 moving into HERS. And equipment costs are noted as barriers
19 to employment. For someone who wants to start their own
20 business in Home Energy Rating, there is equipment that they
21 need to have and it is expensive equipment. So, if you want
22 to go work for someone else, you can do that, but if you
23 want to start your own business, acquiring a blower door and
24 duct blaster is not nearly as inexpensive as one might
25 think. We actually have acquired these through the college.

1 I will tell you that our partners at EDD, who traditionally
2 believe that you lease equipment, and that buying is not the
3 best way to guarantee long range effective use of their
4 funding, were able to see that, if we are going to do
5 sustainable programs on campus, then we need to be able to
6 buy equipment and keep it there so that, at the end of the
7 18-month grant, it does not go away and our program goes
8 away. So we do own these, those very attractive pieces of
9 equipment that you can see there. I will tell you that
10 Brian Rogers, who is my Gateway Pacific WIB Director, when I
11 told him that one of the things that I was told was that,
12 you know, these things will go back to you WIB if they want
13 them, and Brian was trying to figure out how he was going to
14 use that. He said that it was not going to be a problem
15 after we explained, and he was right.

16 We do have a Job Developer and we have a Career
17 Development Track that we put people through, reentering the
18 workforce, resumes cover letters, job search and application
19 process, job interview techniques, work ethics and job
20 retention. We also are doing as many internships, on-the-
21 job training with our partners who are partners in our
22 training, and since they are partners in our training, they
23 have a little bit different relationship with us than if
24 they were a separate industry that we were just approaching.
25 And we have been able on the college campus - Siemens is one

1 of our big vendors on campus - so we are working every angle
2 on this. You know, it is like if they see me coming, they
3 check their checkbooks. But it is that we are finding every
4 way we can to get people to agree to that work experience
5 that is actual real work experience, and not just classroom
6 experience, because one of our earlier speakers said, "Every
7 single home is different." And we can train them in the
8 classroom and we can have our own energy lab that we have
9 built on campus, but I can tell you, it is very different if
10 you are going into my 1921 California Bungalow, and trying
11 to tell me about its duct system, than that nice thing that
12 they just built on campus. So, what we are doing is every
13 place that we can get work experience for our students, we
14 have no shame. And we are making sure that we take care of
15 that.

16 Whole Systems approach at LBCC. In providing
17 workforce training, raising awareness of retrofit clean
18 energy, financing tools and products, and by connecting
19 individuals to the business development through the Small
20 Business Development Center. Several of our graduates have
21 made the decision that they are going to form their own
22 small businesses and because we have the SBDC right there on
23 campus, we have been able to connect very easily, they are
24 one of our partners on this grant, they have been able to
25 give them ideas about our counseling that enables them to

1 develop a marketing plan, they have been able to also work
2 with them on ideas about how to get started. Two of the
3 young men in our program who met in class combined all of
4 their resources, their client resources, and formed their
5 own small Home Energy Rating business, and what the SBDC had
6 advised them to do was to do some pro bono work, and through
7 the pro bono work, they have developed a nice portfolio, and
8 they have just gotten their first client, a restaurant that
9 is a chain restaurant that is in our area, and they are
10 going to go in and do a Home Energy Rating there. And
11 several of the people are finding that, for them, they
12 thought they were going to go another way, a gentleman that
13 came out of real estate thought that what he was going to do
14 was learn in this really good things that he would be able
15 to take back and be better at his real estate job, but he is
16 discovering that there is a whole new job out there for him,
17 that he had no idea of. He is becoming a connector of
18 people, and so he goes to all the conferences and networking
19 events, and he is connecting the person that is doing solar
20 batteries with the person that repairs those things, and so
21 he is talking about all these different connections, and he
22 is looking for someone that does financing for the man that
23 has the patent on such and such. So, there are very
24 interesting new jobs that are coming out of the training.
25 The jobs are coming out of the training, and the people are

1 realizing their new jobs as they go through the training.

2 I have got a nice list of our partners here, as a
3 told you, without them, we would not be in existence. We
4 are developing partnerships throughout the town that would
5 enable us to have that on-the-job training. We have elderly
6 occupants in a low-income housing development, Park Bixby,
7 and we are getting mentorship and hands-on training for our
8 students there. We have an RFP for Suburban Civic Center
9 revitalization and another opportunity for both jobs and on-
10 the-job training. We are developing through virtual job
11 shadow. Seven videos that will be web-based that are going
12 to be on green jobs that will be shared throughout the
13 network for this grant. The community action partnership,
14 oh, my goodness, the Long Beach Community Action Partnership
15 just got \$17 million in Federal money, and it is aimed at
16 green. And they are interviewing our people right now for
17 23 initial start-up jobs. I talked about the LA and Long
18 Beach Offices of Sustainability, and the PACE Program is
19 what we are discussing with them. And the US GBC, they have
20 provided great leadership, they helped us design the
21 program, but they also have provided us with networking
22 opportunities and resources. And Southern California Gas,
23 they are a wonderful partner for us to work on.

24 Just an idea of how our training flow goes. Very
25 much, we talked about how we were going to do outreach and

1 we will model what Leticia said, you know, we have waiting
2 lists for our classes. And we do the training, we do the
3 job readiness, and then we are doing everything we can to
4 get people placed. We have flyers, this is a copy of one of
5 the flyers that we take out and give out at job fairs about
6 the program. We have a newsletter, we are getting ready to
7 produce the third one, and it highlights success stories of
8 the participants, industry highlights, we have a partner
9 spotlight, upcoming training, and resources that are
10 available in the community. We do a big recognition
11 ceremony at the very end, and we have one coming up next
12 week, we have completed one - this is talking about some of
13 our participants that were recognized because they have
14 found jobs and were doing creative things.

15 This is our contact information. Really, you would
16 be much smarter to call Rola [phonetic], but you can call me
17 and I can transfer you to Rola [phonetic], and I am going to
18 ask for some light because I feel like, you know, I am
19 preaching where I can no longer see the sermon. Is it
20 possible? Yes, that is exactly what I needed.

21 Lessons learned. The number one thing for us was
22 that certifications are key. The fact that you required
23 stackable credentials and you required certifications, do
24 not let anybody talk you out of it. It is expensive for us,
25 and it is expensive - it makes the grant program part more

1 expensive, but one of the things we would like to know is if
2 it would be possible to negotiate prices up front with some
3 of these certifying organizations. I will tell you, we are
4 negotiating prices with them, so I know that, you know, if a
5 larger entity with much more leverage than we have was
6 trying to do that, that would be a big help because, what
7 Rola [phonetic] said to me is, she is an Arab woman, and she
8 said negotiation is in her blood, so she is negotiating and
9 getting relatively good prices. But I can tell you, other
10 colleges may not have that and they are being charged much
11 more for the certifications. Another thing around
12 certification is we need to look at capacity of these
13 organizations to certify. As we have this grant funding
14 flowing in and many places credentialing these - getting
15 people trained to the place where they are ready for
16 credentialing, they are not ready to credential as many
17 people as we would like to send to them.

18 Partnerships are key, and I already spoke briefly to
19 the SBDC and our WIB partners, but also the US GBC. They
20 have been unbelievable, and I will tell you, one of the
21 reasons that Leticia and I were able to get this up and
22 running so quickly was that we already had these
23 partnerships in place. I think people who are now trying to
24 scramble to develop their WIB partnership, or develop their
25 partnership with the US GBC, they are struggling. And it is

1 taking them much longer to get up and running. Solicitation
2 efforts must provide clear and reliable information up front
3 by requirements reporting and legislative restrictions. I
4 think this is where most of the battered and bruisedness
5 came from and, you know, we are all kind of learning on-the-
6 job here, but since the job was only going to be 18 months,
7 it has been a real ride, and we do not have a community
8 college bureaucracy system in Fiscal and in HR that lends
9 itself to learning on-the-job. We are getting questions
10 about, "Well, why wasn't this set up? You got the grant in
11 October, why wasn't this done by November?" Well, you know,
12 they are just getting their requirements out to us by this
13 time and that is why it started in January. So, there are
14 real difficulties for the community colleges and I am sure
15 that our partners that have been fighting their way through
16 this, lack of clarity is going to make reporting in the long
17 run very difficult.

18 I talked about the restrictions around buying
19 equipment. I think almost everybody who has spoken today
20 has said the same thing, and that is the short term, we have
21 to find a way to increase the short term duration of these
22 grants. I know that the particular legislative funding,
23 ARRA, had only two years, and so the 18 months of the grant
24 was somewhat driven by the legislation, but if you are
25 working with unemployed people and trying to get them up to

1 a pace where they can be employed in cutting-edge
2 technology, it just is not enough time, and we are not going
3 to be able to get people out of poverty if we are not able
4 to have longer to both get these programs integrated into
5 our for-credit programs, get our own faculty through the
6 train-the-trainer program and get them certified, all of
7 these are things that will lead to this being a sustainable
8 program, but currently it is very worrisome to us that, when
9 this grant funding goes away, that most of the program is
10 going to go away.

