Page 1 1 U.S. DEPARTMENT OF ENERGY 2 PUBLIC HEARING 3 4 RE: HAWAII CLEAN ENERGY DRAFT 5 PROGRAMMATIC EIS (PEIS) 6 7 TRANSCRIPT OF PUBLIC COMMENTS 8 Wednesday, May 14, 2014 Aunty Sally Kaleohano's Lu'au Hale 9 10 799 Piilani Street 11 Hilo, Hawaii 96720 12 13 14 ON BEHALF OF THE US DEPARTMENT OF ENERGY: 15 JANE SUMMERSON ON BEHALF OF THE STATE OF HAWAII STATE ENERGY OFFICE: 16 17 ANDREA GILL 18 19 FACILITATED BY: 20 ROBIN CAMPANIANO 21 22 23 REPORTED BY: 24 KATHRYN PLIZGA, Hawaii CSR 497 25 Registered Professional Reporter

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1	PROCEEDINGS	
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3	MR. CAMPANIANO: My task now is to afford	
4	you an opportunity to present your comments orally.	
5	As Dr. Summerson said, there are other ways to offer	
6	your comments, either in writing or by e-mail.	
7	The slide up there is also on the counter	
8	over there. So if you need the contact information,	
9	just go over there and take a look.	
10	So, as we offer our comments tonight, just a	
11	couple of points to make. We really the State and	
12	the Federal officials that are here sincerely want	
13	to hear your thoughts on the 31 different	
14	technologies and alternatives for clean energy in	
15	Hawaii.	
16	But, we also want to make sure that we	
17	respect your time and your efforts. So to do that,	
18	what we're going to do is set forth the requirements	
19	that we have done consistently through these	
20	meetings; and that is we would ask you to keep your	
21	comments, your initial comments, to three minutes, to	
22	respect the rights of others to speak up.	
23	If you would like to circle back at the end	
24	after everybody else has spoken, you know, of course	
25	we will be around to hear your comments as well.	

Page 5 1 And to respect the rights of your neighbors, 2 it would be nice if we could refrain from asking 3 questions or provoking them until afterwards so that 4 we can have an opportunity for real civil kona 5 discussion. 6 So, what we are going to do then is I am 7 going to call out your names. And if you then could, please, spell your name out so Kathy, our court 8 9 reporter, can dutifully enter that into the record. 10 You see, when she keeps the records, the 11 minutes are actually read by a lot of people far 12 beyond those that are gathered here today. Everv 13 place from Honolulu to Washington, D.C., we need to 14see your comments. 15 So, please, if we can star on those 16 premises, then perhaps we can have a very productive 17 evening. We really look forward to hearing your 18 comments. 19 So, first up we have Judith Mura followed by Richard Ha and Cory Harden. 20 21 So, if you can please come forward. 22 MS. MURA: My name is Judith Mura, that's 23 M-U-R-A. 24 Thank you so much for this opportunity. 25 I'm here to speak against geothermal and to

Page 6 1 please ask your help to stop any geothermal expansion 2 and drilling in Hawaii. 3 I've brought the Hawaii Tribune Herald. In 4 it, in March 7, the front page, and I'll quote, "The 5 state's fresh water will be stressed by global 6 warming." 7 This statement was directed to all islands 8 of Hawaii, and especially for Honolulu's 9 overpopulation, usage, lack of rainfall for all the islands. 10 11 "Fresh water sits on salt water. Over-usage 12 of fresh water is turning their fresh water to 13 brackish water. On the Big Island, Ormat or PGV uses 14 thousands of gallons of fresh water to cool their 15 machinery." 16 PGV's expansion, coupled with global 17 warming, is not what sustainable clean energy is all We, the people, have rights to clean water 18 about. 19 for ourselves, our family, our food gardens, our 20 future. Without water, it's game over. 21 Mahalo. 22 (Applause) MR. CAMPANIANO: Richard? 23 24 Sometimes we get carried away, so there will 25 be a one-minute signal for those of you who get too

1 energetic.

2 MR. HA: My name is Richard Ha, H-A is the 3 last name.

4 Thanks for the opportunity. The main thing 5 I wanted to mention was that I'm here representing 6 the Big Island Community Coalition. This group is 7 interested in getting the lowest cost energy as 8 possible for everybody.

9 The rationale for this is that rising 10 electricity rates acts like a gigantic regressive 11 tax. It affects the most defenseless among us the 12 worst.

Just recently in 2012, Professor Joseph Stiglitiz, who's a Nobel economist, said that in order for renewable energy solutions to be sustainable, it really needs to meet the triple bottom line of sustainability.

18 And it should include social sustainability, 19 environmental sustainability as well as economic 20 sustainability.

21 So, my point here is that every one of the 22 options should meet this requirement.

And then I would like to also mention -- and as we look towards the future -- say 20 years from now, where do we want to be 20 years from now?

Page 8 1 Because right now we are kind of at the breaking 2 edge. Because we have the highest price, we are 3 moving forward in solar and other things quicker than 4 anybody else because we've got the economic incentive 5 to do it. 6 But, looking down the road 20 years, the 7 whole country, the whole world, will catch up with 8 us; and we have to be careful because of being first. 9 You know, you have a better chance -- it's difficult 10 to be first. Your chances of failing is greater than 11 if you were copying the first. 12 So, to go back to what things might look 13 like 20 years from now, everybody will have solar, let's say, and we won't have any particular 14 15 advantage. We'll just have -- we will be equal to 16 everybody. 17 The same thing is with wind. Certain places 18 will have good wind, and we have good wind as well, 19 but it's not a great advantage to the rest of the 20 world. 21 The last thing is, our own resource here is 22 geothermal. It is stable, it will be around for 23 500,000 years, and it's low cost. And what that will 24 do is it will give our people an economic advantage 25 to the rest of the world.

Page 9 1 And that's all I have to say. Thank you. 2 (Applause) 3 MR. CAMPANIANO: Thank you. Cory? 4 MR. HARDEN: Hello. Thank you for holding this meeting and the opportunity to comment. 5 6 MR. CAMPANIANO: Your last name, please? 7 MR. HARDEN: My name, Corv, C-O-R-Y and 8 H-A-R-D-E-N, and I pretty much follow my written 9 comments. 10 I do want to commend the Department of 11 Energy for broadening the range of issues that were 12 analyzed. It was originally just big wind, they have 13 responded to the community by expanding that. So 14 that's great. 15 However, I hear some knowledgeable people 16 saying the goal of the clean energy initiative is not 17 really to explore energy alternatives, but to 18 preserve the Hawaii Electric Company and to get the undersea cable built. So I would like to see that 19 20 addressed. 21 For example, one of the tables, Summary of Impacts for Selected Technologies, there was only one 22 23 alternative where beneficial impacts are identified 24 complete with a web address for more information. 25 And the beneficial impacts were only

Page 10 1 identified for one alternative, the undersea cable. 2 That's the only one I can find. So that seemed odd. 3 Also, on the cooperating agencies, I wish 4 you folks would get comments from the Department of 5 Land and Natural Resources because they will have a 6 different perspective, being very protective of the 7 land, and they're very knowledgeable about it. 8 Let's see. And I made a lot of comments at 9 the 2012 scoping hearing. At least in the summary, I 10 didn't see any of them, so I submitted them again, 11 and I hope you'll look at them again. 12 Let's see, a couple of other specific 13 things. 14 I noticed there was a Hawaii Renewable 15 Development Venture funded by the Department of 16 Energy. And it's awarding thousands of dollars to 17 private businesses for various projects. And I 18 wonder what environmental studies were done for that. 19 I would like to see consideration of impacts 20 from accidents and disasters for the different energy 21 I think we just consider impacts for if sources. 22 things are going well. But some things can have 23 worse accidents than other things. 24 Let's see, like, you know, oil tankers 25 leaking. And I hope we will consider impacts of our

Page 11 energy choices on far-away places. For example, if we depend on oil, there's going to be fracking in the states. If we go with palm oil, that may involve environmental destruction and child labor in Indonesia and Malaysia. We also need to look at how much fuel it takes to produce fuel.

