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CALIFORNIA ENERGY COMMISSION
LITHIUM VALLEY COMMISSION

In the matter of,)
)
Lithium Valley) Docket No. 20-LITHIUM-01
Commission Meeting)

IN PERSON AND REMOTE VIA ZOOM VIRTUAL MEETING

Primary Location:

Calipatria High School Library
601 W. Main Street,
Calipatria, CA 92233

Secondary Locations:

California Natural Resource Agency
2nd Floor, Room 2-310
715 P Street, Sacramento, CA 9581

Franklin Public Library
32455 Franklin Rd, Franklin, MI 48025

1 Norumbega Dr, Camden, Maine 04843

Los Angeles Cleantech Incubator
525 S. Hewitt Street
Los Angeles, CA 90013

THURSDAY, JUNE 30, 2022

1:00 P.M.

Reported By:
Elise Hicks

APPEARANCES

Lithium Valley Commissioners

Steve Castaneda
Miranda Flores
James Hanks
Ryan Kelley
Silvia Paz
Alice Reynolds
Frank Ruiz
Jonathan Weisgall

CEC Staff

Deanna Carillo
Erica Loza
Jasmine Prezeau

Presenters

Derek Benson, EnergySource Minerals
Jon Trujillo, BHE Renewables
Jim Turner, Controlled Thermal Resources
Michael McKibben, UC Riverside

Public Comment

Ken Wuytens, United Way
Michael Marizow (phonetic), Brawley, CA
(INDISCERNIBLE) Romero, Comite Civico Del Valle
Maria Nova-Froelich, Calipatria Mayor Pro-Tem &
Director, Family Resource Center
Janira Figueroa, Comite Civico del Valle
Michael McKibben, UC Riverside
Silvia Ruiz, Alianza
Mariela Loera, LCJA
Charlene Wardlow
James Blair
Cecilia Armenta
Sandra Ramirez
Jeannette Hernandez
D.M. Corn

INDEX

	Page
1. Welcome & Roll call	5
2. Continuation of Workshop on Environmental Impacts Related to Lithium Extraction Activities in the Salton Sea Region	12
a. Introduction	13
b. Panelists	
Derek Benson, EnergySource	13
Jim Turner, Controlled Thermal Resources	28
Jon Trujillo, BHE Renewables	41
Mike McKibben, UC Riverside	51
c. Discussion Among Lithium Valley Commissioners	69
d. Public Comments	91
3. Administrative Items	
a. Approval of Minutes	108
b. Public Comments	108
c. Roll Call	110
4. Discussion of 202202023 California Budget Proposal Related to Lithium Valley and their status	
a. Commissioner Discussion	113
b. Public Comments	116
5. Discussion and Possible Action on Draft Findings and Recommendations Identified During the Incentive Workshop Held on May 26, 2022	127
a. Commissioner Comment	128
b. Public Comment	129
c. Roll Call	154
6. Planning for Upcoming Lithium Valley Commissioner Meetings	135
a. Commissioner Comment	137
b. Public Comment	144
c. Roll Call	155

INDEX (Contd.)

	Page
7. Informational Items	150
a. Media and Legislative Updates	150
b. Lithium Valley Commissioner Updates	150
c. Commissioner Updates	150
d. Public Comments	151
8. General Public Comment	156
Adjournment	157

P R O C E E D I N G S

1
2 June 30, 2022

1:04 P.M.

3 CHAIR PAZ: Hi everyone. Welcome to the
4 Lithium Commission meeting. Again, today we are
5 continuing to meet both in person and through Zoom. We
6 are providing interpretation services in Spanish for
7 attendees at our location here in Calipatria, and those
8 participating through Zoom on their computers or
9 tablets. The Zoom interpretation function does not work
10 for attendees who are only joining by phone.

11 A representative from the CEC will now speak
12 in Spanish to inform our Spanish-speaking audience how
13 to use the service.

14 Erica?

15 MS. LOZA: Buenas Tardes. Me llamo Erica Loza.

16 Daré instrucciones a aquellos, a aquellos de
17 ustedes que quieran escuchar la reunión en español. Hay
18 un intérprete disponible a través de la plataforma Zoom.
19 Para unirse al canal en español, haga clic en el ícono
20 de globo pequeño en la parte inferior de su aplicación
21 Zoom. Seleccione el canal donde dice S-p-a-n-i-s-h.
22 Luego haga clic en la frase siguiente donde dice mute
23 "Mute Original Audio" para silenciar el audio original.

24 Si tiene preguntas o si gusta hacer algún
25 comentario, favor de oprimir el icono de la mano alzada

1 y abierta o envíenos un mensaje en español a través de
2 la función de preguntas y respuestas para ayudarle.

3 Back to you, Chair Paz.

4 CHAIR PAZ: Thank you. So, to ensure that all
5 members of the public have access to the meeting under
6 the Bagley-Keene Open Meeting Act, the additional
7 publicly accessible locations will remain on the English
8 channel for the entirety of the meeting, preferably with
9 cameras on. And then CEC staff, can you please review
10 the general instructions?

11 (Pause)

12 MS. LOZA: This is a hybrid meeting, with a
13 primary physical location here in Calipatria, and
14 additional publicly accessible locations connected via
15 teleconference in Sacramento, and Los Angeles
16 California, Franklin Michigan, and Camden, Maine. The
17 public can also access the meeting through Zoom as
18 described in the meeting notice.

19 The meeting is being recorded as well as
20 transcribed by a court reporter. The transcript will be
21 posted to the docket. The recording of the meeting will
22 be available on the Lithium Valley Commission webpage.
23 The Spanish interpretation will not be recorded or
24 transcribed. The presentation materials of the meeting
25 will be made available through the docket in English and

1 Spanish versions after the meeting. Please note that
2 the Spanish version may post a few days after the
3 English version.

4 Members of the public connected via
5 teleconference will be muted during the presentations,
6 but there will be opportunities for the public comment
7 at times throughout the meeting. For public commenters,
8 we will ask you to spell your name and state your
9 affiliation if any. However, you may remain anonymous
10 if you choose.

11 There is a Q&A window in the Zoom application
12 which you can use to type questions and comments and
13 staff will relay these comments as appropriate. For any
14 comments made in Spanish, the interpreter will render
15 these comments into English for the non-speaking — non
16 Spanish-speaking participants, and to ensure those
17 comments are included in the record and the transcript.

18 The presentation materials from the meeting
19 and workshops today will be made available through the
20 docket in English and Spanish versions after the
21 meeting. Please note that the Spanish version may post
22 after— may post a few days after the English version.

23 Next slide. Okay.

24 Public comments can be submitted at any time
25 through the e-commenting system accessed through the

1 Lithium Valley Commission webpage. For more information
2 on the Lithium Valley Commission, you can access the
3 webpage as shown here. You can also review all the
4 materials submitted through the docket at the link
5 provided below the website address which can also be
6 found on the webpage as well, and on the slides.

7 Back to you Chair Paz

8 CHAIR PAZ: Thank you. Let's move to the roll
9 call. So, although we are now meeting with publicly
10 accessible locations as well as Zoom, Commissioners are
11 required to attend at the physical locations provided in
12 the Notice for the meeting, with at one Commissioner at
13 the primary physical location. I will ask the CEC staff
14 to call the roll of the Commissioners, and when you
15 answer, please indicate which location you are attending
16 from, for the record.

17 I will also note that we do not anticipate a
18 Commissioner to attend the meeting at the Los Angeles
19 location, but that location remains available to the
20 public, so I will be calling on the room host at times
21 to identify any public participants in attendance and
22 wishing to speak.

23 Erica? Roll call please?

24 MS. LOZA: Commissioner Castaneda?

25 COMMISSIONER CASTANEDA: Here, Calipatria.

1 MS. LOZA: Commissioner Colwell?

2 Commissioner Dolega?

3 Commissioner Flores?

4 Commissioner Hanks?

5 COMMISSIONER HANKS: Here, Calipatria.

6 MS. LOZA: Okay. Vice Chair Kelley?

7 Commissioner Lopez?

8 Commissioner Olmedo?

9 MS. LOZA: Chair Paz?

10 CHAIR PAZ: Here, Calipatria.

11 MS. LOZA: Commissioner Reynolds?

12 Commissioner Ruiz?

13 Commissioner Scott?

14 Commissioner Soto?

15 Commissioner Weisgall?

16 COMMISSIONER WEISGALL: Present, in Camden

17 Maine.

18 MS. LOZA: Okay. We have four Commissioners

19 present.

20 CHAIR PAZ: Thank you, so we do not have a
21 quorum at the Noticed physical meeting locations at this
22 time. We will not be able to consider any motions or
23 take a vote unless we have a quorum. We will continue
24 with our agenda, discussion, and workshop as planned.

25 If any Commissioners arrive, please be sure — I will be

1 noting the time when they arrive.

2 And so next slide.

3 The agenda is also printed, I think, in the
4 front, right? I know the screen looks really small.
5 But, some, like I mentioned, because of the lack of
6 quorum, we will be deferring some items for the next
7 meeting.

8 Next slide, please.

9 I also want to, before we move on, I want to
10 take a moment to review expected conduct during our
11 meetings. This is a public business meeting of the
12 Lithium Commission to conduct its business. We welcome
13 and encourage public participation. There are public
14 comment periods throughout the meeting for the public to
15 provide comments.

16 The public comment period are not question and
17 answer sessions, and also comments must be relevant to
18 the agenda item when noted. Or, during general
19 comments, should pertain specifically to the work of
20 this Commission. We welcome you posting any questions
21 for the record, however neither Commissioners nor
22 panelists are required to answer questions in this
23 forum.

24 I also want to acknowledge that after our last
25 meeting, some concerning events took place involving one

1 of our Blue-Ribbon Commissioners being inappropriately
2 approached as they exited. So, I do request that we all
3 exercise some caution when we leave our meetings.

4 I'm also going to ask my fellow Commissioners
5 to keep their comments to remain to the topic at hand,
6 provide space for other voices, and to avoid redundancy
7 of topics we've addressed so we can address the
8 communities request to shorten our meetings.

9 And the way I will be monitoring that, as I
10 started in the last meeting, is that each Commissioner
11 will speak once and we're both here, and then take
12 anyone from Zoom, or via Zoom, and if there's still time
13 for us to get a second chance of Commissioner comments,
14 then I will return to us.

15 (Pause)

16 There are some items on the agenda, like I
17 mentioned, that will be deferred, and I'll note those
18 when I get there. So, again, this is one of the items,
19 the Administrative Items are going to be deferred.

20 So, next slide.

21 (Pause)

22 We do have a discussion noted here on the
23 California Budget Proposal related to Lithium Valley. I
24 know Vice Chair Ryan Kelley was going to be leading that
25 discussion. He's not here, so I will come back to that

1 discussion maybe after the workshop. But since I didn't
2 hear that he was going to be absent. So, he might be
3 running late.

4 So, next slide. I will be taking this out of
5 order, there we go.

6 So, we're now going to move into our workshop.
7 Continuing our exploration of potential environmental
8 impacts related to Lithium Extraction Activities. In
9 prior workshops on this topic, we received presentations
10 on the CEQA process with some details about CEQA
11 findings for the EnergySource Mineral ATLiS Project. We
12 have discussed some potential impacts and heard from the
13 community and technology experts on certain topics.

14 Today, we've asked the developers to join us
15 to discuss their projects, and I have prepared some
16 questions related to waste water, solid waste, and
17 hazardous waste streams to guide our conversation. We
18 have also asked Dr. McKibben to return to share his
19 understanding of direct lithium extraction technologies
20 on the same topics. We asked a few regulators to
21 attend, but they were not able to participate, given our
22 schedule.

23 So first, I want to thank the panel for
24 attending, and offer them each two to four minutes to
25 introduce themselves, talk about — talk about their

1 roles, and for the developers to share the status of
2 their projects. Then, we will move into some questions.

3 We will start at the corner. If you want to
4 introduce yourselves? Derek, and then — yeah, what your
5 role is with the organization. So, you have two to four
6 opening remarks period.

7 MR. BENSON: Thank you. So, my name is Derek
8 Benson, I'm the Chief Operating Officer for EnergySource
9 Minerals. So, that is a development company. We are
10 looking at constructing a 20,000 ton per annum project
11 adjacent to John Featherstone Geothermal Station. So,
12 that's the one that came online in 2012, so the nearest
13 one out in the field.

14 So, in terms of the status of that project,
15 we've done most of the engineering. If you guys are
16 aware, we've gone through the CEQA process, which is
17 relatively comprehensive. And, I realize this is not
18 the forum to talk about tax, but when we talk about
19 status of the project, that's introduced a bit of a
20 uncertainty around all the very next steps that are
21 coming, including finance, construction, and execution.
22 So, I don't quite know what the impacts are going to be,
23 but there definitely are scheduled impacts and risks
24 that have now emerged that we have to, kind of, fully
25 digest and, and evaluate.

1 So, we recognize, you know, people have
2 referenced, you know, trying to spot prices and this
3 shouldn't be a big deal. But, it does add its
4 significant operating costs, and, you know, when you're
5 looking at 20 and 30 year investments in the 100's of
6 millions of dollars, the investors, you know, need some
7 certainty to meet an understanding, and we don't have
8 that today.

9 We'd love to build the project, but, you know,
10 we have to evaluate that and, you know, before we move
11 forward. So, that's kind of where we are today, you
12 know, but we've done a lot of the work, we certainly are
13 far enough along that we can talk about exactly what
14 project benefits may be, what project, you know,
15 processes are, and you know, happy to participate in
16 this forum. But, just for the, the sake of candor, we
17 have uncertainty we didn't have a few days ago.

18 CHAIR PAZ: Thank you. We appreciate the
19 candor. Let's go to the right.

20 MR. TRUJILLO: Hi. Jon Trujillo, with Berksh—
21 BHE Renewables and also known locally as CalEnergy. I
22 am the Geothermal Development Director, also s— doing
23 some secondary support to the lithium development
24 projects that, that we are working on. I've worked with
25 the facilities predominantly on the subsurface, but also

1 with the surface facilities and operations at CalEnergy
2 for the last 13 years.

3 When it comes to lithium, we, we have
4 constructed our lithium recovery demonstration facility.
5 We're looking at constructing a second phase for taking
6 the, the lithium chloride solution and then converting
7 that to a battery-grade product. So, as far as
8 development goes, we're, we're beyond a pilot approach,
9 we're, we're testing at a demonstration scale, which is
10 about 100 gpm. And, in partial support by the
11 California Energy Commission, so thank you for that
12 grant supporting that work.

13 And, our goal there is to understand the
14 operations, the process at that scale, and ensuring that
15 we're able to perform the same task of recovering
16 lithium at a commercial scale as long as we can do that
17 in an envirolly— environmentally friendly manner. And an
18 economically viable manner. And then, of course, a safe
19 and successful manner.

20 CHAIR PAZ: Thank you.

21 MR. TRUJILLO: Thank you.

22 MR. TURNER: Hi, good afternoon. I'm Jim
23 Turner, I'm the Chief Operating Officer for Controlled
24 Thermal Resources. And we're developing the Hell's
25 Kitchen Lithium Project out at the Salton Sea. First of

1 all, I, I echo Derek Benson's comments on tax. That's,
2 that's provided a, an uncertainty that we hadn't planned
3 for in the early stages of our development. And, we
4 think it'll have a, a significant impact on our
5 underlying economics to this project.

6 Our project is in the development stage. We
7 are through most of our engineering, we're in to
8 scheduling issues for construction, the early stages of
9 procurement for construction. We are a little bit
10 behind on, on timing from EnergySource, that — they'll
11 definitely be the first ones out with product. We're
12 all cheering for them. And, I'm sure they're going to
13 be successful, but it's good for the entire Lithium
14 Valley.

15 And, our plants are a little bit different, in
16 that we're greenfield. So, we'll be constructing our
17 power plant portion of that as an integrated facility
18 with the lithium. And, we're glad to be here, and we're
19 ready to, you know, get something in the field.

20 CHAIR PAZ: Thank you, Jim. Dr. McKibben?

21 DR. MCKIBBEN: So, I'm Michael McKibben. I'm
22 a Research Professor at UC Riverside. By training, I'm
23 an economic geologist and geochemist. I've been working
24 on the Salton Sea geothermal field since the 1970's.
25 I'm a — considered a third-party expert. I do federally

1 sponsored research on studying and characterizing the
2 lithium resource of the geothermal reservoir, its
3 sustainability, and its environmental impacts.

4 That requires that I interact with the
5 geothermal companies and take — occasionally obtain
6 samples from them. But, for the record, I do not do
7 consulting for these three companies. And I do not own
8 stock or control stock in them.

9 CHAIR PAZ: Thank you.

10 Next slide, please.

11 So, Derek Benson, we will start with you. Can
12 you please share a description of materials that will be
13 transported to your facility, the Atlas Project, what is
14 produced, and what is transported from the facility,
15 including waste and products?

16 MR. BENSON: Alright. That's, that's a bit —
17 so, I think it might be best to start at the back. Kind
18 of work, work our way up through the process. But we're
19 proposing to make lithium hydroxide. So, that is a,
20 that is the product. It's a, it — and as a monohydrate,
21 which means one water molecule attached to the lithium
22 hydroxide.

23 So, 20,000 tons of that product is, is the,
24 you know, design capacity of the facility. So, for
25 those, kind of give you a sense, you know, giga-

1 factories have become somewhat of a unit of measure.
2 Think of it maybe like a third, or a half of a giga-
3 factory, in terms of, of product material. And that
4 ultimately gets used in to, you know, cathode
5 production.

6 So, to take lithium, which is in the ground as
7 a chloride in solution, just like sodium chloride is,
8 you know, a salt, lithium chloride is a salt. So, we
9 have to convert it. So, there is a hydroxide conversion
10 that happens at the end. So that's, you know, one of
11 the chemicals that you would get added in the
12 conversion.

13 And, and just upstream of that, brines — kind
14 of state of the industry technique is to convert
15 chloride to a carbonate first, and then do a conversion.
16 So, we'd do that as well. So, we, we have a, you know,
17 sodium bicarbonate step that's in there as well.

18 So, that's another product that's in the
19 industry, lithium carbonate. But, the, the off-takers
20 that we are in discussions with, the preference is for
21 the hydroxide product. So, we add that incremental step
22 and, and make what they want.

23 So that, that gives you a sense of, you know,
24 at the very end we're converting chloride to, to
25 hydroxide. What we do in the middle of the plant, is an

1 EnergySource Minerals, sort of proprietary technology
2 approach, and that's kind of the heart of the facility
3 where we separate that lithium chloride from the other
4 salts that are present in geothermal brine.

5 Predominately sodium, a lot of calcium, potassium. You
6 know, we jokingly say it's, it's everything in the
7 periodic table except gold, silver, platinum, the
8 really, really good stuff is not there.

9 But, that's what our technology does. It uses
10 adsorbents. And so, it's a class of technologies.
11 Adsorbents work and, and not to make it too technical,
12 think of it like a sponge. It has a surface area, it,
13 it attracts the lithium, and then we remove the lithium
14 from it. So not, not dissimilar from loading a sponge
15 and squeezing it out. And, and, you know, separating
16 the lithium from the other salts. So, that's, that's a
17 piece of technology that works well here, with elevated
18 temperatures and very high, what we call dissolved
19 solids. And so, there's a lot of, a lot of salts in
20 that, in that water.

21 This is a technology that we are working with
22 others around the country and around the world to
23 deploy. So, it's, it's proven to work very well here.
24 And, it's proven to work in a number of other
25 applications. So, that's a class of technologies, you

1 may hear others talk about, you know, ion exchange or
2 what have you. Adsorbents are proven, and the way we
3 get the lithium off is with a little bit of water. That
4 water ends up reporting to the product. And, we recover
5 all that and recycle it. So, it's — the separation of
6 lithium from the others is a relatively benign process
7 with our technology.

8 And then up front of that, we have to take
9 care of the brine. Some of you have probably been on
10 the tour. Geothermal brines come out of the ground a
11 little bit brown. They need to be cleaned. So, we do a
12 cleaning step on the front end. So, we, we — we were
13 talking about, you know, what are, what are some of the
14 other products. There's a lot of silica, sand. We have
15 to get that out of the way. And then there are some
16 other metals.

17 They're a challenge. To be frank about, you
18 know, economic recovery. But, that's what we're, you
19 know, looking at exploring ways to upgrade some of
20 those. But, the project, kind of at the heart of what
21 we're building today is really focused on that lithium
22 hydroxide flow sheet. So, hoping that gives you a
23 little background, what's going in and what's coming
24 out.

25 CHAIR PAZ: Thank you. Just for my own

1 information and all of you in the audience who may not
2 be experts in the lithium. So, lithium then is coming
3 out as — in a liquid form, originally?

4 MR. BENSON: Originally?

5 CHAIR PAZ: Mmm hmmm.

6 MR. BENSON: Yes. So, it's, it's dissolved in
7 the brine. So, so I'll need to take one step back to —
8 the geothermal resource out there is a hydrothermal
9 resource. So, two things will come out. Really hot
10 brine, and steam. And within the brine are all these
11 dissolved —

12 CHAIR PAZ: Dissolved.

13 MR. BENSON: — salt layers. And it's like,
14 250 parts per million lithium, like order of magnitude.
15 So, yeah.

16 CHAIR PAZ: And you talked about recycling.
17 What amount — I mean is everything recycled? Once
18 you've separated the lithium, everything else is
19 recycled and goes back? Or, is there anything that
20 needs to be transported and disposed elsewhere?