11 And Code requirements, skills standards, incentives,
12 these are the drivers of both workforce development and job
13 development, so these are the things that are requiring the
14 industry to change and with the changes to the industry
15 require new job skills, which require either updated
16 training or new people. And so those are seriously very
17 important things for developing this new economy model. And
18 probably the last thing I would like to say is we really do
19 need to find a way to fund the high school model. And this
20 high school pipeline, in Long Beach, in their most generous
21 days, they are going to say, "We have a 35 percent drop-out
22 rate." And it is much closer to 50 percent. If we are
23 losing 50 percent of our potential workforce because young
24 people are not interested in school, if we can catch them
25 early, if we can develop a passion for something, and I can

1 tell you, green energy fascinates them, this whole idea
2 around green transportation, our model of doing with juniors
3 and seniors at Cabrillo High School, which is the lowest
4 income high school in the District, having a co-enrollment
5 program on alternative fuels training, and they gave us 26
6 at-risk youth, people who were not going to school, and they
7 did not believe they would graduate. Those young people, we
8 had 26 of the 26 pass the first class, taught by a college
9 faculty member, and it was a college level class. They
10 loved the fact that it was career technical education, that
11 they actually got to, you know, learn the theory and then
12 see how this piece of equipment operated, and then learn
13 what the difference was going to make that was going to make
14 our air cleaner. I believe that, if we can figure out a
15 really good high school pathway pipeline program, that we
16 can build into grants. We are funding our Green Academy
17 this summer for high school students out of another grant
18 because we believe it is that important, that we can make a
19 difference in the workforce that our employers are seeing,
20 but also in this drop-out rate that we are all seeing
21 throughout California. So, once again, thank you all very
22 much. We did very much appreciate the opportunity and thank
23 you to our partners, they have gone through this with us and
24 they have been there with us every step of the way. When we
25 have said, "Are you kidding?" They have said, "Well, let's

1 talk about this." And, you know, they talk me back down off
2 the roof and you are doing very well now, but I can tell you
3 that, initially, there were a few rough spots, but we have
4 worked it out now. And so, thank you to everyone. This has
5 been a great opportunity for us at the college.

6 CHAIRMAN DOUGLAS: Well, thank you very much. We
7 really appreciate hearing from you. It sounds like you are
8 doing amazing work and I can only imagine how hard it has
9 been because I think people are encountering and overcoming
10 obstacles at every level in getting this money out and
11 making it do what it is supposed to do, and so I am really
12 glad that you have persisted through all of that. Let me
13 ask if there are questions up here. Lorraine, go ahead.

14 MS. WHITE: Thanks. Thank you very much for your
15 discussion, Gail. I think this is incredibly informative,
16 as have all the presentations been. And your last comment
17 really caught my attention about a high school link to some
18 of these training programs, particularly since it has been
19 mentioned a couple of times the other educational challenges
20 that these people face, especially in Math and Reading, and
21 that somewhere along the line, there has to be something a
22 bit more remedial to not only address the need for educating
23 people in these new technologies, the green workforce, and
24 being able to apply those skills, but at the same time
25 provide them something that really catches their attention

1 to help them be better at Math and Reading, which are
2 fundamental skills, that would have to be applied in any of
3 these careers, anyway. So, do you have any thoughts on what
4 something like that high school curricula may have to
5 contain to be a good link between where kids are at that
6 level with all of their challenges, and where they need to
7 be in a robust workforce?

8 DR. SCHWANDNER: First of all, I believe this whole
9 idea of catching them earlier, I know that if you say to any
10 unbelievably hardworking high school faculty member, their
11 day is completely filled just trying to get that subject
12 matter in. One of the things that the Port of Long Beach
13 has done is that they have worked with high school Math,
14 Science, I believe there is one other curriculum, and they
15 have worked on a curriculum that integrates logistics, goods
16 movement logistics, into it. So if you have got my dreaded
17 word problems, you know, if you have got a dreaded word
18 problem in Math, you know, now we have got a flat screen TV
19 coming from Shanghai and arriving in Long Beach, and now it
20 has got to be put on a truck, and then it has to go by rail,
21 so they are making the problems have to do with industries
22 that are specific to our region, and they have developed two
23 of these, I believe there is a third one that is being
24 finished now. And it was the Port working with high school
25 faculty and putting together curriculum guides for teachers

1 on how to integrate some of these career and technical
2 education skills. So, I believe that faculty very much
3 appreciate - because sometimes I think they just have no
4 idea what you are talking about, "How would I do that?"
5 Another thing that we are seeing is, when we are able to do
6 co-enrollment, when we are able to actually teach college
7 level classes, even if it is a preparation class so that
8 someone could test out of one of our college classes, it
9 really takes away the barrier of "I'm not college material."
10 You know, for these young people I said that were the ones
11 that went to the LNG Alternative Fuels Program, we already
12 have had the four that were seniors, most were juniors, but
13 the four who were seniors have come on to Long Beach City
14 College and have all now finished their certificate in
15 Alternative Fuels, and one of those is now going on because
16 he has decided he wants to transfer to Cal State Long Beach
17 in Engineering. He was not even thinking of college. So,
18 you know, never think that these young people are not
19 bright, they just are losing interest. I mean, they are
20 totally different young people than I was, so it is taking a
21 different - my father said, "You will do this," and that is
22 what I did. So, you know, their attention spans are
23 different, too. I will tell you that we have to start
24 teaching differently, but I believe that having the career
25 and technical education, more of sharing of our resources

1 and our opportunities at the college level with the high
2 school and middle school level, where we are able to also
3 talk to parents so that they do not think the only thing
4 their child can do is become a doctor or a lawyer, but, you
5 know, what you want your child to be is a plumber. And, you
6 know, that is going to support you in your old age. So we
7 really have to talk with parents also, and that is happening
8 at that middle school level. It really frightened me when
9 they told me that, if young people reached high school and
10 have not taken certain levels of Math by that time, then
11 they never catch up. In Middle School, that was a totally
12 different kind of experience. So, I do know that we have to
13 reach them earlier and we do need to build these kinds of
14 partnership requirements into our grants, otherwise they do
15 not happen.

16 MS. WHITE: Thank you very much, Gail.

17 DEAN SCHWANDNER: Okay, thank you.

18 MS. KOROSEC: All right, we are moving on now and I
19 apologize to later speakers, but we are getting a little low
20 on time here, so I am going to have to ask everybody to try
21 to keep it to the original 15 minutes that was allocated
22 with the five minutes for questions and answers, so that we
23 can get through by the end of the day and still have a
24 little time for public comment, just in case we have it.

25 So, our next speaker is Chris Graillat from the

1 Energy Commission, to talk about our Workforce Development
2 Program.

3 MS. GRAILLAT: So, we had Barbara Halsey talk about
4 the whole pie of green workforce training, and we had a
5 couple bites of pie from Gail and Leticia, and now I am
6 going to go back to a slice of pie, which is the Clean
7 Energy Workforce Training Program. And I hope I can get
8 back into my presentation because I was so in awe of all the
9 presentations, I am not sure if I can get back into talking.

10 This presentation will give an overview of the
11 program, program development, the innovative partnerships
12 that helped to create and sustain the program, funding
13 sources, target populations, and then a description of the
14 types of training that will be offered through the program.
15 There were two important components to developing the
16 program, one was basically coordination with and
17 partnerships with traditional labor agencies. As Barbara
18 talked about and several people have talked about throughout
19 the day, including the Chair, the workforce training program
20 is a joint effort with the Energy Commission and the State
21 Labor Agency Partners, which are the Employment Development
22 Department, the Employment Training Panel, and the Workforce
23 Investment Board.

24 The goal of the program is to train workers in
25 skills for occupations in energy efficiency, water

1 efficiency, renewable energy, distributed generation, which
2 means rooftop solar, basically, and utility scale, and also
3 clean and renewable fuels and transportation. So, you have
4 heard a little bit about programs that are already offering
5 these trainings. As we mentioned, partnerships are
6 important and we were able to plug into the existing
7 infrastructure of state labor agencies without which this
8 program really would not exist, frankly. They were very
9 helpful, they had the infrastructure going, and they also
10 provided lots and lots of hard work. We have heard mention
11 of how quickly these programs had to get up and running, and
12 everybody jumped on it and really worked to get these
13 programs up and running. As far as the public workshops and
14 stakeholder input, we kind of did the dog and pony show
15 before we got the program going. We went out and did public
16 workshops as part of the State Energy Program public
17 workshops that were held in Southern California, Fresno, and
18 Sacramento, so we could kind of introduce the concept of the
19 training program and also get feedback from stakeholders and
20 from the public about what kinds of things they would like
21 to see. We, meaning basically Panama Bartholomy, also
22 presented at the Green Collar Jobs Council and at other
23 meetings throughout the state. We received a lot of great
24 input from members of the Green Collar Jobs Council, and we
25 also had many many meetings with stakeholders, and received

1 a lot of public comment, as well. So, all of this went into
2 shaping the program and it was really very helpful for us to
3 have this, even though it was also very time consuming and,
4 as we have mentioned before, the time constraints were
5 really pressing upon us. But, it was essential that we do
6 this to get the program the way it really should have been.