For example, oil, some people say we've tapped all the easy-to-get sources, now we're going to places where it's hard to get the oil out, so you burn a lot of energy just trying to get the oil. And for hydrogen, most United States hydrogen is gotten using fossil fuel.

I would like to see evaluation of the pros and cons of micro-grids versus the current utility monopoly system. For example, Parker Ranch has a little micro-grid going. And we're so used to the, you know, electric company as a monopoly and they send everything out to everybody. What happens if you have small micro-grids?

20 Just holler when my time is up.

21 MR. CAMPANIANO: Sorry, it's amazing how 22 quickly it goes. But I do have your hard copy 23 comments.

24 MR. HARDEN: Thank you.

25

MR. CAMPANIANO: Next up we have John Olson

Page 12 1 followed by Joy Cash and Geoffrey Last. 2 MR. OLSON: Thank you. 3 I would like a point of information, if you 4 can give it to me before I start. In your analysis, 5 I didn't see anything that gave a cost for solar per 6 watt. 7 Was there a fixed cost per watt for solar in 8 your analysis anywhere? 9 MS. SUMMERSON: We did not look at the cost 10 per watt. 11 MR. OLSON: I see. Okay, well, thank you. 12 I don't know what to say. If there's no 13 cost per watt, all electricity is free or it all 14 costs a million dollars a watt. I'm sorry, I'm 15 stunned. Anyway, let me get on with this. We'll 16 just let that go. 17 This process with -- you make note of the 18 fact that the Hawaii process starts in 2008. We're 19 2014. I can tell you in 2008 the cost of solar was 20 about \$6 a watt, and it was hard to get. 21 Today, the solar is -- it's about \$1.30 a 22 watt, and I can buy it at my local farmers market or 23 I can go into Home Depot. 24 And so, what I'm suggesting to you is that 25 what you've done is you've analyzed the death of the

Page 13 1 dinosaur. The utility -- the mega utility is broad 2 to versus done. And this is not just my opinion. 3 Morgan Stanley came out with a recent analysis that 4 said basically the same thing, that if you were 5 holding stock in any major utility that is not in the northeastern part of the United States, you're going 6 7 to lose your ass. Okay? 8 So the other thing that I did ask for in the 9 hearing that you and Cory mentioned in 2012 was an 10 analysis by island. We noticed that we are not 11 inter-connected in the utilities in the state of 12 Hawaii. 13 Each island is a sole and independent body. 14 And about the only energy connectivity we have is the 15 barge that comes in when the weather is good. 16 Sometimes it doesn't come in. 17 So, you know, in terms of looking at this in 18 terms of an analysis of both costs, reliability, all 19 these other things, and keeping in mind that when you speak to geothermal, there's geothermal and there's 20 21 geothermal. I would point out that the current version of geothermal relies heavily on Pentane as a 22 23 binary for their binary systems. 24 Add to which point there is no binary, there 25 is no energy from the geothermal plant. So it is no

Page 14 more or less secure than any other fossil fuel group 1 2 derived process for this island. 3 The one thing I can pretty much guarantee is the sun is going to come up tomorrow. Thank you. 4 5 (Applause) 6 MR. CAMPANIANO: Joy? MS. CASH: 7 I'm Joy Cash, and I gave my name 8 earlier, it's a pretty simple name. 9 I'm here tonight to call upon our entire 10 community, all rate payers of this island, both 11 residential and business. 12 It's important, I believe, that we create 13 community-owned utilities. And I know that people 14 are not happy with Kauai's system. We can learn from 15 their mistakes. That's upon us in that regard. 16 And, you know, we know Germany has installed 17 solar, and they're shocked and surprised. They're 18 creating much, much more electricity than they 19 anticipated. Germans are slow, Siemens and all that 20 crowd, they're very sharp quys. Yeah? So if they 21 can do it, we can do it. 22 Now, on the mainland the counties of Sonoma 23 and Irvine have switched to community-owned utilities 24 very successfully. And so -- and it's the newest 25 trend. And because of our limited resources on this

	Page 15
1	island we're an island community we need to
2	look at not paying a hundred thousand a month to a
3	CEO at HELCO. We can't afford that anymore. This
4	is a new day. This is a new era. Yeah?
5	Anybody here make a hundred thousand a
6	month? It makes no sense, does it? Okay. So and
7	I'm not picking on them I'm just saying their era
8	is past, it's a dying dinosaur, it needs to go.
9	Now, as far as geothermal I'm sorry, my
10	phone is talking right now ignore it. As far as
11	geothermal this is not my opinion because I am not
12	a geologist but my friend in San Diego, Nora
13	Robbins, Ph.D. in geology for over 30 years, has
14	traveled the world, she knows our geology here.
15	She's visited our island and many other Polynesian
16	islands.
17	She says "no way" to geothermal.
18	She says it's too poisonous, it will induce
19	earthquakes, it will induce seismology is the term,
20	yeah. These are things I didn't know until I asked
21	her about it. I said, "Nora, what is the deal?"
22	Her opinion is after all the experience she
23	has, no way on thermal, no way on this island. So
24	that's my considered opinion too for just now.
25	But, you know, this is a great opportunity

Page 16 1 for all of our islands. Every one of us pays a 2 utility bill -- too much, too much -- we can no 3 longer do that. It doesn't serve us economically, 4 environmentally and in any way. 5 So thank you for your time. 6 MR. CAMPANIANO: Thank you. 7 MR. LAST: Aloha. Thank you for having us. 8 My name is Geoffrey Last. I moved here 30 9 years ago. I was excited about moving here and I 10 love this place, this is my home now. And when I got 11 here, geothermal was wonderful. God! clean, green 12 and renewable, I was excited about this. I believed 13 in it. 14 The Department of Health was allowing open 15 venting into our neighborhood. The regulator was 16 allowing open venting into our neighborhood, toxins 17 and H2S and all the heavy metals. They were dumping 18 all their garbage on the ground. 19 I still believed in geothermal because I was 20 involved in getting my life together like lots of 21 people here. You're involved until something 22 happens. 23 Something happened in '91 and it blew 24 off -- the light went on for Geoffrey. Geoffrey went 25 out and got an education and he found out that

Page 17 1 geothermal was not clean, not green and not 2 renewable. It's a lie, a big fat lie. Thank you for 3 that.

And what we have going on here now is in the newspaper yesterday, PGV by the EPA was now 14 counts of being in violation. That's just for last year. What about the last 20 years?

8 Here we have the Department of Health whose 9 regulating them for 20 years, the same Department of 10 Health who allowed our air to be poisoned, my son to 11 drive through clouds of H2S on the bus, and get sick. 12 He allowed this to happen, the CEO, and they're still 13 allowing it to happen. They're not watching PGV. 14 PGV is regulating themselves.

So if you want to have new energy here, then you've got to get regulators that are really going to regulate it. Now, you made a nice opening statement and said the Federal Government doesn't want to tell the State Government how to live.

20 Well, I'll tell you what, I don't want 21 Honolulu telling us what to do over here on the Big 22 Island. And I don't even want Hilo telling us how to 23 live in Puna. We're the sacrificial community out 24 here. They don't care about us, we're a bunch of 25 hippies, drug addicts, welfare people.