21 MR. BENSON: So, the majority of the material,
22 sodium, potassium, et cetera, we leave that in solution.

23 CHAIR PAZ: Mmm hmm.

24 MR. BENSON: We give it back to the host

1 geothermal facility in solution. And plumb it right
2 back into the injection pumps that they use today. And
3 by, by permit, they have to reinject a certain amount.
4 And that maintains pressure support in the field, and is
5 where geothermal gets its renewableness attribute — is,
6 we put the fluid back in, it sweeps across the heat
7 source, and, and is ready to make power in, in that
8 recycled loop.

9 So, most of the material is kept in solution,
10 just like it is today with the geothermal operations.
11 What we do take out is that silica, is, is a problem.
12 So, we take that out and we dispose of that in a way.
13 We'll look for ways to upgrade it, but at the moment it
14 is landfill material.

15 CHAIR PAZ: Thank you. So, you started
16 mentioning about the other minerals that are in the
17 brine. The EnergySource EIR noted that you will also be
18 producing zinc and manganese in addition to lithium.
19 Are — is there anything else that you will recover,
20 outside of these?

21 MR. BENSON: There's nothing else in our
22 horizon. Most everything else is a bit too challenging
23 to get out or is not in sufficient quantities to
24 commercially extract. So, at the moment, no, we don't,
25 we don't have any additional plans.

1 CHAIR PAZ: Thank you. Let's see. We also
2 heard that the facility is expecting to purchase about
3 3,400 acre feet a year from the Imperial Irrigation
4 District. Can you help us understand what happens to
5 that water, and what wastewater is produced from the
6 facility?

7 MR. BENSON: So, I'll start with, with the,
8 the second one. There is no wastewater generated from
9 the facility. So, the brine is kept relatively intact,
10 so it, it, like I mentioned, goes back to the geothermal
11 facility, kind of in its native condition. And then in
12 terms of wastewater, I mean the only, the only water
13 that's not, you know, recovered, reused, kind of, is
14 essentially the, the super. You know, that's it. It's
15 a zero liquid discharge facility. And that's true of
16 the existing Featherstone Geothermal Station, it will be
17 true of the adjacent Minerals facility. So, that, that
18 whole side is zero liquid discharge.

19 So, the — again, the general use of the water,
20 though, is for, you know, processing. And, and Brawley
21 takes a few steps. One, is as we take fresh water
22 source, we need that in two unit operations. And one,
23 notably, we have to upgrade to a very clean, sort of a
24 deionized water in the very last step.

25 So, as we're getting ready to make commercial

1 grade, you know, battery grade lithium hydroxide, you
2 can't have impurities. So, even the surface water here
3 is full of salts, as everybody knows. So, we have to
4 treat that significantly to make it a clean water. And
5 so, that's used at the final step to do some crystal
6 washing, and then the final stage of product
7 development.

8 So, the, the entire water balance, it's pretty
9 well-vetted in terms of any, any recycling capabilities
10 done. Any liquids that may have potentially lithium in
11 them, they get recycled up to the front to be
12 reprocessed. So, that's generally where water is used
13 in one operation.

14 And then, when I was talking about our
15 adsorbent technology, to wash the lithium off of the
16 adsorbent, we use fresh water. It's not a lot, but it's
17 one of the uses of the water. By contrast, there are
18 other technologies out there as a class that are
19 referred to as ion exchange. They typically will remove
20 the ad—il—um, the lithium off of the media using
21 hydrochloric acid.

22 So, this is a more environmentally friendly
23 way, but it's, it's the source of, or the use of the
24 water that, that we have.

25 CHAIR PAZ: And the water you mentioned gets

1 recycled in both of those steps?

2 MR. BENSON: Yes. So, every, every
3 opportunity for us, particularly if you really clean
4 water to that —

5 CHAIR PAZ: Mmm hmmm.

6 MR. BENSON: — that level, we try to reuse it,
7 you know, so, as much as possible. Because it, it
8 becomes very expensive water.

9 CHAIR PAZ: Thank you. Are there any air
10 emissions, like particulate matter, that will be
11 released? Can you please tell us if there is any air
12 monitoring on or near the facility? And this is a three
13 part. Do you have a plan for how to protect workers
14 from any air emissions, whether they are from the
15 facility or just in the area?

16 MR. BENSON: If I miss one, let me know. But
17 in terms of air emissions, from this process, it's
18 extremely low. There is — you mentioned particulate.
19 So, one of the things that we do use is a limestone
20 that's a solid. It's typically pretty moist, but it is,
21 it is a solid material that we're storing, you know, on
22 the ground. So, that's controlled, that, that dust, you
23 know, it's just a few days worth of storage that we see,
24 but you know, we have to control that from a dust
25 mitigation standpoint. So that's easily done with

1 mechanical controls and/or, you know, a light wetting of
2 that material. But, that's one that can be seen.

3 But from a process standpoint, no, there's not
4 a lot of, you know, there's no combustion source, things
5 like that. So, just some solid material. Most of the
6 material that we're using, it's either contained in
7 vessels, tanks, or pipes. So, there's very little
8 contact with the, with the air, with the people.

9 Let's see, your next question. Oh,
10 monitoring. So, I think there's a, there's an air
11 monitoring station that's probably, like, a mile from
12 our facility. And it's part of the background, kind of,
13 ambient monitoring system. But I think that's where
14 that one is. Roughly about a mile away.

15 And so, in terms of, I mean, you know,
16 generally, as a class of facilities, you know,
17 industrial sites have, you know, a whole lot of analysis
18 of operations, identifying physical, chemical hazards,
19 you name it. So, in terms of how we protect our
20 employees, we would do all of those. And then, there
21 are standard operating procedures identified. You know,
22 personal protective equipment, you name it. And
23 depending on the particular job that you're doing,
24 they're going to be trained, and given that equipment so
25 that the workers, visitors, you name it, are safe.

1 So, that's something, you know, this facility
2 will do, all the geothermal facilities out there do that
3 today. And it's pretty standard practice for, you know,
4 sort of industrial operations. Those kind of things get
5 defined as the facility gets built, and the workers get
6 chosen and hired and go through this (INDISCERNIBLE) .

7 CHAIR PAZ: Well, thank you, Derek. Those
8 were the questions for you.

9 Next slide, please.

10 Oh, and for the record, I do want to welcome
11 Ryan, Vice Chair Ryan Kelley, he joined us at 1:23.
12 And, Commissioner Frank Ruiz joined us at 1:29.

13 So, Jim. So, thanks again for your earlier
14 introduction. Your facility is unique, because this
15 will be the first new geothermal plant to be built along
16 with a recovery of minerals. Your company previously
17 provided some fact sheets and other resources to help us
18 understand the plans for your facility. And we also
19 recognize that you're currently in the process of
20 completing permitting and CEQA review, and that more
21 details will be made available.

22 Based on what you heard from Derek, can you
23 share if your Hell's Kitchen project will use and
24 recover similar materials and minerals? Are the waste
25 streams similar? And how are they different?

1 MR. TURNER: Well, thank you, Chair Paz.
2 First of all, these facilities, regardless of which
3 company we have, are fundamentally the same. They have
4 three basic parts. They have a front-end part, where we
5 extract brine, we, we basically make it ready for the
6 extraction of lithium. We have the extraction of
7 lithium itself. Derek Benson mentioned that it comes
8 out as a salt, lithium chloride. And then, we have the,
9 the hind end, or the finishing part, that is designed
10 for whatever the product is that the off taker
11 ultimately wants.

12 So, in our case, we're very similar. We're,
13 we're looking to sell lithium hydroxide. That seems to
14 be the compound of choice by most of the oftakers,
15 whether they're automotive companies, or, or battery
16 makers themselves. And that really depends on the
17 chemistry that the ultimate user wants to see in, in
18 their battery. So, lithium hydroxide is, is one of the
19 choices. Lithium carbonate is another choice.

20 We have, I think, a similar process to what
21 Derek mentioned. We make both, and — but our focus is
22 on, on lithium hydroxide monohydrate, the same product
23 for the end product as, as we see it today. That could
24 change in the future. We're ready to make the change,
25 but today, our design is that. And, and again, on that

1 hind end process, we're using a, a decades old chemistry
2 approach. Been around since way before any of us
3 started working. Well known, and you can almost buy it
4 as a package unit off the shelf. Not quite that, but
5 pretty close.

6 On the extraction of lithium itself from the
7 brine, there's a variety of techniques to do that.
8 We've looked at a number of them, and they all work.
9 The key is, which is the best fit for purpose that, you
10 know, each of our companies has. We're looking at a
11 sorbent. I don't know what sorbent exactly that
12 EnergySource is using, but there's a lot of different
13 sorbents.

14 Derek had an excellent analogy to a sponge.
15 So, if you go to the grocery store, you'll see probably
16 six or eight different brands of sponges. And, they
17 might have different shapes and maybe different hole
18 sizes in them. But they're all sponges, they all
19 operate fundamentally the same. Ours is going to, you
20 know, be the same type of an operation.

21 We'll actually pull the lithium off of that
22 resin, if you will, with water. And, and again, like I
23 mentioned, there's, there's different methods of actual
24 extraction itself. And we're all looking for one that
25 fits the type of needs we have, really, for the back end

1 of the process, so that if, if it's efficient at, at
2 pulling that lithium back off without pulling the sodium
3 and the potassium and the calcium and the other ions
4 that are in, in this brine, then that's good. Doesn't
5 have to be perfect, just has to be — enable us to have a
6 se— acceptable economics.

7 The front end, basically, we're just preparing
8 the brine so that we can perform a good extraction of
9 the lithium. So, the brine is, again, as Derek
10 mentioned, is extremely hot coming out of the ground.
11 Mother nature down there in that reservoir has
12 temperatures exceeding 700 degrees Fahrenheit. We
13 typically bring the brine up. The front end is to cool
14 the brine, and the most efficient way to col this brine
15 is to extract energy from it. So, that's the steam that
16 we take out, and if you have the steam out, you might as
17 well put it through a turbine and make renewable
18 electricity.

19 In our case, we're going to take a portion of
20 that steam to make electricity, and we're going to take
21 a portion of the steam to use as a heat source in our
22 lithium process. We have that opportunity because we're
23 a greenfield. We haven't built a power plant where all
24 the, the energy was already sold and we tried to make it
25 as efficient as we could. If you look at the existing

1 geothermal plants out there, that's what they did. They
2 were, they were made to increase the efficiency of
3 making electricity.

4 Well today, we want to make renewable
5 electricity, but we also want to extract minerals. And
6 so, we have an opportunity to shift the balance a little
7 bit on that, to accommodate that. So, in the case of
8 our plants, we are — we're designing them together as a
9 unit. Even though the power side stands alone
10 economically, the lithium side stands alone
11 economically. We've had the luxury, really, the
12 opportunity, to design it as a unit so that we can,
13 hopefully, get the, the best of both worlds.

14 As far as materials, again, I don't know the
15 materials exactly that EnergySource will use. But,
16 because our processes are fundamentally the same, we'll
17 have reagents that we use for conditioning the brine et
18 cetera, to monitor and manage the pH, for example. And,
19 those will be probably the same reagents, at least from
20 my experience out here.

21 And we'll ship those in by truck to the site.
22 They'll be all completely contained in tanks or, or
23 other kinds of containers. And then, the product of
24 course will, will be — at this point it will be a solid
25 crystal. Looks just like table salt, at the end of the

1 day, except it will be in big bags. And, it will ship
2 out on trucks, at least in our first plant.

3 Waste streams, again, are similar. We, we
4 don't anticipate we'll have any waste streams. Our, our
5 design and our plan is, again, zero discharge. And, uh,
6 and on the solid side, anything that we take out of the
7 brine, we plan to have as a product. We'll, we'll sell
8 it. We have buyers for those products. And, we don't
9 anticipate, other than perhaps the lab waste, office
10 waste, to have any off-site solid waste.

11 Again, we, we enjoy some of that because we're
12 greenfield. Some of the other facilities, uh, don't
13 have quite the same opportunity. But if they did, I'm
14 sure they would do exactly the same thing.

15 As far as how are we different? I mentioned
16 that there's different types of sorbents out there.
17 There's other techniques in order to extract the brine.
18 We're probably slightly different in that, and if those
19 differences command that we prepare the brine slightly
20 different we'll do that. And again, it's to try to
21 maximize the efficiency of extraction and recovery of,
22 of lithium in this case.

23 And, let's see. Both incoming and outgoing,
24 at least in the beginning, will be by truck. We may
25 have, at the end of the day, a more automated feature

1 for that as we develop. Just because of the size of the
2 resource that we command. But that's a, a really a
3 separate project in the future from, from our first
4 stage lithium facility.

5 CHAIR PAZ: Thank you. And you might have
6 touched in other points, so feel free when I ask a
7 question to maybe just summarize if you already — or
8 expand. In terms of the lithium extraction, for
9 example, you mentioned that it's very maybe similar in
10 the zero discharge, but are there any other ways that
11 the technology and the method you're adopting uses
12 resources differently?

13 MR. TURNER: As I mentioned, they're extremely
14 similar. Fundamentally, they're the same. One party
15 may have a technique that works a little bit better for
16 their purposes. Certainly, if the end product is a
17 different lithium compound, then some of the
18 intermediate operations might be slightly different.

19 But, our brine is essentially the same brine.
20 This is one large, very homogenous reservoir. It has
21 been well studied. Dr. McKibben, when, you know, he has
22 looked at this reservoir for many years, I won't say how
23 many. But a lot of years. A lot, a lot of scientists
24 have studied this reservoir. We pretty much know the
25 reservoir inside and out. And there are a lot of

1 elements in there that provide perhaps opportunities for
2 future extraction and recovery.

3 CHAIR PAZ: So, what about the geothermal
4 component of the facility? What waste streams are
5 associated with the geothermal itself?

6 MR. TURNER: Actually, the geothermal, the
7 power portion, we've come a long way since 1982 when the
8 first plant was built out here with Unocal. We, we can
9 have designs that are zero liquid discharge. We did
10 that with EnergySource when we built Hudson Ranch, I was
11 part of that with Derek when, when that occurred.

12 And, we, we have a li— much more knowledge
13 than, than what occurred in the beginning in terms of
14 how to handle silica and, and other materials. And, as
15 I mentioned, our efforts are to sell as a product
16 anything that we extract from this brine. And, whether
17 it's a lithium or some high value product, or to be a
18 lower value product.

19 So, the, the geothermal portion of this is, is
20 extremely environmentally friendly. We do have CO2 that
21 comes up with the brine, it's inherent in this
22 geothermal resource. It goes through the system, it's
23 not very much, matter of fact, it's almost a de minimis
24 amount compared to other sources of electricity
25 production.

1 And, the one element, or compound, that we
2 actually abate is hydrogen sulfide. And there's very
3 well-known techniques. BHC's been using them since
4 before I got out here in '93. There's some new
5 techniques today. We're going to use one of the newer
6 techniques on that. But it is very easy to abate down
7 to well below permit levels.

8 CHAIR PAZ: Thank you. And you started
9 mentioning some of the benefits of co-locating or doing
10 both the geothermal as well as the lithium. Can you
11 expand on that? Like, what are the benefits of your
12 project due to it being an all-new facility using
13 current technologies?

14 MR. TURNER: The most significant benefit, at
15 least in my opinion, is that we're totally renewable.
16 We'll use renewable electricity for the electric
17 requirements. We'll use renewable steam, geothermal
18 steam, for the heat requirements. And we've been able
19 to design this with practically zero emissions, other
20 than fugitive emissions when you open up a piece of
21 equipment for maintenance.

22 And the second thing that we're able to do,
23 because we're greenfield, is to design in reuse of water
24 all the way through back to the power side. Whereas if
25 we were bolting on to somebody else's power plant,

1 that's a little more difficult to do, because we, we may
2 not own that power plant. In our case, recycling water,
3 if you want to use that term, is very important,
4 actually, to all of us. Very important to us. We are
5 conducting a, a water reuse engineering study as por— as
6 a part of our project, to see how many times we can use
7 a gallon of water before it basically it becomes
8 unusable and it's going to go back into the geothermal
9 reservoir.

10 The, the typical things that we all do are
11 jobs, of course. And, property taxes, which get to stay
12 right here in Imperial Valley.

13 CHAIR PAZ: Thank you. Can you also speak to
14 the same questions we asked Derek about water and air?
15 And I think you've touched on the water. But what can
16 you share about the anticipated volume of water the
17 facility will need for geothermal? And separately for
18 lithium extraction?

19 MR. TURNER: Well first of all, and I, and I
20 think Derek mentioned this — we're, we're all, very
21 sensitive to doing whatever we can to help further the
22 clean air efforts here in California and in Imperial
23 County, especially. We, we monitor the air for our —
24 the personal protective equipment of our employees.
25 That's, that's probably number one, to make sure that

1 we've designed and built, and we operate our facility so
2 that our employees get to go home at the end of the day
3 in as good of shape as they got there in the morning or,
4 or better, if we can.

5 And water, we, we use about the same amount of
6 water per ton of product produced — I think that will be
7 fairly similar throughout. And, but again, as, as far
8 as the water goes, as I mentioned, we have a study to
9 see how many times we can reuse a gallon of water.
10 Which means, we might need to, to do some reconditioning
11 of that water, if you will.

12 So typically, these processes need very clean
13 water. Could be distilled water, could be mineral free
14 water, depending on the step that's in there. And in
15 order to produce that level of clean water, sometimes
16 you have to do various operations on it so that you can
17 reuse it. So, that's part of the, the work that we're
18 doing to minimize the, the water intake from the
19 Imperial Irrigation District to the extent possible.

20 I — as far as air, clean air goes from our
21 processes, as I mentioned before. These are fully
22 contained processes. We do have a, an air emission as a
23 result of the geothermal power plants. Basically the
24 same type air emission that you see on all of these.
25 And, we, we abate the compound that, that is a permitted

1 type compound, hydrogen sulfide. Other than that, these
2 are basically air emission free.

3 CHAIR PAZ: And how do you monitor and ensure
4 that workers in the community are protected?

5 MR. TURNER: Derek mentioned, there is an air
6 monitoring station out there. I think it's run by
7 Imperial County, out in the area. We will, as part of,
8 I'm sure, our permit requirements, which we are — we,
9 our permits are in process right now. We'll do periodic
10 checking of our air quality around our plant. That's
11 really, really, for making sure that we have the proper
12 personal protective equipment policy, safety policies in
13 place to protect our employees, and the surrounding
14 environment.

15 And that's pretty typical, with, with all
16 these geothermal power plants. We've been doing the
17 same type of thing for years out here, to make sure that
18 we're doing our best for producing clean air or
19 maintaining clean air to the extent we can.

20 CHAIR PAZ: Thank you. Both you and Derek
21 mentioned the use of sorbents. What happens to the
22 sorbent after you've removed the lithium from it?

23 MR. TURNER: Well, the sorbents all have a
24 lifetime. And, and, quite often, you can — these
25 sorbents are built on a, a basic resin. Might be a

1 piece of porcelain, could be a piece of plastic,
2 whatever. And, quite often, that basic resin can go
3 back to the manufacturer of that resin.

4 They can, I'm going to oversimplify this,
5 clean it up, if you will. They can, they can
6 reformulate that resin to be used again. And our plan
7 is to be able to bring that re— reformulated resin back,
8 use it the next time. And it doesn't mean it's any less
9 expensive, but it means that we're not throwing it away.
10 And, and it would limit the, the amount that ultimately
11 had to be disposed of to breakage type, type impacts on
12 that resin.

13 CHAIR PAZ: And, and in the case that it does
14 need to be disposed, where does it go?

15 MR. TURNER: Typically, the — by the time it
16 gets disposed, it would go to a non-hazardous landfill,
17 permitted landfill. Our anticipation is that it will go
18 back to the resin manufacturer, and, and they will
19 dispose of any resin that is not able to be
20 reformulated.

21 CHAIR PAZ: Thank you. Is there anything that
22 I didn't ask that you want to share?

23 MR. TURNER: I, I think we've probably covered
24 most of it. One thing I would, I would like to
25 emphasize is that we're all extremely sensitive to the

1 use of water. I mean, that's hands down, it's been that
2 way 25 years that I've been around here, probably even
3 longer.

4 But, these days we're even more sensitive to
5 the use of that water. It's, it's precious here in
6 Imperial Valley. We want to be good neighbors in that.
7 We're all extremely sensitive to how we impact the
8 environment. The Sonny Bono Refuge out here, right at
9 the corner of CalEnergy is a good example of, of — that
10 we can do that. And, our, one of our mantras, if you
11 will, in our company, is to make sure that we leave the
12 environment in better shape than we found it.

13 CHAIR PAZ: Thank you.

14 Next slide, please.

15 So, next, is Jon Trujillo from BHE Renewable.
16 And, Jon, you're going to hear similar questions. But
17 again, we understand that your facility is also unique
18 in a number of ways. First, can you share some
19 information on the demonstration projects, and how those
20 relate to your overall plans for commercial scale
21 facilities?

