DOCKETED	
Docket Number:	18-BUSMTG-01
Project Title:	2018 Business Meeting Transcripts
TN #:	224850
Document Title:	Transcript of the 09/21/2018 Business Meeting
Description:	N/A
Filer:	Cody Goldthrite
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/2/2018 8:13:42 AM
Docketed Date:	10/2/2018

BUSINESS MEETING

BEFORE THE

CALIFORNIA ENERGY COMMISSION

In the Matter of:	)
	)18-BUSMTG-01
Business Meeting	)
_____	)

CALIFORNIA ENERGY COMMISSION

THE WARREN-ALQUIST STATE ENERGY BUILDING

ART ROSENFELD HEARING ROOM - FIRST FLOOR

1516 NINTH STREET

SACRAMENTO, CALIFORNIA 95814

FRIDAY, SEPTEMBER 21, 2018

10:00 A.M.

Reported by:
Peter Petty

APPEARANCES

Commissioners

Robert Weisenmiller, Chair
Karen Douglas
Andrew McAllister
David Hochschild

Staff Present: (* Via WebEx)

Drew Bohan, Executive Director
Kourtney Vaccaro, Chief Counsel
Tyler Melgosa, Public Adviser's Office
Cody Goldthrite, Secretariat

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I N D E X

I N D E X (Cont.)

P R O C E E D I N G S

SEPTEMBER 21, 2018 10:08 a.m.

CHAIRMAN WEISENMILLER: Good morning. So let's start the Business Meeting with the Consent calendar.

COMMISSIONER DOUGLAS: Move consent

COMMISSIONER MCALLISTER: Second

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: So this item passes 4-0. Commissioner Scott is not here today.

Let's go to Item 2.

MS. WILHELM: Good morning, Commissioners. I'm Susan Wilhelm of the Energy Research and Development Division. I'm here today to provide an overview of California's Fourth Climate Change Assessment. The Fourth Assessment provided a substantial infusion as new research regarding what climate change means for California and how we can cope with it.

I'd like to begin by noting that California has been assessing the impacts of climate change on the state since before the internet was invented, with an initial report released by the Energy Commission in 1989. The first three modern assessments released in 2006, '09 and 2012 have provided a strong foundation for California's ambitious, comprehensive, science-based climate policy.

The Fourth Assessment was led by California's Natural Resources Agency, the Governor's Office of Planning and Research and the Energy Commission. Research funded by the Resources Agency and the Energy Commission leveraged externally-funded collaborations, shown here in green, to substantially broaden the scope of research and synthesize results.

All of the results of the Fourth Assessment are publicly available online at climateassessment.ca.gov, including 44 peer-reviewed technical reports, of which 15 were funded by the Energy Commission. Nine regional reports synthesize and contextualize peer-reviewed research and stakeholder perspective for regional practitioners and policy makers.

The Fourth Assessment also delivered a statewide summary report and brochure as well as three reports on climate related topics of statewide importance: namely ocean and coast, tribal and indigenous communities, and climate justice. The statewide and regional reports were not a part of California's prior assessments. These are new additions, intended to strengthen dialogue between scientists, policy makers and practitioners in California.

Another new addition with the Fourth Assessment is the release of peer-reviewed data as interactive publicly available tools that make science readily

available for decision makers and policy makers. For example, the high resolution projections of climate, wildfire and sea-level rise generated to support the assessment are all available on Cal-Adapt.

CalHeat, or CHAT, refers to a California Heat Assessment Tool, developed to help local public health officials anticipate and cope with extreme heat. The USGS Coastal Storm Model known as CoSMoS was expanded through the Fourth Assessment research, focusing on Southern California. And it's available as two interactive tool platforms by Point Blue and by USGS.

The USGS Coastal Storm Model reveals that up to two-thirds of Southern California's beaches could completely erode by the end of the century without large-scale human intervention to protect them.

One of the Energy Commission's contributions to the assessment was development of new climate sea-level rise and wildfire scenarios to inform energy sector adaptation. Our climate scenarios tell us that California's climate is expected to get both wetter and drier, which is to say that we generally expect wetter winters and bigger storms, especially in Northern California. But the spring season is projected to be drier, extending our annual dry season and all of the problems that come with it.

To help inform adaptation options, in the face of uncertainty, the Fourth Assessment included middle estimates of projected sea-level rise as well as higher-end estimates that are lower probability but physically plausible.

After all emission pathways we expect accelerating sea-level rise. As you see on the right-hand graph rapid demise of the west Antarctic ice sheets described by the red line on the right-hand graph could translate into as much as ten feet of sea-level rise in California by 2100.

Wildfire projections developed for the assessment shows that years in which an extremely large area is burned are projected to become more frequent. The light blue and light pink envelopes in this graph show area burned in extreme years. Based on these projections, future extreme wildfire years to be substantially worse in terms of total area burned than what we saw in 2017.

One innovative study leveraged big data, more than 2 billion electricity and natural gas bills, to clarify in a spatially disaggregated way how residential energy demand would be expected to shift with changing climate. As our energy system decarbonizes, it must also evolve to meet climate-driven increases in peak demand, especially in inland and Southern California.

New high-resolution field measurements supported by the Energy Commission found that new subsidence rates for some levees in the Sacramento-San Joaquin Delta are about half-an-inch to just under an inch per year. This subsidence compounds the risk that sea-level rise and storms could cause overtopping or failure of levees, exposing natural gas pipelines and other infrastructure to damage or structural failure. At this rate of subsidence, some levees in the Delta may fail to meet the federal levee height standard between 2050 and 2080.

Several studies supported by the Commission investigated climate-related risks to the transportation fuel, natural gas and electricity sectors. These studies made use of high-resolution projections, data-intensive models and stakeholder engagement to generate locally specific knowledge of how weather-related extreme events may affect particular assets. This figure portrays current and late century inundation risks at the terminal in Long Beach, where more than 80 percent of Southern California's crude oil is offloaded.

This suite of studies gives stakeholders locally resolved information to help them chart flexible adaptation pathways that incorporate evolving states of knowledge and policy into the timing and implementation of resilience measures.

In mid-August a workshop at the National Academies of Sciences in Washington D.C. engaged scientists, policy makers and practitioners from throughout the U.S. in discussion of practical, science-based assessments, such as what California has done, to support climate action.

The National Academies' workshop was followed by the official release of the Fourth Assessment on August 27th, at the Climate Adaptation Forum, which was attended by nearly 800 elected officials, public and private sector leaders, tribal representatives, nonprofits, communities and researchers.

