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BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of:)
) Docket No. 16-IEPR-01
2016 Integrated Energy Policy)
Report Update)
_____)

CALIFORNIA ENERGY COMMISSION

FIRST FLOOR

ART ROSENFELD HEARING ROOM

1516 NINTH STREET

SACRAMENTO, CALIFORNIA

MONDAY, OCTOBER 24, 2016

10:00 A.M.

Reported by:

Peter Petty

APPEARANCES

Commissioners

Robert Weisenmiller, Chair

Karen Douglas, Lead Commissioner

Staff

Heather Raitt, IEPR Program Manager

Public Comment

Greg Blue, Cogentrix

AGENDAPage

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P R O C E E D I N G S

10:04 A.M.

SACRAMENTO, CALIFORNIA, MONDAY, OCTOBER 24, 2016

MS. RAITT: Welcome to today's Lead IEPR Commissioner Workshop on the Draft 2016 Integrated Energy Policy Report Update. I'm Heather Raitt, the Program Manager for the IEPR.

A few housekeeping items.

If there's an emergency and we need to evacuate the building, please follow Staff out the doors and across the street diagonally to Roosevelt Park.

Today's workshop is being broadcast through our WebEx conferencing system, and parties should be aware that you're being recorded. We'll post an audio recording on the Commission's website in a couple of days, and a written transcript in a few weeks.

I'll be giving a presentation on the Draft IEPR this morning. And then there will be an opportunity for public comments, and we're asking parties to limit comments to three minutes. We'll first take comments from those in the room. You can go ahead and fill out a blue card, if you like, and you can give it to me or put it in the box. And then we'll take comments from WebEx and those on the phone.

Meeting materials are in the entrance to this

1 hearing room. Comments are welcome, and we request that
2 they're sent by November 7th, and the notice provides
3 instructions on how to submit comments.

4 And with that, I'll pass it over to the
5 Commissioners. Thank you.

6 COMMISSIONER DOUGLAS: All right. Well, good
7 morning. And I would just like to welcome everyone to this
8 workshop. We're excited to -- I guess we don't have a very
9 full room yet. Hopefully, we'll get more attendees or some
10 on the phone. But we're certainly excited to hear from
11 people and appreciate you being here.

12 CHAIR WEISENMILLER: Yeah. This is Chair
13 Weisenmiller.

14 I certainly want to thank Commissioner Douglas for
15 her leadership on this, and the Staff who work on preparing
16 what's a strong document. I'm looking forward -- and,
17 obviously, stakeholder participation in these activities.
18 I'm looking forward to hearing comments today and in writing
19 later.

20 Thank you.

21 MS. RAITT: Great. Okay. All right. Thanks. So
22 I'll just be giving a very high-level overview of the Draft
23 2016 Integrated Energy Policy Report, or the IEPR.

24 The Energy Commission is required to prepare an
25 IEPR in odd-numbered years that assess energy supply and

1 demand, protection, delivery and distribution, market
2 trends, and major challenges. On even-numbered years the
3 Energy Commission prepares an IEPR Update.

4 For a little background, the IEPR Lead,
5 Commissioner Karen Douglas, issued a scoping order on March
6 28th, 2016, identifying the report topics. The Energy
7 Commission adopted the order instituting the information
8 proceeding in April 2016. And the Commission held ten
9 public workshops on topics identified in the scoping order.
10 The information gleaned from the workshops was instrumental
11 in developing the Draft Report.

12 The 2016 IEPR Update reflects -- excuse me, I
13 guess people might not have heard that.

14 The 2016 IEPR Update reflects upon the transition
15 we are in as we work to transform the energy system in the
16 face of a changing climate. There is an increasing
17 recognition of the far-ranging effects of climate change and
18 the need to address it.

19 The state's unprecedented drought has resulted in
20 the death of over 66 million trees since 2010, the 13 oldest
21 wildfires burned in California since 2000.

22 Using a broad definition of the energy sector that
23 includes transportation sector and refinery emissions from
24 the industrial sector, energy use in California accounts for
25 about 80 percent of the state's greenhouse gas emissions.

1 This report examines how the state has made great
2 progress in transforming its electricity sector to achieve
3 the state's energy and climate goals, and identifies other
4 transformations that are still needed.

5 California continued its tradition of leadership
6 in environmental policy when Governor Brown signed Senate
7 Bill 32 by Senator Pavley on September 8th, 2016. SB 32 put
8 into law the Governor's goal to reduce California's
9 greenhouse gas emissions 40 percent below 1990 levels by
10 2030.