22 MR. TRUJILLO: Sure. So, so as I mentioned
23 earlier, our, our recovery facility. So, the, the
24 aspect of the facility, the demonstration facility is,
25 is 100 gallons per minute. It has been constructed, and

1 then we're looking at designing and building that second
2 phase to then take the lithium chloride product to a
3 battery grade product. Our, our intent is to deliver a
4 lithium carbonate, which seems, seems different than
5 what EnergySource and Controlled Thermal Resources has
6 mentioned here.

7 That, that's still in progress. We do have
8 this first recovery facility, which I think is, is most
9 key. But at the same point, the, the one, one doesn't
10 come without the other. If we can make a lithium
11 chloride but we can't deliver a battery grade product,
12 then none of it works.

13 So, so, it — they do go hand in hand. But, we
14 expect to use, use the existing facility that was just
15 constructed, along with the next one, and test those for
16 six months to a year. And really targeting more of a
17 year or two to understand the nuances and operation at
18 that scale. That is going to drive how and if we do do
19 commercial recovery as well.

20 We need to prove to ourselves that it's
21 commercially viable, environmentally safe, safe to our
22 employees and everyone around us. I, I don't have any
23 concerns there that haven't been expressed by, by Derek
24 and, and Jim here, when it comes to environmental
25 impacts.

1 It, conceptually, when you do look at the
2 process, they are very much similar. You, you have a, a
3 preparation step, a recovery step, transfer the lithium
4 chloride over to another facility, or an adjacent
5 facility to, to develop that battery grade product, and
6 then the returning of the brine back to the process
7 there.

8 So, we're, we're a very conservative
9 organization. Our roots are in geothermal. When you,
10 when you look at the history of our company, it really
11 started as CalEnergy, these operating plants here, and
12 expanded to a, to really a multi-national utility that
13 provides power, transmits power, and generates power.
14 And, and it's, it's really neat to see the focus come
15 back to these, these u— facilities just like the one Jim
16 had mentioned, the Unit One facility that started
17 operations in 1982.

18 So, taking that conservative and operational
19 experience that we have, we, we really are focused on
20 proving to ourselves that these demonstration facilities
21 will, will check all the boxes that we need to move
22 forward. Now that being said, we're, we're here and we
23 recognize that there is tremendous amount of attention
24 on lithium right now. And, and it's going to require
25 patience by all of us, at least from, from our

1 perspective, to get to that next step of commercial.

2 So, it — I don't want to put the cart before
3 the horse, because it's, it's going to lead to not
4 success. I guess that'd be the, the general aspect of
5 where we're — where we're looking within the, our
6 demonstration facility.

7 CHAIR PAZ: As you're, you know, building out
8 these demonstration facilities, can you expand on how
9 you expect the commercial scale facilities will be
10 developed? Do you expect to use brine from all of your
11 facilities? And will there possibly be different
12 extraction facilities at each geothermal plant, or how
13 might these be completed?

14 MR. TRUJILLO: So, so, assuming we're able to
15 prove commercial viability, we would be looking to,
16 through stages, establish recovery at all, all of our
17 existing facilities. And then, as, as the directive of
18 geothermal development, we're also looking at expanding
19 our geothermal operations, and also looking at those.
20 So, that would be the expectation, assuming viable
21 commercial success.

22 The second part of the question. When it
23 comes to where, where to place all these things? The—
24 what we're — part of that commercial success is, is
25 making that, making sure that we have applied economies

1 of scale, but also reduced our footprint as much as
2 possible. And so, with that, we would look at
3 recovering lithium at the existing facilities, and then,
4 depending on that scale of operation, looking at
5 centralized facilities for the conversion to a battery
6 grade lithium carbonate.

7 CHAIR PAZ: Thank you. Based on the
8 descriptions you heard of other facilities, do you
9 anticipate that your project will use and recover
10 similar materials and minerals? You did mention that
11 your end product is a lithium carbonate, which is
12 different from the others. So, do you expect waste
13 streams? Is it similar or different from what the other
14 two developers are going to—

15 MR. TRUJILLO: You know, I — there's a little
16 bit of arm waving with all of us, because, because we're
17 going through these processes. Derek and EnergySource
18 are further along in, in their confidence level when it
19 comes to commercial. And so, I don't know the details
20 of their, their projects. But, but what I, what I'd
21 rather focus on is, is when you look at what, what we're
22 trying to develop, as well as just, just generally
23 conceptually of those, those three simplified over—
24 overly simplified steps. The, the consumption of
25 chemicals and the waste products don't look any

1 different than the geothermal operations that we've,
2 we've been performing for the last 40 years.

3 Very similar, if not the same, chemicals.
4 We're striving to, to either have no or, or as little as
5 possible, solid waste. Just similar to, to our, our —
6 to Jim and Derek here, we're also looking at — we don't
7 anticipate any wastewater. We're also a zero-discharge
8 facility, all of our current operations, and we're
9 anticipating the same for ours.

10 One thing coming, coming from a geology
11 background, I do want to clarify, because it sometimes
12 gets a little misconstrued, is, is the geothermal
13 reservoir sits anywhere from 2,000 to over 10,000 feet
14 below ground level. And is, is fully disconnected from
15 local groundwaters, which are non-drinkable. As well as
16 disconnected from the 42-ish foot depth of the Salton
17 Sea.

18 So, so we have separate bodies of fluid. The,
19 the base for the geothermal brine is, is a, an extremely
20 salty water. It's about seven times saltier than sea
21 water, as a perspective here. But why I want to bring
22 that up, is, is any residual water, which is required
23 for the geothermal process, and certainly there is water
24 required for the lithium process, would, would return
25 back to the reservoir to help support pressure and

1 maintain that renewable and sustainable resource.

2 Additionally, we do have oversight and
3 regulation when it comes to all subsurface aspects
4 through, the acronym's CALGEM, but it's, it's a — the
5 Geologic Energy Management Division within the
6 Department of Conservation. So, biannually, we have to
7 verify that our wells have integrity. Meaning, they
8 don't leak anywhere expect for down into the geothermal
9 resource that, that's where they're intended to go.

10 So, we, we had to prove that to ourselves,
11 community, and of course the regulators as well, that
12 we're, we're placing that fluid back where it came from
13 to help sustain this important resource.

14 CHAIR PAZ: Does the technology you plan to
15 adopt, and I would add here both in the recovery,
16 separation, and then the commercialization of the
17 product, use resources differently than the others?

18 MR. TRUJILLO: And, you know, I, I guess
19 there's — by resources, you mean, you mean chemical uses
20 and, and water and stuff?

21 CHAIR PAZ: Water —

22 MR. TRUJILLO: And, I would say, in a general
23 sense, I don't believe so. But again, I, I don't know
24 their, their technology, so I can't say one for one or
25 like for like, you know, on that. But our, our goal is

1 to, to limit the amount or resources because of the
2 environmental footprint, but also the commercial
3 viability aspect. It — there's that.

4 I, I don't, I guess it's probably leaning to
5 the next question I anticipate. But, but, when it comes
6 to lithium itself, that portion of the process, because
7 we're really focused on having these — both the
8 geothermal and the lithium stand on their own two feet.
9 If we run into either a technical or commercial hurdle
10 with lithium, that still allows us to move forward for
11 geothermal.

12 And, and vice versa as well, when it comes to
13 development. We have operating plans and look to
14 operate those for, for a very long time further in this,
15 this renewable resource. But, if there's some sort of
16 issue with the geothermal power market, that allows us
17 to still march forward with lithium.

18 CHAIR PAZ: And the next question's going to
19 sound redundant. So, I'll ask both about the water and
20 the air. But, it—

21 MR. TRUJILLO: Sure.

22 CHAIR PAZ: It is just similar, for
23 clarification. If there's any information, or
24 additional information about water and the wastewater,
25 including anything you can share about the current

1 geothermal facilities? And then, discuss the air
2 quality specific to the lithium extraction.

3 MR. TRUJILLO: Yeah. So, so all of the, all
4 of these, meaning the, the lithium processes — and my,
5 my understanding as, as I've heard it here, these
6 lithium processes all take water. Irrespective of the
7 unique technologies. So, so, I don't think we're any
8 different there as, as needing water. And, being very
9 sensitive to that. You know, we — I was — we challenge
10 ourselves daily on, how can we either reuse water,
11 reduce water, or, or share water between the geothermal
12 facilities and, and lithium.

13 When it comes to the geothermal facilities,
14 there is a need, depending on where you're located
15 within the resource itself. The— it's all one fluid or
16 one brine down there, but there are subtle variations
17 because of the, the geologic make up at, at depth. When
18 you look to one to two miles down below our feet, those
19 subtle differences make a, make a difference. And so,
20 generally, when you look towards the northeastern part
21 of the reservoir, it has a higher total dissolved solids
22 content.

23 So, that means there's more, more minerals,
24 more salts dissolved within the fluid itself. Less so
25 to the southwest of the, the resource. And so, as, as

1 that northeastern part gets developed more and more, I
2 anticipate that what's going to be required as part of
3 the process. But of course, it depends.

4 Now, these are based on what, what we're
5 currently doing in our existing facilities. I can't
6 speak to Controlled Thermal Resources and their
7 applications. But, you typically need something that's
8 called dilution water. And essentially, as you recover
9 that steam for energy, whether that be applied to, to
10 lithium or to, to energy and power production. The, the
11 quantity of, of dissolved solids within that slou— fluid
12 become greater and greater. And, and it gets to a point
13 where regardless of, of temperature, you have to add
14 some dilution water to make sure that you don't plug up
15 the system with, with scale, and salts precipitating in
16 there, where they, they can't be.

17 And so, that, that use of water known as
18 dilution water, really is another factor that, that we
19 apply to keep this resource and operation sustainable.
20 If, if we had to reduce that — if, if we weren't able to
21 use dilution water, we would have to shut down the plant
22 on a very frequent multi— you know, multiple times a
23 year to, to clean out the salts and that scale. And it,
24 it becomes non-viable and non-sustaining.

25 CHAIR PAZ: So, this is my last question. In

1 terms of the dilution water, and I know Derek mentioned
2 the need of having super clean fresh water to be able to
3 use. Is it the same for both the geothermal process and
4 the lithium, the quality of the water that's needed?

5 MR. TRUJILLO: No, it generally isn't. We, we
6 can take lower quality water. It does need to have some
7 quality to it, just because one of the challenges when
8 you add dilution water is, is the coolest this
9 geothermal fluid gets is at the, the back end of our
10 process after we've alleviated all the— or basically
11 transferred that pressure and heat energy through the
12 steam off. It's still sitting at about 225 degrees
13 Fahrenheit. So, we've got to bring that dilution water
14 up to that, up to a similar boiling point and pressure —
15 temperature, excuse me. So, when you do that, you need
16 to make sure it has enough purity to withstand that,
17 that increase in temperature.

18 You know, our source is, is IID, or Imperial
19 Irrigation Canal water for that. And so, we, we've run
20 into, you know, biological material, making sure that
21 it's — we don't have mussels clogging the thing up, or,
22 or other things. But, it doesn't need to be high
23 purity, reverse osmosis, or deionized water for, for the
24 geothermal application. So, it gives us more, more
25 flexibility there.

1 CHAIR PAZ: Thank you.

2 MR. TRUJILLO: Sure.

3 CHAIR PAZ: And, I do want to welcome, also,
4 Commissioner Miranda Flores, and she arrived at 1:45,
5 and Commissioner Reynolds, who arrived at 2:07. So,
6 welcome.

7 And now, Dr. McKibben. Thank you for joining
8 us again

9 DR. MCKIBBEN: Certainly.

10 CHAIR PAZ: Given your knowledge of these
11 projects and the different technologies, can you help
12 fill in any gaps or add any information for the
13 Commission to consider?

14 DR. MCKIBBEN: So, I think they have a slide I
15 prepared.

16 CHAIR PAZ: Next slide, please.

17 (Pause)

18 DR. MCKIBBEN: So, I tried to take what they
19 have all said here, and what they said in their EIR's
20 and, and other public statements they've made during
21 field trips and other public hearings. (INDISCERNIBLE)
22 summarize the waste streams that they're anticipating
23 from geothermal lithium extraction and processing

24 So, I've, I've divided this into, sort of,
25 four steps across the top there. They take a brine feed

1 from the power plant, an existing power plant, and then
2 they take that through a lithium extraction step to pull
3 the lithium out of the brine. And then, they have to
4 release that lithium from whatever adsorbent they're
5 using. Usually, it's a lithium chloride.

6 And then, they need to convert that lithium
7 chloride to the final product they're going to market.
8 And that's either going to be lithium carbonate
9 equivalent, as BHER, BHER has indicated, or a lithium
10 hydroxide monohydrate, as CTR and ESM have indicated.

11 So, at each of these steps, I, I then asked,
12 well, what, what are the possibilities for these, these
13 processes, and what waste streams they would produce?
14 And, one of my colleagues has called this an adventure
15 diagram. Which I think is appropriate, because it
16 really does depend in detail on, on what processes
17 they're going to use, and that will dictate some of the
18 waste streams.

19 So, the first thing to look at is, taking that
20 brine feed from the power plant. The brine at the power
21 plant is treated twice, in, in reactor clarifiers. A
22 primary reactor clarifier, and a secondary. And that's
23 mainly to clean it up so they can reinject it without
24 plugging up the reinjection wells.

25 But, in some cases, they need to clean it up

1 even further to not interfere with the lithium
2 extraction steps. So, there's additional brine cleaning
3 needed. And, that— if that step is necessary, then they
4 need to make some adjustments. There may be some pH
5 adjustments, and that may cause — they may also cause
6 the brine to cool, and that will cause it to precipitate
7 further minerals.

8 And so, they all mentioned pH adjustment and
9 use of sodium hydroxide and, and hydrochloric acid,
10 NaOH, and HCl. And maybe trucking those components in.
11 And what I want to suggest is desalination would be
12 another source of those components that could be done
13 locally. Desalinate local brackish groundwater that's
14 not suitable for drinking or agriculture to produce
15 those reagents locally, and then they wouldn't need to
16 be imported.

17 If they cool the brine and cause it to
18 precipitate further, they will generate additional
19 silica iron filter cake, and, and ESM's draft EIR goes
20 in to quite a bit of detail about additional filter cake
21 generation and, and disposal.

22 But again, I'll, I'll remind the Commission
23 that the — the filter cake generation and disposal is
24 already taking place. It's already permitted. It, it
25 goes into non-hazardous landfills when it's tested to be

1 non-hazardous. It goes into higher level landfills when
2 it's, it's tested to have components that you need to
3 worry about.

4 The next step, which is the lithium extraction
5 step from the brine, they've talked about different ways
6 of, of filtering the lithium out in different sponges.
7 And I'm generally aware of, of what each of them is
8 doing in, in terms of that. And a lot of it's very
9 proprietary. But they're either absorbing the lithium
10 as lithium chloride, which means the only way you need
11 to squeeze the sponge out is with water, and you don't
12 need acid.

13 The other way of doing it is with an ion
14 sieve, where you're actually — the sponge is pulling
15 just lithium out. And then, you need to squeeze that
16 sponge out with both water and acid, or hydrochloric
17 acid, HCl. And so, depending on which of those
18 processes you're using, you may or may not have an acid
19 component to deal with. In the case where they're using
20 HCl, acid, they've designed ways to recycle that HCl
21 back into the system and regenerate it, so they don't
22 have to dispose of it as a waste.

23 So, that second step, the lithium extraction
24 from the brine, really the only waste product from that,
25 and it's already been mentioned, would be the, the worn-

1 out sponges, if you want to think about it that way.
2 So, you have to dispose of any adsorbents after they've
3 been through multiple cycles. And, and so, they've
4 mentioned sending some of them back to the manufacturer
5 and having them reconditioned and come back. So, in
6 those cases, you don't have to worry about disposing
7 them. But, if they break down to the point where you
8 can't recondition them, then yes, you would have to
9 dispose of them. You'd have to test them and see if
10 they need to go into a hazardous or non-hazardous
11 landfill.

12 For the lithium release, whether they're using
13 just water, or water plus HCl, they're going to have to
14 clean up and recycle that water, and they've all
15 mentioned ways they're, they're looking at doing that.
16 And they've identified ways of recycling that acid back
17 into the process, so that it doesn't become a, a waste
18 material that needs to be disposed of.

19 When you look at the lithium conversion,
20 because there's two different possible products — the
21 lithium carbonate equivalent or lithium hydroxide
22 monohydrate, the, the method you use to convert lithium
23 chloride to either of those products can, can vary.
24 Electrodialysis is one technique, where you're basically
25 applying a current across it to separate out the lithium

1 hydroxide. That takes electricity to do that. But, one
2 advantage is, it, it keeps out some of the impurities
3 like magnesium, that would normally contaminate the
4 lithium hydroxide.

5 The other way to do that conversion is a
6 precipitation using either a sodium hydroxide or sodium
7 bicarbonate. And they've already mentioned the need
8 for, for carbonate. And, one thing I want to suggest,
9 and I think some of the companies are looking at, is
10 capturing that CO2 that they currently emit into the
11 atmosphere, and making bicarbonate from that, and use
12 that bicarbonate to make lithium carbonate equivalent.
13 Then you don't need to bring in lithium hy— sorry,
14 sodium hydroxide as a, as a reagent.

15 The other products of those conversions can be
16 sodium chloride, chlorine gas, and hydrogen gas. And
17 the sodium chloride and the chlorine gas can be recycled
18 back to make hydrochloric acid. And so that doesn't
19 become a problem. The hydrogen gas can't be recycled,
20 but you can make fuel cells (INDISCERNIBLE)hydrogen.

21 So, I think this diagram kind of summarizes
22 all the possibilities and, and the difficulty that the
23 companies are having explaining to us what, what the
24 waste streams are going to be is because they're still
25 testing all these ideas. They're still running

1 demonstration plants. ESM is the farthest along, and
2 seems to have settled on a, on a path forward.

3 But any of these companies could go down
4 multiple paths in this diagram, and, and end up having
5 different waste streams as a consequence. And we're
6 only going to know the answers to a lot of these
7 questions once they've gone through that process. Hence
8 the name, Adventure Diagram. Adventure Map. We were
9 really not quite sure which path they're going to
10 follow.

11 But these are all the — in my view, the
12 possibilities.

13 CHAIR PAZ: Thank you. Is there another slide
14 that we need to advance?

15 DR. MCKIBBEN: It was going to be an answer to
16 another question you had.

17 CHAIR PAZ: Okay.

18 DR. MCKIBBEN: Yeah.

19 CHAIR PAZ: So, the question is, and I think
20 you answered number one. So, can you explain the
21 regulatory frameworks that these facilities will work in
22 and share with us? From your experience, where the data
23 related to solid waste, water quality and air quality
24 reporting and monitoring is available, do you have any
25 suggestions about how interested community members can

1 engage with various oversight agencies?

2 DR. MCKIBBEN: So that is indeed the next
3 slide.

4 (Pause)

5 So, I tried to put together sources of
6 information that the public can, can go to, in terms of
7 regulations and data related to the solid waste, the
8 water quality, and the air quality. So, the first
9 source is Imperial County's website. So, there you can
10 find Notice of Preparations, draft EIRs, NEIRs. So,
11 I've given you the links for CTR's Notice of Prep,
12 Notice of Exemption, and Notice of Completion. You can
13 download those. ESM's ATLiS Project EIR, all 1,000
14 pages of it. But, there's a lot of good information in
15 there, and that's the link for that. And then,
16 Berkshire Hathaway has not gone through the, the EIR
17 process yet, but they did go through an EIR for their
18 Monofil, where they dispose of the filter cake. And
19 there's lots of information in that EIR as well.

20 Waste disposal is controlled by CalEPA's
21 Department of Toxic Substances Control. So, there's the
22 link for their website, and, and you can type in Salton
23 Sea, or geothermal, and find a lot of information there.
24 I think Jon mentioned the CalGEM site hosts all the
25 information on geothermal wells. So, if you want to

1 find a geothermal well at any, for any property in the
2 Imperial Valley, there's a map, a searchable map, and
3 you can find the well data, the date, how deep it is,
4 the pressure, the temperature, the brine chemistry, and
5 so forth.

6 As far as air emissions, you can look up on
7 the CARB, California Air Resources Board website. They
8 publish annual greenhouse gas emissions from all sorts
9 of power plants throughout the state, including all the
10 geothermal power plants down there. And there's even a
11 CARB pollution mapping tool, as they call it, where you
12 can pick up a spot on the map and it will show you all,
13 all the known pollution emissions from that site.

14 And then, finally, surface water and the brine
15 pond water at these plants are regulated by Regional
16 Water Quality Control Board. And in the case of the
17 Imperial Valley, it's the Colorado Regional — Colorado
18 River Regional Water Quality Control Board.

19 And so, these are places people can start, I
20 think, if they want to look up information. You can get
21 on the mailing lists for a lot of these organizations.
22 So, you can get notified when new reports come out, and
23 I would advise people to do that.

24 There are a number of other sites I could
25 provide. There's a Salton Sea Management Program,

1 there's the UCR Salton Sea Task Force, many other sites
2 I could mention that are kind of secondary to these in
3 terms of having a lot of information of interest to the
4 public.