In the weeks ahead, the final stage of assessment release will involve regionally specific events to bring together scientists and local stakeholders in discussion of the climate-related challenges that matter most to these communities. The research teams who contributed these reports are directing the events with partial logistical support from the California Energy Commission, the California Office of Emergency Services, The Local Government Commission and regional actors including universities and Climate Resolve in Southern California.

The Fourth Assessment has garnered the attention of regional, state, national and international audiences. It has been featured in more than four dozen media outlets

including the *L.A. Times*, *The New York Times*, *Nature*, *The Guardian* and many more.

I'd like to close by thanking more than 100 researchers who contributed to California's Fourth Climate Change Assessment. Thanks.

CHAIRMAN WEISENMILLER: Yeah, thank you. That was a great summary folks. I think I really want to highlight too that going back to the slide you had that showed the history of these, basically you're also seen the history of Guido's career here, since he's been involved in these. And certainly has been a leading spirit through all these years, certainly a monumental effort on his part.

I think just to sort of summarize one of the differences in last -- a couple of difference in the last studies is first historically we've done the energy studies and maybe snuck a little bit of non-energy stuff in. It's the first time that there's been more parity between the two. Hopefully as we go into the Fifth, if anything, there'll be more resource focus and hopefully the same level of energy, but sort of -- obviously, there's a lot more can be done in that in that space. And certainly the combination of having peer-reviewed papers, but also summaries for more general audience is important.

I think one of the things that really differentiates California from other states for the

national effort is the national effort goes back to 1990. And the law basically says they can do climate impacts, but cannot look at mitigation or adaptation. So we at least can say not only are there issues, but basically how we might deal with those issues. And that's really critical and that's particularly why we have a lot of focus going forward on continuing to work with local governments since they're going to be really facing the land use challenges.

So again, thanks Susan.

MS. WILHELM: Thank you.

COMMISSIONER DOUGLAS: You know, I'll just second the comments and I think this puts us on really good footing to continue this work and continue partnerships as we move forward and think about adaptation and mitigation.

CHAIRMAN WEISENMILLER: Yeah, it's going a great addition to your tribal event.

COMMISSIONER DOUGLAS: Very good.

CHAIRMAN WEISENMILLER: Very good.

Next let's go on to Item 3.

MR. ALVARADO: Good morning Chair Weisenmiller and Commissioners. I am Al Alvarado. I'm a Program Manager in the Transmission Planning and Corridor Designation Office. I'm here to present a proposed resolution approving Amendment No. 1 to the existing interagency agreement between the California Public

Utilities Commission and the Energy Commission. The original interagency agreement was approved by the Public Utilities Commission last September and by the Energy Commission at the October 11th Business Meeting last year.

Under this agreement the Energy Commission provides technical support to the CPUC, which includes preparing California Quality Act documents and transmission planning analyses that are needed as part of the CPUC's formal review of transmission infrastructure applications. This proposed amendment adds other types of CPUC jurisdictional infrastructure projects seeking permits to build, which would include natural gas storage and pipelines, water projects and telecommunication projects.

The Siting, Transmission and Environmental Protection Division staff has the technical skills and many years of related experience from licensing their own power plants and can thereby conduct the necessary environmental review of proposed CPUC jurisdictional projects. Furthermore, we're currently working on several transmission projects for the CPUC under this interagency agreement. The Energy Commission staff has also provided technical assistance to the PUC, conducting transmission network power flow studies to evaluate a utility project.

So the Energy Commission staff has already engaged in studies for the CPUC and has fostered a very

good collegial working relationship between the two agencies. The CPUC typically contracts the technical services to consultants, so this interagency agreement represents a shift of technical work to existing civil service employees. We believe that this interagency agreement and expansion of infrastructure projects established by this propose amendment represents a positive step towards a continued collaborative with the PUC. We are thereby seeking your approval for this proposed resolution and amendment to the interagency agreement.

With that I'm open to any questions.

CHAIRMAN WEISENMILLER: Great, thank you.

COMMISSIONER DOUGLAS: You know, I'll just comment that this interagency agreement has been a really successful partnership between the Energy Commission and the CPUC. I think it adds -- it's certainly an opportunity for our staff on the Siting side who have quite a lot of skills involving environmental review to step up and provide some support for another state agency on very, frankly very similar kinds of analyses. And this amendment expands the scope of what we could partner with the CPUC on, still very much within the core strengths of the STEP Division. And so I think this is a really good measure and I recommend it to all of you.

I'll go ahead and move approval of this item.

COMMISSIONER MCALLISTER: I'll second.

CHAIRMAN WEISENMILLER: Okay, all those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: This passes 4-0. Thanks Al.

MR. ALVARADO: Thank you.

CHAIRMAN WEISENMILLER: Let's go on to 4.

MS. JUAREZ: Good morning, Commissioners. My name is Angelique Juarez. I am a Commission Agreements Manager in the Siting, Transmission and Environmental Protection Division. I am here today requesting approval of a three-year, up to $950,000 agreement with the Aspen Environmental Group.

This agreement is necessary to assist in evaluating applications for energy facilities and transmission corridor designations, monitoring compliance for permitted facilities, reviewing petitions, assessing impacts of natural gas pipeline safety assessments and supporting other activities in the areas of environmental impact assessments and related regulatory matters.

Services providing under this contract will complement the work of Energy Commission staff as it will be narrowly focused, technical and demands a specialized skillset that the contractor can provide. The contractor will also be utilized to train Energy Commission staff and

transfer knowledge.

Before you today is a proposed resolution approving a three-year agreement with the Aspen Environmental Group, not to exceed $950,000. Staff requests approval of this agreement and I'd be happy to answer any questions you may have.

COMMISSIONER DOUGLAS: I just have a brief comment. I want to make it clear that this item is an authority to spend funding, but the funding is contingent on projects being filed or work coming in that would call for that. And this is not a resource. When we work with the -- for the former item when we work for the CPUC we are generally using staff resources. This is a totally different item. This for work coming into the STEP Division on well, it says here corridor designations, compliance, petitions to amend and so on.

And the funding is available, because it's important for us to be able to turn this work around quickly and access relevant expertise when we need it. But if we don't need it, we don't spend it. So I'll move approval of this item.

COMMISSIONER MCALLISTER: Second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

MS. JUAREZ: Thank you.

CHAIRMAN WEISENMILLER: Thank you.

