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CALIFORNIA ENERGY COMMISSION

In the Matter of:

Alternative and Renewable Fuel and Vehicle Technology Program	)))	Docket No.: 18-HYD-04

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STAFF WORKSHOP

WARREN-ALQUIST STATE ENERGY BUILDING

FIRST FLOOR

ART ROSENFELD HEARING ROOM

1516 9TH STREET

SACRAMENTO, CALIFORNIA

TUESDAY, FEBRUARY 12, 2019

10:00 A.M.

Reported by:

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STAFF

Phil Cazel

John Butler

Mark Johnson

Jean Baronas

Miki Crowell

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PUBLIC COMMENT

Wayne Leighty, Shell Hydrogen

Matt McClory, Toyota

Steve Ellis, American Honda

Brian Bonner, Air Products

Jaimie Levin, Center for Transportation and the Environment

Mikael Sloth, NEL Hydrogen

Dwight Zuck, Air Liquide

Joe Cappello, Iwatani

Dave Edwards, Air Liquide

Steven Brooks, Retail Energy Solutions

Jorge Lopez, Air Liquide

Tim Brown, First Element Fuel

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PUBLIC COMMENT

Steve Jones, ITM Power

Matt Forrest, Mercedes Benz

David Park, California Fuel Cell Partnership

Andrew Martinez, California Air Resources Board

P R O C E E D I N G S

10:03 A.M.

SACRMENTO, CALIFORNIA, TUESDAY, FEBRUARY 12, 2019

MR. CAZEL: So good morning to those of you in the room and those of you joining us on WebEx. This is the Hydrogen Draft Solicitation Concepts Workshop. We're going to be going over the Draft Solicitation Concepts document that was posted and answering questions as we go.

For those of you on WebEx, please type your questions in and we'll try and get to them, you know, as we go through the presentation.

So then before we get started, a couple of housekeeping items.

For those of you not familiar with the building, restrooms are located out the door, either to the left or the right. There's a snack bar on the second floor.

And then lastly, in the event of an emergency, please follow the employees from the Energy Commission out the doors and we'll go kitty corner across the street to Roosevelt Park and reassemble there.

We have a sign-in sheet out front. For

those of you in person here, you can staple your business card to the sheet, if you'd like. And then we have a diversity survey which has been distributed to those in the room. You can also go online to the SurveyMonkey link that's here. And for those on WebEx, we'll be sending -- did we send it? We'll be sending that to you. So if you'd please fill that out, that helps us.

So public comments will be limited to three minutes per speaker. And just a reminder that any comments made during this workshop could be -- or will be made part of the public record for this proceeding.

Here's our meeting agenda we're going to try to stick to, so we'll start with the presentation of the draft concepts, take a lunch break at noon, and then continue. Near at the end of the presentation, we will have more time for questions. But as I said, we welcome questions as we go through each of these concepts. And then at the very end, we'll have an opportunity for public comments. So those of you who would like to make extended comments in general are welcome to at that time.

So the Energy Commission is committed to

taking steps towards broadening the pool of applicants to our various programs, especially the underrepresented groups, disadvantaged communities and small businesses. And this commitment is a continuing effort to diversify the participants in Energy Commission programs to help ensure equitable access to Energy Commission funding, create jobs, provide economic stimulus in underrepresented and disadvantaged communities, increase competition, and ensure the best opportunities are identified and funded, and also to ensure that local needs are identified and addressed.

So let's go ahead and jump right in.

So the available funding expected for the next solicitation is $110 million. This is subject to future appropriations through the legislature and the ARFVTP investment plan funding. This is our normal process. So up to $22.6 million is expected for the first initial batch of stations coming out of the next solicitation.

And please raise your hand if you have a question. We'll stop and address it then.

So some definitions for the concepts.

We're using a tranche to describe the entire number of stations that would be proposed by a given applicant. And then a tranche will be divided into batches of stations. So a batch of stations describes, you know, the stations that have been approved and are in progress at any given time. And the initial batch of stations would be the first set. Subsequent batches are called subsequent batches. So the initial batch of stations at the time of the application, we're going to require an address for each of those. And this isn't telling you how many we need. This is give us your application, tell us how many stations in the batch.

And for -- so go ahead. So we have a question in the room.

Please tell us who you are. We have a court reporter here today and so she's going to be recording everything to make it easier for us to search. It will be posted so that everybody can see the transcript like that. So please say who you are. And then if you can give her a business card at some point, then we can have the -- everything attributed to the right person.

So go ahead, Wayne.

MR. LEIGHTY: Hi, Phil. It's Wayne Leighty with Shell Hydrogen. A couple clarifying questions on this terminology and the intent, if I may please?

In most of the Solicitation Concept, I understand that a single applicant would propose a single tranche. In one place it used plural, as if maybe a single applicant would propose multiple tranches. Could you clarify the intent that there's a single tranche from each applicant?

MR. CAZEL: Yes, your take is correct. Each applicant will apply for a tranche. So if we used tranches, you know, we were referring maybe to the whole solicitation, having a number of tranches, one from each applicant.

MR. LEIGHTY: A quick follow-up, if I may?

So then on batches, I understand in some places there's no limit on the size of a batch but that the initial batch may be constrained by the funds currently available, $22.6 million, and by the single applicant cap. So generally, I'm wondering if there is a constraint on the size of an initial batch?

MR. CAZEL: Yeah. I have a slide coming up in a few that discusses the single applicant cap. And so based on the funding that we think we're going to have, the $22.6 million, that would limit the single applicant cap to like seven-point-something million for that initial batch.

MR. LEIGHTY: Thank you.

MR. MCCLORY: Hello. This is Matt McClory with Toyota. A question on the funding allocation.

The $110 million, is that understood that that's the definition of the estimated amount available under the AB 8 statute per the joint report or is that when your statement was, regarding the legislative approval, was that also including other funds that are not part of AB 8?

MR. CAZEL: The $110 million is speaking just to the funds that are available in the AB 8 program through the end of the program. So in addition to that being out there, every year we have to wait for that, you know, for that portion, for the $20 million that we expect each year, to actually be designated and approved for our program. But the $110 million is what we're

expecting based on the AB 8.

MR. ELLIS: Steve Ellis with American Hondo. So I want to come back to your opening statement, so maybe this question is just about process. Which do you want or prefer as you go through? Do you want to pause and then take questions on maybe the part that you covered and introduced? Do you want to go all the way through it and wait until the end? I just want to better understand, I guess, what the rules of engagement would be, so that we know, at least have a sense if we can take it off in pieces of wait until the end?