5 (Pause)

6 CHAIR PAZ: Thank you. Next question. In
7 your opinion, are all of the materials and waste
8 associated with lithium extraction, and even geothermal,
9 sufficiently managed by current regulations and
10 oversight agencies? Since this is new activity in the
11 county, are there any gaps in information or services to
12 be sure residents, workers, and communities are
13 protected?

14 DR. MCKIBBEN: So, lithium currently does not
15 have regulations controlling the allowable levels in
16 drinking water, and regulations controlling what humans
17 can absorb. Lithium is thought to be an essential
18 nutrient for humans. So, normal adults need an intake
19 of about one milligram per day of lithium. And the USGS
20 and the Environmental Protection Agency have issued
21 what's called a health-based screening level, which is
22 an advisory level of 10 micrograms per liter in, in
23 drinking water. So, that's 0.01 ppm lithium in drinking
24 water.

25 A lot of public water supplies actually exceed

1 that number. But currently the EPA and CalEPA have not
2 set a maximum contaminant levels for lithium. The
3 European Union has not set a maximum contaminant level
4 for lithium, but I have read they are thinking of doing
5 that. The only regulatory body that has a maximum
6 contaminant level for lithium is the Eurasian Economic
7 Union, which is Belarus, Kazakhstan and Russia. And
8 they've set it at 30 micrograms per liter, or 0.03 ppm.

9 So, what will happen, if, if the state and the
10 federal government decide to set limits on lithium
11 exposure, that will la— will regulate the amount of
12 lithium that should be allowed in drinking water. It
13 will also regulate things like the inhalation and
14 ingestion and then absorption through your skin.

15 And one thing about the lithium salts, is that
16 they are all quite soluble. And so, they would probably
17 regulate not just lithium by itself, but all of the
18 lithium salts, like lithium chloride, lithium hydroxide,
19 lithium carbonate. If they do that, that would add a
20 level of, of management to the operations of these
21 companies. It would add to their costs, because they
22 would have to protect employees who are working with
23 these materials, packaging these materials, and shipping
24 these materials.

25 I think it will take several years for

1 regulations like that to be developed, and they have to
2 go through a public review process, much like this is
3 going through a public review. So, it's not an eminent
4 thing, but that's certainly something to pay attention
5 to in the future, is any regulations that appear, maybe
6 first in the European Union, and then later in the
7 United States, that regulate the lithium.

8 One other thing I wanted to talk about, and I
9 can't remember if this was one of the questions you had.

10 CHAIR PAZ: Can I ask you, before you move —

11 DR. MCKIBBEN: Sure.

12 CHAIR PAZ: — on on this point, which is
13 really interesting, about the metrics for maximum
14 contaminant levels and regulations around that. And, I
15 don't know if you would have the answer, but I do know
16 you're part of the Salton Sea Task Force. But, are
17 there any studies related to the public health, right?
18 Because, obviously, in order to even set in any
19 regulations, we need to understand how public health is
20 impacted through exposure.

21 DR. MCKIBBEN: So, lithium's kind of peculiar
22 in that regard, in that the beneficial level of lithium,
23 in terms of human behavior, is very close to the
24 toxicity level of lithium. So, there was a USGS paper
25 that just came out, I think last year, and I'd be happy

1 to send it to the Commission, where they reviewed a lot
2 of the data.

3 And they found that — uh, some lithium in
4 drinking water is good. They found that high — higher
5 levels of lithium in drinking water correlate with less
6 depression, less mortality from Alzheimer's, lower
7 suicide rates, and lower violent crime rates. So, there
8 is some certain level of lithium that actually has a
9 positive influence on human behavior.

10 But there then is a toxic level of lithium,
11 where — which has symptoms like tremor, trouble walking,
12 and kidney problems and so on. So, there have been a
13 lot of medical studies on, on the health effects of and
14 impacts of lithium, but it's kind of a tight line
15 between a beneficial level and a, and a detrimental
16 level.

17 Fluoride is another element that has that same
18 kind of tight line between a beneficial level for your
19 teeth, but a toxic level that's slightly above that.
20 So, it will be interesting to watch in, in the future
21 if, if the government decides to regulate lithium and
22 what kinds of levels they'll set. And the state is
23 often setting a more strict levels than the federal
24 government. So, everybody has to follow the federal
25 limit as a minimum. But, I'll give you the example of

1 arsenic. The state's, CalEPA's hazardous level for
2 arsenic is much more strict than the federal.

3 CHAIR PAZ: Thank you. You were going to add
4 something to —

5 DR. MCKIBBEN: Yeah, I, one other thing I
6 wanted to mention, and that — everybody's talked about
7 water. And, and water's important to all of us. And
8 so, I wanted to repeat something I've, I've said before.
9 And that's this idea of, of waiting — using water that
10 has other beneficial uses like agriculture, drinking
11 water, municipal purposes. And trying to use water that
12 won't compete with that. And one of those candidates is
13 the steam condensate that all these gen— plants
14 generate. And they like to inject most of that, because
15 you want to keep the pressure up in the reservoir, and
16 you don't want to have happen what's happening up at the
17 geysers, where the reservoir is dying, and down at Cerro
18 Prieto in Mexico where the reservoir is dying because
19 they're not reinjecting.

20 But what I want to propose, and, and maybe the
21 companies are thinking about this, is, is what they're
22 doing up at the geysers, is piping

23 (Dialogue in Spanish)

24 (Pause)

25 UNIDENTIFIED SPEAKER: Cross connect.

1 UNIDENTIFIED SPEAKER: How'd you do that—

2 (Dialogue in Spanish)

3 (Laughter)

4 (Pause)

5 DR. MCKIBBEN: Up at the geysers, the three
6 local communities including Santa Rosa, are piping their
7 greywater to the geothermal field, and reinjecting it
8 into the reservoir. And that's helping keep the
9 pressure up. And if you did that here, with the local
10 communities, that would provide injection water that
11 could go into the reservoir, and that means they could
12 use more of the steam condensate for process water. So,
13 dilution water, or the deionized water they're talking
14 about.

15 So, I would, I would just urge the, the
16 Commission to consider that possibility.

17 VICE CHAIR KELLEY: Mr. McKibben, excuse me,
18 Chair.

19 CHAIR PAZ: Go ahead.

20 VICE CHAIR KELLEY: In the past, I was on the
21 City Council in Brawley. And Ormat had approached us
22 about tertiary treatment for the wastewater stream from
23 our wastewater plant. And we continued conversations.
24 But it was the Regional Water Quality Board in our
25 permit that precluded us from entering into an agreement

1 at that time. From being able to make that water
2 available. And it — and they said that it was a
3 requirement that we continue to flow that discharge into
4 the New River. So, that, it could be an obstacle, but
5 it certainly could be overcome.

6 DR. MCKIBBEN: Yeah. At lea— at least it was
7 overcome up in, in the geysers area.

8 CHAIR PAZ: And maybe that leads into the next
9 question about ideas or recommendations that this
10 Commission should consider for the report.

11 DR. MCKIBBEN: Yeah, so I think I've given you
12 a couple.

13 CHAIR PAZ: Yeah.

14 DR. MCKIBBEN: Desalination to produce some of
15 the reagents so they don't have to import reagents.
16 Capturing the carbon to make carbonate for lithium
17 carbonate. And then, possibly, injecting municipal
18 water in — to, to allow them to use more steam
19 condensate.

20 CHAIR PAZ: Great.

21 DR. MCKIBBEN: Just ideas. And I don't wha— I
22 don't know what the economics of are, of all these are.
23 They may not work out economically.

24 CHAIR PAZ: I do have one last question based
25 on community interactions and some of the language that

1 we use. So, really, when we're talking about the
2 process of lithium extraction, and there's a use of
3 chemicals, right? Chemicals are going to be used in the
4 process for separating the lithium or for converting it
5 to commercial grade.

6 And then, you introduced now the word acid.
7 These are words that are traditionally, you know, carry
8 negative connotations.

9 DR. MCKIBBEN: What was the last word you
10 said?

11 CHAIR PAZ: Acid, the word acid.

12 DR. MCKIBBEN: Okay.

13 CHAIR PAZ: Yeah, the use of the acid. So,
14 these are words that traditionally will carry negative
15 connotations, and whenever we're speaking to the
16 community, that's the first thing that they hear. What
17 can you tell us about, you know, the chemicals, the
18 acid, and any protections that you think people, or
19 extra cautions, if any, that people should be taking
20 when they hear this? Is there a reason for concern?

21 DR. MCKIBBEN: So, they're not using end
22 processes, end processes necessarily concentrated acids
23 that would be quite hazardous to people. They, they'll
24 end up diluting it in most cases. So, I think they take
25 what might be shipped in as concentrated HCl, but that

1 ends up getting diluted to probably just a few percent.
2 And that, that's comparable with what goes into your
3 pool to give the chlorine. So, it's not, not seriously
4 hazardous to you.

5 But you're right, we need to talk about
6 chemicals in a way that don't alarm people. And, and
7 maybe talk about the processes that alleviate some of
8 their concerns. I mean, we use chemicals in our daily
9 lives all the time. And, and maybe the way we phrase
10 it, we need to be careful.

11 But I, I tried in that chart to indicate all
12 the reagents —

13 CHAIR PAZ: Mmmm hmm.

14 DR. MCKIBBEN: — that I thought people should
15 be aware of that might either consumed or produced as a,
16 as a product. And, and hopefully that will help people
17 understand. But the idea, really, that all the
18 companies are working on, are ways of reconstituting or
19 recycling those reagents back into the process, so they
20 don't end up emitting them. So they're used. And
21 they're — they might be a scary sounding chemical —
22 hydrochloric acid. It's being used, but it's, it's in a
23 closed loop process and it's not being emitted in the
24 air or into the surface.

25 CHAIR PAZ: Thank you. Also again, thank you

1 to all the presenters. And I will now see if our
2 Commissioners have questions or discussion.

3 COMMISSIONER CASTANEDA: Thank, thank you,
4 Madam Chair. And I appreciate it. This was extremely
5 informative, and I, and I learned a lot. And thank you
6 very much. And it kind of sounds like we don't know
7 what we don't know, because a lot of this is still in
8 the test phase, and it's test and learn and trial and
9 error and those kinds of things.

10 And, you know, a lot of the chemicals we've
11 talked about, I sit on a water board in my home town,
12 and we use those com— chemicals commonly in the
13 treatment of water and the treatment of sewage and
14 everything, and, and you know, our plants, basically, we
15 have a desal plant, we have a, a water treatment plant
16 that's connected to our reservoirs and, you know, these
17 are right in urban areas. And we store and we use
18 these, and we obviously have to go through the
19 regulations and we have to ensure that our employees as
20 well as the people who live around there and the people
21 that consume our product are safe. And, and it can be
22 done. We had an interesting talk about lithium as a, as
23 a chemical, and, you know, we sort of forget that in the
24 40's, 50's, the 60's it was the most common anti-
25 psychotic drug that was administered.

1 You're right, I mean anything to a certain
2 degree is beneficial, but beyond that, is, is not. And
3 we need to be very concerned about this. And I am, I am
4 — I am very, very, I think, concerned about the
5 environmental impacts of these processes. But I think
6 that they can be managed.

7 My concern, also is on the other side, is that
8 to the extent that we continue to ask for more
9 regulations and more oversight and more categorization
10 of chemicals and processes that are commonly used today,
11 we'll only add more cost to this process. And I, you
12 know, I, I had the opportunity to read the report, and I
13 don't even remember when we got it, from Ian Warren.
14 And it, and it was extremely enlightening about the
15 different kinds and many — much of what was in there was
16 talked about today, the processes and so forth. And so,
17 and the cost.

18 And, and the cost, actually the cost of what
19 you can actually sell lithium for at, at the carbonate,
20 you know, battery grade level that you talk about. And,
21 we have a very, sort of, equilibrium that is, that's,
22 it's very close here. And, we have a, a real challenge
23 to, you know, to ensure the safety of the public, which
24 is paramount, and, and I think this gentleman here
25 talked about the fact is that this could all just dry

1 up. And we're back to where we were.

2 What I'm, you know, we've talked a lot about
3 above the surface, this report raised an issue for me
4 that I, that we, I think we've touched about just
5 lightly, is below the surface. And it's the reinjection
6 — whether it's greywater or whether it's the recycled
7 brine that basically is been had lithium extracted, and
8 the temperatures that basically that brine is re—
9 reintroduced into the reservoir. And whether or not
10 that might have an effect on the actual resources as
11 they sort of — from what I understand, is that there's a
12 reservoir, you've got lithium bearing rocks underneath.
13 The heat basically discharges the lithium and then
14 that's what's pulled out.

15 If the water, as you said, in the geysers and
16 other places, where they're starting to dry up, if we
17 don't maintain that, that temperature, we've got no more
18 lithium. So, I'm just wondering, is there a — we did
19 talk a little bit about this. And, tell me, whether or
20 not, because I think that Mr., or Dr. Warren basically
21 said that existing geothermal plants at 50 percent of
22 the energy that's generated from those plants, if you
23 introduce lithium extraction, or a DLE process, 50
24 percent of the energy that's generated by that facility
25 goes into that DLE process. Is that, is that sort of

1 accurate?

2 MR. BENSON: That's too high.

3 COMMISSIONER CASTANEDA: Is that too high?

4 MR. BENSON: Yeah. I, I think, ESM was
5 talking about, I think the 8 megawatts, 7 megawatts out
6 of, out of 55, right?

7 COMMISSIONER CASTANEDA: And I don't know
8 what, what size plants he's talking about, here. But,
9 he said generally.

10 MR. BENSON: Yeah, I mean, I can, I can speak
11 to, I think, like all of this. It, it — your results
12 may vary. There is a difference, depends on the
13 technology. If you were doing precipitation. You know,
14 you — we have pumps and motors and things like that.

15 COMMISSIONER CASTANEDA: Sure.

16 MR. BENSON: That has one electric load
17 profile. It is a fraction of the existing geothermal
18 production.

19 COMMISSIONER CASTANEDA: Okay.

20 MR. BENSON: Right? If you do electrolysis on
21 the back end, that is, that is an exchange of chemicals
22 and precipitation for electricity.

23 COMMISSIONER CASTANEDA: Right.

24 MR. BENSON: And then, the electric load would
25 look much higher. So, it really does depend on, on —

1 COMMISSIONER CASTANEDA: Okay, so that's where
2 it kind of, like, started. We don't really know what we
3 don't know, because it really depends on what the
4 process is, and, and how economically viable that
5 process is.

6 MR. BENSON: Yeah. I think generally
7 speaking, just, just for the benefit of everybody, you —
8 if you're in a re— reasonably high electric cost world,
9 no offense to IID, but all of California is reasonably
10 high-cost electricity. You typically see electrolysis
11 in areas where you have a very large hydro, thermal —

12 COMMISSIONER CASTANEDA: Right.

13 MR. BENSON: I mean —

14 COMMISSIONER CASTANEDA: On the cheap end.

15 MR. BENSON: Hydro power.

16 COMMISSIONER CASTANEDA: Yeah.

17 MR. BENSON: Quebec, Tennessee Valley
18 Authority, those kind of places.

19 COMMISSIONER CASTANEDA: Well, you said the
20 magic word, hydro, which doesn't exist in California.
21 So, at least not today. So anyway, that, that's the
22 interesting thing. But then we talked about the use of
23 water and greywater systems and so forth. And, and
24 believe me, I, I know what tertiary treatment costs.
25 And, you know, I mean, the state is gone, you know, full

1 circle around their per— you know, their sort of
2 perspective on, you know, water reuse. It's, it's gone,
3 you know, around a few times.

4 But that's a very expensive process. That's a
5 very expensive process. And you add that into the mix,
6 I'm not sure that this product is going to pencil out.
7 And we've got to figure out a way to do this that
8 protects the, the community, that doesn't deplete
9 resources that are needed by this community. But also
10 makes it economically viable. Because all the things
11 we've been hoping and dreaming for is, that will
12 materialize from this, won't happen. And that will be
13 just another sad story that we've heard many of. So, I
14 appreciate it, thank you. And it's more of a commentary
15 than, than anything.

16 DR. MCKIBBEN: So, one example was the Hudson
17 Simbol plant that was originally going through a CEQA
18 process, but Simbol went bankrupt.

19 COMMISSIONER CASTANEDA: Yeah.

20 DR. MCKIBBEN: They were going to — 70 percent
21 of their water was going to be from steam condensate and
22 only 30 percent of the lithium extraction water was
23 going to be from IID canal water.

24 COMMISSIONER CASTANEDA: Okay.

25 DR. MCKIBBEN: So, that's one example.

1 COMMISSIONER CASTANEDA: So, there's ways to,

2 DR. MCKIBBEN: Yeah

3 COMMISSIONER CASTANEDA: To sort of, yeah.

4 Okay. Alright.

5 MR. TRUJILLO: Commissioner?

6 CHAIR PAZ: Thank you.

7 MR. TRUJILLO: There is, there is one comment
8 I'd like to make. It's, it's one that, that sometimes
9 concerns me, is, is I, again, don't want to put the cart
10 before the horse, is, is the assumption that, that
11 additional lithium recharge will occur within the
12 resource. You've mentioned the, the depletion of heat.
13 That, that certainly can impact the, the duration of
14 time before that, that fluid is reheated to a level that
15 we can produce it for power.

16 COMMISSIONER CASTANEDA: Right.

17 MR. TRUJILLO: However, when it comes to the
18 source of lithium within the resource, this geothermal
19 resource was created over thousands and, and really, you
20 know, million plus years geologic time scale. Not
21 coming anywhere near our human time scale. And so, so,
22 I — again, from that conservative aspect, I don't want
23 to assume that the lithium aspect will continually
24 recharge based on the, on the reservoir and the resource
25 rocks.

1 I think, you know, the better perspective
2 would be to, to consider that icing on the cake. If we
3 see those, that, that additional recharge as we operate
4 the, the resources and recover, right? And that
5 assumption that is so. Because it is, it is uniquely
6 different than the, the sustainable power production
7 that we have here.

8 COMMISSIONER CASTANEDA: Right. But they, but
9 the power production and the lithium extraction kind of
10 go hand in hand, right?

11 MR. TRUJILLO: Absolutely. You can't have —

12 COMMISSIONER CASTANEDA: You know, so you
13 can't have one without the other, right? They're
14 linked. You could, but it wouldn't make sense.

15 (Laughter)

16 DR. MCKIBBEN: So, the, the federal grant I
17 mentioned that I'm working on with Lawrence Livermore,
18 sorry, Lawrence Berkeley Lab — one of the things we're
19 tasked to look at is potential lithium depletion in the
20 reservoir over time. And we're developing a reservoir
21 model, and then water-rock interaction computer codes,
22 to try and model all of that and see if, as Jon says, is
23 it really going— is lithium replenishment, just like
24 heat replenishment, going to be fast enough on a human
25 timescale?

1 COMMISSIONER CASTANEDA: Right.

2 DR. MCKIBBEN: As opposed to a geological
3 timescale.

4 COMMISSIONER CASTANEDA: Right.

5 DR. MCKIBBEN: So, it's something we're
6 looking at.

7 COMMISSIONER CASTANEDA: Good. Alright. I'm
8 glad, thank you. And I knew your were, so I mean,
9 obviously, this is a very serious thing. Because, if
10 milk stops coming from the cow, then —

11 (Laughter)

12 — what do we need the cow for anymore?

13 (Laughter)

14 CHAIR PAZ: Commissioner, Vice Chair Kelley,
15 you had a comment or a question?

16 VICE CHAIR KELLEY: Yeah, just a tie off of
17 what Steve was asking. Jon, you've shared in the past
18 about the resource and its sustainability, and the years
19 of records that you have. And for all of you, is the
20 further development of more geothermal, what kind of
21 pressure is that going to put on the energy production
22 for the, the whole area?

23 MR. TRUJILLO: So, so, in the public domain,
24 you can see resource estimates anywhere from roughly
25 1,400 to over 3,000 megawatts of, of power production

1 within this, this reservoir. Really, what we're looking
2 at depends on, on that scaling. You know? Currently
3 what we have is, what we have in operation around
4 numbers between Hudson Ranch at 55 megawatts, and our
5 345, we're, we're at 400 megawatts.

6 We're looking at an additional 339 megawatts
7 of development for BHE Renewables. Controlled Thermal
8 Resources, I know you have a power purchase agreement
9 for 40 or 50 megawatts with IID. I, I wouldn't dare
10 speak of any other additional developments. But, it
11 takes quite a while to get to even that low number of
12 1,400 megawatts.

13 Now, we have to be smart and manage that
14 resource. And CalGEM, who I mentioned earlier, that's
15 part of their directive, is to make sure that we're
16 using that resource in a, in a respectful and viable and
17 optimized manner. So, while we, we all sort of play
18 separately within the resource, as, as separate
19 operations and companies, it, it behooves us all to, to
20 manage that resource effectively.