11 The Governor also signed a companion bill,
12 Assembly Bill 197 by Assembly Member Garcia to assure the
13 implementation of the 2030 Greenhouse Gas Reduction Goal is
14 transparent and equitable, with the benefits reaching
15 disadvantaged communities.

16 Another important bill this year was Senate Bill
17 1383 by Senator Lara requiring the Air Resources Board to
18 implement a comprehensive plan to reduce short-lived climate
19 pollutants, methane, hydrofluorocarbons, and anthropogenic
20 black carbon.

21 While California is taking bold steps to reduce
22 its greenhouse gas emissions, the state generates only one
23 percent of global emissions. Reducing California's
24 emissions will not be enough to solve climate change.

25 Accordingly, the Governor is working to advance

1 global action by spearheading the Under 2 MOU, a commitment
2 by cities, states and countries to take action to help limit
3 the rise in average global temperatures to below two degrees
4 Celsius.

5 The Governor was also a leader in the 2015 United
6 Nations Climate Change Conference in Paris, and has signed
7 accords with leaders worldwide to reduce greenhouse gas
8 emissions.

9 Looking at California's greenhouse gas emissions
10 by sector, the electricity generation sector accounts for
11 about 20 percent of California's greenhouse gas emissions in
12 2014. The industrial sector, which includes oil refineries,
13 accounted for roughly 24 percent. The residential and
14 commercial sectors accounted for roughly 11 percent. And
15 although not shown in this figure, the greenhouse gas
16 emissions for the residential and commercial sectors
17 collectively account for more than 26 percent when
18 accounting for electricity use in those sectors.

19 The transportation sector is the single largest
20 contributor to greenhouse gas emissions in California,
21 accounting for roughly 37 percent of statewide emissions in
22 2014, almost double the electricity sector. Transforming
23 California's transportation system away from gasoline to
24 zero-emission vehicles is a critical step for meeting the
25 state's climate goals.

1 As discussed in the 2016 Environmental Performance
2 Report of California's Electrical Generation System,
3 California has realized tremendous progress in the
4 environmental performance of its electricity system over the
5 last decade, primarily as a result of its energy and
6 environmental policies. Greenhouse gas emissions from the
7 electricity sector are already about 20 percent below 1990
8 levels. This is a correction from the Draft IEPR which says
9 26 percent. Regardless, reduction is considerable and is
10 largely attributable to increases in renewable energy and
11 decreases in coal-fired generation.

12 Installed capacity of renewable energy in
13 California was more than triple between 2001 and 2016,
14 totaling 23,600 megawatts as of June 30th, 2016. This
15 includes small self-generation such as rooftop solar.

16 Between 2010 and 2015, installed capacity of
17 utility-scale solar-photovoltaic power plants rose from
18 roughly 40 megawatts to 5,700 megawatts. Residential solar
19 installations have also grown dramatically, with California
20 accounting for more than 40 percent of the installed
21 capacity nationwide. 4,400 megawatts were installed as of
22 June 30th, 2016, and almost 2,000 of which were installed
23 just in 2014 and 2015.

24 Coal-fired electricity serving California has
25 steadily declined over the past decade to currently serve

1 about six percent of California's load, and is expected to
2 decline to zero by the middle of the next decade.

3 For the electricity sector, criteria pollutant
4 emissions are modest, contributing just two percent of total
5 emissions in 2000, and were cut more than half by 2015.

6 California has made tremendous strides in its land
7 use planning. The Desert Renewable Energy Conservation Plan
8 is a comprehensive effort to identify the most appropriate
9 areas for large-scale renewable energy development within 22
10 million acres of public and private desert landscape, while
11 protecting and conserving desert ecosystems.

12 At the culmination of years of effort, on
13 September 14, 2016 the U.S. Secretary of the Interior
14 approved phase one of the DRECP, covering 10.8 million acres
15 of public lands managed by the Bureau of Land Management.

16 Building on such landscape-scale planning efforts,
17 the Energy Commission, California Public Utilities
18 Commission and the California Independent System Operator
19 launched the Renewable Energy Transmission Initiative 2.0,
20 or RETI 2.0, to identify the constraints and opportunities
21 for new transmission needed to access additional renewable
22 resources.

23 Also, over the past decade the fossil-fuel power
24 plants' fleet in California has become more water efficient,
25 resulting in a relatively modern fleet of thermal power

1 plants that consume little water. Even greater improvements
2 can be achieved, however, by updating the 23 -- excuse me,
3 2003 IEPR Water Policy to require the use of recycled water
4 and alternative technologies for all power plant operations.