Page 18 1 I mean, we have been hearing this crap for 2 30 years, and it's a lie. I've worked my butt off in 3 a flower business, and lots of other people are hard 4 working people out there. And I'm sick to death of 5 this clean, green and renewable geothermal. That's 6 bologna. Now, get it right, people. The other things judge, but this is garbage. 7 Get rid of the Department of Health. Man, they suck. 8 9 I mean, I can't tell you any other reason. I'm mad 10 at them. I'm not mad at these other people. I'm not 11 mad at Big Mike here for running that thing. I'm mad 12 at the Department of Health for regulating it or not 13 regulating it. 14 And the final thing -- one more little 15 thing -- is the fact that PGV doesn't even own that 16 plant out there. It's owned by some dummy 17 corporation. 18 This is corporate law, this is the way it 19 So if that plant blows up, they walk. Or now qoes. 20 who walks? PGV walks. Who gets stuck? We get stuck 21 in our community. The state is not even going to 22 come in and help. 23 Thank you. 24 (Applause) 25 MR. CAMPANIANO: We have next Bill Steiner,

Page 19 1 Senator Ruderman and then Kenneth Hunt. 2 MR. STEINER: My name is Bill Steiner, 3 S-T-E-I-N-E-R. 4 I only wanted to make a comment about small 5 farmers. You mentioned bio-matter. And not 6 mentioned was oil seeds that I can remember. Oil 7 seeds are a crop that has big potential, I think, for 8 this island. 9 Some years ago when I was named for the 10 College of Ag. they imported 8,000 oil palm trees and 11 planted them out to different farmers, cooperative farmers. 12 Those trees are now starting to produce oil 13 palm nuts, and we're looking to form a cooperative to 14 actually make biodiesel. 15 So, we will grow our own biodiesel, we won't 16 be importing it from Indonesia or any place else. 17 There is a lot of land here in the islands that do 18 that kind of thing, so I think there's a potential 19 for making biodiesel here in the state as a transportation fuel, possibly as an electric fuel 20 too, although I think there's better ways like solar 21 22 to go there. Thank you. 23 MR. RUDERMAN: Hello, my name is Russell 24 Ruderman. I am a vice chair of the State Senate 25 Energy Committee and a resident of Puna.

Page 20 1 I thank you folks for coming here. And 2 despite some of what has been said, I myself am 3 really glad that the Federal Government is involved 4 in looking at the situation here because we've done a 5 terrible job of managing ourselves and we need a fresh look at it. 6 7 To summarize really briefly, there's a couple of things that myself and most people I know 8 don't like about the way we're going, and one is to 9 10 continue considering the cable. We feel that's absurd, and I will get into that. 11 12 We don't like more geothermal because we've 13 had experience with it, and we love solar power. 14 It's as simple as that. 15 You won't find anybody objecting to solar 16 power or an aggressive expansion of solar power in 17 the state. And when you look at the worldwide 18 situation, it is obvious that that's the solution. 19 If we haven't looked at its cost lately, we ought to, 20 because it's dropping year by year dramatically and 21 will continue to drop. 22 Each island needs to have -- be independent 23 energy wise -- the cable cannot be the answer. It's 24 not only possible -- first of all, it is possible. 25 It's also only right. There's no need to harm

Page 21 1 communities to take care of the population in Hawaii. 2 If there were a need, we ought to talk about 3 which community should get harmed. But there is 4 not a need -- we ought not to sacrifice any more 5 communities. And you look at -- Puna has the very 6 similar attitude because of the geothermal plants 7 that people in Lanai had when they had the big wind 8 plan. 9 No one wants to sacrifice their beautiful 10 environment for the sake of unsustainable living in 11 an urban situation in Honolulu. 12 And I'm glad you're looking at, in addition 13 to physical impacts, cultural impacts and well-being 14 impacts, and those will lead you towards the conclusion that each island must take care of its own 15 16 issues. 17 That also leads to the most robust system 18 and the most reliable system. Those are two 19 different -- two different considerations as I know 20 you all know. 21 Talk about the cable for a minute, the cost 22 of the cable, which is unknowable by the way. 23 Whatever the estimate is, there's no such cable in 24 the world. 25 And all of our experience in Hawaii is that

Page 22 when a project that takes 10, 20 years to plan and complete is done, it costs three to ten times what we estimated when it started.

4 So with everything you come up with -- and I 5 don't know how anyone can give you a figure --6 multiply it by ten and then realize that we still 7 have to generate all of our electricity after that --8 whereas if you take that cost, which is certainly 9 over a billion dollars, put that into renewable 10 energy and infrastructure, you don't need the cable 11 and you don't need to keep generating the 12 electricity. That's the solution.

A couple of other little aspects of the cable. Who fixes it when it breaks? How are you going to fix it? How are they going to survive while it's broken, and it has a limit on how much energy it can transmit, and we can't handle that one.

18 You've heard a lot about geothermal, and I 19 know I am going to run out of time, so I won't say a 20 lot about it except that the experience of 21 geothermal, the reality of geothermal in Hawaii, is 22 so different than the reality of geothermal 23 worldwide; and that's why we're against it. We don't 24 not like geothermal, we've just seen what happens in 25 Hawaii.

Page 23 1 We all love and respect Mike and all the 2 individuals involved, but we don't like the actual 3 reality of it. It's more toxic than elsewhere 4 because of our volcanic geology, it's more unstable 5 than elsewhere. 6 And let's say there was -- let's say the 7 state was depending on geothermal in Puna and there 8 was a cable -- right now as we speak, there's a lava 9 flow heading -- that if it continues for another 10 months -- will cut off the geothermal plant from the 10 11 rest of the world right now. 12 So it's unpredicted, unexpected. And that's 13 when I come to reliability. 14 You know, depending on a distant power 15 source that's transmitted from a great distance is 16 not the future of energy development and it does not 17 lead to reliability. The solar panel on the roof and 18 battery and energy storage and inverters, that's 19 reliability. 20 I am going to try to hurry up here. Ι don't have -- I can either talk really fast or run 21 22 out of time here. 23 We're glad you're here because both our 24 utilities system and our state energy office, with 25 all due respect, Miss Gill, who I have great

Page 24 admiration for, have not been making great decisions. 1 2 That's why we're in the situation we're in; 3 the highest energy costs in the nation, the highest 4 paid CEO in the utility industry, the highest profit 5 of the utility industry. And there's still the 6 attitude in the Department of Energy -- and I've 7 gotten this from the horse's mouth -- that geothermal 8 is still the Holy Grail for Hawaii's energy future. 9 That's still what they think. That was 10 their plan from 20 years ago when solar cost 20 to 30 times what it does now and we didn't have the storage 11 12 technologies that we have now. People say solar will 13 never be front power, but that's not true. Solar 14 combined with energy storage is firm power. And 15 there's all kinds of very exciting, very advanced technologies being developed right now to combine 16 17 these two things. 18 I spoke with a high official in the Hawaiian Air, an HE on it, I said, "Why don't you guys go more 19 20 They said, "We can't handle the to solar?" 21 reliabilities." 22 "Why don't you do energy storage? There are 23 batteries and there's other physical technologies 24 such as pump storage, water pump storage?" 25 His answer was, "Well, that's too

1 expensive."