21 CHAIR PAZ: Thank you. Do we have any other
22 questions?

23 (Pause)

24 And if you can state your name and locations.

25 COMMISSIONER HANKS: Pardon?

1 CHAIR PAZ: Your name and location, I, I'm
2 forgetting to remind you.

3 COMMISSIONER HANKS: Jim Hanks, at the Calipat
4 High School. I, I've got a list of questions here.
5 Came up about the energy needs already. And, I think
6 that probably — I think I used an EnergySource as a
7 single unit, just kind of a, base that we can kind of go
8 with, get in to larger—

9 CHAIR PAZ: Commissioner, can you speak
10 louder? The audience cannot hear your comments.

11 COMMISSIONER HANKS: This is, this is loud for
12 me.

13 (Laughter)

14 CHAIR PAZ: You're going to have to s—

15 (LAUGHTER)

16 I don't know if, if we move the—

17 COMMISSIONER HANKS: I'll try it out. You
18 want me to act like I'm mad?

19 CHAIR PAZ: Yes.

20 COMMISSIONER HANKS: Oh, okay.

21 (Laughter)

22 So, I, I think we can use EnergySource as a
23 base, for trying to figure out some of these issues.

24 So, I'll move from there to, to water issues. I

25 understand the geothermal uses the irrigation water,

1 that core production of the lithium, the finished
2 product. Do you have any idea how much of that water it
3 will take for, say, your operation?

4 MR. BENSON: Yeah. So, in our, in our EIR and
5 the water balance that we did, we're just over 3,000
6 acre feet per year for the mineral extraction process.
7 So, that's, that's our current estimate for water use on
8 that. So.

9 COMMISSIONER HANKS: Okay. Would that be
10 pretty much the same for Berkshire Hathaway's plant?

11 MR. TURNER: Yeah, actually it's, it's about
12 the same on a per ton of product. So, if you have a
13 larger plant, obviously you use more. But, on a per ton
14 of product, it — we're all in the same ballpark.

15 UNIDENTIFIED SPEAKER: How we say this.

16 COMMISSIONER HANKS: The reason, the reason I
17 brought that up, and I, I need a couple of follow up
18 questions. Would treated water, like we have in our
19 city for example. Would that meet the standard, the
20 quality standard, you would need for that final step?

21 MR. TURNER: Actually, treated water — the
22 lithium process needs cl— very clean water. And it
23 might be deionized water, or, or distilled water. And,
24 so, depending on which part of the overall process that
25 you're putting water in, it may have different

1 specifications on the quality of that water. But,
2 virtually, any water would be a start. The real
3 question is, what does it take, how much does it cost,
4 to make that gallon of water usable in this particular
5 portion of the process.

6 So, there's — you could start with virtually
7 any water stream, and some of it may be so uneconomic
8 that it, you wouldn't consider it after the first pass.
9 But others you, you might.

10 COMMISSIONER HANKS: Well, the reason I, I
11 brought that up, those that live, that are directly
12 impacted in this area, which is Calipat and Niland.
13 The, the issue with their cost of their treated water.
14 And, you know, we're talking about water constitution
15 and so forth. But I, I'm trying to look and see if this
16 is some way to compliment or enhance the water system in
17 Niland and Calipat? Is there some way that the
18 treatment plant could facilitate and, um, which would
19 open doors to other options? I'm not going to go into
20 those.

21 But also, in the area, we have people that are
22 interested in, in hydrogen. And they're talking about
23 some type of higher-level quality of water than
24 irrigation, putting in their own system. And, where
25 they're looking at is in the, this immediate area. So,

1 I was, I was wondering if there was — had been any
2 consideration of, of the groups going together? We know
3 there's a pipeline that goes down the railroad track to
4 Niland. It is not that far off, that far removed. And
5 if that's some, some possibilities. And, and I know
6 this, like you say, this isn't the time, but maybe some
7 of those tax dollars could work towards that. Okay?
8 So, I, I just throw that out there for consideration.

9 MR. BENSON: Well, I think, and sorry, but I
10 think I'll echo it. The technical challenges of water
11 probably aren't (INDISCERNIBLE) dirty water and clean
12 fresh water. There's probably a spot and a process to —
13 I think regulatory is the bigger, it's the — whose water
14 is that? That's maybe the bigger challenge.

15 COMMISSIONER HANKS: Yeah.

16 MR. BENSON: So you know.

17 COMMISSIONER HANKS: And then, in terms of if
18 you get into the competition, okay? There may be some
19 advantage to using municipal water. The wastewater.

20 MR. TURNER: I, I agree with Derek. It's
21 probably more of a regulatory challenge than a technical
22 challenge. Hydrogen, though, needs extremely clean
23 water. To the point where there's almost nothing else
24 in the water, except for, in some cases, a little bit of
25 sodium hydroxide because it enhances the electrolysis.

1 But, the treatment water from a treatment
2 plant, you know, technically it's viable. It's a matter
3 of economics, but, I think Ryan Kelley mentioned the,
4 the regulatory aspect. You'd have to get past that
5 hurdle. So, if we did, and, and it was close enough
6 source to give it a shot, we'd probably all be
7 interested in it.

8 COMMISSIONER HANKS: Okay. And, you know, I,
9 I have reached a point of frustration, I guess. That
10 there were still journalists out there questioning the
11 environmental issues of, of the lithium operations. And
12 we've gone over it and over it, and I keep thinking,
13 well what's so difficult to understand? But the
14 professor, he added in some things into a different eye,
15 so there may still be some things out there, so I'll,
16 I'm going to back off (INDISCERNIBLE). You know, with
17 the closed loop system, and seeing the same operation
18 here for years.

19 So, it, it brings up this question for, for
20 Jon. With some of the older plants, is there any
21 modifications that you've seen will have to be done to
22 address any environmental concerns for lithium recovery
23 at those sites?

24 MR. TURNER: For, for lithium recovery, it's,
25 it's — it really is a bolt-on technology. We have to

1 make sure that the quality of the injection brine at, at
2 the tail end of our geothermal power process is, is
3 sufficient to pass over to, to the lithium process for
4 recovery.

5 But, aside from that, it really is, is a bolt
6 on technology. Now, from an environmental aspect, it,
7 it does — not even in an environmental permitting
8 aspect, it does open up when you have, you've added on
9 new facilities and new project onto an existing. It, it
10 does have us look at, at our abatement systems and
11 evaluate any other, other impacts that may have been
12 permitted 30, 40 years ago.

13 But, as a standard, we're not going for the
14 minimum, we're going for what's right. So, I don't, I
15 don't think that there's going to be anything besides
16 that, that in — besides ensuring that our, our injection
17 brine quality is sufficient for the lithium
18 (INDISCERNIBLE) that'll impact the existing plants.

19 COMMISSIONER HANKS: Since, since 2012, I've
20 heard that, that lithium here was a very high grade. I
21 don't know whether that's changed, or what. Is there
22 any of this lithium that's a pharmaceutical grade?

23 MR. TURNER: So, lithium is lithium. And in
24 fact, when 7Up was originally made, the seven is the
25 molecular weight of lithium. They had lithium in it.

1 Just like Coca Cola had other —

2 COMMISSIONER HANKS: That was back in the days
3 when we were all happy.

4 (Laughter)

5 MR. TURNER: That's right. Lithium's lithium.
6 You change the grade of that lithium product by your
7 processing. So, it may have a, a tech grade, which is —
8 tech grade lithium carbonate might be a 90 percent pure,
9 for example. But, if you want battery grade, you make
10 it 99.5 percent pure. If you want ultra-high lithium
11 carbonate grade, then you make — you might make 99.995
12 percent pure. So, it's how you process it to get to
13 that end product.

14 COMMISSIONER HANKS: So, it kind of gives us a
15 range of wh—

16 MR. TURNER: Right.

17 COMMISSIONER HANKS: —where we're at with it.
18 Okay.

19 CHAIR PAZ: Commissioner Hanks?

20 COMMISSIONER HANKS: My last —

21 CHAIR PAZ: Oh, your last question?

22 COMMISSIONER HANKS: My last question.

23 CHAIR PAZ: We're in synch.

24 COMMISSIONER HANKS: Now I listened to all

1 your questions, so just —

2 (Laughter)

3 CHAIR PAZ: I'm the Chair, you gave me the
4 privilege.

5 COMMISSIONER HANKS: You're going to keep me
6 here till five o' clock anyway.

7 CHAIR PAZ: You gave me that privilege, Mr.
8 Hanks.

9 (Laughter)

10 COMMISSIONER HANKS: So, the, the last
11 question. This is important. With technology,
12 everything changes over a period of time. Electric
13 cars, hydrogen, (INDISCERNIBLE) and so forth. So, my
14 question is this: in the development of batteries, is
15 there any consideration to developing batteries, energy
16 storage for, on the magnitude to of like 200 megawatt
17 battery storage areas? Or (INDISCERNIBLE).

18 (Pause)

19 MR. BENSON: Individually by us?

20 COMMISSIONER HANKS: Well, I'm just —

21 MR. BENSON: Just in general?

22 COMMISSIONER HANKS: Yeah. I'll always hear
23 about electric cars, but I was just wondering —

24 MR. BENSON: Yeah, I mean, it's a bit more of
25 a market question. I mean, generally speaking, lithium

1 is a very light, you know, metal, conductivity, et
2 cetera. So, it, it's best application is a mobile
3 device, right? Your phone, your car.

4 For utility storage, I think there's going to
5 be a variety of batteries that will serve the
6 functionality of the utility. And, they may be heavy,
7 but you don't care, because they're sitting on the
8 ground and don't need to move. There are lithium
9 batteries that are being used for that. And there are
10 competing technologies that are emerging. So, that may
11 be one application where lithium is well suited, but
12 maybe not best suited. But I think in mobile
13 applications, they will be lithium batteries from here
14 forward.

15 COMMISSIONER HANKS: I was just — the reason I
16 brought that up is because, you know, we're looking at
17 transmission out of here. And with all the geothermal
18 potential that we've talked about, it would only seem to
19 me, because of the open spaces and so forth that are
20 available outside of the ag area, that battery storage,
21 this might be the appropriate place. It might be a
22 little more appropriate near the load center, but where
23 are you going to put them? You know? So, if it's next
24 to your transmission lines, I, I think there's some
25 potential there. And also, would be a, a boost to not

1 only geothermal, but the local area too.

2 So, I, you know, those are the, are my
3 questions. Okay, I'll turn it back to you.

4 CHAIR PAZ: Thank you. Commissioner Ruiz.

5 COMMISSIONER RUIZ: Okay, no.

6 CHAIR PAZ: You're okay. So, now we will turn
7 over to any questions from the Commissioners that are
8 joining us via Zoom. I will start with Commissioner
9 Weisgall.

10 COMMISSIONER WEISGALL: Well, as a
11 Commissioner who usually spends a lot of time talking,
12 I'm going to yield. I'm listening to all the various —
13 no. I, I do not have any questions. I want to commend
14 the panel. This was — I, I thought I knew most of these
15 issues, but I continue to learn a great deal. So,
16 thanks for an excellent discussion. I did have
17 questions about water and the, the duration of the
18 lithium that I know Professor McKibben is working on.
19 But, I think those all have been covered, so, no
20 questions here from Camden, Maine. Thank you, very
21 much.

22 CHAIR PAZ: Thank you. Commissioner Reynolds?

23 COMMISSIONER REYNOLDS: Yeah, this is Alice
24 Reynolds, from the Natural Resources Building in
25 Sacramento. I, also, really enjoyed hearing from the

1 panelists. I think there's a lot of interesting
2 information, and it will be informative for the
3 Commission's report. But, I don't have any questions at
4 this time. Thank you, Madam Chair.

5 CHAIR PAZ: Thank you. Commissioner Flores?

6 COMMISSIONER FLORES: I'll echo Commissioner
7 Reynolds' comments. It was a fascinating discussion,
8 but no questions at this time. Thank you.

9 CHAIR PAZ: Thank you.

10 MR. TURNER: Silvia, could I make a comment?

11 I'd like to make a comment relative to the, the
12 chemicals. We, we talked about that a little bit
13 earlier. Almost all the chemicals we use in these
14 geothermal plants, and that we will use in, in mineral
15 extraction are the same chemicals that we use in our
16 household.

17 Toilet bowl cleaners, et cetera. We talk
18 about hydrochloric acid. It's, it's almost ubiquitous
19 in use in the world and household chemicals. Sodium
20 hydroxide caustic. The concentrations vary, but the
21 precautions on how to handle it, how to use it, et
22 cetera, are virtually the same.

23 If you go to any, any chemical plant, will
24 have the same types of procedures in terms of chemical
25 handling, chemical offloading from, say, a tanker truck,

1 if you will. Or, or any other kind of truck.

2 So, we're not extraordinary relative to
3 chemicals. We are very, very ordinary. And the, the
4 key that we've done out here over the years is, we train
5 the people, and we train the people that are using them,
6 and we train, train, train. And we insist on safe, safe
7 policies to — in the use of, and the handling of those
8 chemicals.

9 CHAIR PAZ: Thank you for that clarification.
10 This concludes our panel conversation, and we will now
11 move to public comment. But again, thank you for all
12 the information you've shared.

13 We will now open the floor to any public
14 comments specific to the workshop presentation. A
15 reminder to limit all comments only to this topic. Keep
16 all comments to three minutes or less. And please state
17 your name for the record.

18 I want to remind participants and our
19 panelists, this is a public comment period, not a
20 question-and-answer period. All parties are welcome to
21 post questions for the record, but please understand
22 that the Commissioners and panelists will not be
23 providing responses. So, I will start with the physical
24 location. So, here in Calipatria, if there's anyone
25 wishing to make a public comment, you can start making

1 your way to the podium.

2 (Pause)

3 We're waiting for somebody, thank you.

4 (Pause)

5 MR. WYUTENS: Hi. Ken Wuytens, and I'm here
6 representing United Way from Imperial County. We're a
7 public service and charitable organization down here in
8 the valley. And, our three main focuses are education,
9 income, and health.

10 And, particularly talking about income here,
11 because I think these gentlemen are here trying to
12 provide us with a lot of jobs. I wanted to point out,
13 just coming up here on the radio, I heard that Ioneer, I
14 believe that the right name, broke ground today on
15 their Nevada facility, their lithium mine.

16 So, they broke ground, they hope to go into
17 production in 2024. So, we're behind. And, as I read
18 the local papers, I'm reminded of Pavlov's dogs.
19 There's a possible new tax source has the state and
20 local politicians in high salivation mode before a
21 single pound of lithium is produced. In addition to the
22 taxes, the property taxes, the sales taxes, the fuel
23 taxes, the income taxes, the (INDISCERNIBLE) fees, we're
24 already considering putting another tax on the, on this
25 industry.

1 They have made a commitment to make huge
2 capital investments. I hear the finger of 200 million
3 dollars per plant. That may be low in today's
4 inflationary environment. And at five percent, if they
5 can sell volumes at five percent, up at the higher
6 interest rates we're experiencing, that's \$10 million a
7 year just in interest. I could find a lot of places
8 where you could spend \$10 million around here.

9 This is all new technology. It may work, it
10 may be economically feasible, but that's still to be
11 discovered. And I'd point out that years ago, the lead-
12 acid battery was considered the height of technology.
13 Now, we've progressed through metal hydride, and up to
14 lithium, and who knows what might happen in ten or 20
15 years. Maybe these people who have invested all this
16 money and a new source, or a new type of battery comes
17 along. So, they need to be sure, assured, that they can
18 get some payback.

19 So, I would encourage our politicians, our
20 government officials, to please don't kill the goose
21 that may lay the golden eggs. You can't afford to lose
22 a new valuable industry, particularly if rumors of the
23 demise of the sugar industry down here are true. I've
24 just heard in a couple of the last couple days, that
25 this may be the last beet season.

1 So, let's see. Let's see if I can ready my
2 scribbles here. I would like, I would really hope that
3 we can work between the government officials and the
4 private industry and, and not have an adversarial
5 relationship, but be trying to help each other out. And
6 getting back to the taxes, the county has stated that
7 they need money for, a just one more —

8 CHAIR PAZ: You can wrap it up.

9 MR. WUYTENS: — for bridges and roads. So,
10 I'm thinking, well, private industry can, can build or
11 construct a bridge cheaper and faster than a government
12 agency can. So, maybe one of these companies might want
13 to say, "Okay, we'll build a bridge in exchange for
14 triple tax credits five years down the road." Or
15 something when they're in production.

16 So, we've got to think outside the box, and
17 try to make this a success for them, and the valley.
18 Thank you.

19 CHAIR PAZ: Thank you.

20 VICE CHAIR KELLEY: I would offer some
21 information. I, I know Mr. Wuytens, and I'm happy to
22 have —

23 (Pause)

24 Sorry, Ken? Ken. Hold on. I wanted to give
25 you the opportunity to — I do know you, and I am happy

1 to discuss what has occurred. I am not adversarial to
2 any of this industry. I've been in conversations with
3 them for ten plus years. Different faces, but I am
4 wholly invested in seeing this development occur. And I
5 would be happy to be able to share with you the
6 rationale of where we are and why we are.

7 MR. WUYTENS: Thank you, Ryan. I, I
8 appreciate that. And I, it's just, it seems like so
9 often down here, we try to get something done, and it
10 doesn't happen. And, this is, they're not the first
11 people that have come in the valley, and — but I know
12 it's tough to build. And I'm — I would like to see
13 permitting, our objective, our hope would be to get
14 permitting down to a matter of days rather than months
15 and years.

16 I know days is unrealistic, but to, to work
17 harmoniously rather than, you know, it ends up on
18 somebody's in-desk in the in-box and nothing happens for
19 months at a time. And so, we just, we need to work on
20 that. Anyway.

21 CHAIR PAZ: Thank you for your time.

22 MR. WUYTENS: I appreciate what you're doing.

23 MR. TURNER: Silvia, can I make another
24 comment, is that okay? Or not.

25 CHAIR PAZ: No. No.

1 MR. TURNER: Okay.

2 CHAIR PAZ: We don't want to have a —

3 (Laughter)

4 —back and forth. Thank you for asking though.

5 I'm going to see if there's, yes, welcome to
6 the podium.

7 (Pause)

8 MS. NOVA-FROELICH: My name is Maria Nova-
9 Froelich, I'm Mayor Pro-Tem of City of Calipatria. Just
10 wanted to share a quick update before, that the City of
11 Calipatria would be happy to work with the developers in
12 regards to getting municipal water. Regarding from our
13 wastewater treatment facility. We do serve the
14 Calipatria State Prison. I understand that the water
15 tank that is there is owned by the state of California.
16 Because it is a State of California State Prison.

17 And, Golden State Water provides them with
18 water. So, if, if possible, if you write a letter to
19 Golden State Water to be identified as a, as part of the
20 service area, Region 3. Because, they do serve
21 Calipatria, they serve Niland. So, you would just be
22 able to, you know, included. You might have to go
23 through the PUC, through a hearing, or something. Maybe
24 you could ask it to get fast-tracked. But we would be
25 more supportive than, you know, more than happy to be

1 supportive in regards to that aspect.

2 Want to say that although we did support the,
3 the tax, I am very supportive of the lithium project.
4 Very supportive of the, of the developers coming. And,
5 very grateful for Mr. Hanks and Mr. (PHONETIC) Cowney,
6 and other local Commissioners and the Commission as a
7 whole for the lithium project.

8 We are very excited about the lithium project.
9 We think it is a game changer for our community. And,
10 we believe that, you know, we're, we're excited about
11 the, what could happen and what it could bring to our
12 community. But, it can't — there had been a time — and
13 I know my time's almost up.

14 There had been a time where we wanted to serve
15 the city, the, the townsite of Niland, because our
16 wastewater plant has the capacity to be able to serve
17 Niland. And we, there had been money invested in to,
18 for us to serve the Niland. And it didn't happen. But,
19 there's been a lot of talk about annexation, I don't
20 think we could do it right now, but I think that writing
21 a letter to Golden State Water to be part of the service
22 area maybe could be a quick fix to provide water to your
23 geothermal plant.

24 Thank you very much.

25 CHAIR PAZ: Thank you. Is there any other

1 speakers here wishing to make a public comment?

2 (Pause)

3 We have one more coming to the podium.

4 (Pause)

5 MR. MARIZOW(phonetic): Hi. My name's Michael
6 Marizow (phonetic) from Brawley. I've been following
7 the stories for about four years. I think the paper
8 that first generated the story that came out of the, the
9 Desert Sun and, uh, and uh, I don't know when. Right?

10 And so, anyway, I'm really optimistic in
11 regards to this plant. I, I hope they, they get their
12 act together in regards to what the (INDISCERNIBLE)
13 need. (INDISCERNIBLE) talking about taxes. It seems
14 like greeds. People are — politicians are a little bit
15 greedy. Trying to get some money out, and say, "Hey, we
16 gotta get this, and get that," before it's even, even —
17 nothing's come out yet.

18 You know? If they step back and, they should
19 say, "You know what? We're not going to tax you guys
20 until after you get it all? You know? And, like maybe,
21 six months, a year. Let's get this project going.

22 I mean, look at the sto— here, the Imperial
23 County is usually, right now, the, the unemployment rate
24 is about 16 percent. Usually, in a good year, in a good
25 month, it's 22 percent. Unemployment rate. Right? So,

1 it would help the community, it would help here in
2 Calipat.

3 I worked on retirement at the Calipatria State
4 Prison when they said we're going to come in and this is
5 what's going to happen at Calipat. What happened?
6 Nothing. Right? Nothing. Right? So, anyway, I hope
7 this project gets done. And, I wish — when it, when it
8 first being developed and talking about from the Desert
9 Sun and the newspapers, and somebody say, "Wow. If I
10 had \$100 million, I could invest." Right?