Let's go on to Item 6.

MS. NEUMANN: All right. Good morning, Chair Weisenmiller and Commissioners. I'm Ingrid Neumann from the Building Standards Office. And I'm bringing the City of Del Mar's request for approval of a new local energy ordinance before you today.

Our office encourages and assists local jurisdictions in developing and adopting local energy standards that go beyond the statewide standard adopted by the Commission. Today's ordinance will be the 19th we've brought before the Commission under the 2016 Building Energy Efficiency Standards. Local governmental agencies wishing to enforce locally-adopted energy standards must, by statute, apply to the Energy Commission for a finding that the local energy standards require buildings to obtain equal or greater energy efficiency than the current energy standards.

Staff reviewed the City of Del Mar's application and finds that its ordinance meets the requirements for consideration by the Commission.

The City of Del Mar's ordinance requires all new, nonresidential construction and nonresidential remodels over $150,000 construction valuation, as verified by the city building official, to adhere to the 2016 CALGreen Tier

1 Standards.

2 The 2016 CALGreen Tier 1 Standards require that
3 nonresidential building projects that include indoor
4 lighting or mechanical systems be 5 percent more energy
5 efficient than the current building standards. But if they
6 include both indoor lighting and mechanical systems they
7 required to be 10 percent more energy efficient.

8 The City of Del Mar staff found that the
9 ordinance is cost effective and has no significant negative
10 impact on the environment. For these reasons, staff
11 recommends that the findings be approved and the Energy
12 Commission resolution be signed. I'm available to answer
13 any questions you have, as is Shaun McMahon from the City
14 of Del Mar. Thank you.

15 CHAIRMAN WEISENMILLER: Great, thank you.
16 First, are there any comments from anyone in the room?
17 Anyone on the line?

18 Commissioner McAllister.

19 COMMISSIONER MCALLISTER: Thanks, Ingrid. I
20 appreciate it. I guess we've done a number of these, as
21 you said the 19th. This one is actually relatively
22 straightforward, because CALGreen's vetting process has
23 done all the work for us. So CALGreen Tier 1 has already
24 been through our process and so it's relatively
25 straightforward for the city to use that as a baseline.

And I'll just say CALGreen is a great resource. It's a great pathway to sort of push the envelope on the building standards and get local government's comfort in going beyond code, so we can then learn from that as our virtue of cycle, kind of happens. So I'd advocate for this item.

Okay. All right, and I'll move Item 6.

COMMISSIONER DOUGLAS: Second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: Item 6 passes 4-0.

Let's go on to Item 7.

MS. OWNBY: Good morning, Commissioners. My name is Adrian Ownby and I'm with the Building Standards Office in the Efficiency Division.

This item is a nonresidential technical support contract with NORESCO, LLC for 3.75 million over three years. The contract will provide crucial technical support for both the implementation of the 2019 Energy Code and the development and implementation of the 2022 Energy Code. Key tasks in this contract include the development of time dependent valuation of energy, efficiency measure identification and analysis and California Building Energy Code compliance software development and implementation.

And with that I'd like to request approval of the contract and I'm happy to answer any questions you might

have.

CHAIRMAN WEISENMILLER: Thank you. First, is anyone in the room with any comments? Let's go on to the phone then.

(Off mic colloquy.)

Please, anyone on the phone that has comments please speak now. Is that Demitri? I didn't think he was going to comment.

MR. CONTOYANNIS: Hi, this is Demitri. Adrian asked me to listen in to respond to any questions that may come up, but I have no comments. Thank you.

CHAIRMAN WEISENMILLER: Okay. Thank you.

Let's transition to the Commissioners.

COMMISSIONER MCALLISTER: Yeah, so this is a really a key resource for implementation of the Building Standards. So once, as you remember back in May, we adopted the regulation language actually. There were a lot of steps after that to actually implement the Building Standards and this is for the nonresidential side. So the market, all the builders in local jurisdictions need much detail to actually implement the Standard, and so that's what this is all about. And this contract is a key resource for staff to help get that done. So if there are no comments I will move Item 7.

COMMISSIONER DOUGLAS: Second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: So this item also passes 4-0.

MR. OWNBY: Thank you.

CHAIRMAN WEISENMILLER: Thank you.

Let's go on to Item 8.

MR. JOHNSON: Good morning, Chair and Commissioners. My name is Mark Johnson. I'm with the Fuels and Transportation Division. I am presenting a grant agreement for possible approval that would provide operation and maintenance funding for a hydrogen refueling station.

In August of 2017, the Alternative and Renewable Fuel and Vehicle Technology Program released the first come, first served light-duty vehicle hydrogen refueling infrastructure operation and maintenance support grants. The purpose of this solicitation is to provide operation and maintenance support funding for publicly accessible hydrogen refueling stations that did not previously receive operation and maintenance support funding, or which received only a portion of the potential $300,000 in operation and maintenance support funding.

The purpose of offering operation and maintenance support funding is to ensure that hydrogen refueling

stations remain operating during the rollout of fuel cell electric vehicles.

The grant agreement being presented today is for a station located in Thousand Oaks, which qualifies for operation and maintenance support funding. This agreement will require the station operator and operator to report details of the station operation and maintenance to the Energy Commission, which includes rent, electricity consumption, maintenance, dispensing and hydrogen deliveries for three years from the effective date of the agreement.

Thank you for your consideration of this item and I'm happy to answer any questions you might have.

CHAIRMAN WEISENMILLER: Thank you. Let's start with any comments from anyone in the room? We have one blue card. Please come on up.

MR. STEPHENS: Thank you, Commissioners and good morning. My name is Shane Stephens. I'm one of the founders of FirstElement Fuel, the grant recipient. We're proud partners of the Energy Commission in building California's retail hydrogen network. We've put the CEC's grant dollars to work to open 19 hydrogen stations in the State of California. And we have 12 more under development.

To date, on those 19 open stations we've

completed 208,000 successful fills. We've removed 45.8 million gasoline miles from the road and replaced those with zero emission fuel cell vehicle miles. And we've eliminated 28.7 million pounds of CO2 from the atmosphere, by our estimates in doing that.

In staying true to our mission, which is to foster the widespread adoption of fuel cell vehicles we also go to extraordinary lengths to focus on the customer experience. This includes building a team of technicians here in California that make sure that stations are up and available as close to 100 percent of the time as possible, so customers can get access to retail hydrogen.