MR. CAZEL: There are some slides that tie together and may explain a certain concept better than, you know, going page by page and trying to take questions. So if we get to something like that, I'll say wait. But you know, in general, if you have a question, raise it right away because it's easier to discuss while it's right there.

MR. ELLIS: Perfect. Thanks.

MR. CAZEL: So can you come to a microphone please? Oh.

MR. BONNER: Hi. Brian Bonner with Air

Products.

Has the CEC considered how the current structure of the solicitation may actually constrain station sites if they are not awarded in the first batch of stations?

MR. CAZEL: That's a good question. We tried to look at -- you know, we tried to give the flexibility in the batches so that, you know, an applicant can propose however many stations they think they need in a batch. And whether that's limited by the number of addresses available or not, you know, is something we wanted to give the flexibility to, to the applicant themselves.

Does that answer the question?

MR. BONNER: Yeah. I was more getting at if you have a station owner or location that is interested in developing a fueling station site, they may get delayed for an extended period of time for that opportunity to install a station. And, I mean, is there a negative implication to that in terms of developing infrastructure, you know, within the network?

MR. CAZEL: I think the easiest way to say it is our initial batch, we want the

addresses. For future batches within the tranche, those addresses will come later. So if there's a station that's going to take longer to get ready, that would be one that you'd want to put in a later batch. Because then you don't have to give us that address and start officially working on it until a later date. But the initial batch, we want stations that are ready to go and have an address that can be -- that you can start developing right away.

If I'm stumbling at getting at the question, then send us something to the docket kind of outlining your question more and that will give us something in writing that we can address.

MR. MCCLORY: A question. This is Matt McClory with Toyota.

Could you kind of maybe clarify a procedural or a process, at least on a high level, on comparing how solicitations went through a notice of proposed awards, who the tranches and the batches would be handled? Would the idea be that the station developer, I think as it's articulated, is going to submit a plan for a total number of stations and highlight what

would be the first batch? Is the idea of a notice of proposed awards, would it also identify the applicant's tranche plan or will it just be discussing what the batch award would be at that time?

MR. CAZEL: So we're envisioning the notice of proposed awards to say how many total stations in the tranche were proposed and awarded, but then to only name that initial batch with addresses. We're thinking we'll go out with subsequent NOPAs or revised NOPA that has the next set of addresses for the next batch as we go through, you know, as we go through the years and get more funding and roll out more batches.

So that's a little bit of what's on this slide. So, you know, the Energy Commission business meeting will approve the tranche and then only the initial batch will be encumbered based on the funds that are available at that time. And then each different batch after that, each subsequent batch, will be authorized separately.

Okay, I'll just keep going.

So subsequent batches will be authorized. And this will be one batch at a time for each

applicant. And it will be a first-come-first-served basis. And the requirements for requesting to be able to start on your next batch and to receive approval for the next batch are these bullet points here. So, you know, the building approval is received for the prior stations within 18 months. The stations are open retail in the prior batch or they're expected and, you know, reasonably underway so that they'll be open within 30 months. The funding is available to us to award to applicants. And critical milestones one and two are met for the new batch, and those critical milestones are the standard ones that were in the last GFO. It's having the meetings with a AHJ having site control, and I have those laid out in the later slide, as well.

And then, also, the station locations for the new batch have to be ready to go and they have to be in eligible areas.

So then as far as the award amount per batch, we will use the dollar per kilogram for the trance and do that math to figure out how many kilograms are in the batch. And then the award for the batch will be based on dollars per

kilogram for the batch.

MR. LEIGHTY: Hi. It's Wayne, Shell Hydrogen. Maybe this is premature but a clarifying question also.

I saw, in the scoring criteria, two forms of cost competitiveness, I don't remember the exact term, one on dollars per station, one on dollars per kilogram capacity. I thought I also read -- and so my first question is whether those are parameters that the applicant specifies, here's a dollar per station and a dollar per kilogram capacity the applicant is requesting? That's my first question.

The second one is I thought I also saw a place where the Energy Commission may specify a dollars per kilogram capacity. Is that a parameter the Energy Commission would specify functioning something as a funding cap?

Thank you.

MR. CAZEL: Yeah. I'm not sure where you saw that the Energy Commission would specify a dollar per kilogram. Our intent is to look at the applications as they come in, do the math, figure out, you know, what is the dollar per kilogram that is the ask, and then use that as

part of the scoring, like you said, to figure out, you know, the efficiency of the use of the funding.

If we get to that later and it does come up, bring it up again.

MR. LEIGHTY: Thank you.

MR. LEVIN: Jaime Levin with CTE, Center for Transportation and the Environment.

Since you're going to be evaluating on cost effectiveness for the tranche, how is it that -- and I didn't see this so maybe I missed it in the document, but how are you going to evaluate the probability of the applicant fulfilling the entire tranche since you're going to be evaluating cost effectiveness on how many stations over the trance are going to be built?

MR. CAZEL: Yeah. That's a good question. We always try to look at what's the strength of the applicant and how strong is their plan? Does it seem reasonable? Is their schedule reasonable? Do they have, you know, experienced partners? All of those things go into deciding, is this, you know, a good get for the state to spend money on. And so those types of things, we'll look at can they really build

this many stations based on what they've told us about their plan to get there?

So this is just an example, kind of made into a table that came out of the document. So an example, number of stations in a batch could be ten. The capacity per station, 500 kilograms per day. And then dollars per station proposed. And the math comes out to $10 million for this batch. So just a simple equation. The math works the same if you use dollars per station or dollars per kilogram to get to the $10 million. Our intent with using the dollars per kilogram is, you know, to provide for stations that are different sizes and different batches, just so that we don't have a dollar per station with station sizes being variable. But this is not what we're expecting everybody to follow. This is just an example. A batch could be any number of stations.

MR. MCCLORY: Question, maybe just an administrative question.

Is the presentation you're sharing going to be available on the docket?

This is Matt McClory with Toyota.

MR. CAZEL: Yes. Yes, we'll post the

slides. Some of them have web links for things that we'll reference. And then at the end there's a whole list of all of the references that we use for the solicitations, so they'll be posted for everybody to have.

MR. ELLIS: Steve Ellis with American Honda.