7 In August 2009, the program was officially kicked
8 off with the release of a Joint Solicitation for Proposals,
9 and that was for local training partnerships. Our state
10 partnerships in that solicitation were the Employment
11 Development Department and the Workforce Investment Board.
12 Also in August, the Governor announced the training program
13 as the largest clean energy workforce training program in
14 the nation, so that was pretty exciting. Once we released
15 the Solicitation for Proposal, we also held summits in
16 August, where we talked about the funding opportunities and
17 answered the public's questions. And then, in October, \$27
18 million was awarded to 34 local workforce training
19 partnerships. And these partnerships consist of community
20 colleges and workforce investment Boards, as well as
21 additional partners like employer agencies or labor
22 organizations, trade organizations, community organizations,
23 but the primary partnership has to be between a workforce
24 investment board and a community college. So if one is
25 receiving the grant, it has to partner with the other. We

1 also awarded \$4.5 million to 14 grantees under our
2 partnership with the Employment Training Panel. These
3 grants will be offered through labor organizations, trade
4 organizations, private employers, and community colleges,
5 and it is a little bit different focused - it is primarily
6 for incumbent workers, but also new workforce entrants. The
7 portion of the program, the largest portion of the program,
8 is for unemployed, underemployed, and new workforce
9 entrants.

10 So, as we have reiterated numerous times throughout
11 this workshop, partnerships on the state level are extremely
12 important, and partnerships on the local levels are really
13 important. One thing I think Gail mentioned, the Green
14 Employer Councils, those are also required of any of the 34
15 grantees that are either community colleges or Workforce
16 Investment Boards. They must convene a Green Employer
17 Council that will advise them on basically the market needs
18 for these positions, and also presumably will also be able
19 to help to employ some of these graduates. And also,
20 several of the partnerships are already connected to
21 building retrofit programs, you know, the idea of course is
22 to get these people employed and I know that sometimes the
23 training programs are not always perfectly aligned with the
24 timing of the retrofit programs, but the Energy Commission
25 has awarded Municipal and Commercial Retrofit Grants, so

1 these Grantees will also be hiring for our Workforce
2 Training Program, so that is really exciting to hear.

3 Funding sources for Q-Tip, or "Cutie-Pie," depending
4 on who you are talking to, comes from the American Recovery
5 and Reinvestment Act, through the State Energy Program, and
6 that is \$20 million, the Workforce Investment Act Governor's
7 Discretionary 15 percent, that is \$10 million, and through
8 Assembly Bill 118, which is the Alternative and Renewable
9 Fuel and Vehicle Technology Program, and that is \$15
10 million, and Darcie Chapman, who is from our Transportation
11 Division, she will be talking more at length about that
12 program and that funding. And then an additional \$39
13 million was offered up by the Grantees in matching public
14 and private funds.

15 So, a quick overview of the program. The overall
16 program has three major components, and that is Training and
17 Education, Labor Market Information Development, and
18 Regional Clean Energy Industry Cluster Planning and
19 Implementation. And Barbara touched on the labor market
20 information development, as well as the cluster planning,
21 and Darcie will also add a little bit about that later and I
22 am going to focus on the training portion of it. The target
23 populations for the program are, as I said, unemployed and
24 underemployed workers, with a focus on construction workers.
25 Construction is one of the hardest hit industries actually

1 nationwide. In California alone, we lost 74,400
2 construction jobs in the past year, and the year before was
3 actually a lot worse, so it is kind of sad that at a loss of
4 12 percent of the workforce, we are doing better than we
5 were the previous year. So that is the focus. Also, new
6 workforce entrants, Automotive Industry Workers, Incumbent
7 Workers, and hard to reach populations. Both Gail and
8 Leticia talked about the populations they serve, such as at-
9 risk youth, low-income, also former offenders, homeless,
10 those who suffer from chronic unemployment, and those with
11 limited English skills, or those without a high school
12 diploma. So, some of these training programs who serve
13 these populations will incorporate basic skills such as Math
14 and English into their training program.

15 So, for the whole program, 42 training grants were
16 awarded. Twenty-eight were for green building and clean
17 energy partnerships, six are for clean transportation
18 programs, and an additional 14 for green building and clean
19 energy programs were offered under the ETP interagency
20 agreement, that are being administered by the Employment
21 Training Panel. Those 14, as I mentioned before, are for
22 labor organizations, private industry, and trade
23 organizations and community colleges. So, the program is
24 really pretty comprehensive and reaches a wide variety of
25 populations.

1 The training and education focuses on Energy and
2 Water Efficiency, Renewable Energy, Distributed Generation,
3 and Utility Scale, as I mentioned before, and Clean
4 Transportation. You cannot really see this, but there are
5 hand-outs at the front, this is a map showing the areas
6 where all the training programs cover and there is a legend
7 that explains what exactly the training program is. At the
8 bottom left, you can see that those are statewide training
9 programs that are offered through the Labor Unions and
10 through trade organizations. And those will cover partially
11 that big white hole in the middle, which looks very white.
12 And also, Barbara mentioned that the State Energy Sector
13 Partnership, one of those grants has been awarded to San
14 Joaquin Valley, so that will also help to address training
15 issues, clean energy training in the Central Valley.

16 Funding sources for the training program, for
17 unemployed, underemployed, and new workforce entrance, \$15
18 million comes from ARRA-SEP, which is the State Energy
19 Program, and \$10 million is from the Workforce Investment
20 Act. For existing workers and new workforce entrance, that
21 is SEP funding, ARRA-SEP funding, at \$5 million, and then
22 the AB 118 funding of \$9.2 million will go for all types of
23 workers for what Darcie referred to as "Upscale Training,"
24 so it is basically to improve their skills in clean
25 transportation technologies.

1 Water and energy efficiency training, these are just
2 some examples of training programs for energy efficiency
3 retrofits, building auditing, green plumbing, HVAC
4 installation, and lighting control systems. You can see
5 here, this picture of these three handsome young men here,
6 the one in the middle is actually a graduate of the City of
7 Richmond program and he is working for an ESCO out of
8 Oakland now, so he is one of our definite success stories.

9 The distributed generation and utility scale
10 training covers thermal solar, rooftop, photovoltaic (PV),
11 wind turbine operations and maintenance, as well as
12 electrical distribution and lineworkers. And Leticia
13 mentioned that she has got a training program that is
14 specifically for women, for lineworkers, so that is really
15 exciting to hear about those projects coming out of this
16 program.

17 And I will not go into this too much, the
18 Alternative and Renewable Fuel and Vehicle Technology --
19 that is why my mouth is so dry, because I have to say all
20 these long titles -- fuel feedstock production, fuel storage
21 and transport, transit fleet conversion, servicing and
22 maintenance, so there is really a wide variety of training
23 that is offered through this program. And actually, that
24 sums it up.

25 Here, I just want to say, to sum it up, the well-

1 trained workforce is critical to attracting clean energy
2 sector investment, advancing policies for a clean energy
3 future, and building a clean energy economy, and this photo
4 here is of trainees of the Solano College Program, and two
5 of the men in the photo want to start their own energy
6 services companies. The woman who is wearing the "We ARRA
7 Working" t-shirt, she gave me a hat, I should have worn that
8 today, she received her LEED certification and she is
9 working on a temporary -- it is an ARRA funded project now,
10 so she is hoping to get permanent employment. And the young
11 woman in the black sweater is learning about water
12 efficiency, and I think she wants to go into water efficient
13 landscaping. So, it is really exciting just to go out to
14 these programs and see all the wonderful work that this
15 funding is going towards. And we are going to be able to
16 hear from Gail and from Leticia, and we are also going to
17 hear from Robin Purdy of the Sacramento Employment Training
18 Agency, and Barbara Cox, who is representing the Electrical
19 Trade Union, IVEW NECA, and I know that they have really
20 excellent programs, too, so I am really looking forward to
21 having them share what they are doing with you. And there
22 is my contact information, and we also have a Website for
23 Clean Energy Jobs.

24 CHAIRMAN DOUGLAS: Thank you, Chris. Thank you so
25 much for your hard work on this program. It is great to

1 hear from you and great to see that overview. In the
2 interest of time, we will move on if there are not any
3 questions from the public, but thank you.

4 MS. KOROSEC: Next, we will have Darcie Chapman from
5 our Fuels and Transportation Division, to talk about their
6 aspect of the program.

7 MS. CHAPMAN: Well, good afternoon, everyone. It is
8 funny with the change in the agenda, I feel like Chris does,
9 I have been sitting over there scribbling all over my
10 presentation because our partners have expressed some of the
11 accomplishments that I was going to outline, but that is
12 okay, we will just struggle on.