11 It's, it's still not public yet. It's all
12 private. Right? Private, private industry, private
13 funding, all this kind of stuff. Got Elon Musk and all
14 these people trying to pump in \$100 million with their
15 money, to get this off the ground. Why? Because
16 there's a lot of revenue.

17 And, this is the future. Right? This is
18 green energy, also. And, a lot of technology that's
19 going to affect the kids, the schools, and here in
20 Calipat, so people can come and get some good wage, good
21 income. And, this is, this is the future. Know what I
22 mean? Green energy. So, I hope they get their ducks in
23 a row. I hope this thing comes together. And, I hope
24 some day become (INDISCERNIBLE) so, you know I —

25 (Laughter)

1 But anyway, I hope it — and, and thanks guys,
2 you know, for the information that you guys shared on
3 those topics. So, anyway, thank you.

4 CHAIR PAZ: Thank you. I do want to just tell
5 you that I understand both the perspectives of the
6 developers, and the public and the tax versus no tax.
7 And those are contentious, you're negotiating, it's
8 always going to be tense when you're negotiating. It's
9 not that there's animosity, it's going to be figured
10 out.

11 And I also want to put in perspective that,
12 these usually are low-income communities, right? Where
13 projects like this come in and we expect that we're
14 going to be, because we're so hungry for jobs, that
15 we're not going to ask for anything in return. And
16 that's been cyclical. I mean, I live in the Eastern
17 Coachella Valley. It's happens all throughout Imperial
18 Valley.

19 No one will go to Indian Wells and expect to
20 put in a project and then get, you know, not be taxed or
21 similar issues like that. So, I think we're in a
22 transition of how things are, and our environmental
23 justice communities have asked for additional resources.
24 I know that at the end, it's going to be resolved
25 between the people who are negotiating, but I did want

1 to uplift that we shouldn't panic because there is a
2 discussion about a tax.

3 MR. MARIZOW(phonetic): Well, there was an
4 article, maybe about a month ago, in regards to the
5 economic plan that had already developed. Where, Ms.,
6 if I, I think — Calipat had, Calipat and Niland were
7 excluded from it. And this was in the, this was in the
8 newspaper that I read it, in this regard (INDISCERNIBLE)
9 about a month (INDISCERNIBLE).

10 And I don't think that's cool.

11 VICE CHAIR KELLEY: That's not true. The —

12 MR. MARIZOW: But, I mean, it was in the
13 newspaper.

14 VICE CHAIR KELLEY: Yeah, just because it's in
15 print doesn't make it true.

16 (Laughter)

17 MR. MARIZOW: Well, I'm just —

18 (Laughter)

19 I'm just trying to (INDISCERNIBLE) alright?

20 CHAIR PAZ: So, maybe —

21 MR. MARIZOW: You guys are the ones dealing
22 with that, so I hope it's not true.

23 VICE CHAIR KELLEY: Not true.

24 COMMISSIONER HANKS: Are we going to open this
25 up?

1 CHAIR PAZ: No —

2 COMMISSIONER HANKS: I'm going to get in the
3 middle of it.

4 (Cross-talk)

5 CHAIR PAZ: Okay, okay. We're going to stop
6 it now. But thank you. Thank you for your comment.
7 Yeah, thank you for your comments.

8 MR. MARIZOW: (INDISCERNIBLE)

9 CHAIR PAZ: Speak to your representative
10 after the meeting.

11 (Laughter)

12 (Cross-talk)

13 CHAIR PAZ: That's okay. Good conversations.
14 I don't see — do I see anybody else here? I
15 have one other person. And this time, we'll just hear.

16 MR. ROMERO: I'm Ricardo Romero, with Comite
17 Civico del Valle. I just wanted to give a, some facts.
18 I've heard a lot about the golden goose. So, we have
19 over 20 nations in the world trying to go
20 environmentally friendly with the green energy.

21 The global demand for lithium is going up.
22 Geothermal's already in place, so the only thing they
23 need to work on is extracting the lithium. If, if
24 there's a history of the industry taking advantage, for,
25 for these communities previously. So, it's a necessity

1 to, to establish those taxes before we start extracting
2 them.

3 But, alright, I've —

4 (Pause)

5 (INDISCERNIBLE) Sorry (INDISCERNIBLE).

6 CHAIR PAZ: Thank you. And, please, anyone
7 who has spoken, if you didn't fill out the public
8 comment form, if you can just fill it out for the
9 record. There is a public comment form here at the
10 podium.

11 So, seeing no other hands raised here in
12 Calipatria, I will check if there is — if there are any
13 individuals wishing to speak in Sacramento?

14 COMMISSIONER REYNOLDS: No individuals are
15 here to speak. Thank you.

16 CHAIR PAZ: Thank you. So, I will be calling
17 on some places where I believe there's no one, but I
18 have to call them. So, are there any individuals
19 wishing to speak in Franklin Michigan?

20 (Pause)

21 Are there any individuals wishing to speak in
22 Maine?

23 COMMISSIONER WEISGALL: No, there are not.

24 CHAIR PAZ: Thank you. Are there any
25 individuals wishing to speak in Los Angeles?

1 (Pause)

2 There are none.

3 We will now move to people participating
4 through Zoom. The CEC staff, are there any hands
5 raised, or comments entered in Zoom?

6 (Pause)

7 MS. LOZA: Okay. So, a reminder, if you're
8 joining us by zoom on the computer, please use the
9 raise-hand feature. If you're calling in, please dial
10 star-nine to raise your hand and star-six to unmute your
11 phone line.

12 (Pause)

13 Okay, I don't see any hands raised, but we do
14 have a few comments in the Q&A box. So, I'll go. For
15 the first one, is from Anonymous Attendee. And it says:

16 "They all discussed water recycling but did
17 not mention exactly where the water they purchased goes.
18 It will go to evaporation cooling, injection into the
19 geothermal resource, combination with the lithium to
20 become lithium hydroxide, and some to toilets. Can they
21 describe how much goes to each?"

22 The next comment is from Charlene Wardlow.

23 And it says:

24 "Has the Colorado River water been tested for
25 lithium concentration? It's the valley's drinking water

1 supply.”

2 The next comment is also from Charlene
3 Wardlow, and it says:

4 “The Geysers is a steam dominated resource
5 completely different from the Salton Sea resource, which
6 is 100 percent water.”

7 The next comment is from James Blair. It
8 says:

9 “Thank you very much for the helpful
10 explanation and discussion of the waste streams.
11 Besides some of the problems already discussed related
12 to water, iron-silica filter cakes, lab waste and acid,
13 it would be useful, or helpful, to hear more of the lead
14 sulfide, which I believe is also mentioned in the
15 EnergySource ATLiS EIR. How will lead be stored and
16 disposed?”

17 And the last comment is from Galaxy Tab S4 de
18 Dora. And it’s in Spanish, so I will have one of the
19 interpreters go into the English channel and translate
20 it for us.

21 (Pause)

22 Jasmine, if you can go into the English
23 channel and translate the Spanish comment—

24 MS. PREZEAU: Hi, Erica? I’m in the English
25 channel. I am, I am in the English channel, and I do

1 not see the comment.

2 MS. LOZA: (INAUDIBLE) Oh, it looks its, okay
3 it looks like its been texted, so I will read it.

4 MS. PREZEAU: Okay.

5 MS. LOZA: It says:

6 "There has been talk of chemicals that we use
7 daily and we use them under our responsibility. But
8 here, we are talking about lithium, and its extraction,
9 and I believe, the impact on health and the environment
10 will be harmful. Remembering that there are several
11 communities in the Salton. Now, I ask you, knowing that
12 lithium is a chemical that can harm our communities,
13 what responsibilities would you take if they were to
14 damage our health or damage our environment? How safe
15 will this lithium project be? My name is Cecilia
16 Armenta, and I represent Salton City."

17 Okay, those are the last comments from Zoom.

18 Back to you, Chair Paz.

19 CHAIR PAZ: Thank you. Again, thank you for
20 all the participants, and, you know, the spirit of the
21 discussion. And thank you for all the panelists for all
22 the information and continue to do what you're doing.

23 We will go back on the agenda to take care of
24 the administrative items. So, if we can pull those back
25 up on the screen.

1 UNIDENTIFIED SPEAKER: Do we have quorum now?

2 CHAIR PAZ: Oh, thank you. So, I do — we
3 achieved — we reached quorum at 2:07.

4 UNIDENTIFIED SPEAKER: Oh, good.

5 CHAIR PAZ: So.

6 MR. TRUJILLO: Silvia, can I make a comment
7 while we're — before we leave lithium?

8 CHAIR PAZ: Do you want to make a comment?
9 Yes.

10 MR. TRUJILLO: I do.

11 CHAIR PAZ: Yes.

12 MR. TRUJILLO: I do.

13 CHAIR PAZ: There will — well, there will also
14 be general public comments where you could make a
15 comment, of if you want to wait or —

16 MR. TRUJILLO: When would you prefer?

17 CHAIR PAZ: General public comment.

18 MR. TRUJILLO: Okay.

19 CHAIR PAZ: Thank you.

20 So, these are administrative items. Ahead of
21 you, there's mostly the meeting action minutes that
22 either we ran out of time or lost quorum by the time we
23 got them at previous meetings. So, I would need a
24 motion to approve them.

1 VICE CHAIR KELLEY: Motion to approve.

2 COMMISSIONER CASTANEDA: Second. Do we have a
3 quorum?

4 CHAIR PAZ: Yes, we do. There is a motion by
5 Vice Chair Kelley, and there is a motion, a second by
6 Mr. Castaneda. Can we have roll call, please?

7 MS. LOZA: Okay. So, Commissioner Castaneda?

8 COMMISSIONER CASTANEDA: Yes.

9 CHAIR PAZ: Oh, sorry, sorry. I think we need
10 to public comment —

11 COMMISSIONER CASTANEDA: Oh.

12 CHAIR PAZ: — before we take the roll. So, I
13 almost skipped that. So, if we can do public comment.

14 COMMISSIONER CASTANEDA: I gave away my vote.

15 (Laughter)

16 CHAIR PAZ: So, at this time we will take
17 public comment related only to the administrative items.
18 So, if there's anyone here in Imperial who has a public
19 comment, now is the time.

20 I see none. Is —

21 Is there anyone in Sacramento?

22 COMMISSIONER REYNOLDS: Wishing — there's no
23 one here wishing to make public comment.

24 CHAIR PAZ: Thank you. Anyone in Franklin,
25 Michigan?

1 Is there anyone in Maine?

2 COMMISSIONER WEISGALL: No, there is not.

3 CHAIR PAZ: Thank you. Are there any
4 individuals in Los Angeles?

5 (Pause)

6 Thank you.

7 So, seeing none, we will now see if there's
8 anyone participating through Zoom who wishes to make a
9 public comment on this item.

10 (Pause)

11 MS. LOZA: As a reminder, if you're joining us
12 by Zoom on the computer, please use the raise-hand
13 feature. If you're calling in, please dial star-nine to
14 raise your hand, and star-six to unmute your phone line.

15 (Pause)

16 VICE CHAIR KELLEY: I feel like I should be
17 somewhere exotic right now.

18 (Laughter)

19 MS. LOZA: Not seeing hands raised or any new
20 comments in the Q&A box, so back to you, Chair Paz.

21 CHAIR PAZ: Well, thank you. Now, let me ask
22 if there's any discussion on this item?

23 We had a motion and a second, so if we can do
24 roll call please.

25 MS. LOZA: Commissioner Castaneda?

1 COMMISSIONER CASTANEDA: Yes.

2 MS. LOZA: Commissioner Colwell, is absent.

3 So, Commissioner Dolega is absent.

4 Commissioner Flores?

5 COMMISSIONER FLORES: Yes.

6 MS. LOZA: Commissioner Hanks?

7 COMMISSIONER HANKS: Yes.

8 MS. LOZA: Vice Chair Kelley?

9 VICE CHAIR KELLEY: Yes.

10 MS. LOZA: Commissioner Lopez? I believe he's
11 absent.

12 Commissioner Olmedo? Absent.

13 Vice Chair Paz?

14 CHAIR PAZ: Yes.

15 MS. LOZA: Or, vice — Chair Paz, sorry.

16 CHAIR PAZ: Yes.

17 MS. LOZA: Commissioner Reynolds?

18 COMMISSIONER REYNOLDS: Yes.

19 MS. LOZA: Commissioner Ruiz?

20 COMMISSIONER RUIZ: Yes.

21 MS. LOZA: Commissioner Scott?

22 Commissioner Soto?

23 Commissioner Weisgall?

24 COMMISSIONER WEISGALL: Yes.

25 MS. LOZA: Okay. We have seven yesses — or

1 eight. Sorry.

2 CHAIR PAZ: Thank you.

3 Next slide, please.

4 Okay, so we had set up some time to speak
5 about the budget. We were hoping to have a presentation
6 on the current status of the budget proposals and final
7 budget decisions. Activity around the budget is
8 continuing, and it is just unfortunate timing to try to
9 have someone from the Department of Finance.

10 So, at this time we will still welcome
11 Commissioner discussion, and I will lean on Vice Chair
12 Kelley to lead that discussion.

13 VICE CHAIR KELLEY: Thank you, Chair Paz.
14 Last night, as already been spoken to in a reference,
15 there was Senate Bill 125, and Assembly Bill 208, that
16 were approved by a two thirds majority in both houses.
17 And, they are expected to be signed. They were mirror
18 bills in each house. So, they're expected to be signed
19 today by the Governor.

20 What was in reference was that there is a
21 lithium tax that is part of that bill language. But
22 there are other items that are in, in those bills. And
23 that is reference items from what Imperial County put
24 forward in February of the Lithium Valley Economic
25 Opportunity Investment Plan.

1 There is money for a specific plan of Lithium
2 Valley, programmatic of Lithium Valley, an
3 infrastructure assessment, roads, bridges, rail, air,
4 utilities. There is also money for a health assessment
5 for Imperial County.

6 And, as well as community outreach monies, and
7 supporting a Lithium Valley development office here to
8 be able to help shepherd business development. And when
9 we talk about the specific plan and programmatic EIR, we
10 are talking about helping geothermal, and lithium
11 mineral and other mineral extraction. But, beyond that,
12 we're talking about manufacturing, associated business
13 opportunities, and everything else that we have been and
14 become aware of. We've talked to these companies, and
15 we are including them in to our specific plan.

16 So, there were a (INDISCERNIBLE), but I know
17 that the one that is getting the most attention is the,
18 the lithium tax. It is based off of metric ton at a
19 fixed dollar amount. \$400 per metric ton, up to 20,000
20 metric tons. 600 up to 30,000 metric tons. And, \$800
21 for every metric ton above that. And there is also a
22 language that is in there that allows an assessment of a
23 gross percentage be applied. And, the timeline on that
24 is, I believe, 18 months, to be able to come back with a
25 report.

1 No, at this moment, I don't believe anyone
2 will be in production in 18 months. But I would be
3 happy to hear different. But this was not — the County
4 of Imperial was not in negotiations with industry over
5 these price points. But we did pr— put forward a plan.
6 The state incorporated that plan in language, and there
7 was a negotiation between industry and the state. And
8 that is the bill that is about to be signed.

9 And we continue to be here to work with
10 industry, and with IID, and the community to see Lithium
11 Valley be successful.

12 CHAIR PAZ: Thank you. Is there any
13 Commissioner discussion at this point?

14 (Pause)

15 COMMISSIONER HANKS: Yeah, I got a question.
16 And, it goes along with what Mr. Wuytens had to say.

17 CHAIR PAZ: Can you project louder, pl— thank
18 you.

19 COMMISSIONER HANKS: Yeah, I, I have a
20 question that goes on along with Mr. Wuytens. At some
21 point in time, will it, with these analyses coming up,
22 will it inform us of a comparison between what the tax
23 collects and what the owners of the mineral rights
24 receive?

25 (Pause)

1 CHAIR PAZ: Do you have any knowledge of that?

2 VICE CHAIR KELLEY: No, I believe that's going

3 to be —

4 (Crosstalk)

5 COMMISSIONER HANKS: —come out and study it.

6 It needs to come back.

7 VICE CHAIR KELLEY: The study that's in the
8 bill references a gross production versus a flat fee,
9 and how that balances out with industry. I don't
10 believe it addresses any of the mineral rights with
11 plant owners.

12 COMMISSIONER HANKS: It wont, it won't be able
13 to calculate it out until you, you do an analysis and
14 see what the price of lithium is, and whether it's
15 escalated or whether it's lowered. If there's a
16 possibility that it lowers to a point where the tax
17 actually collects more money than the owners of the
18 royalty. And I'm not talking about the developers.

19 (Crosstalk)

20 UNIDENTIFIED SPEAKER: That won't happen
21 because there won't be any lithium.

22 COMMISSIONER HANKS: And in the case of
23 Berkshire Hathaway, then there just so it's almost 100
24 percent private individuals.

25 UNIDENTIFIED SPEAKER: Four hundred bucks,

1 huh. Four hundred bucks in—

2 CHAIR PAZ: Are there any other comments from
3 Commissioners here?

4 Seeing none, I will see if Commissioner
5 Weisgall, do you have any comments?

6 COMMISSIONER WEISGALL: I'm sorry, did you
7 call on me, Silvia?

8 CHAIR PAZ: Yes.

9 COMMISSIONER WEISGALL: Sorry, I was coughing.
10 No, no comments. Thank you.

11 CHAIR PAZ: Thank you. Commissioner Reynolds?

12 COMMISSIONER REYNOLDS: No comments from me,
13 either. Thank you.

14 CHAIR PAZ: Thank you. Commissioner Flores?

15 COMMISSIONER FLORES: No comments here, thank
16 you.

17 CHAIR PAZ: Thank you. Commissioner Dolega is
18 absent. So, we will now open for public comment
19 relating to the 2022-'23 California budget, specific to
20 Lithium Valley issues. If you are here in Calipatria,
21 please proceed to the podium. To those that are not
22 able to, please raise your hand and we will bring a
23 microphone to you.

24 If you don't wish to remain anonymous, please
25 spell your name and state your affiliation, and a

1 reminder to complete the card. And, I believe Mr.
2 Turner maybe your comment doesn't have to wait until
3 general public comment, because I sense it's related to
4 the discussion. So, after (INDISCERNIBLE) you can.

5 MR. TURNER: It's, I'll, I'll wait till you
6 tell me when.

7 (Laughter)

8 MS. NOVA-FROELICH: My name is Maria Nova-
9 Froelich, I'm the Mayor Pro-Tem from the City of
10 Calipatria. I'm also the director of the Family
11 Resource Center here at the school district. So, my — I
12 have a comment, and I'm not sure if I'm able to ask the
13 question.

14 So, my question to Mr. Kelley on what was
15 approved yesterday. Was — does it include legislation
16 that will have earmarked 30 percent to the North End?

17 VICE CHAIR KELLEY: There's two — yes.

18 MS. NOVA-FROELICH: Okay. Good. Because I
19 thought it had gone away, I'm like, oh, no. So, the
20 other comment I want to make is — my environmental
21 friends. In regards to the 15 percent that's going to
22 be designated to them. Is that going to be taken out
23 of the 30 percent that's going to the North End, or is
24 that going to be shaved off of the County?

25 VICE CHAIR KELLEY: Are you talking about the

1 distribution?

2 MS. NOVA-FROELICH: Yeah. There's like 15
3 percent that I thought that I saw that was strictly for
4 environmental.

5 VICE CHAIR KELLEY: Right, so there, there
6 will be a conversation. Those are buckets with
7 placeholders, and we, we did share it on Tuesday. 50
8 percent for infrastructure, and local government, and
9 mitigation. So, that — nothing is written in stone,
10 there will be a conversation that we're going to have.

11 MS. NOVA-FROELICH: Okay. So, we would like
12 to be included in that. And then also on the 30
13 percent, we're wondering if that's going to Brawley or
14 Calipatria, Niland, Bombay Beach, Salton City.

15 VICE CHAIR KELLEY: So they —

16 MS. NOVA-FROELICH: — cause, once you include
17 all of those, then —

18 VICE CHAIR KELLEY: So, they, the actual
19 language specifies exactly which communities we're
20 talking about.

21 MS. NOVA-FROELICH: Okay.

22 VICE CHAIR KELLEY: It says, Bombay, Niland,
23 Calipatria, Westmorland and Brawley, as the areas of
24 significant impact. And all other cities and towns of
25 Imperial County, are the areas of not-significant

1 impact.

2 MS. NOVA-FROELICH: Okay. And then, back to
3 the environmental. Pardon me, Mr. Hanks. Back to the
4 environmental, the 15 percent that's going to go to my
5 friends, because they are my friends, I, my concern is
6 that —

7 VICE CHAIR KELLEY: Maria, all those, all
8 those percentages are, it's a frame work. And, we're
9 going to have a conversation.