So when I see this and I think about my years of experience with government procurement, I always think about trying to procure something with the lower bidder wins, so to speak. When I look at this metric it just, it causes me a bit of concern because I don't understand how it might be weighted, this score or in context of procuring stations, given the fact that you can also have other metrics that go beyond just the lowest possible.

So talk a little bit about that and then what -- just more detail on intent of this address evaluation in the scheme of the overall procurement?

Thank you.

MR. CAZEL: So the cost per station and the cost per kilogram come into scoring under the budget portion. And so when we get to that part,

you'll see that we've increased the weight of the budget, the importance and so the cost to the state, you know, is weighted heavier than it has been. But then also there's station performance, you know, applicant experience, all of those things will go into scoring, as well.

So does that answer your question somewhat?

MR. ELLIS: Somewhat. But I guess if you're saying a later site is actually going to get into the, and I can't remember, the actual weighting of it, that's fine. I'll wait until then. But you know, under typical procurement rules, you know, low bid wins. So that's why don't -- I want to just better understand how other metrics, call it quality versus quantity, will really play out? So I'll wait until we get further along and then see if this comes -- if my question is answered.

MR. CAZEL: Yeah. It always -- and there's a different weight for each metric, but everything does get weighed.

MR. LEIGHTY: Hi. Wayne with Shell. May I use this example to just reconfirm my understanding?

If in this hypothetical example this were an applicant's initial batch, $10 million exceeds the single applicant cap. So how would you handle that proposal on an initial batch, if I understood correctly, that is too big, too -- yeah? Thank you.

MR. CAZEL: Yeah. So on purpose, we tried to use an example that you couldn't fit in, you know, the round peg in the square hole.

MR. LEIGHTY: Yeah.

MR. CAZEL: So if this were an actual proposal and our cap was lower than this, we would come back to the applicant and say, hey, here's the cap your stuck with, can you build X number of stations for X number of dollars? So there would be some give and take. And there is some language in here that will come up on a slide later that talks about that a little bit.

MR. LEIGHTY: Thank you. Thank you.

MR. CAZEL: Okay. So eligible costs, reimbursable an match will be limited in the next solicitation to equipment only. And so the other expenses that have always been counted and accounted for, you know, the labor fringe, travel, won't be eligible, even as a match, for

the next solicitation. So it will simplify the bookkeeping. And then it limits, you know, what we need to process to equipment only.

And then along with that, match funding, so the other side of what's eligible. So it would be 50 percent grant funding, 50 percent match funding, but again, for the equipment costs only.

MR. BONNER: I have a question. Brian Bonner from Air Products again.

How is a situation where you have one company that may have an equipment division as a subsidiary or let's say a division of an existing company that actually sells the equipment that would include, you know, the imputed labor, overhead and other costs that would support that total equipment price and they may sell that to another company? How would that be handled, I mean that type of situation, from a cost sharing?

MR. CAZEL: What we'll look for is the bottom-line cost of that piece of equipment to be delivered. So you know, if you're buying it from Home Depot, we don't go to Home Depot and look at what labor went into getting that to the shelf. Same thing here. You know, the equipment

producer, whatever it takes for them to get that equipment to the state where it's ready to deliver, that's the cost we'll look at. So we're trying to get out of the business of going into all of the details on the labor and the fringe and everything that goes into the equipment. We just want to see, what's the cost of the equipment? We'll split it with you 50-50 and use that as our benchmark, rather than all of the backup.

So for a company that, like you're saying, builds their own internal equipment, they'll have to justify it to the state auditors, how they get to that value. But as far as judging and using it in the solicitation, we're going to use the stated amount of the equipment value.

MR. BONNER: Okay. So if you did have like engineering and overhead and, you know, subcontractor work that would be involved in that equipment transaction, that can be included in terms of the cost?

MR. CAZEL: It would be rolled into the cost of the equipment, yes.

MR. BONNER: Okay. Thank you.

MR. BUTLER: John Butler, Energy Commission.

Just to elaborate on that, so essentially it would be, if it's less than an arm's length transaction between these companies, then it would be based on the cost of goods sold. So that's an accounting procedure of all the costs that go into building that equipment. That will be what our auditors are looking for.

So the value claim under the agreement and then split 50-50 would be on the cost of goods sold.

MR. LEIGHTY: Hi. Wayne with Shell. Just a suggestion to define equipment. And I'm sure you can get some input on where to draw that line.

Thanks.

MR. SLOTH: Mikael from NEL. Just to add to that, equipment, is it only rated to hydrogen? For instance, there are components in the civil works construction where you're also procuring equipment, like (indiscernible). But is that equipment or materials?

MR. CAZEL: I would suggest, as Wayne said, you know, let's send something into the

docket describing what we should consider for equipment. I mean, we of equipment as something that comes on a truck and is unloaded. But as you're saying, there's stuff that's onsite that could be considered or should be considered equipment as well.

MR. ELRICK: Does this change -- Bill Elrick, California Fuel Cell Partnership.

Does this change the lineup, the hydrogen funding and how equipment is dealt with versus labor or travel, et cetera, more in line with the other fuels and how funding is distributed under ARFVTP? Is this more of an alignment move for the rest of the program?

MR. CAZEL: I'm not sure. I'm not sure if other parts of the agency are going this way or not.

MR. BUTLER: John Butler again.

So I would say, no, this is not an alignment. This is unique to hydrogen and this solicitation. And again, this was in an attempt to keep things simple and make sure -- as simple as possible and make sure that we're appropriately incentivizing, you know, hydrogen stations and supporting them while balancing it

with that simplicity of limiting it to equipment purchases.

MR. MCCLORY: All right. One more question. This is Matt McClory with Toyota.

Does the Energy Commission have an establish for the number of stations that the $110 million funding could contemplate? And the reason I specifically bring that up is in regards to the joint report from December, it seems it infer or forecast that up to 46 stations could be funded with $110 million. But based on the cost share, that seems to be well under, you know, half of, I think, our projection, that it should be closer to 100 stations potential. Could you provide some clarification of comment?

MR. CAZEL: So the joint AB 8 report used these numbers to support our goal to reach the 100 stations that AB 8 calls for. So that's where that math kind of crosses where, you know, what we're presenting here. So if we get more than the 47 or so stations and exceed the 100 station goal of AB 8, we're happy with that as well.