13 My name is Darcie Chapman, I am with the Emerging
14 Fuels and Technology Office within the Fuels and
15 Transportation Division, here at the Energy Commission. I
16 am the Program Lead over the Workforce Development and
17 Training activities for the AB 118 program, or the
18 Alternative Fuel and Vehicle Technology Program. A few of
19 our partners presented, like I said earlier, and actually I
20 think there is only one of my partners still left to speak,
21 so I am going to provide just an overview of the program,
22 what is specific to the Alternative and Renewable Fuels
23 Program. And everyone else is kind of giving you a detailed
24 overview of the other projects.

25 Okay, so first a quick introduction to the AB 118

1 program, which is how I am going to reference it, rather
2 than Alternative and Renewable Fuels and Vehicle Technology
3 Program, it is a little faster. The program was established
4 to develop and deploy innovative technologies that
5 transformed California's fuel and vehicle types to assist in
6 attaining the State's Climate Change Policies. The program
7 goals include: increase the use of alternative and renewable
8 fuels, reduce greenhouse gas emissions, reduce petroleum
9 use, and increase in-state biofuel production.

10 Workforce development and training is a key
11 component to this effort and to the effort for the state's
12 clean transportation efforts and climate change efforts.
13 Successful development and deployment of clean
14 transportation fuels and vehicles will require a well-
15 trained workforce. A trained workforce is a critical
16 element to implementation of each of our development and
17 deployment projects. Just as you need fueling
18 infrastructure to support operation of low emission
19 vehicles, and low emission vehicles to support operation of
20 alternative fueling stations, you also need workers trained
21 to design, construct, install, operate, service, and
22 maintain new fueling infrastructures and vehicles. A low
23 emission vehicle is not successfully deployed and
24 consistently operated if it sits in the yard, because the
25 vehicle's owner does not have a trained workforce to service

1 and maintenance that vehicle. The AB 118 Workforce
2 Development and Training Program is being developed, I will
3 not say it is developed because we have had some fast and
4 furious learning here, but it is being developed to be
5 cognizant of the importance of a well-trained workforce, and
6 to be responsive to the demands of employers and the
7 industry in implementing our goals, they need to have that
8 trained workforce.

9 Earlier in the day, several of the partners have
10 also expressed the need for establishing these networks and
11 these programs to support these efforts, but also to provide
12 sustained effort and sustained resource to maintain that.
13 So, our first year's activities, the first year of the
14 program actually we got our Regs passed in April of 2009,
15 and when did ARRA hit? Somewhere right on the tail of that.
16 But, in the first year, somewhere after April 2009,
17 workforce development activities were allocated \$15 million.
18 And following the lead of Panama, and Barbara, and EDD, and
19 the LMID folks, we partnered in roundtables from a
20 perspective of AB 118 to find out who are the workforce
21 development experts in the area. It surely was not me. And
22 so we needed to find out who they were, and beg them to
23 partner with us, and educate us on the process. What was
24 interesting is that we found that programs were already
25 happened without our assistance, and projects were being

1 designed that really were going to meet, or help us meet,
2 our training goals. And the best discovery was that we
3 found with that existing and extensive and expert field
4 system, workforce training system, we could just plug in AB
5 118 and our goals for clean fuel and vehicles, and kind of
6 ride on the shirttails of programs already in progress, and
7 projects already flowing, for instance, the RECOG project,
8 the Regional Industry Cluster of Opportunity Grant Project,
9 which I will discuss in more detail later. But anyway, the
10 \$15 million was allocated, we went through what we had
11 already been going through, the roundtable meetings, and
12 sometime in April we began developing partnerships with
13 three leading workforce development entities, and those were
14 the Employment Training Panel, the Employment Development
15 Department, and the California Workforce Investment Board -
16 and the California Community College Chancellor's Office.
17 The projects funded through -- the first ones to roll out
18 and actually have an approved interagency agreement with us
19 was the Employment Development Department, and they were the
20 first ones to fund AB 118 specific training, also, through
21 the Q-Tip effort and that solicitation. We were CAT-3 of
22 the Q-Tip effort. And those were -- we had six projects
23 awarded under that solicitation, of which Leticia and Gail
24 were one, and then later in the program, Robin is one, also,
25 of our sub-grantees, and delivering a very strange animal,

1 as I can see from the presentations. The EDD Agreement has
2 allocated a portion of the funding already through that
3 first solicitation, but we also will be having another
4 release of funds sometime in the fall of 2010. The goal of
5 that, one of the goals of that solicitation, will be to
6 reach areas that did not solicit funding in the first round,
7 of which San Joaquin was one of them. We have several
8 targeted areas, but another potential area of funding, which
9 would address some of the comment and concern today would be
10 to fund high school pipeline projects, or to include that in
11 the solicitation for the next funding cycle.

12 So, the California Community College Chancellor's
13 Office interagency agreement is going to include all of
14 those studies that the Center of Excellence spoke about this
15 morning. Each one of those are going to enhance our
16 understanding of the evolution of the industry and the
17 building or changing workforce training demand.

18 The Employment Training Panel provides us the
19 opportunity to work directly with or to fund business driven
20 workforce training, where they craft and develop their very
21 specific training needs, or curriculum or training program
22 to meet their very specific training needs, and how that
23 training is going to happen. Also commenting in this
24 morning's program was the value of having an introduction to
25 a subject, then bring it out into the yard, or bring it to

1 the equipment, or the site, so that they can do that hands-
2 on training. I know that that would have been helpful with
3 my PowerPoint training! So, the Employment Training Panel
4 is really bringing us an aspect that I think really
5 completes our pie because we have EDD, who, through EDD we
6 are working with the local Workforce Investment Boards, who
7 really have that connectivity in the community to the
8 employers, to the community colleges, I mean, they bring us
9 through that, locally, EDD brings us through that
10 connection. But the ETP is going to connect us, yet again,
11 directly to business. But that is not all they will do
12 because, as was stated earlier, they are also going to be a
13 source of potential funding for the community colleges, for
14 the Unions and the Labor organizations, they are kind of
15 like -- the way that I envision them is the value that is
16 provided by these partners is not just in the trainees that
17 they serve, but also in their connectivity, their sphere of
18 influence, and also in their mechanisms of getting funds
19 moving, right? And so we have the solicitation process
20 through all of us other state entities, and ETP's direct
21 contracting, so it is a more expeditious and responsive,
22 possibly -- I hope, Robert is shaking his head, so that is
23 good - a way to get the funds moving. And so, during
24 periods of gap, maybe, that is going to fill a gap for us.

25 Earlier, I will just address a couple of things

1 since I had to cross out a whole bunch of stuff, I wrote new
2 stuff down, several of our partners also expressed concern
3 or confusion about how this process was going to work in
4 that, you know, you were having to cherry pick candidates or
5 trainees based on the fact that advanced fuels and vehicle
6 technology does not just walk in the door, right? So here
7 is - I will give you just a scenario of how the vision
8 works. In this vision, EDD may fund introductory auto or
9 diesel mechanic training -- I laugh because diesel has been
10 a bit of a hurdle for us - diesel mechanic training. When
11 that candidate graduates from those introductory or
12 traditional training programs, they then can come or
13 graduate into advanced training to cover hybrid vehicle
14 maintenance and servicing. And I know that you are already
15 doing that in your stacked program, and, really, it is just
16 - this is one more aspect of our partnering. If we bring in
17 EDD's funds through the WIA, which has happened now with our
18 diesel programs, that is really the model of how it works.
19 Let's bring in several funding sources with multiple funding
20 objectives, and limitations, and expectations, and
21 opportunities, bring them altogether to one fund training
22 source, a college, and that college, as you already do
23 screening of trainees as they are walking in the door, that
24 you do education screening, you do aptitudes, you can also
25 screen them for funding source. So, they come in the door

1 and you map them into one of your D training programs, and
2 you say, "The first tier of this training is going to be
3 funded by WIA dollars, the second phase is going to be
4 funded by AB 118, the third phase is by AB 42000," who
5 knows? But, you know what I mean, it is a new, I hope,
6 paradigm that hopefully will meet where that requirement
7 came from, which Gail knows, you lived it and you memorized
8 it, I know, she visited the legislation for AB 118 and the
9 regulations, and it is very specific. This is very targeted
10 funding for a very targeted program, with very targeted
11 mission. We cannot fund training in traditional fuels if we
12 are really wanting to move away from them, and so that is
13 the source of the restriction.

14 I just want to make sure I try to answer all the -
15 oh, Gail, you also talked about the SPDC, which was very
16 gratifying to me. I am a previous employee of this SPDC
17 program. Prior to the California Trade and Commerce Agency
18 being closed down, I was the Assistant State Director for
19 Northern California SPDC. And they really will be a
20 valuable partner to our efforts. I am just going to scoot
21 through these slides real quick, just like we did before, we
22 have got plenty of surveys and studies going on, being
23 sponsored by the LMID at EDD. That is coming up this month,
24 results on the green jobs survey specific to AB 118, and
25 then the targeted industry assessment is actually being

1 handled by the ATTE, Advanced Transportation Technology -
2 thank you - and the environmental scan is what was
3 referenced this morning and the Centers of Excellence are
4 going to be covering that one. And then, the Regional
5 Industry Clusters of Opportunity provided us that linkage,
6 or that communications strand, directly down into the
7 communities, directly to those companies that need our
8 workforce training efforts or funds.