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2 (Laughing) 3 MR. RUDERMAN: Yeah, it's laughable because 4 it's expensive compared to what? Compared to 5 unreliability of our electric grid, compared to buying oil forever, combined to the cost of a cable? 6 7 No, it's really cheap compared to that stuff. 8 And if you look at pumped water storage, 9 it's only expensive if there's not some other need 10 for the water transportation. For example, we have a 11 wet side and a dry side. 12 There's no reason we couldn't pump water 13 uphill during the day and let it flow downhill and 14 generate electricity as needed to Kona, or adopt any 15 of the various very exciting and much more cost 16 effective battery energy storages that are being used 17 on grids in large scale in other places. 18 You could have batteries at the substation, 19 you could have batteries at the utility, you could have batteries at the home or at the solar 20 21 installation. All those things remove the 22 variability. And the reasons that the utility doesn't like solar, that can all be addressed with 23 24 energy storage. 25 So, solar combined with energy storage is

Page 26 1 the most robust and the most reliable and the 2 cheapest solution that we have available to us, and 3 it addresses all the concerns. 4 So I just, once again, urge you to look at the robustness of our plan, the reliability of our 5 6 plan, the cost considering solar dropping so 7 radically. 8 And once again, I thank you for coming. 9 Please save us from the terrible energy plan that our 10 utility and our state has done so far. Mahalo! 11 (Applause) 12 MR. HUNT: I saw a podium over there and I 13 thought we were going to be using it. That's okay. 14 I'm K.R. Hunt. Most of what I was going to 15 say has already been said so I'm not going to go 16 there, other than to say totally anti-geothermal as 17 we have it on the Big Island. Geothermal in general 18 could work, but not here. And we've already 19 demonstrated it does not work. 20 My biggest concern is, is that we have a 21 horse and buggy situation here. We have a company that stays in power because about a hundred years ago 22 23 we thought it would be better to have public-serviced 24 utility conditions, so that we would not be gouged 25 price-wise for our valuable essential services such

1 as electricity.

Well, that was fine when you had to have a grid. We don't need a grid. More importantly, we don't need a grid when it's run so poorly. And I thought it was interesting because when I was doing my research, something I found that I thought was wonderful.

8 It's not what I think, it is what our own 9 Public Service Utility Commission is saying about 10 HELCO -- or HECO -- sorry.

And I thought this says it all. So I cannot support in any form any money being given to HECO regardless of the reason, because they don't know what they are doing. And this is what the Public Service Commission is saying.

16 This is Exhibit A, you can find it on line, 17 it is the Commission's Inclinations on the Future of 18 Hawaii's Electric Utilities. "Aligning the Utility 19 Business Model with Customers' Interests and Public 20 Policy Goals. The Commission is compelled to offer 21 the following perspective on the vision, business 22 strategies and regulatory policy changes required to 23 align the HECO Companies' business model with 24 customers' interests and the state's public policy 25 goals.

1 The Commission is compelled because the HECO 2 Companies failed to articulate a sustainable business 3 model in the intervening time period since this 4 directive was set forth by the Commission almost a 5 year ago.

6 As the Commission noted last year, the 7 nature of the electric utility business is evolving 8 rapidly in light of technical, market and public 9 policy changes that have and will continue to occur 10 in Hawaii. The Commission observed that the HECO 11 Companies appear to lack movement to a sustainable 12 business model to address technological advancements 13 and increasing customer expectations.

14The Commission observes that some mainland 15 electric utilities have begun to define, articulate 16 and implement the vision for the electric utility of 17 the future. Without such a long-term, customer-18 focused business strategy, it is difficult to ascertain whether HECO Companies' increasing capital 19 20 investments are strategic investments or simply a 21 series of unrelated capital projects to expand 22 utility rate base and increase profits appearing to 23 provide little or limited long-term customer value." 24 Now, there's a lot more to that, but I am 25 running out of time. So my point is, is that as our

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Page 29 1 senator says, whether it costs one billion, five 2 billion or 30 billion to build a cable, it's not to 3 do anything but to keep the utility company in 4 business. And that is not our role and that is not 5 the purpose of what utility companies are designed 6 for. 7 If we wanted to take the same amount of money -- and I've heard five billion dollars -- we 8 9 could put on every existing structure in Hawaii some 10 form of wind -- as it's applicable -- or photovoltaic 11 of some type or solar or both, and we would have no 12 need for the grid. 13 And just as important because of one of 14 those three-letter alphabet agencies, Homeland 15 Security would be happy to say that our grid would be 16 less likely to be destroyed or attacked by terrorism. 17 MR. CAMPANIANO: So Mayor Kim, come on up, 18 followed by Robert Petricci and Ole' Fulks. 19 MR. KIM: The name is Harry, last name Kim, 20 K-I-M. 21 You know, in one year, if I were to say last 22 year what I am going to say now, people would say 23 he's pipe dreaming. In one year technology, I think 24 we all know, has changed so dramatic, you know, for 25 an old man like me it's really hard to keep up.

Page 30 1 And for those of you who listened to 2 President Obama's speech to some business 3 organizations last week, I was very surprised and 4 also elated that his own emphasis of energy of 5 tomorrow was solar. And I hope we all heard that. 6 I want to read very briefly a letter I wrote 7 to the Public Utilities Commission. It's dated 8 January 22 of this year, and I cut it down. What it 9 was, was in their Commission meeting I pleaded to 10 them of the following: 11 "The Integrated Resource Plan required by 12 this Commission is to identify the long-term power 13 needs and how those needs are to be met." 14 This plan that they were reviewing for 15 approval or disapproval in, I think two years, and a 16 lot of resource and money to complete. 17 And I stated, "It is asked that the present 18 completed plan that awaits this Commission's action 19 be tabled. 20 It is also requested that this Commission 21 pursue the development of a new updated plan that 22 will take into account the very rapid changes in 23 technology, demand, supply and lifestyles of this 24 state. This plan should identify all the major 25 alternatives available and the pros and cons."

Page 31 1 This plan should be developed independently 2 from any of the power companies. 3 "The development of a new plan based on 4 contemporary issues could also include reviewing 5 problems faced by the providers and users of today." 6 I'll skip to -- I stated that because part 7 of the plan was an inter-island cable. 8 Perhaps this will give providers such as HEI 9 and HELCO and Maui Electric an opportunity to 10 reassess the direction to take for their future. 11 "HEI has stated -- and it is in writing --12 it is years ahead of schedule in meeting its 13 renewable energy goals, and it won't have to rely on 14any controversial inter-island cables to bring power 15 from the neighbor islands to Oahu, the company says. 16 Hawaii Electric Industries also stated, Oahu 17 can meet its renewable energy requirement and its 18 power needs on its own. 19 And the president just recently stated to 20 everyone in regards to the PUC that their biggest 21 problem is an oversupply of energies right now. 22 To this Commission, you know, the Commission for 23 these bodies responsible for this plan, in one year 24 your plan is outdated. In one year, your information 25 therefore, is outdated and any conclusion you derive

Page 32 1 from it will be outdated unless you conclude it is outdated." 2 3 Thank you. 4 (Applause) 5 MR. PETRICCI: Aloha. My name is Robert 6 Petricci. I am the president of the Puna Pona 7 Alliance. 8 I want to thank you all for giving us an 9 opportunity to have some input into this project. 10 Unfortunately, I have to tell you that I think you 11 have a fundamental problem, and it's an economic 12 problem. 13 It's not going to work. The costs are too 14 high. Right now already HELCO peaked in 1996, '97, 15 their customer base is shrinking. Honolulu is 16 already 10 percent solar, this island is 8 percent 17 solar. 18 Maui is the fastest growing solar community 19 in the nation right now, and prices are plummeting. 20 And a big part of the problem are distribution costs. 21 You have wires, you have poles, you have 22 tree trimmers, you have the trucks, fleets of 23 brand-new trucks. You have the administration. 24 Somebody will say that the distribution costs are not 25 more than 50 percent; I say they're wrong.

Page 33 1 The distribution -- because you have to figure in what are all of the distribution costs --2 HELCO is basically an energy distribution company. 3 4 They do some power production, they pay 18 cents for 5 some power, they pay 11 cents, we pay 43 cents. The 6 difference is over 50 percent, and that's 7 distribution. 8 There is a worldwide energy revolution. And 9 if you look around the world, you'll see the people

10 going to distributed power, they're going to 11 decentralized power. They're not building large 12 centralized power plants because the distribution 13 costs are not going to be able to be competitive.