You know, again, these are concepts that are out there. And based on what we heard, you

know, from the workshops over the last year-and-a-half, this is where we think we need to go to reach those goals.

MR. LEIGHTY: Hi. Wayne from Shell.

Just to follow on to Matt's question and make sure I understood, the interpretation of the authorization under AB 8 is that this funding and GFO could yield a total of more than 100 stations? Is that what I understood?

Or said another way, would you anticipate calling -- cutting off, calling an end to this funding when 100 stations are reached?

MR. CAZEL: No. We don't intend on stopping at 100 because that's a goal. We intend to spend the funding that's allocated for the AB 8 program to get as far as we can.

MR. MCCLORY: Question. Matt with Toyota.

As a follow-up, is it fair to assume that all of the $110 million is used for match -- I'm sorry, grant funding for every single station or is there a whole back that the CEC is going to deduct from the $110 million so it's not actually available for grant funding? I just -- we want to kind of understand, what's the potential

available as it relates to the number of stations possible?

MR. CAZEL: We don't intend to hold anything back within our program but we are dependent on every years' allocation from the legislature and then the process that we have to go through with our investment plan. So if that number isn't exactly $20 million a year and the $110 million turns out to be a different number, it wouldn't be because we were, you know, consciously holding something in reserve for another use.

Okay, so here's the single applicant cap discussion. So 33 percent of available funding at any given time is the single applicant cap. And the example we discussed a little bit earlier, using the $22.6 million that we're expecting to be available immediately for the initial batch, that would limit the first batch of stations to $7.5 million, based on those numbers. So every year, you know, every July 1st, we expect to get our, you know, next allocation of funding. So this could go up $20 million every July 1st. Today, we have the $22.6 million available.

MR. BONNER: Excuse me. Brian Bonner with Air Products. Sorry I didn't get this in, in the last section.

But in terms of the match share funding, which would be in the form of cash or in-kind contribution, can that match share funding include upstream production and distribution investments from a supplier that provides hydrogen to the retail fueling stations?

MR. CAZEL: I think it would go -- I think if we go back to what John Butler was saying, it's the cost of goods that is declared as the cost of the equipment. So however you arrive at that number, regardless of what the upstream input is, we're going to look at that.

MR. BONNER: Yes. Yeah, I understand that. But then there's also that tie, you know, to the capital efficiency metric of a fueling station in terms of dollars per kg dispensed, which is only a component of the entire supply chain that's actually serving that retail fueling station. Because there is upstream investment and capital efficiencies that could differ depending on how hydrogen is applied to those stations. And not only capital but also the

energy component, as well, which could vary quite considerably.

MR. CAZEL: I think some of those other aspects would be scored in the other areas, other than budget. So we would have a cost of the goods for the equipment as part of our criteria. And then there are other scoring bullets in other criterion that cover, you know, the efficiency of the station, the supply, the reliability of that supply. Does that make sense? Okay.

So then the next solicitation is will also have a pre-ordained reimbursement for different stages for the grant funds, so stages one through five, depending on the criteria that are reached, and then the percentages that are eligible for reimbursement at those different stages.

So stage one, the critical milestones are met. The design plans are completed. The equipment is ordered. We can process an invoice for reimbursement on the equipment for up to 25 percent, so that could be a down payment for the equipment. And then each stage after that, you can see different progress needs to be completed. And then the eligible reimbursement percentage

goes up.

One the station is open and operating, up to 90 percent can be reimbursed. And then the final ten percent is essentially the retention, which will be reimbursed after completion of the data collection at the end of the entire project.

MR. LEIGHTY: Wayne from Shell again. My apologies. This is also going backward just a little bit.

I'm wondering, I generally interpret the change in eligible expense shifting to equipment only being a simplification. I'm wondering what simplifications in administering a grant agreement go along with that?

For example, in current grant agreements there are some requirements around subcontractors, labor and wage rates, et cetera. Do you anticipate that without those components of expenditure included in the eligible expense, those requirements and administrative aspects are eliminated or continue? Is it -- are you able to comment?

MR. CAZEL: We envision this as eliminating that need. So you know, from the applicant and the recipient side we've heard, you

know, over the last year-and-a-half, you know, if we simplified our requirements it would simplify, you know, the recordkeeping on both ends. And so, you know, we're hoping that some savings will come out of that.

MR. LEIGHTY: Thank you.

MR. BUTLER: John Butler.

So just to clarify on that, I mean, there -- it's still envisioned that there will be administrative costs that are incurred, obviously, with the development of those stations. Those will still need to be borne by the applicant. So I just want to be clear on that. Still, the reporting is required. You know, certainly there is labor associated with that. But that's not included in our budgets and, therefore, not tracked according to the grant itself. But the scope of work will have those requirements in there and those will have to be fulfilled.

MR. LEIGHTY: Thank you.

MR. LEVIN: Just so I -- Jaime Levin from CTE.

Just understanding the retention on this, so if I claim $1 million for a station for

equipment and you're paying me $500,000, so you'll pay me 25 percent of the $500,000 in the first stage, up to 90 percent through stage four, and then the last 10 percent I'll get in stage five? So there isn't -- like when I submit an invoice, you're not going to take 10 percent off that invoice, you're going to pay 25 percent of the total amount? I just want to make sure because when I first read this, I thought you were going to hold back 20 percent, 10 percent retention plus only up to 90 percent through the project.

MR. CAZEL: No. So the stage four 90 percent assumes the 10 percent retention. And whether that's withheld from each stage or whether it's withheld from the final stage, I don't think we've solidified yet. We've done it both ways in the past, where we've taken ten percent off each invoice. And then we've done it where we pay invoices in full before we reach the point where we withhold the final percentage.

MR. LEVIN: Okay. Sorry. If you say stage one at 25 percent of total and you take 10 percent off of that invoice, you're going to, at the stage four, they -- we will only have 80

percent, if I read that correct.

MR. CAZEL: Yeah, I see where you're getting that. So we're saying eligible reimbursement in one hand, and on the other hand we're saying eligible to be invoiced, which may then be reduced by ten percent. Yeah. Thanks.

MR. SLOTH: Mikael from NEL Hydrogen.

Are there any specific background for the change in the from three to five years of data collection? I know that throughout the document it's stipulated that with the change in the LCFS requirements, that that also have caused some of the changes under the program, for instance the lower funding rate, and also no funding for O&M. But why then the increase in administrative efforts on collecting data for five years?