9 These are local training delivery partners, of which
10 you see several have been here today, Long Beach and
11 Sacramento, and Los Angeles are all going to be here today.
12 We have been out to each one of their sites, we would love
13 to go to more, as Chris said, it is always gratifying, or it
14 kind of makes the work worth it, actually, to go out and
15 actually see what is happening locally and how it is
16 affecting people's lives, and the difference that funding is
17 making. A sampling of the partners, the participating
18 employers involved through the ETP contract, who recently
19 awarded five training contracts and they have, I believe, 44
20 in the cue, waiting for a state budget. These are rather
21 exciting programs. We have got - I think it is Terex, who
22 is working on a hybrid boom that will be used by utility
23 trucks, so they can turn off the diesel engine while they
24 operate that boom, which reduces GHG, fuel usage, and noise
25 pollution. We also have the Electric Vehicle International,

1 which happens to be in San Joaquin Valley, we are very
2 excited to see that project, and they are in the business of
3 manufacturing electric vehicles. We have SMUD as partners
4 with - I am sure you are going to talk about them, right?
5 SMUD and PG&E, and we are working through SETA, who is going
6 to speak next, to train their maintenance and service crew
7 on their natural gas, and their electric vehicle fleet
8 conversions, and all of that. I will let you go into the
9 detail. We also have CMTA, which is the California
10 Manufacturers and Technology Association, and they are
11 actually delivering a plethora of training specific to AB
12 118 through various of their employer members. Anybody else
13 exciting -- oh, they are all exciting. We have our industry
14 clusters of opportunity grantees, this is a real prime
15 example of that plugging in - am I done? Can I go a little
16 bit? I am going to go really quick. The RECOG effort is a
17 really great example of how a project or a program was in
18 development for 10 years, when we came knocking on the door
19 and asked if we could plug in the AB 118 objectives. And it
20 has worked out really well because they are already funding
21 \$2.2 million, the overall, or the general effort, and we are
22 coming in with \$500,000 to support the identification and
23 support of green transportation specific business. So, it
24 is an augmentation of an existing or planned project, and it
25 supports the businesses that we need to support, so it is a

1 great partnership. Here is our highlights, near term
2 projects - we have got - one more page and I am done, okay,
3 Suzanne? Near term projects, we have got the industry
4 assessments and all the surveys coming in, in the next
5 month, analysis of those will be happening internally and
6 they will be informing our next steps. We have got those
7 two more solicitations coming out, another RECOG effort to
8 identify some opportunities in regions that we did not
9 address in the first solicitation, and another solicitation
10 with EDD for workforce developing and training.

11 Real quick, next steps, one of the next steps is
12 that we would like to expand, first of all - continue to
13 develop and expand our relationships with our partners that
14 we develop this year, which have been rewarding and very
15 exciting, and then the other thing is to identify other
16 opportunities, and SPDC would be a prime example of a
17 program that would fill out our little family pretty well.
18 High school trade program is one of our objectives, it was
19 one of our objectives last year, but ARRA kind of distracted
20 everybody, and so they were not able to come to the table.
21 We would like to utilize our newly developed workforce
22 training network to inform businesses of program funding
23 opportunities for the development and deployment of new
24 fuels and low emission vehicles, inform funded projects of
25 the workforce training resources that are available to them

1 through our partner providers, and obtain regional and local
2 information on developing an evolving industry and workforce
3 training needs. So that is my presentation. Thank you.

4 MS. KOROSEC: Thank you, Darcie. We are going to
5 move on to Robin Purdy from Sacramento Employment and
6 Training Agency.

7 MS. PURDY: These were great presentations to listen
8 to today and I am going to try and shorten mine because a
9 lot of this stuff that you have already heard is stuff that
10 I would say. So, my name is Robin Purdy, and I am the
11 Deputy Director for the Sacramento Employment and Training
12 Agency and Sacramento Works, which is the local Workforce
13 Investment Board for Sacramento County. Our mission is to
14 build a dynamic workforce for the Sacramento region and
15 prepare people for success in work in life and in school.
16 Our 12 one-stop career centers partner with over 40
17 workforce and economic development education institutions,
18 business associations, community-based organizations, and
19 governmental entities to prepare job seekers for success in
20 work. We offer over 60,000 people per year the opportunity
21 to know their skills, enhance their skills, and get the best
22 job possible with the skills they have. In the past two
23 years, our task has become increasingly difficult with high
24 unemployment and a bad economy. And we have increasingly
25 turned to partners to create sector training initiatives, to

1 prepare and train workers for emerging jobs in high growth,
2 high wage jobs in our region.

3 Our most successful sector initiative is the Clean
4 Energy Workforce Training Program, and we want to thank the
5 California Energy Commission and the California Workforce
6 Investment Board for investing in these regional initiatives
7 that have really helped people, give hope that there are
8 jobs emerging, that they are going to be able to get, that
9 are going to pay them wages that are going to keep their
10 homes and send their kids to school, and allow them some day
11 to retire.

12 We began planning the sector strategy in 2006 as a
13 community when a regional effort led by Sacto in the
14 Sacramento Metro Chamber of Commerce resulted in the
15 formation of the Green Capital Alliance, and development of
16 a business plan for the Sacramento Region, which centered on
17 the growing clean energy technology sector. Through the
18 Green Capital Alliance, the workforce development,
19 education, and training institutions in our region worked
20 together to ensure that there is a qualified workforce for
21 the emerging clean energy jobs. Because of the range of
22 skills that are required for the emerging clean energy
23 technology jobs in our region, from entry level to PhD, we
24 have developed a range of strategies to develop the
25 workforce. UC Davis and Sac State are focusing on long term

1 and degree training, and the Workforce Investment Boards and
2 community college, and the private training providers, are
3 focusing on short term training and certification programs
4 that quickly provide the skills necessary for unemployed
5 workers to enter or re-enter the workforce, and for workers
6 who are at risk of lay-off to retain their jobs. And Clean
7 Energy Workforce Training Initiative focuses on - we were
8 funded for all three grants, Green Building Pre-
9 Apprenticeship, Green Building Retraining, and Alternative
10 and Renewable Fuels and Vehicle Training.

11 Our partners in these initiatives include Valley
12 Vision, who is the managing partner for the Green Capital
13 Alliance, which serves as both our Green Employer Council
14 for our region, and serves as the facilitator for the
15 regional industry cluster of opportunity planning process.
16 We are working really hard in our region to have one
17 planning process, one implementation process, we have a lot
18 going on in this area, we are trying to integrate and
19 collaborate and coordinate all of those efforts, and that in
20 itself is a full-time job. Our other partners include the
21 three Workforce Investment Boards in our region, Sacramento
22 Works, Golden Sierra Job Training Agency, and Yolo County's
23 Workforce Investment Board, SMUD's Energy and Technology
24 Center, and PG&E's Power Pathway Program. Our efforts are
25 championed by Congresswoman Doris Matsui, who has shown

1 great leadership in the Regional Industry Cluster of
2 Opportunity planning, and Sacramento's Mayor Kevin Johnson,
3 who is championing the Greenwise Initiative to put
4 Sacramento on the map as the greenest region in the country,
5 and the hub of green technology.

6 For training and education partners, we have
7 developed a green training provider list and we have
8 executed contracts with the Los Rios Community College
9 District, the Sacramento Area Electrical Training Center,
10 Northern California Carpenter's Joint Apprenticeship
11 Training Council, Sheet Metal Workers International
12 Association, California Building Performance Contractors
13 Association, Build It Green, Green Plumbers, and CalCERTS.
14 So, these will be the providers that we will be training and
15 certifying the workers who are going through our programs.

16 As I said earlier, we are focusing on creating
17 pathways to assist new entrants to the workforce, low
18 skilled workers, and laid off construction workers to enter
19 emerging high wage green collar jobs. When we first began
20 publicizing the Clean Energy Workforce Training Programs,
21 our career centers were inundated with calls from job
22 seekers who wanted a green job and employers who wanted
23 market share. It became really clear to us really fast that
24 we needed to figure out a way to give short informational
25 orientation workshops to people to kind of inform them what

1 our green jobs, what is growing in our community, what are
2 the skills that you will need, how do you get those skills,
3 and who is going to hire you. So, we turned to our
4 community college partner, Los Rios Community College
5 District, and they developed for us a curriculum for both a
6 four-hour and an eight-hour workshop that we are calling
7 Green Career Exploration. This curriculum provides an
8 introduction, history, and terminology for the green jobs
9 movement, information on green career pathways, skills that
10 are needed, types of employers that are hiring, and then
11 there is an interactive assessment activity that assists
12 customers in figuring out if they are a good match for one
13 of these emerging green jobs. We started the schedule, the
14 orientations in April, and we have had 300 people attend
15 them so far, and we are starting to schedule them in our
16 career centers on a weekly basis. And these are just
17 informational workshops, they do not really count as part of
18 the enrollments in the Clean Energy Workforce Training
19 Program.