5 Even with these advancements, more work is needed.
6 The rapid growth in California's renewable resources has
7 brought new challenges for grid operators trying to maintain
8 reliability while managing swings in wind and solar
9 generation. Two days in 2016 illustrated that the grid is
10 already experiencing unprecedented operational fluctuations.

11 On May 15th, 2016 the net load reached a minimum
12 of almost 12,000 megawatts, an amount not anticipated until
13 2020.

14 On February 1, 2016 the three-hour ramp was 11,000
15 megawatts, approaching a ramping need not expected before
16 2020.

17 Helping to address such challenges, the California
18 ISO, Pacific Corp, and NV Energy participate in an Energy
19 Imbalance Market, or EIM, to balance supply and demand, and
20 dispatch least-cost resources over five minutes. With the
21 EIM excess energy in California, California's ISO balancing
22 area can be transferred to other areas in real time. With
23 the energy transfers facilitated by the EIM the California
24 ISO avoided curtailing 272,000 megawatt hours of renewable
25 energy in the first half of 2016.

1 Further benefits can be realized with the
2 development of a regional west-wide electricity market to
3 help integrate renewable resources. The California ISO
4 study found that a regional grid would save California
5 ratepayers up to \$1.5 billion per year and reduce greenhouse
6 gas emissions by more than 7 million metric tons by 2030.

7 Flexible resources that can reliably and cost
8 effectively ramp up and down to reach ramping needs are
9 becoming increasingly important. Also, more work is needed
10 to upgrade the electricity distribution system to
11 accommodate the growing use of small distributed generation.
12 As California electrifies the transportation system the need
13 will only grow.

14 The permitting process for new transmission
15 continues to take six to eight years, much longer than the
16 three-year process envisioned by the Governor. The Energy
17 Commission, CPUC and California ISO should conduct
18 regulatory process reform to implement the Governor's
19 vision.

20 Meeting the 2030 Greenhouse Gas Reduction Goal
21 will require significant progress decarbonizing the entire
22 energy system. Energy efficiency is a key component of the
23 state's strategy. At sufficient scale, energy efficiency
24 reduces the need for new generation and transmission
25 resources. Transforming California's -- excuse me --

1 transportation sector away from gas lane to zero-emission
2 vehicles, powered predominantly with renewable electricity
3 is fundamental to California's strategy for meeting its
4 greenhouse gas reduction goals.

5 While sales of zero-emission vehicles are growing
6 and infrastructure deployment is advancing, much more growth
7 is needed to meet the Governor's goal of 1.5 zero-emission
8 vehicles on California roadways by 2025.

9 Also, all Californians need to realize the
10 benefits from energy efficiency and weatherization,
11 renewable energy and zero-emission and near zero-emission
12 vehicles.

13 In accord with SB 350, the Energy Commission and
14 other state agencies are evaluating the barriers and
15 developing recommendations for low-income customers,
16 including those living in disadvantaged communities, to
17 access these clean energy technologies.

18 Finally, California leads the nation in the
19 development of innovative technologies, and must continue to
20 support the research, development and deployment of emerging
21 technologies that will be critical to ultimately transform
22 its energy system.

23 While California must take swift action to reduce
24 climate change, it is also grappling with the legacy of an
25 aging infrastructure. In the past few years the state has

1 suffered two major disruptions in its energy's
2 infrastructure that has tested the state's abilities to
3 provide reliable energy service to Southern California.
4 Energy supply disruptions can put public health and safety
5 at risk, and have consequences to local businesses and the
6 economy as a whole.

7 The most recent disruption stems from the massive
8 leak at the Aliso Canyon natural gas storage facility in
9 late 2015. The Energy Commission, CPUC, California ISO and
10 Los Angeles Department of Water and Power worked together to
11 assess the risks to local energy reliability and develop
12 action plans to reduce those risks.

13 The Joint Agencies first developed an action plan
14 aimed at maintaining reliability over the past summer. It
15 helped manage the increased use of natural gas-fired
16 electricity to satisfy air conditioning needs. The second
17 action plan addresses reliability in the upcoming winter
18 months, focused on natural gas used for heating.

19 In response to the leak at Aliso Canyon the
20 legislature passed a suite of bills addressing the storage
21 of natural gas. For example, SB 380 by Senator Pavley
22 continues a moratorium on injection of natural gas to Aliso
23 Canyon storage until specified standards are met. SB 826 by
24 Senator Leno appropriates \$2.5 million to the California
25 Council of Science and Technology to study the long-term

1 viability of natural gas storage facilities in California,
2 in accordance with the Governor's Aliso Canyon State of
3 Emergency Proclamation.