MR. CAZEL: Well, of course, we'd like to get data for ten years. We'd love to get data for the life of the stations. That helps, you know, it helps our program to, you know, not only justify, you know, the good that we're doing, but it also helps, too, you know, for planning and those sorts of things. So we, you know, we're going to ask for five years of data collection regardless of whether you're getting O&M. Before

we had, you know, the three year O&M tied to the three year data collection.

You know, this is a concept that we're hoping we can fulfill to get the data. Now, you know, our hope is the data will become more automatic and require less labor and less cost for recipients to actually comply with.

So along with the reimbursement stages, the evidence that we want for each invoice has kind of progressed over the years as well. So photographs and serial numbers of equipment and parts will be required as backup for each stage. The only place this doesn't make as much sense would be for stage one. So if the equipment has just been ordered, sometimes it's kind of hard to get a picture of something that doesn't exist yet.

So for stage one, you know, we wouldn't require the photographs and serial numbers. But otherwise, you know, we need some solid evidence to help us justify that, you know, this is moving forward, the equipment exists and it's on its way, so that we can pay for the invoices as they come in.

And then as Eddie just brought up, no O&M

will be offered for this next solicitation. And our reasoning is that the LCFS program, beginning in January, will allow stations to generate the hydrogen refueling infrastructure credits. And we expect that this will help to support the stations in lieu of the O&M. And I'll talk more about the LCFS in a little bit also.

The critical milestones, one and two are the milestones that were in the last solicitation, so meeting with the local authorities to discuss permitting issues and establishing site control will be required prior to application. So those will be, especially for the initial batch because we want those addresses for the initial batch, that milestone one and two has to be met. And then for subsequent batches, one and two will have to be met before the batch addresses are given to the Energy Commission for approval.

MR. LEIGHTY: Hi. Wayne with Shell. Just a comment.

You might consider the sequencing of milestone one and three. Often, meeting with a fire marshal is a prudent thing to do in advance of meeting with the AHJ as they look to each

other.

MR. SLOTH: Mikael from NEL.

In the definition of milestone two, it said that site control could be in the form of a lease agreement. But later in the document, it only indicates that you need a support letter from the site owner. Is that a letter to confirm some sort of site control in the form of a lease or, basically, can one apply without having signed a lease contract?

MR. CAZEL: Let me first apologize for calling you Eddie earlier, Mikael. Nobody waived their arms at me.

For milestone two, we want a signed, executed lease. So we've kind of ramped up to this based on sites that have been lost because of letters of intent with the owner, that kind of thing. So the stronger, you know, more sure is to have some sort of lease that's executed that, you know, it could be contingent on funding, but we want something that's a document that's more of a legal document that ties up the property.

So then for the milestones three, four and five, the intent is to make sure those are met before any reimbursement goes forward on the

stages of reimbursement. So the meeting with the fire marshal which, I do agree, could be combined with the initial meeting for milestone one, we'll look at that. And then meeting to arrange utility connections, we've seen lots of problems with that, so we want that to be something that's done, you know, early on and up front. And then meeting with a hydrogen supplier to come up with a plan to supply the station and to have a backup for hydrogen supply.

MR. ZUCK: So proof of that is -- Dwight Zuck, Air Liquide.

So proof of that is a signature from these individuals that I have the supplier or the utility company or that you had a meeting or an email?

MR. CAZEL: Yeah. It will be something that's written into the scope of work. So as we've done with the milestones in the past, it would be, you know, something along those lines, submitting to the Energy Commission proof that this has happened.

MR. CAPPELLO: Joe Cappello with Iwatani.

In milestone five, is a contract part of the requirements?

MR. CAZEL: It could be. I mean, if there is something less than a contract, you know, we'd love to hear your input as to what constitutes, you know, something that's solid enough that could be relied on.

MR. CAPPELLO: Some of the participants are fully integrated suppliers and others aren't. It might be a bit of a conflict.

MR. EDWARDS: Dave Edwards from Air Liquide.

Regarding milestone number five and meeting with the hydrogen suppliers, particularly on the last points, certainly some concerns about what a contract would look like coming out of that and is a contract required, the timeframe for such supply agreements, and then the renewable aspect of that in order to meet the renewables planning? A little bit of fidelity around those on the requirements for milestone five would be helpful.

Thank you.

MR. CAZEL: Yeah. I have a slide near the end that kind of reiterates, you know, the hydrogen supply idea. But anything you can give us in writing that lays out, you know, what's

important in this kind of contract, what could be, you know, shown would be great.

Okay, so the next solicitation will use area classifications to determine the eligible areas for stations to be located.

So this is a static map produced by CARB using the California Fuel Cell Partnership input. And it uses the capabilities of CHIT. And there's an electronic version online that you can zoom into. Let me try and go there real quick. Oops. There we go. So CARB has this posted online. You can follow the link that's in the slides. But just to show you that you can go in, zoom in, do street level and look at these areas. And the different colors are related to the capacities that would go in that area. So I have a table in a minute that we'll look at that correlates the map colors with the size of stations that are projected to fit best in these areas. Any area that's in a gray area throughout the state will be considered not eligible for the next solicitation. And this is about -- this is based on a lot of work that's gone into the 2030 vision and how to get to 1,000 stations. And so these areas are the, you know, the next projected

need in the state.

MR. MCCLORY: Question. This is Matt with Toyota.

Regarding that map, is there an image that the map would be potentially dynamic going forward into future batches or tranches so that this document could basically be the same document going forward through 100 stations, but even beyond towards the governor's executive order of 200 total? So in other words, can this map be allowed to be updated by the ARB in a process?

MR. CAZEL: Yes, that's the intent. This is the current map. And as stations are funded and opened in the different batches the map will be updated to reflect, you know, areas that have had stations go into them.

But again, so the colors don't say that, you know, one area has a higher priority than another. It's more related to the size of the station that should fit in a different area, and we'll discuss that. Like I said, there's a chart coming up.

MR. LEIGHTY: Hi. Wayne from Shell. A couple follow-on questions, if I may?

The updating, the dynamic nature updating of the area classifications as the network grows, I understand the intent and it seems to be an elegant solution. I wanted to test one implication related to the intent around batches.

Is it correct that it could be a station developer awarded a tranche is progressing subsequent batches which, with an update to the area classification, then change, then become classified as a different area, that developer would need to shift their plans?