20 After a job seeker attends the orientation, the
21 Green Career Exploration Workshops, they meet with a Career
22 Center Coach, and they begin to develop their Action Plan.
23 Depending on their education, their training, their skills,
24 they are referred to one of the Clean Energy Workforce
25 Training Programs. Those job seekers that have no skills or

1 prior education are referred to the Pre-Apprenticeship Green
2 Building Programs, which serve as kind of the introduction,
3 a pipeline to green construction careers and provide
4 contextual basic skills remediation, and some of them
5 provide some physical conditioning training. Currently, we
6 have three training providers focusing on pre-apprenticeship
7 training, American River College, which focuses on green
8 infrastructure building skills and preparing job seekers for
9 apprenticeships in sheet metal, plumbing, electrical,
10 carpentry, Consumnes River College, which focuses their pre-
11 apprenticeship training on energy efficiency,
12 weatherization, and home energy auditing, and then the
13 Sacramento Area Electrical Training Center, which is
14 focusing on recruiting and training apprentices with the
15 Electricians Union, or the IBW. We have had 94 job seekers
16 enroll so far in the pre-apprenticeship training programs,
17 and our goal is to serve 230 by June of next year.

18 For customers who have prior experience in
19 construction or show aptitude and skill in the assessment
20 process, the Green Building Retraining Program is often
21 their best training option. The Green Building Retraining
22 Program provides opportunities in green construction career
23 pathways to skilled construction workers and provides
24 journey level training by the Joint Apprenticeship Training
25 Councils in carpentry, electrical, and sheet metal work.

1 Another component of our retraining grant is a scholarship
2 program that pays for the costs associated with skill
3 upgrades in green certification programs. SETA will pay the
4 costs associated with training and testing to assist job
5 seekers become certified as green building professional Home
6 Energy Raters, building analysts, professional green
7 plumbers, photovoltaic solar installers, and advanced high
8 energy lighting control technicians. We have 72 individuals
9 enrolled so far in the retraining program and, by the end of
10 2011, we expect to have 200.

11 Our Alternative and Renewable Fuel and Vehicle
12 Program focuses on incumbent workers and also provides entry
13 level training for unemployed or underemployed individuals.
14 Funded by both AB 118 and the Workforce Investment Act, this
15 program will result in the receipt of a certificate in
16 Alternative Vehicles and Fuels, or a certificate in Clean
17 Green Diesel, or, for incumbent workers, it will be an
18 industry certificate for either the operating engineers,
19 PG&E, SMUD, or Regional Transit. And Darcie asked me to
20 tell you that we have gone through the curriculum and there
21 is nothing related to clean diesel being funded by AB 118.

22 We have a total of 35 individuals enrolled in the --
23 I think it is the Clean Diesel Certificate program as of
24 June 30th, 2010, and our goal by the end of the grant in June
25 2011 is 146. Last Saturday, so this was a July enrollment,

1 we started 31 students in a class that is funded through
2 WIA, AB 118 and PG&E is kicking in some money, it is the
3 PG&E Bridge to Utility Maintenance Training Program, and it
4 will be a Saturday program. We have recruited people with
5 some mechanics background, either veterans who have had some
6 training in the military, or others who are unemployed, who
7 have previous mechanic jobs, they will be going through
8 Saturday classes and, at the end of the training, 25 of the
9 31 will be hired by PG&E at \$46.00 an hour. So we are kind
10 of excited about that one.

11 Our task is to prepare the workforce to meet the
12 needs of the Regional Green Employers. Our Green Employer
13 Council, the Green Capital Alliance, has worked really hard
14 to coordinate and integrate the economic development
15 planning efforts focusing on clean energy, and has worked
16 with the WIBS to facilitate a work group for green job
17 training providers to ensure that the skills that are being
18 taught to the job seekers meet the needs of our regional
19 employers. We are also in the process of scheduling the
20 third annual CEO Roundtable Luncheons with owners of local
21 clean energy companies, which really allows us to sit down
22 and talk with them one-on-one about what are the workforce
23 needs, the training needs, their needs in terms of helping
24 with financing and incentives, all of that stuff, and it
25 really informs our work plan for next year. We are also

1 updating the Green Careers Guide, which is a Website of
2 green career information, and it will include interactive
3 information on the training programs that are funded in our
4 region. And we are assisting our county governments in
5 establishing green building task forces to help develop
6 uniform building codes and financing incentive programs.

7 We have had great support from employers in the
8 region, and we have leveraged funding from the Workforce
9 Investment Act to provide tax credits and wage subsidies to
10 employers who will hire and train the workers referred by
11 our Career Center Systems. So, as we get graduates, we are
12 seeing hiring happen, and we are quite encouraged by the
13 partnership that we have from the employers in our region.
14 We have worked really closely with a number of employers who
15 have hired or committed to hire program graduates, including
16 the employers you see on this list here. We now have over
17 130 companies in the region who meet our definition of clean
18 energy technology companies, or who sell, maintain, install,
19 build, or repair clean energy solutions. Sacramento
20 recently reported that, in the last year, our region
21 successfully located 15 new clean technology companies,
22 resulting in over 2,000 jobs and \$8 million in capital
23 investment. So, we want to, again, thank you, the
24 California Energy Commission, for your investment and commit
25 to you that your dollars will be put to good use in training

1 workers for the green economy.

2 And, in terms of the challenges, a lot of the
3 activity, a lot of the growth in our community, in our
4 region, has come from the policies that you have enacted,
5 and I would ask you not to move backwards on them. Help get
6 the PACE, the financing stuff figured out, I know
7 Congresswoman Matsui is totally committed to working on
8 that, too, but we need to generate the market, we need the
9 public to believe that they are going to get incentives if
10 they do these energy efficiencies in their homes, and that
11 we are not going to change our policies mid-stream and make
12 it difficult for people to take out loans on their house to
13 get the money in order to put panels on their roof, or to do
14 energy efficiency stuff. So, that is what I would say to
15 you is keep moving forward. The policies that you have put
16 in place, we have seen growth in our region and I think we
17 are seeing growth all over the state. We need to keep
18 moving because this really is one of the answers to the high
19 unemployment in our communities. So, that is it for me.
20 Thank you.

21 CHAIRMAN DOUGLAS: Well, thank you very much for
22 your last comment and for your entire presentation, and for
23 you very hard work that is bringing such tremendous benefits
24 to this region, and we are pleased to see you out there and
25 certainly I think I can speak for this Commission and our

1 determination to do everything we can to hold firm and move
2 forward on our policies.

3 MS. KOROSSEC: All right, we did have one question,
4 but I think it was for Darcie because it was talking about
5 AB 118 funded programs, "Do they require training to be
6 placed by the end of the program?" So we will take that
7 question and give it to Darcie and e-mail it to our
8 questioner. All right,

9 MS. COX: Good afternoon, everyone. My name is
10 Barbara Cox. I am the Director of Green Energy grants for
11 -- I am going to have to inhale before I pronounce - the
12 Labor Management Cooperation Committee for the International
13 Brotherhood of Electrical Workers and the National
14 Contractors Association. And what that means is that, while
15 most people refer to me as working for "the Union," I
16 actually represent both the workers and the Union employers,
17 and part of the very robust partnerships that we have
18 engaged in over the last year are because we have 2,000
19 electrical contractors that are part of our Labor Management
20 Cooperation Committee, in addition to 35,000 state certified
21 electrical workers. Through this partnership, we fund 22
22 privately funded joint apprenticeship and training committee
23 electrical training centers, so we were able to leverage
24 some fairly significant infrastructure for some of these.

25 So, what I would like to talk about is, we have been

1 very very active, and I would like to talk about the
2 Department of Labor Energy Training Partnership Grants. We
3 worked with the California Energy Commission, the
4 Chancellor's Office of the Community Colleges, and the
5 California Lighting Technology Center at UC Davis, and ICF
6 International is our Program Manager for the program. These
7 are the grant funded partners on the \$5 million grant that
8 we received. These are the other partners on the grant, so
9 all of the investor-owned utilities in California, as well
10 as the Sacramento Municipal Utility District. We had
11 letters of commitment from 14 Workforce Investment Boards,
12 and also a number of community-based organizations. When we
13 talk about lighting controls, most people have no idea what
14 I am talking about. I am a state certified general
15 electrician, so I thought I would bring some pictures so
16 that you could see the difference. So, this is a retrofit
17 project at the Lighting Technology Center at UC Davis, this
18 is a metal halide retrofit, so you can see the numbers there
19 about the energy usage on the project, and there is the
20 project after the retrofit, there is a 79 percent savings on
21 energy and, as you can tell, let me go back to the prior
22 slide, there is actually better lighting on the project, as
23 well. So, what we are talking about are these control
24 systems that not only save energy, and save money for
25 companies that have facilities, but they also have to be

1 installed by trained folks. Now, that spectrum of who are
2 we talking about, that is why we have such a robust
3 partnership - policy drives this industry innovation, but we
4 also need researchers, and we need engineers who are
5 innovating the technology. We need electricians who can
6 install it, we need contractors who can bid it, and we need
7 architects who will specify it in bid packages. So, that is
8 why I say we have a robust partnership that we are working
9 on with the California Advanced Lighting Controls Training
10 Program.