We also have 24/7 call center for customer support. And we're doing all of this while trying to keep downward pressure on the price of hydrogen on the pump. And I can tell you that these things would not be possible without these O&M grant dollars. They are so critical to what we were doing for the customer experience, especially during the next three or four years, which is the really hard period when we go from thousands of fuel cell cars on the road to ten thousands of fuel cell cars.

So thank you very much for the support. We are putting this to work and doing great things with these grant dollars. We appreciate it.

CHAIRMAN WEISENMILLER: Thank you.

Any comments from anyone on the phone? Let's transition to the Commissioners.

As I said earlier Commissioner Scott is not available today, but I'm sure she would be very enthusiastic in her support for this contract. FirstElement has been one of our best partners in getting these fueling stations out. We certainly appreciate your focus on the customer experience and frankly there have been some issues with other providers. But as we go forward, it's really important to make this a routine part of California's transportation landscape. So thanks again for your hard work on this.

COMMISSIONER MCALLISTER: All right, I'll move this item.

COMMISSIONER DOUGLAS: Second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: This also passes 4-0. Thanks again.

Let's go on to Item 9.

MR. ERNE: Good morning, Commissioners. I'm David Erne, with the R&D Division. I'm here to seek approval to fund a microgrid at the Port Hueneme facility of Naval Base, Ventura County. The microgrid will support a critical server farm and it will be particularly designed

to address the electric instabilities that server farms are sensitive to. And they will also be designing this microgrid, so that it can be a replicable model for other server farms or other facilities that have similar issues with electric instabilities.

Seeking adoption of this award, we have Paul Kistler, who's the Navy Project Manager who is online, as well as Robert Schainker, the EPRI PM who will be available if you have any specific questions.

CHAIRMAN WEISENMILLER: Great. Thank you.

So let's start with if there's anyone in the room who has comments on this? How about switching over to the phone line?

UNIDENTIFIED SPEAKER: It's open.

CHAIRMAN WEISENMILLER: It's open and so for both of you, why don't you identify yourselves? And certainly if you have comments that would be great and if you want to just stand by for questions, that also works. Okay. Do you want to identify yourselves?

MR. KISTLER: Yes. This is Paul Kistler with the Navy. I was hoping that Robert Schainker would go ahead of me if he's on the line.

CHAIRMAN WEISENMILLER: Okay. We don't think he's on the line.

MR. KISTLER: If not, I can start.

CHAIRMAN WEISENMILLER: Why don't you start then, sorry.

MR. KISTLER: Okay. Good morning Chairman Weisenmiller and Commissioners. The main thing I want to express is the value of working together to meet the future energy needs of California and the military. Energy resiliency and reliability are critical to the mission of the Navy. With the CEC grant we are able to provide to one of the highest priority facilities within our base, increase reliability, improve resiliency, further reduce greenhouse gas emissions and also be a model for other Navy and DOD bases to follow.

We look forward to fully implementing the microgrid, so we can demonstrate the value the microgrid provides the base, the local community, Southern California electric utility and California Energy Commission. We appreciate the confidence the Energy Commission has placed on us. I know the Navy Facilities Engineering Command and the California Energy Commission have a long history of working on successful projects together. And we feel this will be another showcase project for California.

The project also helps Navy build in-house skills and experience with microgrids and batteries that can be applied to other bases in California and worldwide support to the war fighters. And I am happy to answer any

questions at this time.

CHAIRMAN WEISENMILLER: Thank you.

MR. KISTLER: Thank you.

CHAIRMAN WEISENMILLER: No one from EPRI, so let's transition over to the Commissioners to talk about this.

As I was going to say earlier, last month I went to the Military Council and the Governor, Diana Dooley and I met with the bases in California. There's always been a premium placed by the Governor by having a very strong working relationship with the bases in California. And certainly that's been one of the things, which we've really focused on at the Energy Commission, particularly in the R&D area. There's a very strong focus on resilience at the bases. And they've been great partners, so far in our R&D activities. So I think this is going to be another great project, looking forward to the results.

COMMISSIONER DOUGLAS: I'll move approval of this item.

COMMISSIONER MCALLISTER: Second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: Thanks. So this passes 4-0.

Let's go on to Item Number 10.

MR. CROFT: Good morning, Commissioners. My name is Josh Croft from the Energy Research and Development Division. I'm requesting Commission approval today for 18 small grant proposals for our most recent CalSEED solicitation. CalSEED provides small grants and resources to early stage technologies.

CalSEED held its second open application period earlier this year and received over 200 eligible applications. The applications were split into two groups with approximately half being scored in this round and the rest being scored in a future round. This application period, CalSEED had a focus on ensuring stronger geographic diversity. And CalSEED directed applicants to submit proposals to one of four groups based on their geographic location.

There are four to six highest ranked applications per region that are up for your consideration today.

These applications span a wide range of technologies, with most corresponding to energy storage, generation or efficiency. Some were at the concept stage whereas others had a basic prototype tested in the lab.

The applications were evaluated for long-term technical potential, impacts including potential to positively impact disadvantaged communities and the expertise and readiness of the applicant team. I'll be

giving a brief summary of all 18 projects. I've ordered them by region with Central Valley being first.

The first project from the Central Valley is a microchip irrigation system that operates at a much lower pressure, which greatly decreases the energy use. The system is able to do this because of a new innovative filter that combines several functions into one unit. During the project the team will finish the design and patents and will test the filter on a campus farm at Fresno State.

Moving on, the next small grant goes to DTE Materials for a natural and sustainable building insulation that's looking to replace fiberglass. What sets DTE materials apart is that unlike other natural fiber-based solutions theirs does not settle and will have a low cost. Other natural fiber insulations can settle, which decreases the energy efficiency of the building. During the project the team will improve the technology as well as simulating the manufacturing process.

The next project supports an innovation that integrates phase change material into a building duct in order to decrease the load of an HVAC system. Using this special duct the system passively removes heat from the air before it is treated by the HVAC. The team will build a 10 percent scale prototype and will focus on increasing the

effectiveness and value of the phase change materials.

The next project is an easy commercial retrofit solution for florescent light fixtures. Empow Lighting has a low-cost LED lighting sheet that can snap into existing light fixtures. The technology spreads light into a wide area and is cheaper than other LED retrofit solutions. The team seeks to build a prototype for their retrofit lighting technology and demonstrate their prototype in a commercial building setting.