And then you add the costs of this cable. For the cost of the cable, you honestly could install so much solar power that there's not -- there's not even a contest there.

Last year in Hawaii, we installed 179 megawatts of solar power, and it's going to double this year and it's going to double next year. And my community is not on the grid. We are not going to connect to the grid because it would cost us too much money.

24 So what you've seen is a worldwide 25 revolution and a competition for trillions of

Page 34 1 dollars. The electrical energy market is trillions 2 of dollars. And you have universities in Korea and 3 China and all these companies developing all these 4 new technologies and that's why solar prices are 5 crashing.

And the same thing is about to happen with batteries. And it's already happening with fuel cells and other types of water storage. You are basically using 18th century technology where we nail the wire to a tree when the Pony Express had the telegraph.

12 This is the 21st century. And I'm sorry, I 13 know you did a lot of work on this project and I 14 really appreciate it. My honest opinion is that it's 15 never going to work. We're not going to buy your 16 power because it's going to cost too much money.

MR. FULKS: Mahalo and Aloha. I am Ole'with an accent, because the accent is on the "E."

I would like to broaden this discussion a
little bit. Solar and wind, they're both free, clean
energy sources. But they have -- they both have a
problem. Now, the sun doesn't shine at night, the
wind isn't always blowing.

But I am not here to talk about problems, I am here to talk about solutions. There's a third

Page 35 1 energy source that nobody seems to be paying any 2 attention to, and we're surrounded by it. There's this Pacific Ocean out here. 3 Think 4 H2O, not O-tech, hydrogen. But, the problem is the 5 hydrogen isn't free. You've got to extract it from 6 the water. Now, that's where our solar and wind 7 comes in. 8 When it's producing plenty, free energy, it 9 takes energy to extract the hydrogen from the water. 10 Once you extract it, you've got a product that you 11 can transport, you can store, it's perfectly mobile, 12 perfectly usable. And essentially with solar and 13 wind, the energy is free so the product is free. 14 You can produce it on any of the islands. 15 We're surrounded by this beautiful ocean. So I would 16 just like to share this idea with you and, you know, 17 I think this should be part of the discussion. 18 Mahalo. 19 MR. CAMPANIANO: Thank you. Richard 20 Bidleman followed by Jim Albertini and then Hanalei 21 Fergerstrom. 22 MR. BIDLEMAN: Thank you. I'm Richard Bidleman, and I am going to repeat myself here again 23 because I think it's a very important issue that 24 25 seems to be continually overlooked.

Page 36 1 In 2010, I wrote an e-mail to Jim 2 Kauahikaua, who is the head volcanologist at HVO. 3 "Has USGS ever been asked to weigh in on geothermal 4 energy production in Puna? For those us who live in 5 lava zone one, it seems ridiculous to be drilling in 6 an area that is presumably the most hazardous zone in 7 all of the islands." 8 And that was my question to Jim. Here is 9 his response. 10 "Good questions. HVO has not been formally 11 asked to testify or submit information on geothermal developments in Hawaii in the last several years. 12 13 You've identified a relevant point that we have made 14 before, but that seems to have been overlooked in the 15 current flood of interest in geothermal." 16 My goodness! It's called dollars, I think. 17 Yeah. 18 "That what makes geothermal so attractive at 19 Kilauea also poses a threat to the power generation 20 facility and the customers that depend on it. You 21 are correct that the Lava Flow Hazard Map that we 22 developed designates Hazard Zone One as the most 23 hazardous for lava flows because it is directly over 24 a volcanic rift zone that erupts frequently. That 25 hazard threatens homes and power plants alike. Of
Page 37 1 course, it is that same rift zone that is the most 2 lucrative geothermal target in the state." 3 Let's put some dollar signs around that, 4 huh? 5 "If you are worried about further geothermal 6 drilling starting a volcanic eruption, there is no 7 evidence of this. Deep drilling has encountered 8 liquid magma, sometimes intentionally, but has not 9 started a lava eruption. I know of one instance 10 where about one cubic meter of magma came back up the 11 drill string before the drill hole was plugged, but that's all." 12 13 So he's saying that there's no evidence, but 14 we just have to see what happens, huh. 15 Now, one of the other things that Jim said, 16 it's not going to -- if we have a blow-out in a 17 geothermal well, it's not just going to affect the 18 surrounding community. The more reliability -- the 19 more we rely on geothermal energy, it's not just 20 going to affect our community, but it's going to 21 affect those rate payers who depend on that energy, 22 and it's not just going to be Puna. 23 Anyway, thank you for your time. 24 (Applause) 25 MR. ALBERTINI: Aloha, everyone. I'm Jim

Page 38 1 Albertini, and I'm been living out in Kurtistown off 2 the grid for 33 years.

3 (Applause)

MR. ALBERTINI: I want to give you the simple story here. We never wanted to hook into HELCO in the beginning. We wanted to live a little life over here. But without our requesting it, HELCO sent us an estimate of what it would cost to bring electric poles to our farm. It was \$20,000.

In 33 years, we haven't spent \$20,000 on solar. And I have lights, computers, refrigeration, freezers, even a big freezer. I put all my wild pig meat in to share with people in need. That's in 33 years.

15 So, what we need today, I think, and this 16 will be something for Russell Ruderman and others to 17 think about, we need a finance mechanism, but what 18 Richard Ha calls it, a rubber slippery crap.

Because we had to start small scale with two batteries. And little by little as we farmed and raised enough money, we could expand our solar system, our panels and things like this. Today, the battery storage is maintenance free, you know. But we need a finance mechanism. So that's something for the rural people, decentralized, that we need to work

Page 39 1 on. 2 I want to make a comment about the 3 Department of Energy. Before I came here, I googled the DOE to see what their budget was for clean 4 energy. It's \$6.3 billion a year they spend. But 5 6 the same DOE, Department of Energy, spends \$7.6 billion to maintain the nuclear weapons systems in 7 8 the United States. 9 Now, we need to change the priorities here. 10 I speak as a peace activist. Let's put more money 11 into clean energy than we are into nuclear weapons. 12 (Applause) 13 MR. ALBERTINI: And finally, I would like to 14 make a comment on geothermal. 15 Under the Health and Aspect dealing with 16 geothermal, I want to ask a question. Does 17 geothermal impacts address the spiritual and psychological impacts to native Hawaiian 18 practitioners of desecration of the Hawaiian deity 19 20 Pele? And how do you avoid, minimize or mitigate the 21 desecration of Pele and the psychological impacts to 22 Pele worshippers by geothermal drilling? 23 My answer is you don't do it. No more 24 geothermal drilling. 25 (Applause)

Page 40 MR. FERGERSTROM: Before I start my stuff, I 1 2 just want to do some housekeeping stuff. I have been 3 on you guys' list, and I just got the notice 4 yesterday. Okay? 5 None of the -- I am the spokesperson for 6 Na Kupuna Moku O Keawe. I have kapuna from all six 7 major districts of this island. 8 So I want to try to copy -- first of all, I 9 don't have the capacity to download it, the size of 10 your files -- but I need to be able to take those to these other districts that I communicate with so I 11 12 can share that information. 13 But I can't do it on a disk, you can't 14 change the pages and throw this to that -- you know 15 how that goes -- so I'm requesting a hard copy. I left my information on how to get it to 16 17 And as quickly as you possibly can, because me. 18 apparently this deadline thing is right around the 19 corner. 20 So, anyway, so I will get back on the time 21 card now. I am Hanalei Fergerstrom, I am the 22 spokesperson for Na Kupuna Moku O Keawe. I'm also a 23 native religious practitioner. I am with the Temple 24 of Lono. Pele is the first of the Aumakua. 25