11 We had an existing program, it had already been in
12 process for about a year and we had 14 sites throughout the
13 state, and 30 trained instructors already working on
14 training state certified electricians. So, this is - seven
15 is apparently the new six because our expansion is supposed
16 to go to six JATCs and then six advanced transportation
17 technology and energy campuses, and the demand has made the
18 choices more difficult. So we had 30 instructors, our grant
19 funding is going to allow us to train 60 instructors, that
20 is for the JATC and the ATTE, we are going to expand to six
21 campuses for the JATC and six for the ATTE, and the key
22 component to this grant, which is why we sought Department
23 of Labor funding, is that we have Lab Trainer Boards, which
24 I will show you a picture of in a minute, and they are quite
25 expensive. And many of the speakers previously today have

1 talked about the cost of that initial expense for equipment,
2 and the DOL funding is going to provide us with 66 Lab
3 Trainer Boards. We also now have a Website that was soft
4 launched last week, it will have portals for electricians,
5 it will have portals for contractors, it will also have
6 portals for instructors to get updates to curriculum, and
7 also sort of a landing zone for consumers who need some
8 basic education about what is going on.

9 So this is just a little snippet from the Website
10 that was launched last week, and you can see that one of the
11 slides talks about the state goals are being supported by
12 CALCTP, again, AB 32 is key, as are some of the policy
13 drivers about demand reduction. Those really are very
14 helpful to the electrical industry when we are making sales
15 because people are really starting to see not just the
16 environmental piece, but they are also starting to recognize
17 the National Security piece, and then there is the economics
18 of why would you want to spend -- as the earlier slide
19 showed -- 79 percent more money than you needed to? So, we
20 are starting to get a really cogent argument together to
21 present to customers. So, here is one of these very
22 expensive Lab Training Boards. There are seven separate
23 modules that are utilized on these Training Boards. Our
24 partners with the Lighting Controls Association provide a
25 prerequisite online reading course that every participant

1 must complete in order to enroll in the CALCTP class, that
2 way everyone is coming in at the same baseline, if someone
3 finishes it in three hours, that is fine, if they need 12
4 hours to finish it, that is fine, too, they can either do it
5 at home, or they can use a computer at a training site or at
6 a community college. There are lectures, but the majority
7 of the class is hands-on learning how to not just follow
8 steps one, two, three and four, but get that conceptual and
9 heuristic skill set that is really needed to retrofit and
10 install these systems because, you know, every building is
11 different, and when you go in and you find that not only was
12 the system maybe not installed properly, or it was
13 installed, but never commissioned, you have to have kind of
14 a different skill set than just following, first you do A,
15 then you do B, then you do C, and so this hands-on component
16 is actually quite quite rigorous. Our pass rate is
17 challenging to some of our folks who are not used to really
18 being put to the test, but that is the whole idea of the
19 program is that we want to make sure that when somebody is
20 CALCTP certified, they really do know what they are doing.

21 Now, I am going to switch gears and talk about the
22 Department of Energy funding that we received with -- the
23 lead on the grant is the Chancellor's Office, this is the
24 Solar Installer Instructor network, California and Hawaii,
25 we are a network provider. We finally have gotten contracts

1 signed and we will begin rolling out this program. IBEW-
2 NECA has Advanced PV instruction that we have had in place
3 for about five years now, so we will be rolling that out on
4 a larger scale, working with our community college partners
5 on that, and also helping the folks in Hawaii who have a
6 much stronger solar thermal market, and a not so strong
7 solar photovoltaic market. And these are the partners on
8 the solar instructor training network. We also have the
9 Center for Sustainable Energy, they are the solar heating
10 and cooling specialty subcontractor. And the Department of
11 Energy grant was actually the one that we wrote first, and
12 then we continued to partner with the Chancellor's Office on
13 the CALCTP, and now the most important part is that the DOL
14 funded unemployed and underemployed workers, and our
15 contractors said, you know, we have had to lay off some
16 really important people, they will be able to get this
17 training, but what do we do with the members of our staff
18 who are still employed? How do we get them this training if
19 they are the ones who are going to go out and sell it? So
20 we had the opportunity to apply to the Employment Training
21 Panel to get some additional funding to fill in that
22 particular gap, so it still covers unemployed and
23 underemployed, but we also have a small amount of funding
24 for incumbent workers, which is extremely helpful. An
25 additional part of that is that, because we made the program

1 so rigorous, we actually qualified for the Advanced
2 Technical Training designation on the CEWTP. This is the
3 first time that a Labor Union has received the Advanced
4 Technical Training designation for a program, so we are
5 actually very very proud of that, and we hope the results
6 will be seen when the investor-owned utilities and the
7 municipal utilities roll out additional rebates for CALCTP
8 certified contractors and electricians on retrofit projects.

9 And then, in my free time, we have worked on about
10 30 different grants, either as leads to support our partners
11 and our stakeholders, what is listed here as the Veteran
12 Employment Assistance Program is actually the High Wage
13 Clean Energy Grant for Veterans that we receive. We will be
14 working on that with LA Trade and Tech, and the Community
15 Career Development, Inc. in LA. A little known fact, the
16 building trades has a very high percentage of Veterans, and
17 so while we are a traditionally very male workforce, we also
18 have a high number of Veterans, and even though there are
19 Helmets to Hardhats program, there has always been a huge
20 push in the building trades to bring in folks from our
21 military services. One of the additional things that I want
22 to draw people's attention to is the Municipal Commercial
23 Building Targeted Measure Retrofit, that, I believe the
24 contracts were signed yesterday, and we are partnered on
25 that, as well, so CALCTP certified contractors and

1 electricians will be required. I think it is 14
2 municipalities and seven counties for that particular one.
3 So, as our contractors are starting to sell and do this
4 work, we now have a nice demonstration project that will
5 raise some community awareness as we start to ramp up our
6 training. So, for us, we have been extremely fortunate that
7 the timing is -- sort of -- working pretty well. I know
8 that a lot of other folks are not having the same luck. But
9 it does bring me to another issue, which is, as we get our
10 unemployed and underemployed work force back to work, that
11 opens up the pipeline for apprenticeship and we have been
12 really unable to partner in really significant ways we have
13 on the CEWTP on the pre-apprenticeship in Sacramento, and in
14 some other areas, Long Beach and -- we have not been able to
15 honestly say to people, "We will partner with you on that,"
16 because the employment numbers are too high and we know it
17 is going to be, given how long it is going to take to get
18 folks back to work, how long after that it is going to take
19 to open up slots and apprenticeship, so the timing of how
20 that pipeline gets cleared was not working really well with
21 that 18 months timeline, we really could not make the
22 commitment in that 18 month timeline, and we had a number of
23 partners who were actually really appreciative of the fact
24 that we were being as honest with them as we could.

25 I would like to mention a little bit the Green Jobs

1 Corps in Santa Clara County, the IBW there partnered with
2 the San Jose Evergreen Community College District, the
3 Workforce Institute, and the Work to Future WIB for a
4 portion of their Green Jobs Program. And part of the Green
5 Jobs Program required community service on the part of the
6 participants, and while we did a solar car demonstration for
7 the students, we asked if we could have those students come
8 back with us and help us with the Construction Careers
9 Agreement and we had those students become the trainers for
10 5th graders in the Alum Rock School District. So it was not
11 a hard and fast requirement, but it really allowed us to be
12 creative by saying that there needed to be some community
13 service, we were like, "Hey, we have this other work that we
14 would like to get to, and who better to reach 5th graders
15 than people who are not my age?" There is a point there
16 where you just become - no one hears you.

17 So, finally, I would like to talk a little bit about
18 the Energy Efficient Building Systems, which is - that is
19 the E-RIC Hub. There are going to be three innovation hubs
20 throughout the United States. We partnered with the
21 California Application, it is a massive application. We
22 actually partnered on the Department of Commerce side and,
23 yes, we were leveraging Department of Labor funding, but we
24 really wanted to look at how do you take the research and
25 really get it into the field, and then how do you get that

1 feedback loop back to research about "this is a wonderful
2 idea, it works great when you are in an air-conditioned
3 environment, but on a construction site, when it falls off
4 the truck, it just does not work anymore." So we really
5 want to be able to participate so that we have this robust
6 driver for innovation and I am actually really happy about
7 all the efforts that we have focused on. For the Smart
8 Grid, we were actually not successful on the Federal level,
9 but we were very busy putting the applications together and
10 we have been working with the Smart Grid Center on their
11 efforts moving forward and continuing to engage with them as
12 we look for other opportunities to partner. And thank you
13 for your time and if you have any questions? I do have a
14 couple of suggestions or recommendations, one of them is
15 that the Codes and Standards are really really key, and
16 while we talk a lot about certification, we need to make
17 sure that they are integrated and collated with existing
18 Codes and Standards. In that rush to move forward,
19 sometimes we miss those particular things. And for the LMCC
20 policy drivers are key, they are truly truly key. And, you
21 know, as Robin was saying, with Sacramento, I cannot stress
22 enough how really important that is. And then, we need to
23 see more funding or more mechanisms to loosen up credit and
24 financing to move projects forward. I know PACE is one of
25 those, but there are other credit issues, as well, for our

1 contractors that need to be addressed. So, thank you so
2 much.