10 MS. NOVA-FROELICH: Okay.

11 CHAIR PAZ: If I just, let me just, the
12 questions. I was okay with him clarifying from the
13 budget angle, but I think a lot of the questions you are
14 raising are county, now, decisions, now that the
15 language has been approved. So, at this —

16 MS. NOVA-FROELICH: But, I do want to be
17 included for a comment.

18 CHAIR PAZ: So, you can ask, yeah. You can
19 ask the questions, but Mr. Kelley —

20 MS. NOVA-FROELICH: Is not supposed to respond
21 to it. I, I understand.

22 VICE CHAIR KELLEY: (INDISCERNIBLE)

23 MS. NOVA-FROELICH: So, the 15 percent that
24 goes to environmental. My concern would be, is it — if
25 there's an opportunity to cap 'em, because it appears

1 that it might go to the same five or, five or six
2 environmental agencies. And I'm just thinking that that
3 part is not fair either. Although they're my friends, I
4 think that if, you know, I think that environmental
5 people tend to get rich out of the backs of
6 environmental issues. And, I'm very outspoken and some
7 people might not like it. But it's the truth. And I
8 think that it needs to be capped at a certain percentage
9 when we actually look at it. Because of the fact that
10 it, it's going to take away from a lot of what's
11 actually — it's supposed to go to, in regards to back to
12 the community. (INDISCERNIBLE).

13 CHAIR PAZ: Thank you.

14 MS. NOVA-FROELICH: Thank you very much. Oh,
15 I've, just to finalize my comments in regards to the —
16 if you need to change the franchise water agreement, we
17 will, if we're allowed by the PUC, to provide water to
18 the, to the plants. Thank you very much

19 CHAIR PAZ: Thank you.

20 COMMISSIONER HANKS: Maria, the 30 percent
21 that goes to the cities. (INDISCERNIBLE) saying of how
22 much of that Calipat gets?

23 MS. NOVA-FROELICH: Well, when I was
24 advocating for the North End, I was hoping for
25 Calipatria and Niland. But now, it's looking like it's

1 going to be split up into —

2 COMMISSIONER HANKS: But what, what's your
3 understanding that in the bill as it is proposed —

4 MS. NOVA-FROELIC: I think it's going to
5 include all the cities. But I'm not sure, I haven't
6 seen it. I haven't seen it.

7 COMMISSIONER HANKS: So, you're at the mercy
8 of the vote from the Board of Supervisors.

9 CHAIR PAZ: Thank you for your comments.

10 MS. NOVA-FROELICH: Really quick.
11 Respectfully requesting to be part of it. Thank you
12 very much.

13 CHAIR PAZ: Thank you. Mr. Turner, you had a
14 public comment on the topic of the budget?

15 (Pause)

16 UNIDENTIFIED SPEAKER: That's you.

17 MR. TURNER: Oh, me?

18 CHAIR PAZ: Yes.

19 (Laughter)

20 UNIDENTIFIED SPEAKER: You're up.

21 (Laughter)

22 CHAIR PAZ: You can speak, maybe from — that's
23 fine. Yeah.

24 MR. TURNER: So, my comment, in, in, you know,
25 kind of a little bit of a roundabout way, gets to this.

1 And that is, someone said, or made the statement about,
2 you know, these technologies to extract lithium are new
3 and novel. These, a lot of these technologies have been
4 around since at least the 1960's. I worked for Dow
5 Chemical for 20 years. I have friends that had patents
6 in the 1960's for lithium extracted from hyper-saline
7 brines. Okay?

8 The issue that we all face, every one of us,
9 is not, not so much the technology and — can we get,
10 make it work. It's can we make it work economically, so
11 that there's enough profit to attract investors to
12 provide the money so that we can build the plants, and
13 make the product. And so, I know all of look at, we can
14 make it, we can technically make it better, and better,
15 and better. But, can you make it so that it's saleable
16 under today's market?

17 It wasn't very many years ago that lithium for
18 batteries had virtually almost no value. We didn't see
19 big batteries in cars, we saw, we saw alkaline batteries
20 in the stores. So, our, our real challenge is, making
21 this stuff as economically as we can, so that we can
22 attract financing to build the plants, make a margin so
23 that either our shareholders or the investors get a
24 return on their investment that's economical. I would
25 just ask that everybody keep that in mind when you're

1 talking about taxes or, or anything else. We, we're
2 working very hard to, to make that thing happen.

3 The last thing I would say, is let's don't
4 study this for 18 months. I mean, that means
5 everybody's going to work one day a week. Let's, let's
6 get this study done. It's a very important study, let's
7 do it in six months. If we put our minds to it, we can
8 do that. But, otherwise, we just study it today.

9 It'll turn out just like the Salton Sea.
10 We've studied the heck out of that for 20 years now,
11 since we knew that we were going to transfer water to
12 San Diego. And, we're where we are. So, we can, we can
13 study this thing for six months, get to a resolution
14 that works for people, and then get on with the show.

15 It will help us as developers attract
16 financing. Because I forget who mentioned it, but the
17 uncertainty in what the, this could bring about, makes
18 an investment, an investor, a little bit hesitant about
19 just writing a check.

20 CHAIR PAZ: Thank you. Thank you for that
21 perspective. We have another public comment.

22 MS. FIGUEROA: Hello, good afternoon. My name
23 is Janita Figueroa from Comite Civico del Valle. My
24 comment is regarding the legislation on the Lithium
25 Valley packages and the taxes. I would recommend this

1 Commission to continue supporting the taxes like they've
2 been tasked. You know, our Assembly Members see the
3 merits that this can bring and see the benefits that it
4 can bring to our communities. And I think that it's
5 fair that industry pay their fair share of coming into
6 our communities.

7 When you look at the, at the tiered packages,
8 you know, maximum, it'll be one percent on their
9 revenue. So, I think it is what is fair. I think this
10 Commission, its job is to think of the benefit that it
11 can bring these communities and the people. And the
12 people are in favor. People have spoken out, so I would
13 continue to urge them to be in support of these
14 measures, like SB 208 and further.

15 COMMISSIONER HANKS: Question.

16 CHAIR PAZ: Thank you.

17 COMMISSIONER HANKS: One percent, what was the
18 — what did you base that on? What was the number?

19 MS. FIGUEROA: Um, on the 800 per, per ton on
20 the tiered system.

21 COMMISSIONER HANKS: Yeah. Well. You said it
22 was one percent of their —

23 MS. FIGUEROA: Yeah, of revenue.

24 COMMISSIONER HANKS: Of the revenue. What was
25 the, how do you know what their revenue that you were

1 basing that out of?

2 MS. FIGUEROA: That, that's basing on the
3 amount of the tenth per, the, the categories that were —

4 COMMISSIONER HANKS: Somebody, somebody gave
5 you that number. That one percent.

6 MS. FIGUEROA: Yeah.

7 COMMISSIONER HANKS: So, what is the number?
8 What is the revenue going to be based off of?

9 MS. FIGUEROA: Current value of lithium.

10 (INDISCERNIBLE)

11 COMMISSIONER HANKS: We don't know what the
12 price here is. How do you, how do you know?

13 MS. FIGUEROA: I'm sorry, I just wanted to
14 comment on that.

15 CHAIR PAZ: Thank you. Thank you. But, that,
16 I did see, I don't know where I read it, but there is,
17 out there, a number on the — and I believe I heard it
18 from the audience. It is around the current market
19 value, probably, of lithium. And I think that's the
20 number that's being referenced. Because I have heard it
21 before coming here, just don't recall where I read it.

22 UNIDENTIFIED SPEAKER: We're calculating that
23 based on the current value right now, I don't know how
24 accurate that is. But I think that's —

25 UNIDENTIFIED SPEAKER: Yeah, that's,

1 some (INDISCERNIBLE)

2 COMMISSIONER HANKS: We're calcu—

3 CHAIR PAZ: Yeah.

4 COMMISSIONER HANKS: You're, you're basing it
5 on the current value, but just like with the solar
6 panels, you know, we —

7 DR. MCKIBBEN: I'd like to make a comment.

8 CHAIR PAZ: Thank you. You have a public
9 comment, Mr. McKibben. You can state your name from
10 there, and.

11 DR. MCKIBBEN: Okay. Mike McKibben, UC
12 Riverside. I just want to remind everybody that the
13 mineral industry is taxed three times. They're taxed
14 for identifying the resource in the ground. They're
15 taxed for severing it from the ground, for mining it.
16 And then, they're taxed when they sell it.

17 These additional taxes imposed by the state
18 are on top of that. So, now they're being taxed four
19 times.

20 CHAIR PAZ: Thank you.

21 DR. MCKIBBEN: Most commodities don't get
22 taxed four times.

23 CHAIR PAZ: Thank you. Are there any public
24 comments?

25 (Off mic)

1 (Laughter)

2 Are there any other public comments?

3 Seeing none here in Calipatria, I will see if
4 there is anyone in Sacramento who is wishing to speak.

5 COMMISSIONER REYNOLDS: No one here wishing to
6 speak, thank you.

7 CHAIR PAZ: Thank you. Is there anyone in
8 Franklin, Michigan?

9 (Pause)

10 Is there anyone in Maine?

11 COMMISSIONER WEISGALL: No, there is not.

12 CHAIR PAZ: Anyone in Los Angeles?

13 (Pause)

14 Now I will turn it to the CEC to see if there
15 are any public comments on the budget discussion that
16 came through the Zoom platform.

17 MS. LOZA: Okay. If you are joining us by
18 Zoom on the computer, please use the raise-hand feature.
19 If you've called in, please dial star-nine to raise your
20 hand, and star-six to unmute your phone line.

21 (Pause)

22 Okay, there are no hands raised and no new
23 comments in the Q&A box, so back to you Chair Paz.

24 CHAIR PAZ: Thank you. And I think we should
25 now be on slide number 21.

1 (Pause)

2 (Laughter)

3 So, this is a discussion and possible action
4 on the draft findings and recommendations that were
5 identified during the incentive workshop, held on May
6 26th. You were all provided, and it has been docketed.
7 A draft document that shares findings and
8 recommendations from that workshop. Again, it's only
9 meant to capture what was in the discussion. That's
10 really not exactly the way that the report is going to
11 look. But the intent is that we start gaining consensus
12 on some of the items, workshop for workshop.

13 So, at this point if there are any questions,
14 recommendations, on the draft findings.

15 (Pause)

16 I do not see anyone here in Calipatria from
17 the Commissioners, so I will ask Commissioner Weisgall,
18 do you have any comments, questions, recommendations?

19 COMMISSIONER WEISGALL: I do not, Chair Paz.
20 I — and, I mean, recognizing you, right. This is, this
21 is sort of a compendium of what we discussed and will
22 not necessarily be what's in the final report. But I
23 think it, I think it did a good job of capturing the,
24 you know, really condensing that several hours of, of
25 discussion on incentives. So, I think it's a good

1 document.

2 CHAIR PAZ: Thank you. Are there any
3 questions from Commissioner Reynolds?

4 COMMISSIONER REYNOLDS: No. Thank you, Madam
5 Chair,

6 CHAIR PAZ: Thank you. Any questions,
7 Commissioner Flores?

8 COMMISSIONER FLORES: No questions at this
9 time. Thank you.

10 CHAIR PAZ: CHAIR PAZ: Let's see. We will
11 now open the floor to any public comments relating to
12 the findings and recommendations that were identified
13 during the Incentives and Investments Workshop.

14 (Pause)

15 So, for public comments on this item, again,
16 we will first take comments from people here in
17 Calipatria. Is there anyone wishing to speak on this
18 item?

19 (Pause)

20 There's no one here in Calipatria. Now, I
21 will check in the physical locations. So, are there any
22 individuals in Sacramento, California wishing to speak?

23 (Pause)

24 COMMISSIONER REYNOLDS: No one here wishing to
25 speak, Chair.

1 CHAIR PAZ: Thank you. Are there any
2 individuals in Michigan wishing to speak?

3 (Pause)

4 Are there any individuals in Maine wishing to
5 speak?

6 COMMISSIONER WEISGALL: No.

7 CHAIR PAZ: Thank you. Are there any
8 individuals in Los Angeles wishing to speak?

9 (Pause)

10 Thank you, we will now move to people
11 participating through Zoom. CEC staff, are there any
12 hands raised, or comments entered via Zoom?

13 MS. LOZA: If you are joining us by Zoom on
14 the computer, please use the raise-hand feature. If
15 you've called in, please dial star-nine to raise your
16 hand, and star-six to unmute your phoneline.

17 (Pause)

18 Okay. So, we have a comment in Spanish.
19 Again, if one of the interpreters can go into the
20 English channel and translate it.

21 (Pause)

22 Jasmine, if you could go into the English
23 channel and translate the comment.

24 (Pause)

25 MS. PREZEAU: Can you hear me? Hi. Can you

1 hear me? Me puedes escuchar?

2 CHAIR PAZ: Si.

3 MS. PREZEAU: Okay. Muy Bien.

4 So, if the person that is speaking Spanish
5 would like to speak now. Si pueden hablar, por favor.

6 (Pause)

7 Adelante.

8 (Pause)

9 CHAIR PAZ: Erica, was this a person or a
10 comment that was typed in the chat?

11 (Pause)

12 MS. LOZA: Looks like, oh— okay.

13 MS. PREZEAU: I'm going to read it, sorry.
14 I'm going to read it out loud. It, it was typed.

15 CHAIR PAZ: Thank you

16 MS. PREZEAU: So, thank you. Hi. I would
17 like to talk about (OFF MIC) for the Spanish speaker.

18 I, I see it written in the Q&A. Okay.

19 MS. LOZA: It looks like Jasmine is waiting for
20 the Spanish speak, but it is a written comment. It
21 should be in the Q&A box, Jasmine.

22 MS. PREZEAU: I am speaking now, and I am
23 reading it out loud, in English, if that's okay.

24 CHAIR PAZ: Yes, we can hear you here in
25 Calipatria, Jasmine. Go ahead.

1 MS. PREZEAU: Okay. Oh gosh. Ya, no la puedo
2 leer. Okay.

3 Okay. Disculpa.

4 Okay: "Hi. I would like to comment about my
5 concerns about the extraction of Lithium. The impacts
6 to the environment do— based on the extraction of
7 lithium are: consumption of water, modifications to the
8 landscape, an alteration —

9 (Cross-talk)

10 MS. CARILLO: Chair Paz this is Deana from the
11 Sacramento location just to note that we don't have a
12 quorum, we don't think, from Vice Chair Kelley leaving
13 the room, so we won't be able to take a vote on this
14 item at this time.

15 MS. PREZEAU: — an alteration in the natural—

16 CHAIR PAZ: Okay, there is a lot of cross, I
17 don't know, wires here. There's multiple people
18 speaking. If we can — the, the comment is not related
19 to the item, so can we read it during the general public
20 comments please?

21 MS. PREZEAU: Yes, yes.

22 CHAIR PAZ: Okay, thank you.

23 And um, yes, we're not taking a vote right now
24 because Commissioner Kelley just got up to take a break,

1 but he will be back shortly. So, at this —

2 UNIDENTIFIED SPEAKER: Thank you.

3 CHAIR PAZ: Mmm hmm, thank you.

4 And, are there any additional comments here?

5 No?

6 COMMISSIONER CASTANEDA: Yeah.

7 CHAIR PAZ: From the Commissioners?

8 COMMISSIONER CASTANEDA: Well, I've —

9 CHAIR PAZ: Commissioner Castaneda?

10 COMMISSIONER CASTANEDA: It's a comment, it's

11 not related exactly to what is written in the report.

12 But, I do want to make a, a comment, and I think this is

13 a good opportunity. Because, I think that Commissioner

14 Weisgall said that, you know, it's a good compendium of

15 our, of our discussion, and there may be more

16 information available.

17 And I just want to say, that last week I had

18 an opportunity to, to join a panel of — in Chicago, with

19 the National Association of Latino Elected Officials.

20 And, I sat with a gentleman. His name is Alex Schroder,

21 and he is the Executive Director of the, I'd like to get

22 this right, of the Office of Energy and Transportation,

23 who, it was just created by Executive Order by President

24 Biden a few months ago.

25 And so, I — they asked me to talk about this

1 Commission and the work that we were doing. Mr.
2 Schroder provided a lot of information on the seven or
3 eight billion dollars that has been made in the, the
4 Bipartisan Infrastructure Plan. And I extended an
5 invitation to Mr. Schroder to join our meeting, and I
6 would just like to see whether or not the Chair would,
7 would like me to officially work with the CEC to
8 officially ask him to, perhaps, talk about the bill.
9 Excuse me. Not the bill, but, but the funds that are
10 available for EV, you know, vehicles, battery related
11 infrastructure, and, and processing and so forth. And
12 perhaps there is some additional information on
13 incentives, and benefits that might be available to all
14 of the work that we're doing here. So, I'd like to—

15 CHAIR PAZ: And you think those are in
16 addition to the benefits on that —

17 COMMISSIONER CASTANEDA: These are from the
18 federal government. Most of what we've talked about was
19 the state.

20 CHAIR PAZ: We had a speaker from the federal
21 government, and from the Secretary of Energy's
22 department.

23 COMMISSIONER CASTANEDA: Right.

24 CHAIR PAZ: At the last meeting.

25 COMMISSIONER CASTANEDA: So, and again, I —

1 that's why I wanted to bring it up. And, and so, Mr.
2 Schroder is, is both from the Department of Energy and
3 from the Department of Transportation. So, he may
4 provide more information, I just put that out.

5 CHAIR PAZ: Let's talk offline and plan with
6 the CEC. And the reason why, as you'll see later in our
7 discussion, it's just planning for the future meetings—

8 COMMISSIONER CASTANEDA: We've got a lot of
9 meetings.

10 CHAIR PAZ: — that we have.

11 COMMISSIONER CASTANEDA: I know

12 CHAIR PAZ: What we have lined up already, but
13 I think there might be a way, so.

14 COMMISSIONER CASTANEDA: Okay.

15 CHAIR PAZ: I just don't have a —

16 COMMISSIONER CASTANEDA: Okay, thank you.

17 CHAIR PAZ: —solid view of that right now.

18 So, we, we're not able to make a motion at
19 this point. So, we will move on to slide number 23
20 please.

21 (Pause)

22 And this is an item um — yeah. This is an
23 item that we are deferring to a future meeting. Simply
24 because we, we didn't get the draft findings and reports

1 on time. And, let's see.

2 So, planning for upcoming Lithium Valley
3 Commission meetings, this is what I was talking about.
4 Our next meeting is scheduled for July 21st. And that
5 meeting is booked as an all-day meeting. I understand
6 that the CEC team is supporting us in bringing together
7 a panel of tribal representatives for our workshop
8 session during the July 21st meeting.

9 The meeting location is still being
10 established, and could be hosted by the Torres Martinez
11 at a local school. So, just for anyone needing
12 reference, the Torres Martinez is located in the
13 community of Thermal.

14 At the last meeting, I mentioned that we may
15 use at least part of the July 21st meeting to discuss
16 the draft reports. But, since we have a few more
17 critical activities to complete before the draft report
18 is finalized, that timing will change. Since we will
19 have some time on the 21st, I would like to propose that
20 we also coordinate a panel of local community members
21 for the other half of the day. This can support the
22 next update that I want to provide, which is around
23 community engagement.

24 Commissioner Olmedo wasn't able to join us
25 today, but he asked me to share the work that he's doing

1 with a few other of the Commissioners on community
2 engagement. So, I know Mr. Frank Ruiz, and Mr. Ryan
3 Kelley, along with Mr. Olmedo, are part of the ad hoc
4 community engagement committee.

5 He and a couple other Commissioners have
6 conducted some community engagement on their own and
7 have also been working with CEC staff to plan community
8 engagement events over the next few months, as we work
9 to develop and finalize our report to the legislature.
10 He has also asked the CEC to review the record and
11 develop preliminary findings and recommendations
12 specific to future community engagement for discussion
13 and consideration by this body and possible inclusion in
14 the report. And that item be placed on the next meeting
15 agenda for consideration and discussion, which will work
16 well if we are also holding a community organization
17 panel.

18 So, would Commissioner Frank Ruiz like to add
19 anything on this topic?

20 COMMISSIONER RUIZ: Sure, sure. We had
21 several discussions with members of the CEC and
22 Commissioner Kelley, and Commissioner Olmedo. And, we,
23 we discussed community engagement based on two premises.
24 One, is that it should be an ongoing process. Community
25 engagement shouldn't be, just, you know, something that,

1 that should be done by the end of, you know, this
2 report, but it should be something that should continue.

3 And as a matter of fact, we feel that it
4 should have started from the beginning. Unfortunately,
5 we didn't get the, the — an engagement process going on
6 from the beginning. But we feel that this is something
7 that should have been done instead of then just, you
8 know, trying to figure it out right now, it should have
9 been done, you know, a long time ago.

10 However, we agree that this is something that
11 should continue to continue allowing the community
12 knowing what is going on, what is happening, what is it,
13 how the processes is going. And allow the community to
14 know what is information and what are some of the
15 actional items, you know, where they can influence the
16 process.

17 So, that is, you know, what the, what the
18 process will look like. Well, that's our
19 recommendation, you know, to the CEC — to continue, even
20 after, you know, this body, you know, is no longer
21 active.

22 CHAIR PAZ: Thank you. Commissioner, Vice
23 Chair Kelley, do you have anything to add on the
24 engagement ad hoc committee and discussions that you've
25 been having?

1 VICE CHAIR KELLEY: I — so, as Commissioner
2 Ruiz mentioned, we did have an, a meeting, and I think
3 we're in agreement that we should be making a request
4 for some funding, I know that there's been challenges in
5 even these settings of being able to have the equipment
6 and staff and last minute (INDISCERNIBLE) trying to
7 cobble things together, so that these could be open.