Page 41 1 Now, in your energy firms, you have all 2 different kinds of things. But I want to 3 specifically talk about geothermal because this is --4 I thank very much Jim who spoke before me -- because 5 I am the person who is injured -- because it rips at 6 me, it rips me, it hurts me, it hurts me so badly. 7 And if you start thinking that somehow this 8 is the gift of nature, you're wrong. You've raped 9 her, and you've continually raped her. Now, you want 10 to put her out on the street for every Tom, Dick and 11 Harry to get. So that is very, very, very offensive 12 to me. 13 But, another problem is, is that you need to 14 look and understand the Hawaiian mythology. You have to understand that Pele is on this island and that 15 16 area of Pole Maha for a reason. It's not like she 17 couldn't have been anyplace else, because she was. 18 So when you start talking about fracking, 19 which is one of the things that's on you guys' list, 20 you better really do some over-care because there are 21 unintended consequences that you do not want to walk 22 into. 23 Now, I know everybody looks at it, oh, these 24 Hawaiians, they get a little dramatic. Well, how 25 else can I possibly tell you that this is really

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Page 42 1 It's really scary ****. scary ****. There is 2 historically scary ****, so it's not like we making 3 this stuff up. 4 I will just move along with that. I will 5 tell you that I am 1,000 percent against geothermal 6 and 3,000 percent against fracking -- even worse. 7 There is nothing that cannot be accomplished, 8 especially with the breakfast graduation of 9 technology today. 10 Things like the Tesla batteries science 11 that's going on, the solar accumulator-type of 12 things -- I guess that's what they call them -- there 13 are so many different ways to do that that it is 14 absolutely ridiculous to think that we are going to rely on power lines or cables. 15 16 The need for communities to have their own 17 facilities to be able to farm the areas is very, very 18 important. Like you said, if you're not centralized 19 you're not going to get bombed there. That is a good 20 point. 21 There are a lot of things Jim talks about. 22 But, you know, this just blows my mind. The last 23 time you guys were here was two years ago. Who did 24 you talk to in the meantime? I spent all night last 25 night reading the testimonies. That was just the

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Page 43 1 testimonies, that wasn't even the stuff that you got 2 on your stuff because I can't download it. It would 3 cost me too much money and I just don't have the facilities to do that. 4 5 But, where is that information? I mean, 6 guys like us, we're on the list, you know. Why 7 aren't we getting the little updates? What, it took 8 you two years to come out and say, hey, quess what, 9 here's what else I got for you. 10 You have three minutes to make a ******* 11 comment, excuse my language. You have three minutes 12 to make a comment. That's not correct. 13 You know, I would love to be able to sit 14 here and dissect this stuff and tell it to you. I'11 15 read it. I actually do read this stuff because it 16 concerns me in a great deal. 17 If it affects me, it affects every one of 18 I'm just the first in the line. you. 19 So, I would really like to ask the 20 Department of Energy, communicate with the local 21 people, especially the Kanaka Maoli. Just as a 2.2 matter of point, the United States does not have 23 . jurisdiction in Hawaii. This is my country, this is 24 my resources. 25 I am not going to debate you on this because

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Page 44 1 we can't decide this in this room. I am asking you to consider this matter when you start talking about 2 3 this, okay? And believe me, you guys got to -- you 4 even have it on your power points -- the historic and 5 customary values of this -- who are you going to ask 6 about it? Nobody has asked us yet. 7 You talk about us, about how caring you're 8 going to be for us. Never once did you ever call us. 9 So, you know, I'm not trying to be a Jack Ass here, I am trying to tell you that -- look, I'm alive, I'm 10 11 I have been around for 45 years doing this here. 12 stuff. It's very annoying. But I have to keep doing 13 it. 14 But, see, some of you die and don't ask me a 15 question. Gees, I have been doing this too long. At 16 least ask me a question. Thank you very much. 17 (Applause) MR. CAMPANIANO: Paul Kuykendall followed by 18 19 Suzanne Wakelin and Nelson Ho. 20 MR. KUYKENDALL: Aloha. Paul Kuykendall. 21 That's spelled K-U-Y-K-E-N-D-A-L-L. 22 Aloha. I appreciate all the work and effort 23 that you've made in doing this EIS. We do need help 24 on this island. 25 You know, you wonder where all these

Page 45 1 geothermal activists came from. They all live around 2 the PGV plant. They all live around the old HTPA 3 plant.

And the reason is, when you talk about potential impacts in your charts, you talk about the potential impact of health and safety, groundwater, noise and vibration we hear, because of our experience, they are going to do it again -- we've had health and safety problems. We've had groundwater problems, we've had noise and vibrations.

11 Last week -- I live a mile from PGV. I am 12 awakened at night by PGV. When you talk about best 13 management practices, what I hear is the PR we hear 14 from PGV. We hear that PGV wants to go above and 15 beyond the regulations.

16 The reality is, we've had civil defense
17 emergencies more than any other power plant in Hawaii
18 at PGV. I live a mile from the plant.

So, in April and March last year there was something tripped the plant, and they had a release. And civil defense came out and they did a reading, it was much higher than what PGV was telling us was going to happen.

And since then, EPA has done an investigation, and you probably saw the paper

Page 46 1 yesterday, that there were 14 violations of the Clean 2 Air Act. And the last violation, the last finding 3 was PGV has failed to maintain a safe facility, 4 taking such steps necessary to prevent releases. 5 When they say releases, they're talking 6 about hydrogen sulfide, which they say in their 7 letter is an extremely hazardous substance. 8 So, when you talk about potential hazards, 9 we think about our experience. And that's why we're 10 against geothermal. It's not because we were born 11 thinking that we wanted to be activists, it was because we have experienced geothermal. And it was 12 13 even before PGV. 14HTPA was done by the State of Hawaii, and 15 they dumped their brine on the ground. And when the EPA asked, at our request, that they look at what's 16 17 happened to the groundwater, DOH said, oh, it's no 18 problem because we already know that that ground-19 water is saline anyway. 20 And, by the way, we did it on Alpine Pond, 21 we scraped all the soil away, so we can't take soil 22 So, you know, that's our experience. samples. 23 And that's why, when you want to talk about 24 potential impacts, we feel it in our hearts that 25 again we're going to be -- we're going to be set

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1 upon. And let me just say this.

Right now PGV is producing -- last year it was 22 percent of the Island's electricity. Puna uses about six percent. So when you talk about geothermal making energy less expensive, it hasn't happened on this island. We are more expensive than the other islands that don't have geothermal.

9 mile from my house to Kona. And there's no reason it 10 should be exported to Oahu so that we can have the 11 impacts in our neighborhood, so that other people can 12 leave their hotel rooms open and still air condition 13 their room.

14 So, Mahalo, I appreciate what you're doing. 15 And know that, you know, it's our hearts that are on 16 the line because this is our families and this is our 17 farms.

18 Mahalo.

19 (Applause)

20 MS. WAKELIN: Aloha. My name is Suzanne
21 Wakelin, W-A-K-E-L-I-N.

22 So I want to start out by saying I 23 appreciate the work that you've been doing and the 24 opportunity to provide input. I live in Puna. 25 I echo solidly the previous speaker. I understand

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Page 48 1 completely, living in the same area, dealing with the 2 same issues.

3 However, in this case also, I would like to 4 express my concern about the section in the draft 5 report about geothermal. Specifically, about the 6 enhanced Geothermal Systems, which incidentally is 7 against the law in the County of Hawaii. 8 Enhanced geothermal hydrofracking or 9 hydroshearing, whatever you want to call it, has a 10 number of serious potential negative impacts on the

11 environment.