3 CHAIRMAN DOUGLAS: Well, thank you very much for
4 being here, for your leadership in making all this happen.
5 I guess I feel like a broken record by now after hearing
6 these presentations and saying this is really impressive,
7 thank you for being on the ground doing this and making it
8 happen. I guess my only question for you is, now that we
9 are where we are and we have got programs going, and we have
10 got a clean energy sector that is growing, albeit sometimes
11 not as fast as we would like, and we have setbacks like PACE
12 that we have to deal with, and we have to think about how to
13 resolve, what would you say to us about how the State can
14 continue to help and continue to support you in this effort,
15 and continue to make sure that we do what we can do to make
16 this all come together?

17 MS. COX: Well, obviously, the policy drivers are
18 key. Financing is key. And some of our partners have
19 issues with, you know, there are some glitches that occur as
20 some of our community-based partners experience -- let me
21 just give you an example so it makes more sense. If a young
22 man is in arrears on his child support, his license is
23 suspended. Now, if we are going to talk about stackable
24 credentials, at the bottom of the stack is a driver's
25 license, and the next thing there is a high school diploma,

1 or a GED, so what kind of mechanisms, or how do we move
2 around that in ways that are productive? Some sort of
3 dispensation in an authorized program, something like that.
4 I mean, it is a glitch that we need to address because if
5 you have folks who want to move into training programs, who
6 want to provide for their families, and then their
7 punishment is keeping them from doing that, that is not
8 working. So there are a number of things like that, and I
9 really appreciate having forums where we can continue to
10 bring these very formerly silo'd parts of industry and
11 education and training together so that we can compare notes
12 and talk about some of these particular issues that we have,
13 as we integrate, I think, in a more sustainable way.

14 CHAIRMAN DOUGLAS: Well, thank you. That is very
15 helpful and I think you are exactly right. As I noted
16 earlier, this is our first significant foray into this field
17 of workforce training at all, we are very pleased with what
18 we have seen and what we have learned and what we have been
19 able to achieve with our partners, and with everybody out in
20 the field doing the work, and doing it well, and doing it
21 with this passion that you bring to it, and as always, when
22 you bring different silos together and you try to mesh
23 energy policy and workforce training and some of the other
24 policies that are being advanced with different requirements
25 that are also affecting how trainings work, and ultimately,

1 do you create this conduit where you bring the workforce and
2 the job creation together? There is no question in our
3 minds that there is a lot of learning that we need to do.
4 So, please continue and continue to bring issues that come
5 up to our attention, and obviously we are working through
6 these regional partnerships and forums, and the Green Jobs
7 Council, and so on, because I think that we will get better
8 at this as we go on.

9 MS. COX: Thank you.

10 MS. WHITE: I just have one question and it is part
11 of my education, at least.

12 MS. COX: Sure.

13 MS. WHITE: You had mentioned that there was a
14 timing issue, that sometimes presents you from partnering
15 with different parties in implementing these programs
16 related to the apprenticeships. And understanding that,
17 because I do think that your role with both the employers
18 and the employees and that relationship that you have with
19 them, and the access you have to this particular market, is
20 key, and anything that prevents you from fully partnering in
21 these programs, certainly we need to be aware of and be able
22 to either respect it, or help you work through it. So,
23 could you elaborate a little bit more on that for me?

24 MS. COX: Sure. So our Joint Apprenticeship
25 Training Committee, Electrical Training Centers, provide two

1 types of training. They provide training to apprentices and
2 registered apprenticeship programs at the State of
3 California, and they also provide journeyman upgrade
4 training because, in California, electricians need to be
5 state certified if they are residential commercial or
6 industrial electricians, or voice data video technicians.
7 They have to do continuing education for recertification.
8 So we do two types of training at our training centers. For
9 the apprenticeship training, there is a process of
10 application and testing to get into the program, right now
11 they are stopped, and some of them are locked, they are not
12 even accepting applications because they have apprentices
13 who are out of work, and then there is the high unemployment
14 among electricians, and so, until we start to get more folks
15 in to work, we are not going to see slots open up, and it is
16 one of those situations where you have to decide, are you
17 going to be honest with your partners and say, "We're not
18 seeing it in the next 12 months," and how fast is this grant
19 going to roll up? And we do not want to promise something
20 that is not going to happen. We do not want your grant to
21 not be successful with us as a partner because we were not
22 being clear about what the conditions were on the ground.
23 You know, the IBEW has been around since 1891, the National
24 Electrical Contractors Association has been around since
25 1903, the LMCC in California has been around for almost 40

1 years. We have been through not this type of an economic
2 environment, but ups and downs, and there is a particular
3 response to where demand driven training, so when demand
4 starts to pick up, slots start to open, and until we start
5 to see that threshold, we are not going to see the slots
6 open. That does not mean that we cannot have people waiting
7 at the door, but that is not what somebody needs on a grant
8 reporting -- on a report, is that we got five of our people
9 standing in line.

10 MS. WHITE: That is not what you guys are looking
11 for. Right, so with the chicken and the egg problem, what
12 are the employer members of your organization telling you
13 about how or what needs to be done to help move the demand?
14 I mean, are there specific things that are not being
15 responsive to in trying to facilitate the uptake of this
16 industry that maybe we could be doing to help on the demand
17 side, to help clear out that pipeline?

18 MS. COX: Well, their response would be more
19 projects, just very clear, more projects, and it is one of
20 the reasons I highlighted the municipal and commercial
21 targeted retrofit because that actually is kind of a bright
22 spot for us, so you know, financing and projects, there
23 needs to be work and there really is not any way to kind of
24 gloss around that. We need more projects.

25 MS. WHITE: Right. Well, thank you very much.

1 MS. COX: Sure.

2 MR. BARTHOLOMY: No question, Barbara. I just
3 wanted to thank you for your partnership. You probably - I
4 think you talked at least about seven different projects
5 that we are working on with you, and you are probably one of
6 our most underground friends here at the Energy Commission,
7 but it is amazing to look at the breadth of what we are
8 working on together that was captured in your presentation.
9 So I just really wanted to thank you for being such a good
10 partner. And you have, in my experience, been by far the
11 easiest trade partner to work with in this process over the
12 last 18 months or so of working on these programs. You
13 know, you guys told me the Lab Training Boards are really
14 expensive, and I was thinking, "How expensive could a
15 training board be, really?" But, yeah, now that I see the
16 picture of it, I can see why it is so expensive.

17 MS. COX: And the components, because they are - the
18 components, some of them are very leading edge, and so they
19 are not in huge production and there is not a lot of demand
20 to drive down the price, so you know, you have kind of got
21 to hit that sweet spot of we need to train on the
22 technology, but we cannot wait for the price to come down.

23 MR. BARTHOLOMY: So, thank you.

24 MS. COX: Well, thank you. And it is nice to
25 finally meet you in person.

1 MS. KOROSSEC: All right, well, we do have a few
2 hearty souls who have managed to hang in here for the whole
3 day, so we would like to give anybody who is here in the
4 room an opportunity to make any comment. So, please, come
5 up to the center podium there and make sure the green light
6 is on, on the microphone.

7 MS. HIMES: Yes, good afternoon. My name is Kelly
8 Himes and I am Advisor to Commissioner Diane Grueneich at
9 the California Public Utilities Commission. I just wanted
10 to thank you for holding this event and making it a public
11 event so that we can all come and learn about this. I also
12 wanted to thank the CEC for its continued participation in
13 our efforts for the workforce education and training, as
14 well as for our efforts to understand Title 24 standards. I
15 know that our staff met with your staff recently to help get
16 through some of the concerns that we had, so again, I just
17 wanted to say thank you.

18 CHAIRMAN DOUGLAS: Well, thank you for being here
19 and we have been working very well with the PUC and with
20 Commissioner Grueneich and it is very helpful because we are
21 trying to achieve the same things and the PUC is showing
22 some enormous initiative in the area of workforce training,
23 which we very much like to see. So, thanks for being here
24 and thanks for sticking it out through the entire day. I
25 hope you do not hit too much traffic eventually going home.

1 MS. KOROSSEC: All right, well if we have no other
2 comments, we have no one online, thank you again to all of
3 our speakers and, Commissioners, are you ready to adjourn?

4 CHAIRMAN DOUGLAS: I am ready to adjourn. Thanks to
5 everybody who has been here, especially the hearty souls who
6 stayed with us all day long. We are adjourned.

7 Ms. KOROSSEC: Thank you.

8 [Adjourned at 4:42 P.M.]

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REPORTER'S CERTIFICATE

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

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

IN WITNESS WHEREOF,

I have hereunto set my hand this 2nd day of August, 2010.

Kent Odell

Kent Odell
CER**00548