8 And so, I, I support the recommendations of
9 Commissioner Ruiz and Commissioner Olmedo that we make a
10 request for the augmentation to be able to do supporting
11 these actual committee meetings, Commission meetings,
12 and also community outreach.

13 CHAIR PAZ: Thank you.

14 VICE CHAIR KELLEY: And I'll also add,
15 tonight, in Niland, at 6:00 that (INDISCERNIBLE).

16 CHAIR PAZ: Thank you. And first of all,
17 thank you for the individual outreach that you all have
18 been already doing. I know that some of the communities
19 members from West— where was it, West Shores right
20 there, seeing flyers and things, but they see them
21 mostly, like, if they come to Brawley. So, just putting
22 a, a plug there for the communities of West Shores and
23 see how, if there was additional funding and capacity,
24 not forgetting that they also want to be included in the
25 conversations.

1 So, so here's the questions that I have, or
2 can— just for you to consider and see if you have any
3 thoughts. I mentioned the 21st meeting, and what it's
4 looking like, again, to summarize, is maybe a morning
5 panel, potentially tribal. Well, on the tribal topics —
6 and I'm saying potentially not because the topics going
7 to change, but just depending on who goes first.

8 So, having a tribal panel, tribal perspectives
9 panel. And then, having also a communities perspective
10 panel. And, when we are talking about community
11 perspective panel, we're not talking about bringing like
12 the CBO representatives that I think we've heard in the
13 past. I think the CBOs have been well represented. But
14 I think we haven't heard, throughout our panels as much
15 as we would like, from residents in the region.

16 So, the idea is to identify a panel between
17 now and then, and I — the CEC will support in talking to
18 the CBOs or others helping identify, you know, the
19 members to be on the panel. And so, that would probably
20 give us maybe the missing links or voices that, that
21 we've had in the process.

22 So that would be in the first the location?
23 Again, it's being proposed right now as happening
24 potentially in the Torres Martinez, which makes sense to
25 me, since we're having a tribal panel that, you know,

1 it's hosted in a location where they feel comfortable.

2 The only, maybe, question — and I don't know
3 if any of you have perspectives, is, is that since we're
4 also doing a community panel, and there's communities in
5 both sides of the Salton Sea, that that's not going to
6 create like any unintended tensions, right? So, that's
7 why I'm bringing it up —

8 (OFFMIC)

9 MS. LOZA: Giana, one of the mics in
10 Calipatria turned off.

11 COMMISSIONER REYNOLDS: Oh, there's no focus.

12 (Pause)

13 COMMISSIONER WEISGALL: Lost hearing up in
14 Maine also.

15 (Pause)

16 MS. LOZA: Hi everyone, let's just sit tight
17 and figure out the technical issues at Calipatria.

18 (Temporarily off the record, 3:02:49)

19 (Pause)

20 (Return to record, 3:04:43)

21 CHAIR PAZ: We're back. Fake news, the break
22 is not it.

23 (Laughter)

24 No break.

25 UNIDENTIFIED SPEAKER: We made one

1 (INDISCERNIBLE).

2 CHAIR PAZ: Okay. So, we are continuing the
3 discussion about the potential locations and the intent
4 of having both a tribal panel perspective and community
5 panel perspective. So, we've heard from Vice Chair
6 Kelley about potentially separating them, so that we
7 could have the tribal panel in the Torre — with the
8 Torre Martinez tribe, and then a community panel maybe
9 back in this location.

10 But, that we were also talking about the
11 geographic challenges when we're thinking about our
12 region. Even though not everyone's going to be impacted
13 as much as, you know, Calipatria and Niland, which are
14 closer proximity, there are other regions in the Eastern
15 Coachella Valley and West Shores who have been following
16 along from the beginning as well, the conversation.

17 COMMISSIONER HANKS: Is it going to be open to
18 all tribals?

19 CHAIR PAZ: Yes. The — my understanding, and
20 I couldn't tell you, like, which tribes, but
21 Commissioners, I'm blanking on the names of our
22 Commissioners. Richie, yeah, Arthur. He is working
23 with our other Commissioner, and Manfred, right? And
24 they are, they have reached out to other tribes to
25 engage them in this topic.

1 COMMISSIONER HANKS: Including the ones in
2 Imperial County.

3 CHAIR PAZ: I cannot confirm, but I will ask.
4 I'm sure they have. But yeah, they were very inclusive.
5 And, you know, they're following the process. And part
6 of their process is hearing from other tribal
7 perspectives, so that they're not the only ones here
8 coming and speaking for the tribes. So, they've been
9 planning this for several, several months now.

10 COMMISSIONER RUIZ: Yeah, and thank you, Chair
11 Paz. I just wanted to reiterate my comment to hear from
12 the tribal communities. And, and even the communities
13 on the north end of the sea. Even though, as you
14 mentioned, they're not directly impacted as communities
15 like Niland and, and Calipatria. However, I think it is
16 important to hear their perspective, and just take
17 advantage of this opportunity. To, if you listen to the
18 residents, and listen to the tribes at the same time.

19 CHAIR PAZ: Yeah. An idea, and I don't know
20 if we would have to figure out the logistics, given
21 technology, but I know we've done, in the past for the,
22 the forum that we had. We did have satellite locations.
23 So, perhaps we could have one of the tribes with the
24 Torres Martinez and then it could be another location in
25 this area and another location if needed elsewhere. And

1 then, we as Commissioners, at least the ones who plan to
2 attend regularly physically, can — we can coordinate,
3 right? Like who's going to be there, that way we're not
4 ignoring the community members. And maybe that's
5 something, but yeah, we would have to figure out all the
6 technology, and I mean, Comite del Civico has been great
7 in helping us achieve that with the technology and the
8 County. But, if we would face maybe a limited of
9 resources, right? In terms of the capacity of how many
10 locations we could serve. But, that's a consideration,
11 maybe to make it all work out.

12 Good. So, are there any comments on this
13 topic from Commissioner Reynolds or Commissioner Flores,
14 or Commissioner Weisgall?

15 COMMISSIONER WEISGALL: Nothing from
16 Commissioner Weisgall.

17 CHAIR PAZ: Thank you.

18 (Pause)

19 Commissioner Flores and Commissioner Reynolds?

20 (Pause)

21 COMMISSIONER REYNOLDS: Nothing to ask, thank
22 you.

23 CHAIR PAZ: Thank you.

24 Okay. So, we will now open this conversation
25 to public comment. And, we will start here in

1 Calipatria.

2 (Pause)

3 MS. RUIZ: Hi, good afternoon everyone. My
4 name is Silvia Ruiz. I am a resident of the East
5 Coachella Valley. And, I work at Alianza. Just a
6 couple of comments. I — thank you to Commissioners
7 Frank Ruiz, Luis Olmedo, Vice Chair Kelley for providing
8 the update on community engagement they have done.
9 Really appreciate the individual work that you have all
10 done to really set the awareness and include community
11 members in these discussions.

12 And, I would like to support the request to,
13 and urge the Energy Commission to provide resources,
14 funding for the Lithium Valley Commission to expand on
15 the capacity outreach— expand capacity to do outreach
16 and engagements. As Chair Paz mentioned, there is so
17 much these individuals and their respective
18 organizations can do outreach and engagement. If
19 they're provided with resources that can help expand the
20 capacity, there can be that opportunity to help folks
21 that feel excluded in these conversations to be a part
22 of these conversations, know when these meetings are
23 happening, we would coordinate, do what they can to
24 attend.

25 And I also support the idea of a community

1 panel that may, I mean, matching of course as
2 (INDISCERNIBLE), Imperial Valley, but — it's
3 (INDISCERNIBLE) for accounting, but also having
4 community members from Salton City, additional community
5 members of the West Shores region, and the East
6 Coachella Valley in this community panel. And, I also
7 would support the idea for having remote meeting
8 locations for these panels. I know that as it did turn
9 out would be great, would have (INDISCERNIBLE)
10 locations.

11 When these Lithium Valley Commission meetings
12 happen, but I understand that some mentioned you have
13 limited resources capacity to be with, hold remote
14 locations. But, overall I'm giving support on, like, if
15 the community panel and whatever works best to make it
16 to accommodate where the Lithium Valley Commission,
17 sorry, and residents. So, we could (INDISCERNIBLE) to
18 the side, but we did in general support the idea of a
19 community panel for the July 21st meeting. Thank you.

20 CHAIR PAZ: Thank you. Is there anyone here
21 in Calipatria wishing to make a comment on this topic?

22 Okay, I have several —

23 Linda, can you — Okay.

24 And you can take the form with you, and then
25 turn it in.

1 MS. NOVA-FROELICH: Maria Nova-Froelich, City
2 Mayor Pro-Tem. So, I think it's a good idea for that
3 community panel. If there's an opportunity for me to
4 sit in, I've participated in most of your workshops, I
5 think that the trainings and everything that's coming
6 together, I think it's very educational.

7 I want to say that, if there's going to be a
8 presentation in Westmoreland, or up there in Thermal,
9 the plan to extend either via Zoom or —

10 CHAIR PAZ: Thank you.

11 MS. FIGUEROA: Hello, Janita Figueroa, Comite
12 Civico del Valle. I would also like to support the idea
13 of remote locations for the next meeting. And also, I
14 would also encourage the idea of Q&A portions being
15 included in these meetings. I think it's come up
16 multiple times, and it would be beneficial to have more
17 conversations with the Commission, rather than simply
18 just have public comment.

19 CHAIR PAZ: Thank you.

20 (Pause)

21 Dr. McKibben? You can speak from there.

22 DR. MCKIBBEN: Alright. I just wanted to say
23 that we received funding from the Department of Energy
24 to hire students to do public outreach on geothermal
25 lithium. So, we have both undergraduates starting July

1 1st and graduate students, who could out and do
2 outreach. Whether that's with community groups of K-12.
3 Please contact me if —

4 CHAIR PAZ: Great.

5 DR. MCKIBBEN: — if you're interested.

6 CHAIR PAZ: Thank you. That's a great
7 resource.

8 There any public comments here in Calipatria?

9 Okay. Seeing none, I will now check if there
10 are any individuals wishing to speak in Sacramento?

11 COMMISSIONER REYNOLDS: No one from the
12 (INDISCERNIBLE) wishing to speak. Thank you.

13 CHAIR PAZ: Thank you. Are there any
14 individuals wishing to speak in Michigan?

15 (Pause)

16 Commissioner Weisgall, are there any
17 individuals wishing to speak in Maine?

18 COMMISSIONER WEISGALL: Ah, no. No, there are
19 none.

20 CHAIR PAZ: Thank you. Are there any
21 individuals wishing to speak in Los Angeles?

22 (Pause)

23 We will now move to people participating
24 through Zoom. CEC staff, are there any hands raised or
25 comments entered in Zoom?

1 MS. LOZA: As a reminder, if you are joining
2 us by Zoom on the computer, please use the raise hand
3 feature. If you have called in, please dial star-nine
4 to raise your hand, and star-six to unmute your phone
5 line. So, the first hand raised is from LCJA, ECV
6 Office. You should be able to unmute yourself.

7 MS. LOERA: Hello, this is Mariela Loera, with
8 Leadership Council. It's great to hear that you all are
9 planning this panel. I would encourage that we have
10 more of these from now until the report is due. I'm — I
11 am really concerned that the report doesn't reflect
12 community input and perspectives enough, due to the lack
13 of engagement thus far. So, it's great to see this now,
14 and hopefully it happens more often to let those can be
15 included.

16 I agree that, while Imperial County
17 communities should be prioritized in the panel,
18 residents from the Eastern Coachella Valley should also
19 be represented. I think the (INDISCERNIBLE) location
20 that was used during the forum in November was great, so
21 would suggest just feedback on that one was good.

22 I would like to see more updates on the work
23 that is being done by this ad hoc committee. I think
24 this is great, so just having more consistent
25 information, maybe putting that in the docket and seeing

1 the docket more, more consistently would be great.

2 Thank you.

3 CHAIR PAZ: Thank you.

4 MS. LOZA: Okay, we do have one comment in the
5 Q&A box and it says— and it's from D.M. Corn. And it
6 says:

7 "If the \$400 per ton tax is imposed as seems
8 likely, and each of the three companies produces —

9 CHAIR PAZ: Can you,

10 UNIDENTIFIED SPEAKER: Sorry.

11 CHAIR PAZ: Can you — Excuse me. Can you
12 please read these during the general comments and only
13 read the ones that are related to the topic we're
14 discussing?

15 MS. LOZA: Yeah, sure.

16 CHAIR PAZ: Thank you.

17 (Pause)

18 MS. LOZA: Those are all of the comments.

19 Back to you, Chair Paz.

20 CHAIR PAZ: Thank you. So, my last comment is
21 that we're at the end of June. We have plans for our
22 next meeting, and then we will be working towards the
23 draft report and ultimately a final report. There may
24 be a need for additional meetings to get through these
25 activities. And it will be critical that the

1 Commissioners all attend, and provide their input.

2 So, I just want to mention that we may
3 identify additional meeting dates in the future, and, of
4 course, we will provide the public notice of all planned
5 meetings in advance and we will be in communication, or
6 the CEC will be in communication with the Commissioners
7 as we identify any future meets, since our deadline for
8 the report is in October. So, we're right around the
9 corner.

10 This is not a voting item, so I would just
11 like to turn to Commissioners, I think we already took
12 comments, so that is it on this topic.

13 So, slide number, what are we? Next slide,
14 please.

15 Do we have any media and legislative updates?

16 Oh, no. So, we were informed there's no media
17 and legislative updates today.

18 Commissioners, do you have any updates you
19 would like to present at this time? And, I will do it
20 in the form of a roll call, just to make sure we don't
21 miss anybody. And, if you do — you don't have any
22 updates you can pass. And if you do, I ask you to be
23 concise and just remember to identify yourself before
24 providing your update. But, I'll be doing roll call, so
25 maybe you don't need to identify.

1 So, I will start here with Commissioner Hanks.

2 Do you have any updates?

3 COMMISSIONER HANKS: No.

4 CHAIR PAZ: Thank you. Commissioner Frank

5 Ruiz, do you have any updates?

6 COMMISSIONER RUIZ: No.

7 CHAIR PAZ: Commissioner Ryan Kelley, do you

8 have any updates?

9 VICE CHAIR KELLEY: I have none.

10 CHAIR PAZ: Commissioner Castaneda?

11 COMMISSIONER CASTANEDA: No. Thank you.

12 CHAIR PAZ: Commissioner Weisgall?

13 COMMISSIONER WEISGALL: No.

14 CHAIR PAZ: Commissioner Flores?

15 COMMISSIONER FLORES: No updates, thank you.

16 CHAIR PAZ: Commissioner Reynolds?

17 COMMISSIONER REYNOLDS: No update from me,

18 thank you.

19 CHAIR PAZ: Thank you, and I have no

20 additional updates either.

21 We will now go to public comments. And again,

22 we will now take public comments on the informational

23 items, which there were none. So, if you have a general

24 public comment, please hold until we call on general

25 public comments. But I will see, are there any public

1 comments here in Calipatria about informational items?

2 No? I do apologize, but I have to do this
3 every time. So. Commissioner Flores and Commissioner
4 Reynolds, are there any individuals wishing to speak in
5 Sacramento?

6 COMMISSIONER FLORES: No, no one's here
7 wishing to speak. Thank you.

8 CHAIR PAZ: Thank you. Commissioner Dolega is
9 not here, but are there any individuals wishing to speak
10 in Michigan?

11 (Pause)

12 Are there any individuals wishing to speak in
13 Maine?

14 COMMISSIONER WEISGALL: No, there are not.

15 CHAIR PAZ: Thank you. Are there any
16 individuals wishing to speak in Los Angeles?

17 (Pause)

18 We will now move to people participating
19 through Zoom. CEC staff, are there any hands raised or
20 comments related to the informational items?

21 MS. LOZA: As a reminder, if you are joining
22 us by Zoom on the computer, please use the raise-hand
23 feature. If you've called in, please dial star-nine to
24 raise your hand and star-six to unmute your phoneline.

25 (Pause)

1 I don't see any comments or hands raised.

2 Back to you, Chair Paz.

3 CHAIR PAZ: Thank you. And, we had — I'm
4 taking this item out of order, I just need to go back to
5 it, to slide number 23. Since we have lost quorum. We
6 did discuss the possible actions and draft findings on
7 workshops held on June 16th. And there was discussion
8 and there was public comment already. But, I just need
9 a motion to accept the possible action on draft findings
10 from workshops held on June 16th, 2022.

11 COMMISSIONER WEISGALL: So moved.

12 CHAIR PAZ: Thank you.

13 COMMISSIONER CASTANEDA: Second.

14 CHAIR PAZ: Thank you. There's a motion by
15 Jonathan Weisgall, there is a second by Commissioner
16 Castaneda. Any discussion from the Commissioners?

17 I do have a question for you all. We've been
18 integrating this in the last few meetings, again, as a
19 way for us to start seeing some of the writing and
20 thought that is informing the report. We are getting
21 close to having to have the final draft report — the
22 draft report and then the final.

23 Should we continue trying to capture things in
24 this way after every workshop? Has it been helpful? Or
25 are we okay with maybe stopping this for now and then

1 just wait until the draft report is. And, it's not a —
2 it's just conversation. There's no decision being made
3 here. Just wanted to hear your thoughts.

4 (Pause)

5 COMMISSIONER WEISGALL: I'll just jump in. I,
6 I think capturing, capturing comments as close to the
7 time of the meeting as possible makes a lot of sense.

8 CHAIR PAZ: Okay. Thank you.

9 That was the only thing I wanted to have for
10 discussion, but we do have a motion and a second. So,
11 roll call please?

12 MS. LOZA: Okay. Commissioner Castaneda?

13 COMMISSIONER CASTANEDA: Yes.

14 MS. LOZA: Commissioner Colwell?

15 Commissioner Dolega?

16 Commissioner Flores?

17 COMMISSIONER FLORES: Yes.

18 MS. LOZA: Commissioner Hanks?

19 COMMISSIONER HANKS: Yes.

20 MS. LOZA: Vice Chair Kelley

21 VICE CHAIR KELLEY: Yes.

22 MS. LOZA: Commissioner Lopez?

23 Commissioner Olmedo?

24 MS. LOZA: Chair Paz?

25 CHAIR PAZ: Yes.

1 MS. LOZA: Commissioner Reynolds?

2 COMMISSIONER REYNOLDS: Yes.

3 MS. LOZA: Commissioner Ruiz?

4 COMMISSIONER RUIZ: Yes.

5 MS. LOZA: Commissioner Scott?

6 Commissioner Soto?

7 Commissioner Weisgall?

8 COMMISSIONER WEISGALL: Yes.

9 MS. LOZA: Okay. There are eight yesses.

10 MS. CARILLO: And, Chair Paz, this is Deanna
11 Carillo reaching out from Sacramento. Just a note, or a
12 correction that this is from the May 26th meeting, not
13 June 16th, just for the record.

14 CHAIR PAZ: Oh, thank you. And, I just saw
15 your text and responded.

16 MS. CARILLO: Great, thank you.

17 CHAIR PAZ: We'll clear a spot for that.

18 Thank you.

19 Okay, so we will now turn to general public
20 comments. I will open the floor for general public
21 comments, and there is a two-minute limit. Any
22 individuals wishing to make general comments here in
23 Calipatria, you can either raise your hand or come to
24 the podium.

25 (Pause)

1 Is that a yes or a no?

2 No? Okay. So (INDISCERNIBLE).

3 I see no hands raised here. Are there any —
4 is there anyone wishing to speak in Sacramento?

5 COMMISSIONER FLORES: No, no one here. Thank
6 you.

7 CHAIR PAZ: Thank you. Is there anyone
8 wishing to speak in Michigan?

9 (Pause)

10 Is there anyone wishing to speak in Maine?

11 COMMISSIONER WEISGALL: No.

12 CHAIR PAZ: There anyone wishing to make any
13 comments in Los Angeles?

14 (Pause)

15 Now we will move to people participating
16 through Zoom.

17 MS. LOZA: As a reminder, if you are joining
18 us by Zoom on the computer, please use the raise-hand
19 feature. If you've called in, please dial star-nine to
20 raise your hand and star-six to unmute your phonenumber.

21 Okay, so there is two comments. And the first
22 one's from D.M. Corn. It says:

23 "If \$400 per ton tax is imposed and seems
24 likely, and there are three companies producing 20,000
25 tons per year, the taxes collected will total 24

1 million. If Imperial County receives 80 percent of
2 that, that is 19 million. Question number one, is that
3 tax money going to be sequestered and not commingled
4 with count general funds so it is used exclusively to
5 support the lithium extraction industry? And number
6 two, does Imperial County intend to spend 19 million per
7 year on lithium industry related expenditures?"

8 (Pause)

9 And the second comment was from D.M. Corn, and
10 it just says to read the general comment above, and I
11 did. Thank you.

12 CHAIR PAZ: Thank you.

13 MS. LOZA: Mmm hmmm.

14 CHAIR PAZ: That is it for today. We made
15 record time.

16 (Laughter)

17 The meeting is adjourned at 4:25.

18 (Whereupon the meeting was adjourned at 4:25
19 P.M.)

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CERTIFICATE OF REPORTER

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 27th day of July, 2022.



ELISE HICKS, IAPRT
CERT**2176

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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.

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IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of July, 2022.



Myra Severtson
Certified Transcriber
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