4 The second ongoing risk to energy reliability in
5 Southern California stems, in part, from the unexpected
6 shutdown of the San Onofre Nuclear Generating Station in
7 2013. This was compounded by the planned closure of several
8 natural gas-fired power plants along the Southern California
9 coast as part of the phase out of once-through cooling
10 technologies.

11 A multiyear Joint Agency effort has been closely
12 tracking the development of resources needed to assure
13 reliability in the area, including preferred resources such
14 as energy efficiency, demand response, distributed renewable
15 energy generation and storage, as well as transmission
16 additions and conventional generation.

17 One of the conventional generation projects, the
18 Carlsbad Energy Center, was planned to replace the Encina
19 OTC plant but is facing delays from legal challenges. The
20 Joint Agencies may need to request that the State Water
21 Resources Control Board delay the schedule for the Encina
22 Power Plant.

23 Managing the decommissioning of nuclear power
24 plants is another legacy issue for California.
25 Decommissioning of San Onofre is already underway. And the

1 last operational nuclear power plant in California, Diablo
2 Canyon, will close by 2025 as part of an agreement between
3 PG&E, labor, and environmental organizations.

4 For both San Onofre and Diablo Canyon, public
5 safety, security, environmental remediation, and the
6 management of radioactive materials are key concerns.
7 Citizen groups, local government and state agencies continue
8 to express concern over long-term onsite storage of nuclear
9 waste, while actively engaging federal agencies and
10 congressional representatives for expedited development of
11 both interim and permanent storage options for nuclear
12 materials.

13 Going forward, the state is shifting to a more
14 comprehensive approach aimed at improving the performance of
15 the energy system and achieving the 2030 Greenhouse Gas
16 Reduction Goals. Consistent with SB 350, integrated
17 resource plans will be the primary tool for implementing
18 greenhouse gas reduction measures in the electricity sector,
19 while also maintaining reliability and controlling costs.

20 Ongoing efforts to transform California's
21 transportation system will be key and requires, among other
22 things, advancing both zero-emission vehicle infrastructure
23 and vehicle deployment. SB 380 requires investor-owned
24 utilities to increase access to electricity as a
25 transportation fuel to support widespread transportation

1 electrification.

2 Further, the 2016 ZEV Action Plan, which was
3 released after the Draft IEPR, identifies actions state
4 agencies will take to help meet the Governor's goals for
5 zero-emission vehicles.

6 The 2030 Greenhouse Gas Reduction Goals also
7 require expanded and improved analytical capabilities. To
8 reflect changes in the evolving energy system, forecasters
9 need access to more granular data, particularly more
10 locational data to better track, for example, increases in
11 distributed energy resources, energy efficiency, and a zero-
12 emission vehicle charging. Further analysis is also needed
13 to better understand how the peak demand is shifting to
14 later in the day with the increased use of rooftop solar.

15 This IEPR lays the groundwork for revisions to the
16 Energy Commission's forecast in the 2017 IEPR and beyond.
17 In planning for new transmission and generation the state
18 needs to continue refining and implementing practice
19 strategies, like landscape scale planning to reduce energy
20 infrastructure impacts.

21 Despite efforts to reduce greenhouse gas
22 emissions, California's climate is changing. Governor
23 Brown's Executive Order B-30-15, and a set of bills passed
24 last year in this, mandate expansions of the state's
25 adaptation efforts and the goal -- excuse me, with the goal

1 of making the anticipation and consideration of climate
2 change a routine part of planning.

3 Continued climate research for the energy sector
4 is also needed to better inform climate adaptation and
5 mitigation strategies. In short, the state needs to build
6 on and expand the successes realized in the electricity
7 sector over the last decade to transform its overall energy
8 system.

9 So that concludes my presentation on the Draft
10 Report. As I mentioned, written comments are welcome and
11 due November 7th. And so this is a work in progress. And
12 we'll carefully consider all the comments received today and
13 in writing. And we plan to post a final draft at the end of
14 January for possible adoption in February.

15 And with that, I'll turn it over to the
16 Commissioners. Thanks.

17 CHAIR WEISENMILLER: Thanks a lot for your
18 presentation. I was going to note, EIM now also includes
19 Arizona and Puget Sound.

20 MS. RAITT: Thank you.

21 CHAIR WEISENMILLER: But anyway --

22 COMMISSIONER DOUGLAS: All right. Great. Well,
23 thank you for your presentation.

24 We'll move to public comment. I have one blue
25 card. And if anyone else who has not yet filled out a blue

1 card would like to speak, please find one and fill it out,
2 if you could.