MR. CAZEL: Yeah, that's possible. I don't foresee that we would go look backwards and say now that that spot has been filled, something has changed. But definitely going forward for the future batch, for the subsequent batch stations, they should conform to the new calling on the map for, you know, what fits in what place, so that we can get the right size.

MR. LEIGHTY: THANK YOU. And a follow-on, if I may?

The coverage and capacity growth areas are relatively small, rather precise. Of course, the shading has a boundary at some point. I think I read in the Solicitation Concept that

there's some prerogative that could be exercised. An applicant could give a rationale for a location being a different classification than shown on the map. Could you explain that further?

MR. CAZEL: Yeah. Let me see if I have that slide coming up soon? Yeah. Let's hold on to that for a minute because I'm going to discuss that a little bit --

MR. LEIGHTY: All right.

MR. CAZEL: -- coming up.

MR. LEIGHTY: Thank you.

MR. SLOTH: Mikael from NEL.

This may be coming back to the discussion on cost effectiveness because even the document had stated the dollar per capacity or dollar per station but not stated which one of those parameters in the scoring will be most important. So are you looking for many smaller stations or a few large stations? Looking at the map, of course, there are more areas to put in small stations. But maybe some guidance on that would be good.

MR. CAZEL: Yeah. So the map calls for certain size stations in certain areas. The way

that the scoring will use the dollars per station and the dollars per kilogram doesn't necessarily follow the way we've done it in the past where bigger may not be better. We want the best fit for the right spot. So in the scoring, we use both of those. You know, they may be equally weighted. They may just be used as a guide.

For the actual funding, we want to rely on dollars per kilogram because that's closer to, you know, matching the size of station that we're paying for.

MR. BROOKS: Steven Brooks, Energy Solutions.

I know we have these priorities on the list here, some of which, I'm just kind of curious about how many, I mean, I know it's difficult, stations you're planning per category, if you will? For example, I'm envisioning connector designation based on prior GFOs only to be including a few sites. I think it would help developers be able to target, you know, especially some of those, you know, growth capacity. How many, really, stations are we talking about in that area to achieve that? And that will allow us to focus on other areas and

not do extra work, I guess redundant work, I should say.

MR. CAZEL: Yeah. That's a challenge for us, as well. What we've heard in the workshops over the last year-and-a-half is leave us alone, let us put the stations where we know they belong, and quit telling us exactly where to put things. So this is an attempt to say here's the available areas. Again, the colors are not necessarily a priority, they're a size differentiation. So whether a station is in a more urban area that has, you know, higher early use, we want bigger stations there. Of course, the connectors can be smaller and still, you know, be appropriate.

So we're trying not to be too prescriptive on the locations, other than here's a suggestion of how big of a station you should probably build if you're going to apply in this area.

MR. BROOKS: Sorry, just one follow-up.

MR. CAZEL: Sure.

MR. BROOKS: So I get that. And appreciate that. But I still think it would be, at the end of the day, how many connectors are we

really talking about, just as a guidance? It can be anywhere we, you know, feel fit in those areas but I think at the end of the day, we're only looking for so many stations based on those category types. I think it would just provide some direction.

MR. CAZEL: Okay. Thanks.

Okay, so then this is just information about how to contract -- how to contact CARB and that, you know, how the map will be updated, how to use it. You can direct questions to Andrew Martinez. He is happy to work with you and make it a better map.

So then the other concept that will be integrated into the next solicitation is the use of the HySCapE. So the solicitation will use the same HySCapE model and the same -- in the same way that it's used for the LCFS program. So it won't be a different version, there won't be different inputs, it will be exactly as has been presented by LCFS?

Any information that's submitted to the Energy Commission as part of the application will be considered confidential. And then each station's capacity needs to meet the requirements

of a station classification from Table 1, which we'll go to.

So then the station classification table incorporates the minimum 24-hour throughput for each fueling position, and also for the total station throughput. So that's columns two and four. And each fueling position -- I have a question already?

MR. BONNER: Yes. Brian Bonner from --

MR. CAZEL: Oh. Go ahead.

MR. BONNER: -- Air Products again.

In regards to the HySCapE tool, I mean, is there any degrees of freedom in regards to the station deliveries to limiting it to one delivery per day? You know, considering that there are constraints in terms of the hydrogen supplier to stations that may provide limited access into stations in terms of the size of equipment that could actually deliver into the various sites?

MR. CAZEL: Yeah. All of those inputs are built into HySCapE. So the assumptions of how many deliveries and the time it takes for that delivery is built into the model. So what we want is an output that uses the model as is without changing everything and putting in

different variables.

MR. BONNER: But if there was a scenario where you had let's say two deliveries in a given day, can you just assign some downtime or, you know, some derate, you know, for that time period that would accommodate that second delivery?

MR. CAZEL: Yeah, that I'm not sure. You'd have to contact the LCFS program. I have their contact information in here. But whatever is submitted to LCFS in order to get the HRI credits and to get into that program is the same input/output that we want to use in the solicitation to judge the station capacity.

MR. BONNER: Thank you.

MR. LEIGHTY: I've got one more question.

MR. CAZEL: Oh, go ahead.

MR. LEIGHTY: Hi. Wayne with Shell. Just a suggestion for clarification.

If I understood correctly, the intent is to match the use of HySCapE in the LCFS program. Maybe the clarification that the station throughput is at full state of charge. The HySCapE model produces two capacities, one including partial state of charge and one not including partial state of charge. And then the

LCFS program, the capacity at full state of charge, not including the partial state of charge, is what is used. Thank you.

MR. MCCLORY: A question, and maybe a comment. This is Matt McClory with Toyota.

The Table 1 that's in the document, I know it illustrates some information as a result of the HySCapE model. But I think the concern point is that it's missing design criteria or design requirements as criteria for the stations themselves. And I'm wondering what the thinking -- or perhaps maybe I'm missing it and perhaps maybe it needs to -- I'm asking for a clarification, for example, time between fills and the definition of a minimum dispensed mass and SOC of being 95 percent of better. These are kind of critical metrics from a design standpoint. And the way it's articulated doesn't share that.

And so I'm wondering, perhaps I'm missing this, or could you comment on that topic?

MR. CAZEL: Yeah. Our intent is to use the HySCapE in exactly the same way as the requirement is through LCFS. And so those criteria that you listed off are part of the

requirement for them. So we didn't lay out everything, you know, in our concepts document as to, you know, what that model includes or requires. But our intent is to -- whatever -- to use whatever that model requires as our own gauge as well.