12 The only impact that is mentioned is the 13 problem with induced seismicity. There have been 14 studies on this problem with regards to fracking 15 elsewhere. However, the specifics of Hawaii geology 16 and volcanology are not addressed.

17 The report refers to the MIT -18 Massachusetts Institute of Technologies studies and
19 PICHTR -- that's the Pacific International Center for
20 High Technology Research. They've published a report
21 last year.

However, there's a strong bias for EGS technology without addressing any of the negative impacts.

25

So, I'm concerned that by partnering with

Page 49 1 DBEDT, the Department of Business, Economic 2 Development and Tourism, there is an implicit bias in 3 this PEIS with regards to the interisland cable, centralized power generation, and the small grid. 4 5 DBEDT's objective is to make policy determinations 6 with respect to economic development. DBEDT does not 7 appear to have any interest in environmental, 8 cultural or cost impacts. 9 So the whole landscape with regards to 10 energy generation in utilities is changing, it's in a state of flux right now. And the draft PEIS report 11 12 does not seem to address this fact. 13 It does not address the problem that 14 continued growth is not sustainable. It's 15 irresponsible to simply enable business interests and continued growth of consumption under the banner of 16 17 green energy. 18 I'll finish by saying no to geothermal in 19 Hawaii, and no to the interisland cable. Mahalo. 20 (Applause) 21 MR. CAMPANIANO: Nelson? 22 MR. HO: What I wanted to say has been put on the record by the other speakers. So, thank you. 23 24 MR. CAMPANIANO: The last speaker that's 25 signed up is Maureen Cruz. As we wait for Maureen,

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Page 50 1 if there's anybody else that would like to speak, you 2 know, please gather your thoughts. 3 MS. CASH: Could I say one more thing? 4 MR. CAMPANIANO: So Maureen is not here? 5 MS. CASH: So, I don't need the mike, I 6 think I can project. Renewables --7 MR. CAMPANIANO: Well, can I see if there's 8 anybody else that wants to speak? 9 Well, nobody raised their hand. MS. CASH: 10 It will be short. 11 Renewable energy brings sustainable 12 employment along with it, and you can look this up. 13 So if there's concerns about bringing jobs to the 14 island, these are truly sustainable clean employment. 15 So for those people that are interested in that too, 16 I forgot to put that in my statement. 17 Thank you. 18 MR. CAMPANIANO: Hanalei? 19 MR. FERGERSTROM: I'm sorry, I just stepped 20 Did you just ask if anybody else has anything out. 21 else to say? 22 MR. CAMPANIANO: Yes. 23 MR. FERGERSTROM: I have something else. 24 One of the parts that I didn't bring up that I thought is very important for us to look at as a 25

Page 51 peoples, just living in Hawaii, the water use. 1 You 2 can't afford to take your fresh water and throw it into the water and pollute the ocean. 3 You can't afford to do that. 4 5 You know, Hawaii has a very unique situation 6 here. We've got the only parking lot and the only fresh water in a 2500-mile radius. You don't want to 7 8 lose those qualities by some -- I'll refrain from the 9 word -- but from this geothermal stuff. None of 10 that. That's causing -- ocean wide -- it's causing 11 dead zones in the ocean too. 12 And so, there are so many impacts that 13 affect me as a Hawaiian, but impacts everybody else 14 too. And it's threatening to everybody else also. 15 Thanks. 16 (Applause) 17 MR. HUNT: For the record, I'm K.R. Hunt 18 again. 19 I was doing some homework, and I noticed 20 that the Department of Energy has done some extensive 21 research on the wave energy. And if there's a need 22 for whatever reason that I don't know of to have a 23 grid system, that seems to be the best way to go. 24 The 2009 study that is on line is well worth 25 the read. And just recently, they compiled a 2012

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Page 52 Environmental Impact Study. And it's pretty 1 2 extensive, 143 pages. 3 And I think that, as I said, if for some reason we need to keep a grid, that would make the 4 5 most sense. If we study what's happening in Kaneohe 6 at the military, they've had some pretty good 7 Quite a few companies out there have results. 8 devices that ride on the waves. 9 Seems like from all the studies done so far, 10 far less risks to our environment than trying to put 11 some super cable down through the water that to me, 145 miles, gee, that's a lot of area you have to 12 13 patrol in case of a terrorist attack. So just my 14thoughts on that one. 15 MR. PETRICCI: Aloha. Robert Petricci 16 again. 17 I wanted to talk about fracking a little bit 18 because I spent the earlier part of this year in the 19 legislature working on geothermal issues. And we got 20 a bill passed through the house and the senate to ban 21 fracking in Hawaii. 22 And it went to conference committee where it 23 died in conference committee. And it was a 24 geothermal regulatory bill that the geothermal 25 industry needed to permit their project. So they

1 really wanted the bill.

2 In it we had restored contested cases and a 3 process for the community that we really wanted. So 4 there were a lot of things in there that everybody 5 wanted. But they couldn't agree on fracking. The 6 rest of it took a half an hour, whatever. Then they 7 fought for four hours over the ban on fracking. 8 And they all said they don't want to frack, 9 and all the testimony all year, we don't want to 10 frack, we don't want to frack. But they wouldn't 11 even give us a two-year moratorium on fracking. So I 12 tried to talk to Andrea about it earlier. 13 And I think DBEDT's position is they support 14 fracking. I know DLNR's position is we can regulate 15 fracking. We don't need any further regulations. 16 I'm telling you guys, they want to frack. 17 And when I talked to Andrea about the water 18 because of climate change, we have been reading about 19 climate change. One of the problems that Hawaii is 20 expected to have for climate change is water. We are 21 going to need the water. And the fracking presents a 22 real problem for the water. 23 And she said to me, don't you know the water 24 is already polluted or it's already salinity, the DOH 25 Because the DOH says so. savs so.

Page 54 1 Well, I don't think that that's -- I mean --2 I am not trying to knock her but I don't think that's 3 an okay reason. So let's go ahead and frack, the 4 water has got some salinity in it. I find that 5 reckless. 6 And there was one other thing. Let's see. 7 MS. WAKELIN: We don't want our drinking 8 water being gone from millions of gallons of water 9 to --10 MR. PETRICCI: We are going to need that 11 water, you know. And the same people that told us 12 geothermal HEPA was going to be safe, you know, and 13 all that, are the ones that are telling us the water. 14 Anyway, we are not going to let you frack, 15 I'm sorry. 16 (Applause) 17MR. HARDEN: Cory Harden again. A couple of 18 more things. 19 I would like to see evaluation of what 20 happens to the big companies as we move toward 21 renewable energy sources. Suppose the big electric 22 generating facilities aren't needed anymore and the 23 grid is not needed, then what? 24 Does the Hawaiian Electric Company go out of 25 business? What happens to the old facilities? Will

Page 55 1 rate payers or taxpayers have to pay for some of 2 this? 3 And how about if we don't need the gasoline 4 stations and the gas storage facilities? Then what 5 happens? I mean, they're not very safe, you know, 6 facilities. 7 The owners may go bankrupt. What will the 8 facilities be used for? Who is going to pay to clean 9 up any hazards? 10 I would like to see the option evaluated of 11 energy service companies that help consumers maintain 12 their systems like maintaining solar panels, 13 maintaining their batteries, whatever they've got. 14 Let's see. People have talked about storage 15 methods. 16 Let's see. I didn't see anything about 17 growing algae for fuel. I hope that's evaluated 18 someplace. 19 And also, when looking at the undersea 20 cable, we need to look at impacts from the projects 21 that feed into the cable. One big concern I have was typically when new stuff comes along, the 22 23 corporations get out ahead of the regulatory 24 agencies. 25 That happens over and over. There's new

Page 56 1 stuff developed. For example, with that Huhanoa 2 Biofuel Plant just down the coast, they were all set 3 to get their clean air permit. There happened to be some concerned citizens living around there who 4 5 happened to have enough money to hire a lawyer, and lo and behold they did not deserve that permit. 6 But 7 it would have gone ahead if there wouldn't have been 8 some people that had the money to hire a lawyer 9 there.