3 So right now I'll ask Greg Blue with Cogentrix
4 energy to come forward.

5 MS. RAITT: You can just come over here. Sorry
6 about that.

7 MR. BLUE: Good morning. My name is Greg Blue.
8 And I'm a little surprised I'm the first speaker, since I
9 just walked in the room. I was just now writing out what I
10 was going to say, but I'll jump right in.

11 I appeared at the August 29th Workshop on Southern
12 California Electricity Reliability and offered some thought.
13 And, actually, we filed comments, and appreciate the
14 recognition in the Draft Report of those comments. And we
15 also wanted to -- we appreciate the recommendation, which is
16 to assure that resources for local reliability remain
17 available.

18 And it's all regarding, for folks who may not have
19 been at that workshop, it's regarding peaker plants,
20 especially two down in -- we have 50 megawatt gas-fired
21 peakers, each with a five- to seven-minute start time, one
22 hour minimum runtime, four starts a day, those kind of
23 peakers, down in the San Diego subarea which, according to a
24 report by a local capacity annual assessment tool, shows
25 that eight out of the next ten years, it's a deficit in that

1 subarea. Now granted, it's a subarea. Granted, the load
2 forecast is maybe -- you know, there's different ideas of
3 what the load forecast is.

4 Nonetheless, it doesn't really matter because in
5 the end the report now recommends the potential of keeping
6 Encina Plant open down there. And there must be -- it must
7 be enough of an alarm to folks to get to even be thinking
8 about that.

9 And I guess, you know, even if you decide to keep
10 that open, I guess my word of caution is that that
11 application process is going to take a year at a minimum.
12 And it's likely to be protested by many parties. I'm just
13 guessing, the environmental groups and others will be
14 protesting. So, you know, it would be awhile before you
15 could even get the approval to keep that plant open beyond.
16 So there might be a period of time where you may not be able
17 to have it open until you get approved to open up again.

18 So I guess, again, what we had put in our comments
19 was the need for an insurance policy, specifically in San
20 Diego, but this really applies to the whole state, but an
21 insurance policy, basically, of a five- to seven-year
22 contract for these peakers that are transitional contracts.
23 That kinds of leads us to the green grid, leads us to where
24 battery storage is fully up to scale, accounts for the
25 delays in Carlsbad, accounts for the delays of the two

1 transmission projects down there, accounts for the delays in
2 the regionalization of the IOS, as well.

3 So there's a lot of things that are happening over
4 the next three to four years that we really think, from our
5 opinion, and I'll be filing comments on this, again, as
6 well, that the state of California needs to look at, you
7 know, some sort of -- I call it an insurance policy, to make
8 sure you have these contracts -- these projects that are
9 needed, this type of generation needed that are contracted
10 in there so you don't have to worry about this.

11 So I guess my other recommendation -- I understand
12 my time is up, but I don't see a line behind me, so I'll
13 just keep going.

14 My recommendation, as well, will be that when you
15 give your message to the PUC, that you certainly add a sense
16 of urgency, because we think there's a real sense of
17 urgency. And I think you'll see that as you move forward.

18 Thank you.

19 COMMISSIONER DOUGLAS: Thank you very much.

20 Other speakers? Would anyone else like to speak
21 who's in the room?

22 If not, let's open the lines.

23 MS. RAITT: All right. If anybody on WebEx wanted
24 to make a comment, please use the chat function to let our
25 coordinator know. No?

1 COMMISSIONER DOUGLAS: All right. Well --

2 MS. RAITT: Oh, we can just open the phone
3 lines --

4 COMMISSIONER DOUGLAS: Okay.

5 MS. RAITT: -- for just one moment.

6 COMMISSIONER DOUGLAS: Sorry. Okay.

7 MS. RAITT: So please put it on mute, unless you
8 wanted to make a comment. We're going to open the phone
9 lines for just a moment here.

10 COMMISSIONER DOUGLAS: All right. Anyone on the
11 phone like to make a comment? It doesn't sound like it.

12 So, Heather, can you remind everyone one more time
13 when written comments are due?

14 MS. RAITT: Written comments are due November 7th.
15 And the notice for this workshop gives all the information
16 you need to submit comments.

17 COMMISSIONER DOUGLAS: Fantastic. Thank you,
18 Heather.

19 Thank you everybody. And we'll look forward to
20 seeing everyone's written comments.

21 We're adjourned.

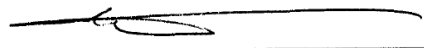
22 (The meeting adjourned at 10:28 a.m.)
23
24
25

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 1st day of November, 2016.



PETER PETTY
CER**D-493
Notary Public

CERTIFICATE OF TRANSCRIBER

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 transcribed by me, a certified transcriber 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.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



MARTHA L. NELSON, CERT**367

November 1, 2016