Our firth project moves us to the first of the San Diego region awards. A researcher from UC Riverside is demonstrating a way to double the production of renewable methane at places like wastewater facilities. The team will insert carbon dioxide microbubbles into the system using a fluidic oscillator, which will distribute the microbubbles in a way which helps increase the methane production.

The next project is a battery innovation. Silicon carbon anodes increase the capacity of lithium batteries, but have been hard to manufacture at scale. This project will demonstrate an innovative manufacturing process that addresses prior manufacturing barriers and increases the performance of the technology. If successful, lithium ion batteries will have increased capacity and last longer.

Next is the innovation for second life batteries. After batteries are used in an electric vehicle they have decreased performance characteristics, but can still be used for grid services. However, different EV batteries have different chemistries and ages and this makes them harder to integrate together. Smartville Energy's plug and play inverter matrix is designed to use these diverse battery sets together in a way that maximizes each battery's performance and lifetime value. During the project, the team will develop and test the prototype and develop a business plan.

Our last San Diego region project supports research for a technology that directly creates pressurized air from the ocean's energy. The pressurized air can then be used to create electricity and power resiliency for ports and coastal cities. With CalSEED funds, a miniature prototype will be developed and tested at Scripps Institute of Oceanography.

Moving to our Los Angeles region awards Crossno & Kaye is developing a method to shift load in industrial warehouses that need cooling. Using information from IOT sensors, knowledge about the warehouse characteristics and its contents and grid pricing information, their algorithm safely overcools the warehouse contents for where it's best for the grid. As we continue to increase the amount of

renewable energy on the grid, industrial load shifting techniques such as this one will become increasingly important.

Our tenth project titled "Invisible Front Contacts for Solar Cells" supports a technology that addresses losses in solar PV output due to the shading from the front contacts. The technology can increase solar PV output by 5 percent. And during the CalSEED agreement the team plans to break the PV efficiency record by combining their technology with a concentrated solar PV system and achieving the efficiency of approximately 50 percent.

Moving on the next award is to an easy to install, easy to move, sustainable solar product for California homes and apartments. This team is creating a flexible thin film portable solar shrub using advanced multi-material 3D printing. The team will also work on an algorithm that will allow the shrub to automatically reconfigure itself based on the changing amounts of shade and sun throughout the day.

Continuing, Project 12 titled "Pronoia Energy Storage Device" is continuing prototyping and research and development on a new type of battery. This new energy storage method may be able to store 10 or 100 times as much energy in the same space. Instead of chemicals the battery uses nano-sized electric dipole systems and has no

electrolyte or separator. As it does not have these things there may also be minimal capacity loss over time.

The next project is titled "SolarBlock" and is being awarded to Pick My Solar. The team will finish development and start a small pilot test on a block chain-based transaction platform for community solar projects. This technology will lower costs associated with community solar while increasing reliability, speed and accuracy for the community members buying and selling electricity.

The 14th project for consideration is InPipe Energy. This technology captures otherwise wasted energy associated with pressure reduction valves in industrial water systems. Often times, when water is transported it is depressurized as it moves closer to delivery. The technology is designed to fit onto existing infrastructure and can power the controls and sensors associated with industrial water transportation. During the project the team will continue the design of the hardware and its controls.

Last is our Bay Area region awards, first is a project titled "Cooling Mobile Data Centers with the Sky." This project will develop a passive cooling technology that radiates heat to the sky with a system that uses an order of magnitude less energy to remove heat compared to normal data center cooling methods. During the project, the team

will optimize the hardware design and assess how energy savings might differ in various regions of California.

The second Bay Area project funds development and demonstration of a new way to limit and control a battery when it is short circuiting. This new method will allow for lighter and cheaper battery protection that is printed directly onto the battery cell. During the project, Palo Alto Research Center will develop and test their technology on lithium ion coin batteries.

The next project titled "Mobile Envelope Dam Electrification System" aims to provide a way to quickly electrify dams and canals in a matter of weeks instead of years. The technology will siphon water into a turbine in a way that is designed to not require significant civil engineering or structural load analysis at the site. CalSEED funds will support the construction of a prototype, which will be evaluated in a test bed environment.

The last project before you today is a compressed energy storage technology that uses an innovative liquid piston to increase efficiency using a liquid allows for increased heat transfer area, which increases the performance of the storage technique. The liquid is magnetically stabilized and the team is hoping to demonstrate a roundtrip efficiency of 70 percent.

Overall, these projects represent an exciting

wide range of CalSEED small grants. I'll be happy to answer any questions that you may have. For those interested in learning more about CalSEED small grants and staying up to date there's a website available, which is shown on the screen. Thanks.

CHAIRMAN WEISENMILLER: Thank you.

Let's start with are there any comments from anyone in the room? Please. Come on up.

MS. DALSTROM: Good morning Commissioners and Colleagues. My name is Tenley Dalstrom. And I'm the Director of California programs at the California Clean Energy Fund. It's my privilege to lead the team administering the California Sustainable Energy Entrepreneur Development Initiative, more commonly known as CalSEED.

The CalCEF team is excited to be here today to recommend our second cohort of CalSEED awardees. These 18 organizations are early stage startups working on energy efficiency, generation, storage and electric transport. As clean tech truly is the rising tide that lifts all boats we have worked to strategically diversify our applicant pool and this opportunity was made available to entrepreneurs represented within the clean tech ecosystem regions of Central Valley, San Diego, Los Angeles and the Bay Area.

Our management approach is focused on continuous

improvement. And we endeavor to strengthen the program through the application of lessons learned and best practice. We seek to foster strong partnerships with the CEC, the clusters within the ecosystem and our partners to better serve our community of entrepreneurs.

Our team strives to create a robust network and community of CalSEED awardees and alumni with whom we share information about resources related to market and policy trends and provide opportunities for funding, training, collaboration and mentorship.

In 2017, 48 percent of the $4 billion worth of clean tech investments within the United States occurred within the State of California. We're committed to furthering the state's leadership and agreement economy through supporting the vision, ingenuity and dedication of our awardees. Thank you very much for the opportunity to support the state's significant clean energy commitments.

CHAIRMAN WEISENMILLER: Thanks for being here.

Anyone else? Please. Again, the court reporter will need your cards.

MR. DENNING: My name's Zach Denning. I'm the CEO of EnerDapt. We were a CalSEED awardee. I apologize if I talk too fast, I'm about six cups of coffee and three hours of sleep right now, but we're a startup. We're local to Sacramento.