MR. MCCLORY: As a follow-up, does that mean that you would contemplate adding the inputs or the assumptions into that model as part of this document? Because the concern point is that it's not -- unless it's defined, it's not even defined, even for LCFS, what the assumptions are clearly as far as the inputs and I think that's where the concern point is.

MR. CAZEL: If you could lay that out for us in writing, please, into the docket, then we can look at that and make sure that we're, you know, working equally toward that goal.

So we have a question from WebEx.

MR. JOHNSON: Yeah. Ian Peden wrote, "Over the life of the station, how long does the LCFS program stay in operation?"

MR. CAZEL: So the link that I'm going to put up in a minute has some of that information in it. Let me see, what's the next slide? No.

So there is a manual that helps applicants into the LCFS program. It describes, you know, all of the parameters, the timing, the funding. That would be the best place to get that information.

MR. SLOTH: Mikael from NEL.

Just to follow-up on the HySCapE, in the HySCapE the maximum time between fuelings is up to 249 seconds. So it depends on how many fuelings that are stuffed into an hour. So when I read the table here, is this to be also following the HySCapE and Chevron profile? And if so, why am I then allowed to go to 427 between fuelings? As one could say, you could interpret that as a fueling profile where you do a fueling every seven minutes throughout the day, which would probably not cover the rush hour event.

MR. CAZEL: Yeah. So this table is intended to prove a station can move the minimum requirements for the solicitation. So the 427 seconds was selected in order to create the 300 kilogram per day fueling position. And so if those are put -- if those inputs are put into the HySCapE model and you can prove that the station can do that, then we know you've met the minimum. Beyond that, there will be different inputs for

your actual time between fills and what your station is capable of, and that will be used also to determine, you know, the ultimate performance of the station. And those numbers are what, you know, the HySCapE HRI program is asking for. They're not asking for these minimums. But for our purposes, we want to have a run that shows the minimum is proven and then other runs with the actual that show us what the ultimate performance of the station is.

MR. SLOTH: So maybe it's worth it to do a comparison with the past two requirements in the previous GFO because such a profile would be very relaxed as it's over a 24-hour period. And if you have 7 minutes between the fills, you would do that in 15 hours, whereas I guess in the previous GFO, you not only had 180 kilo in 12 hours, but you also had some rush hour requirements that you probably would not cover with this profile.

MR. CAZEL: Yeah. So the -- I don't want to do too much on explaining my understanding of HySCapE but built into HySCapE are those other one-hour, three-hour windows.

Okay, so this goes back to -- go ahead,

before I go on.

MR. ELLIS: Sorry. At the risk of multitasking, so I do also want to raise a question about minimum number of fueling positions. And I want to put it in the context of kind of the real world practical application from standing in the customer's shoes, not necessarily what I would call the math that might align with available kilograms and, you know, things like that. And I say this only because over time, you know, there's been a lot of lessons learned. We've seen individual dispensers where it was called one-to-one. A dispenser equaled one hose and that was applied at one-to-one position. And yet, we've also seen a pathway where possibly there's cost reduction from a dispenser that's more akin to what we know of as a gasoline dispenser with two hoses, two faces, to independent control systems, two people able to operate it at the same time.

And I think, you know, this is a change where maybe we can get it right. It's hard for me to grasp as easily an image at a station where possibly we're pushing toward getting the dispenser under a canopy. And we want to

eliminate customers having to wait in lines, and so we want more fueling positions that's also aligned with the scale of the capacity of that station.

So as opposed to a minimum, could this be suggested or preferred or something like that, less hard and fast? And I'm calling it a question: Why three? Why not four? Because if we're trying to aim to that idea of cost reduction, engaging with dispenser manufacturers, I think they would scratch had and say you mean you want me to build one with just a single face? I can't put gasoline on the other side of it, and it would kind of a waste of space.

So that's all I'm trying to get at here is that I don't have the answer, necessarily. But what I do suggest is that you talk with the developers and say what is the best case here? Should we skip three and go from two to four for the purpose of advancing cost reduction, scale, all the things that we're keeping, and customer convenience at the dispenser when we get to these larger capacity stations like that? More of a comment than a question.

MR. CAZEL: Yeah. Thanks. Yeah, as

minimums here, they do look funny, you know, what you're saying, the three versus four. You know, where our intent is to put something up here showing, okay, we want at least this. You can tell us how it's going to be expanded. But you know, if anyone has any suggestions on, you know, how this can be made better, please, you know, submit something to our docket.

MR. LOPEZ: Hello. This is Jorge from Air Liquide. I just had a question, just to clarify, I guess, in terms of equipment and the number of deliveries.

So the assumption in the docket that I read was one delivery per day. I just wanted to clarify, is that per fueling position or for the overall station capacity?

MR. CAZEL: Again, you'd have to look at the LCFS requirements for how the HySCapE input is used to see exactly. That's -- my understand is per day per station, but you'd have to look that up.

MR. MCCLORY: Question. This is Matt with Toyota.

On the table where it has the minimum number of fueling positions, is it implied that

those are all H70 fueling positions?

MR. CAZEL: Yes. Yeah, they're -- we envision having H35 as optional, but those are in addition to what's listed here.

Okay, so this is back to the question of, you know, what if a station seems to fit in a place, you know, size-wise that doesn't look like it's in the right spot on the map? And so if an applicant wants to locate a station in a different classification than that's what's called for on the area classification map, then reasonable justification has to be submitted for that.

And so just for, you know, a simple example, if the station is classified as, you know, market initiation on the table based on the number of fueling positions and its capacity, that it's being proposed for a market -- that it's not being proposed for a market initiation area on the map, then we want something in the application that contains justification why it's a better choice than what is, you know, specifically called for on the map.

So in any case, the proposed station has to be located in an eligible area on the map.

You know, we don't want something that is going to try to describe why it should be put in the middle of an ineligible area. But for those that seem to, you know, want to straddle, you know, a given area, as long as we can get some justification as to why it doesn't line up exactly with what's laid out, that's what we're looking for.

So then this is the -- I'm going to go real quick to this. This is a link to the user guide for the HRI program, and it also has information on the HySCapE.

Phil?

MR. ELRICK: Go ahead.

MR. ELRICK: If I can go back one? Bill at the Fuel Cell Partnership.