10 This is the kind of stuff that happens 11 because even the supposedly renewable energy, there's 12 a lot of brain washing out there, a lot of people 13 jumping in thinking they're going to make a quick 14 buck. And they typically get out way ahead of the 15 regulations. So that needs to be looked at.

Let me see. If we go into renewable energy, we'll need less fuel, less harbor facilities, less trucks. I mean, it will change everything. So I think that needs to be looked at.

And I would like to see models for planning. I mean, what is the planning process here? So far it's been projects here, there and the other place. So I think we need -- you know -- if we're not the first place to try to figure out how to do renewable energy right, how do we make a statewide 1 energy policy.

2 Maybe it's best for each location to figure 3 out what's the best energy source.

Is it good for that location to be connected into a big grid or a microgrid or just have an individual power? There needs to be a way to determine all that and a way to look at this statewide.

9 And I think we need to look at our economic 10 drivers because that affects your energy use. 11 Currently, tourism and the military are the major 12 drivers. They're real big, contributing to our 13 economy supposedly.

14 They have a lot of impacts but most people 15 say that they're helping us. Anyway, well, if we 16 become more self-sufficient for food and our other 17 needs, which is another initiative, self-sufficiency, 18 will we always need so much military fuel, so many 19 pile drivers and new hotels, so much power for air 20 conditioning, so many tour busses, airplanes, cruise 21 ships? 22 Will we always need so many container ships 23 coming in? That's going to change.

24 MR. CAMPANIANO: You can leave your comments25 with us.

Page 58 1 MR. HARDEN: I am finishing up. Everyone 2 else went over. 3 We need to look at building codes, building 4 design, subdivision covenants. Some people say you 5 can't have clothes lines. Zoning so people don't have to drive really far to work and shopping. 6 7 Street designs so you don't need cars. 8 And the last thing, the various scenarios, what is the cost of maintenance? And if something 9 10 goes wrong, how bad is it, how costly is it to fix 11 it. Okay, thank you. 12 (Applause) Robin, our court reporter 13 MR. JOE RIVERS: 14 has been going solid one hundred percent of the time 15 for an hour and a half. So I would kindly request 16 that we give her at least ten minutes to rest her 17 fingers and then we can continue. 18 I'm not stopping everything. I just want 19 to give her a break for a minute to let her have some 20 water and the restroom and just to be considerate --21 (A recess was taken from 7:40 p.m. to 22 7:50 p.m.) 23 MR. CAMPANIANO: We are back in session. Can you please give Ole' your full attention. 24 25 MR. FULKS: Okay, Ole' back again. Just a

Page 59 couple of quick points that I missed the last time 1 2 around. 3 One, to get liquid hydrogen, there's a 4 couple of byproducts -- and pretty non-polluting -oxygen and maybe a little sea salt. Not too bad. 5 6 But then also, well, if you start thinking 7 about, well, okay, using up the water in the ocean, you're going to have the level go down. 8 I don't 9 think we've got too much to worry about there. 10 But, hey, they say sea levels are rising. There is islands out there in the Pacific going 11 12 under. So, if we -- you know -- if we did reduce a 13 little bit it wouldn't be a bad thing I don't think. 14 So, okay, I'm done. 15 I think there was somebody else but I don't 16 see her now. 17 Hey, nobody else, I qo. MR. FERGERSTROM: 18 MS. CASH: I think Judith went home. 19 MR. CAMPANIANO: She went home? 20 MS. CASH: I think so. I am not sure. But 21 she's not here. 22 MR. FERGERSTROM: Don't forget. You know, 23 there's some realities that we have to really come to 24 understand in Hawaii that's very unique. 25 Growing up on a volcanic island, it's layers

Page 60 and layers of air pockets and rock. And so, this fracking stuff, the potential to destroy so much is so -- it is so close for even the smallest fracking experiment.

5 When you look at the energy consumption on 6 this island or in the islands, you have two major 7 players; it's the military and the telescopes. You 8 know, so when you talk about generating all this 9 electricity, especially at our expense, I want to 10 know for whom, and what do we get out of it. Because 11 we're not getting anything out of it except the short end of the stick. We get the sickness, we've got the 12 13 sleepness nights.

But anyway, it's like you have to talk to the people that are on the ground. You've got to get away from the state agencies that pretend they know everything because they don't do a damn thing. They run out and have these meetings that have two-minute comment periods like you're supposed to be a genius and be able to summarize it in three minutes.

Nobody -- nobody in this room can summarize
what they're thinking in three minutes. So, why
expect the public to do so? I don't understand.
But there's people like myself -- there's
several parties in this room who are very consistent

Page 61 in coming out to these meetings. I would like to see 1 the Department come out and reach out to them and let 2 3 them do some speaking to really give some input 4 that's not connected to a Federal Agency, a State 5 Agency or a big corporate entity. 6 It would be very, very helpful, it would 7 sure calm down a lot of nerves around her. Because 8 right now we're looking at it -- we're like, you 9 know, those roads going down to Pohoa, that's not for 10 us. 11 They're putting those roads down there 12 because it's going to industrialize that whole area 13 which means -- tell me -- what is the purpose of you 14 if they are going to make all these things in the way 15 in the first place. 16 The cable is already being laid. You know, 17 it's not like a decisive thing going on here whether 18 we're going to do it. All the -- and the cables 19 are -- they're doing it. They're just coming in to 20 ask us, did it hurt yet? You know, what I mean? 21 And so, I'm asking you to reach out to the 22 people who are actually on the ground that have to 23 live through this who have unbelievable ideas. We 24 have great green ideas that are functional. But you 25 have to include us in that program and not listen to

Page 62 1 I mean, I spent almost all night last night just us. reading the testimonies from the last scoping 2 3 meeting. And that's just a handful of people that 4 5 really want to know. I don't know anybody in my 6 circle that knows about this meeting tonight. I 7 don't. That's not good. Because there's a lot of 8 people here being affected. 9 Anyway, it should not be at the expense of 10 the Big Island to support Oahu. There are all kinds of mechanisms in which they can do like those solar 11 collector things, kind of things, that could be done. 12 13 Let's go around the rail. It's all going to come out of the volcano? Very important questions. 14 15 Okay, who else? Next? 16 MR. CAMPANIANO: Any further comments? 17 MR. JOE RIVERS: You can adjourn. 18 On behalf of everybody, we would like to 19 thank you so much for coming out and sharing your 20 manahoa with us. So, again, there's an open comment 21 If you would like to provide further period. 22 comment, the instructions, like I say, are on that 23 poster there. Thank you very much. 24 (The public comments period was concluded.) 25

Page 63 1 STATE OF HAWAII) 2) ss. 3 CITY AND COUNTY OF HONOLULU) 4 5 I, KATHRYN PLIZGA, RPR, CSR No. 497, State of Hawaii, do hereby certify: 6 7 That on May 14, 2014, the above-mentioned 8 proceedings are contained; 9 That the proceeding was taken by me in 10 machine shorthand and was thereafter reduced to 11 typewriting by me: 12 That the foregoing represents, to the best of my ability, a full, true and correct transcript of 13 14 said proceedings. 15 I further certify that I am not attorney for any of the parties hereto, nor in any way concerned 16 17 with the cause. 18 Dated: Honolulu, Hawaii, June 10, 2014. 19 20 21 KATHRYN PLIZGA, RPR 22 Hawaii CSR No. 497 23 24 25