We found that small medium-sized commercial office buildings from about 30,000 to 200,000 square feet are terribly inefficient. So HVAC systems don't work correctly and we've been able to save between 30 and 40 percent energy in HVAC. So we bootstrapped the company on our own, me and my cofounder. We did win the CalSEED award, which has really helped us get off the ground and start commercializing, start prototyping.

So far, we've been able to acquire 500,000 square feet locally, in the Sacramento area; 250,000 of that real estate is in poverty stricken areas. From our initial projections right now, running for about three to four months in that half-million square feet is about 1,500 megawatt hours of energy saved annually. So we're hoping to be able to acquire another half-million square feet before the end of the year and keep scaling. So CalSEED has been fantastic for us. Thank you.

COMMISSIONER MCALLISTER: That's fantastic.

CHAIRMAN WEISENMILLER: That's good, very good.

Anyone else? Anyone on the phone?

(No audible response.)

CHAIRMAN WEISENMILLER: Great. Okay, so then again transitioning to the Commissioners.

Now, I think we've been working for years trying to figure out how to encourage innovation in California.

Historically we've had the San Diego program, which transitioned to CalSEED. This is the second traunch and we're looking forward for great things from these folks.

COMMISSIONER HOCHSCHILD: Thank you, Mr. Chairman. I just really want to compliment you as the lead for R&D and EPIC for this. I confess when I first became aware of this idea we're going to do these small grants I was somewhat skeptical, because it's just not that much money. And my view has really changed.

I just think what's happening now is that over the last four years clean tech venture capital in California has increased from 28 percent to 48 percent, so we're getting half the money coming to our state. And by being the seed bed we're really sort of dedicated and it just gives the idea sort of clean energy safaris for investors to come into our state and see all these startups. And our role is just helping them get a little momentum that positions them well to attract for their follow-on investment.

And I actually now question whether this program is big enough as a share of our total hours, because it's just so exciting to see this. I also think we need to -- CALGreen (phonetic) had a really momentous month in terms of new policy in California with SB 100, with Senator Stern's decarbonization bill and others. And I think

looking ahead, to me demand is going to be as important as supply in terms of being able to adopt higher and higher penetration of renewables and that is a real area of interest and obviously electrification is continuing to get -- and we know the grid is going to be (indecipherable) clean energy migrating all the services that are now powered by diesel, by natural gas and gasoline onto the grid becomes even more paramount. And so I'm just really excited by what I'm seeing here with these and the earlier traunch as well.

But looking at them I think we need to calibrate some of these developments and look forward to working with everyone on that. But just thanks to the entrepreneurs that are here and Laura and Eric for shepherding this whole thing and Danny for you and your team's great work.

CHAIRMAN WEISENMILLER: Go ahead.

COMMISSIONER MCALLISTER: Yeah, I second all of that. Great to hear Commissioner Hochschild emphasize demand. I love it, love it, love it. You know, I think buildings are the platform where all these solutions pretty much go and the distribution grid is really the main focus; a central if not the central focus of reliability discussion going forward. And so I really agree that this sort of panoply of projects together really represent tons of opportunity.

And I think particularly hearten both on the res and non-res that you've got load shifting technologies in there. You know, moving energy around is going to be just as important as saving energy, generally. And so I think those two things really help make each other can happen together. And there are several projects here at least that do that just directly go right for it, so fabulous stuff.

And I appreciate the under-slept and over-caffeinated entrepreneurial spirit. That's exactly what we're trying to promote here. So it's a great thing to put some resources into. So I just wanted to compliment Josh on a great presentation, so thanks for that.

CHAIRMAN WEISENMILLER: Yeah, no that's good.

Yeah, I was going to say actually I've seen other programs. The surprising thing is that small scales like this in terms of dollars are the ones that have the impact; that when people have tried to go to a million plus they -- you know, it's not nearly as much. And I think for CalSEED the good news we have it out, I think certainly going forward is always going to be important to develop a record on what really happens.

We're hearing great enthusiasm here today and really good projects, but I mean ultimately the test for the PUC and others is going to two or five years from now,

which of these startups really have launched? And certainly I hope all of them, but the reality is that the value of definite issues along the way.

So anyway, a great start here and I think we're all enthusiastic waiting for the next traunch. And again, I think certainly the message in part is to really develop that track record and what comes out of it.

COMMISSIONER HOCHSCHILD: What about can someone refresh my memory on the follow-on? There is a $600,000 follow-on grant right, where you can be sort of the stage gates?

MR. CROFT: Right, yeah so the more successful of the original ones do get a chance to compete in a business plan competition, which is actually upcoming and they will get a follow-on funding of $450,000.

COMMISSIONER HOCHSCHILD: So $450,000, so a total of $600. Okay.

CHAIRMAN WEISENMILLER: Yeah. Great, okay so to move --

COMMISSIONER HOCHSCHILD: I move the item.

COMMISSIONER MCALLISTER: I second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

CHAIRMAN WEISENMILLER: This item passes 4-0. Thanks again.

Let's go on to minutes.

COMMISSIONER DOUGLAS: I move the minutes.

COMMISSIONER MCALLISTER: Second.

CHAIRMAN WEISENMILLER: All those in favor?

(Ayes.)

COMMISSIONER HOCHSCHILD: I will abstain.

CHAIRMAN WEISENMILLER: Okay. So it's 3-1 to 0, so this is a pass.

Lead Commissioner, Commissioner McAllister?

COMMISSIONER MCALLISTER: Oh no, I have to go first?

CHAIRMAN WEISENMILLER: Yeah.

COMMISSIONER MCALLISTER: Commissioner Scott's out. I'm not sure if I can match her level of enthusiasm, although it's just not my way. But just imagine it being there, because it's there.

But yeah, let's see I just have a few things I want to talk about. A bunch of staff and I visited the Sheet Metal Training Center in Fairfield and just incredible work going on there. They're vetting all these new technologies. They're looking at all the different refrigerants. They're coming up with really improved practices all the time. And they can turn right around and train HVAC technicians in those. And those resources are really -- there's a few facilities around the state, but I

think this might be the largest one. In Southern California there's one that's roughly similar, but Dave Diaz hooked us up with a tour and it was just fantastic.

And so quality really matters. I mean, I think that's one thing that I believe more and more as we go along in our existing building work is that all projects are not created equal. And quality is really what gets us our savings. And so that's exactly what the CAL SMACNA folks and the training center are promoting, so it was really terrific.

We did a press conference at Home Depot around lighting. And Matthew Hargrove at the Business Properties Association and Feit Electric both participated in that. And it's just incredible the pace of evolution of the LED marketplace. I mean there is a whole row of any product you want, you can find it. The challenge is actually there's almost too much choice and people get confused. And so the old incandescent light bulb in its various forms in its screw base, that's not the decision you're faced with. It's more complicated. You can choose the color. You can choose obviously a lot of different styles, many brands competing for market share there. So it's really quite exciting. It's not just Home Depot. Obviously all the retailers are carrying all these lights and a lot of brand competition.

Their ability to manufacture improved lighting, their product cycles are actually speeding up and so new innovations can get in the marketplace quickly. It's really phenomenal. So it's good to highlight that with one of our retail partners across the state.

And then finally, I'll just make some general comments about GCAS. I mean everybody is going to talk about that likely, but last the Global Climate Action Summit was last week. And I've got to give kudos to Jaimie and Amy and the crew at the Governor's Office and obviously many, many partners that they recruited to pitch in. It also was certainly a big coalition effort.

And I have to say the production quality of the event itself was phenomenal. It was incredible. Just the level of the graphics and the staging and lots of big names there, lots of people really on our side on this and I think one thing I took, I gave like nine talks. I mean my voice was going by Thursday and it was all just extremely positive. You know, not without controversy. There were lots of different scenarios we can imagine about how to get carbon neutrality and to our climate goals. But just this incredible sense of can do and positivity and possibility globally, you know, it was a big international crowd.

And I think it's just remarkable how many people -- we knew this kind of generally speaking, but how many

people in institutions across the world are rooting for California and are really invested in what we're doing. It's tremendous, because they sort of look at California and say hey, we're putting in resources. We've just heard an incredible innovation.

And we just have generally a suite of policies that are maybe not always entirely consistent 100 percent, but they're all rolling in the same direction. And so for the most part we have challenges. We've got to focus on reliability in the electric system. We've got to figure out what the evolution of the natural gas system is going to be. But everybody seems up for the challenge. And I think the week really reinforce that multiple times for me.

Just a couple of the institutions I think that the activities that I wanted to highlight, we had a Carbon Smart Buildings Day, which was basically everybody in the building space. And turning from sort of a zero energy focus to a decarbonization focus was my goal for the Challenge 3, the Buildings Challenge at GCAS. And I think we achieved that. We're now talking about building decarbonization and we're not focusing nearly as much on sort of the zero net energy goal. And that's appropriate. Not that ZNE is a bad thing, but it's really we've got to go for the jugular right, which is carbon and climate change itself.

And then the U.N. has an initiative called the Global ADC, the Alliance for Building and Construction. So that was a very -- it's focused more in Europe obviously, because of U.N.s based in Paris; that particular initiative. But marshalling a discussion that really complements oursand so that event was really well received and was really terrific, hosted by Auto Desk that is doing a lot of really innovative work with big data and design and tremendous contribution to the building space as well.

So just a couple of highlights, I think lots of marquee names and we really got to network I think with the main movers and shakers in the climate change movement across the world. I think that was really the achievement of GCAS. And I hopefully we can keep that momentum going and it'll remain action oriented as the name suggests.

So anyway I'm still sort of lifted up by that and I think will be for a while.

COMMISSIONER DOUGLAS: Well, I also found the summit to be really inspiring and exciting and had an opportunity to participate in a large number of panels and events and just I learned a lot from some of the panels that I just attended.

I went to some of the ocean events. There was a whole Ocean Day setup and it was quite fun and it was really interesting. There were some people from Hawaii who

supported the summit by sailing a traditional canoe to California, navigating in the traditional way and it was pretty amazing to hear them speak. And so you know there were a number of forums that I took part in, or in one case not connected to the summit, but just as an educational sort of side event.

We worked with representatives from Scotland and Denmark to host an informational forum on offshore wind permitting in Scotland and Denmark. And then the kinds of approaches they take and data they collect and so on and so that was really interesting and really helpful of them to participate in that.

I'll just add that on Monday the California BOEM, which stands for Bureau of Ocean Energy Management Taskforce on Offshore Wind met. And BOEM put forward some kind of preliminary potential call areas for areas that they're considering collecting information on as possible areas for offshore wind in California. So there's a timeline behind that process. But at the moment where that process is, is that the taskforce members and by extension everyone who is interested can get the information online and has an opportunity to see what is at least thought about and at this early stage in that process. So I think that's all I've got for today.

COMMISSIONER HOCHSCHILD: Well thank you, Mr.

Chairman. I just want to remark that to me the Climate Summit was a homerun, but it really was a capstone of what's been the most fulfilling and rewarding year I've had in almost working in clean energy policy. And I just want to recap, because we began the year with the Lighting Standard going into effect, which the progress you described being -- Commissioner McAllister, it really is because of the standard you led moving the state from incandescents to LEDs.

And then late January the Governor raised the zero emission vehicle goal from 1.5 to 5 million electric vehicles. We have now over $3 billion of commitments for electric vehicle charging infrastructure investments and we were at 6,000 electric vehicle sales a month in January. We're at 18,000 today. Right, the market's taking off as we hoped.

In May we did a Zero Net Electricity Standard, cutting energy bills by 53 percent and I think paving the way for a lot of other states to follow suit and incorporate clean energy into the buildings.

And then this legislative session we made progress across the board including Senator Skinner's bill to encourage the ride hailing apps Uber and Lyft and others to green their fleets. And Senator Stern's bill on decarbonization and the landmark legislation the Governor

signed in SB 100. And I want to just share a few thoughts about why I support the Governor's decision to do that.

Obviously it's been a subject of much discussion over many years with the Legislature, the Governor, investors and entrepreneurs and industry and the public health and environmental community and number of the Board Members of the ISO. But by settling that question that we're moving to a clean energy grid, it really allows us I think now to focus squarely on the pieces of the puzzle that are not yet done. Including regionalization, which I think is essential to our long-term success and electrification and migrating services that are now not on the grid, to the grid.

And we're seeing this. It's happening in ways I think none of us expected. I mean just around the corner, there's a new charging station for JUMP electric bikes. Uber made a big investment. They're already seeing Uber car rides go down in areas where they've deployed the bikes, right? And you're seeing the two-wheeled scooters. I was at a session, I think the Chair sent me to one with China Electric Vehicle. There's over 300 million two-wheeled electric vehicles in China today. I will say there's something quite efficient about (indiscernible), when you just decide to do it, you do it; 85 percent of the bus sales in China today are battery/electric, right? It's

happening and at a pace that is extraordinary. And we can really keep pushing the envelope on that and I think that's really the challenge that's in front of us.

I also just want to say special thanks to Commissioner Douglas. I think this closed legislative session and SB 100 especially really validates the seven years of your life you spent on DRECP and ensuring appropriate inclusive and careful planning for renewables on land. And now for the last year you've been engaged with all these federal agencies on offshore wind. We're going to need all of that. And your planning expertise and your patience, which you have in much, much greater supply than I, are going to be essential. So I want to acknowledge that.

I have a few other things I'd like to say, but I wanted actually if we could queue up the video? We did, in advance of the summit, as you recall, Volume I of the IEPR the printed copies which we got out. But we also did a video and I wanted to give special thanks and recognition to Tara, who really quarterbacked this with the media team, Katy and others and to Chair Weisenmiller's Summer Fellow, Amulya, who's voice narrates to this two-minute video. So go ahead.

[START OF VIDEO: Music starts then fades to narration.]

"For decades, California has remained at the forefront of clean energy leadership. This year, the state became the world's fifth largest economy, while continuing bold efforts to reduce greenhouse gas emissions.

"The state's policies have driven reductions across sectors and aim to lower emissions by 80 percent below 1990 levels by 2050. California has installed more renewable energy than any other state and generates more than 32 percent of its electricity from renewable sources. The state plans to reach 60 percent renewable energy by 2030 and 100 percent clean energy by 2045.

"A groundbreaking requirement to be approved this year will also require solar panels on new homes beginning in 2020. The state's progressive energy efficiency standards through buildings and appliances are moving the market toward cleaner, more efficient technologies. These standards have already saved Californians more than $100 billion in utility bills. And landmark legislation signed by Governor Brown will double energy efficiency savings by 2030, further reducing energy demand and saving customers money.

"Transportation pollution is the state's largest source of greenhouse gases and smog-forming pollutants. In response, the state is shifting transportation systems to clean electricity and low-carbon fuels. Today, California

is home to half of the zero emission vehicles in the country and plans to have at least five million by 2030. Already, the state is home to a dozen companies manufacturing zero emission cars, buses and motor cycles.

"Each year, the state provides $150 million in grants to test and demonstrate innovative clean energy solutions supporting a cleaner, more resilient energy system. These grants leverage private and federal investments, contributing to an innovation ecosystem across California and beyond. As California builds a thriving green economy, it is working to overcome the areas that limit access to clean technologies for low-income customers ensuring that all residents benefit from a clean energy future.

"California is committed to working with cities, states and nations around the world to face the unprecedented challenge of climate change and together support a global clean energy future for everyone."

[VIDEO ENDS]

(Applause.)

COMMISSIONER HOCHSCHILD: Whoever would have thought we could fit the IEPR in two minutes, right?

So just a few more comments, I also just wanted to personally thank Sylvia Bender who's retiring after many, many moons here for her long career in public

service. And to congratulate her successor, Siva, who I think is going to bring a lot of new vision, energy and vigor to that role. So I'm very happy for him and congratulations to her.

A couple of updates I want to share with you briefly. We're making some moves on the equipment list, finally. We are going to be moving to delist dumb inverters that don't possess voltage regulation, telemetry, etcetera. I think that's the way we need to go. And also looking to add storage to ensure customers are protected and we're installing high-quality equipment.

The big picture here, we don't want to repeat what happened with solar thermal in the '80s where a bunch of fly-by-night companies with fly-by-night technologies got going and we had a lot of failures. And I think the equipment lists have been really successful in that. And I wanted to thank Natalie Lee and her whole team.

And the other idea that we've been discussing in cooperation with Danny Kennedy and others is doing a workshop this fall on the future potential of lithium extraction in California. We've looked at the markets for battery storage for electric vehicles etcetera. I mean, they're all booming and we're sitting on one of the largest lithium reserves in the world, but it's in this brine. And we have a very small program with our Geothermal Resource

and Development account. But we wanted to start fostering the conversation and reach out to Senator Hueso and some of the innovators.

And I gather that Steve Chu, former Secretary Chu has been digging into this. And just to understand what are the barriers in front of us and whether California could become a real lithium producer. And dig into that and begin that conversation, because I think that's as we see these EV markets and storage technology that I think we have a big opportunity there. So I'm hopping to schedule that in November timeframe.

And that's it for me.

CHAIRMAN WEISENMILLER: Thanks.

Before the summit I went to Germany, a combination of I was asked to speak there at *Die Zeit* (phonetic) and interview for their event. And at the same time the Governor and I had met with the president of Germany in July and I met with some of the parliamentarians there and so it was a good chance to follow up with them.

And it also led -- it was connected into my focus at the summit was very much the practitioner's event with President Picker and Mary Nichols, which I think went very well; the bilateral event with the Germans, or a second bilateral.

And then finally the Chinese pavilion, (phonetic)

which was again very productive. And as everyone said, I think all of us lost our voices at some point in time, but fortunately cough drops were invented and we made it through.

And so I would also note on this Saturday the Governor and I met with the delegation in Baden-Wuerttemberg. And one of the mayors there is moving forward on requiring solar on all new construction. So anyway, it's starting to move worldwide.

Let's go on to Chief Counsel's Report.

MS. VACCARO: Nothing today.

CHAIRMAN WEISENMILLER: The Executive Director's Report?

MR. BOHAN: Briefly, I too was excited to be a part of history last week and this week that history begins for us. Part of what Governor Brown did last week was sign a number of pieces of legislation and several of those showed the Legislature's and Governor's Office's faith in the Energy Commission. But they also need a lot more work, so literally as we speak we are finalizing proposals, budget change proposal to acquire more staff to perform some of the activities that are needed. So we're excited to roll up our sleeves.

CHAIRMAN WEISENMILLER: Okay, Public Adviser's?

MS. MELGOSA: Hello, Chair and Commissioners,

Tyler Melgosa on behalf of the Public Adviser. There's nothing to report today.

CHAIRMAN WEISENMILLER: Thank you.

Public comment?

(No audible response.)

CHAIRMAN WEISENMILLER: The meeting is adjourned.

(Adjourned the Business Meeting at 1:10 p.m.)

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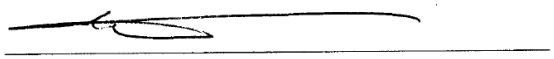

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