With the reference earlier with the map and basically inclusion and exclusion areas, you know, looking back at the concept, one of referencing 2030 and where we're trying to go, as well as having the most flexibility in the system, both in how developers go after sites and how they submit and how CEC reviews, I'd strongly encourage the idea of no exclusion area locations but maybe within the point system, just like you

described the ability to maybe reclassify an area to be able to put a site on the map. Because I think that's really important if we're looking at where we want to end up, as well as back to that dynamic map, so more flexibility in the system instead of ever restricting or excluding an opportunity.

MR. CAZEL: Go ahead.

MR. LEIGHTY: Hi. Sorry. Wayne from Shell again. Testing one other implication.

If, as I'm coming to understand it now, if the initial batch is limited in its size by the single applicant cap, I'm thinking about the updates to the area classifications over time, if there's an applicant who has a subsequent batch who also has sites identified, specific sites, do you envision those would be matched up with a classification according to the current map or the updated map when batch number two is authorized? Does that make sense?

MR. CAZEL: Yeah. I think we would look at those addresses at the time the subsequent batch is ready to be authorized because otherwise we don't know what other applicants may have been awarded to their trances until those are all in

process and it affects the subsequent batch. So it's not just one applicant's list of stations. It, you know, could be affected by others.

MR. LEVIN: Jaime Levin from CTE.

Elsewhere, there's reference to one mile separation. Is that hard and fast? If there's justification that the market would support a closer proximity, would that be acceptable?

MR. CAZEL: Yeah. Let me talk about that. I do have a slide that has that on it. I don't know that it will answer your question but then I'll try and address it more at that time.

Okay, so I was just going to -- well, I went to the user guide, which is -- so following the link and the slides, you can get to this user guide online which the LCFS program has posted. It has information about applying into their program and their requirements. And so this is what we're going to use. You know, the input to this program will be used the same way for our scoring or for reporting the size of the station to the solicitation.

And then, also, the contact information for James Duffy at the LCFS program for questions or clarifications for how to use HySCapE, how to

apply for the HRI credits.

Okay, so then let's go through some of the project requirements.

So eligible projects include new construction at gas stations or other facilities or on a greenfield site. Upgrades are also eligible if they are at an open retail station that is increasing dispensing capacity. And the only stations that we think are, you know, not going to be eligible for the next solicitation under an upgrade would be the existing stations, Coalinga, Santa Nella, Truckee and Santa Barbara.

As I said earlier, the location has to be on an eligible area on the classification map. And the HySCapE output has to show that the station meets the minimum throughput for one of the station classifications on that Table 1.

MR. MCCLORY: A question. This is Matt with Toyota.

Is there a possibility, either in scoring or other mechanism, to provide an incentive for stations that would be considered a connector location that would be outside of a concentrated market of supply and distribution so that areas identified, from a location target standpoint,

that could be on corridors as connectors, would receive some sort of incentive to enable that type of network development?

MR. CAZEL: I think, as we have it laid out here, there isn't an added incentive or a set-aside for connectors. But if you have, you know, a strong opinion about how that should be done, again, please send us something to the docket.

MR. BONNER: Brian Bonner with Air Products.

You indicate that the upgrade needs to increase the dispensing capacity. Can you clarify whether it could also provide an upgrade that would include compression and storage equipment, as well, as part of that upgrade package that would be funded under this solicitation?

MR. CAZEL: Yeah. I think those go hand in hand. If the station is, you know, dispensing at its limit already, then, of course, the equipment that goes behind adding dispensing capacity would be included.

MR. BONNER: Thank you.

MR. CAZEL: Okay, so additional

requirements, so one station out of each batch must be either in or within a 15 minute drive of a disadvantaged community.

And then very standard, each station must meet the minimum technical requirements for open retail.

So for eligible applicants, any key personnel listed need three years of experience in hydrogen or other pressurized gas. The applicant has to have proven experience with grants or contracts and these could be grants with the Energy Commission or another public agency or could be a contract. You know, say if it's a subcontractor, it could be a contract with another organization, a private entity, just something that shows they've, you know, fulfilled a contract at some point.

No money can be owed to the Energy Commission or other public agency in order to be eligible

And then good standing with Secretary of State is a standard that we have always used. No delinquent taxes would be another eligibility requirement.

And no active litigation with the Energy

Commission or other public agency.

Other required information in the applications, so for those of you following along, page 16, the tranche in the batch description should include the total number of stations in the trance, the number of batches, and the number of stations for each batch. And part of that description needs to include a schedule for completing the tranche and for completing each batch. And in addition to that, the throughput capacity for the entire tranche, including all the stations, and then for each batch.

MR. LEIGHTY: Wayne with Shell. I have -- revisit a prior question as it pertains to subsequent batches.

In thinking about the number of batches and the number of stations per batch for a given tranche, a given total program size, should an applicant think about those subsequent appropriations in the single applicant cap, the subsequent batches should be sized to fit within the anticipated annual appropriations? Or maybe said a different way, if that matchup in sizing isn't accomplished can stations roll over from

batch to batch? If there's a subsequent batch that ends up being too large for the amount of funds that are appropriated, do the stations in that batch then roll over to the next batch?

MR. CAZEL: I don't think we have a mechanism for them to automatically roll over. But we would be looking for information as to how that would happen. And maybe that's something we should ask for at this point into the docket is how can that best be, you know, implemented? Because, you know, if the funding is going -- if every batch is going to be reduced by the available funding, there's got to be some way for you to tell us, okay, how can we make that up later or, you know, how does that affect the ability to roll the stations out?

Our intent is to get the stations in batch sizes that are small enough that they can be completed efficiently, rather than having, you know, one huge batch that has stations that take years and years to build. So the timeframes that are built in are what we think is what we need for -- to get the batches to roll, to keep them rolling.

MR. CAPPELLO: Joe Cappello with Iwatani.

Will the review of the batches in the applications be an iterative process? Will it be all or nothing approval of the number of stations within a batch?

MR. CAZEL: At the initial application, we want to see the entire tranche, which includes however many batches and however many stations. And we'll use that as a gauge of, you know, the strength of the applicant -- or the strength of the application, you know, the dollars spent for the number of stations and the number of kilograms. But then within that, each batch, each subsequent batch will be judged on, you know, are the stations in eligible locations? Do they match what the initial application said they would be? And that would happen on an iterative basis.

Did I get it all?

MR. CAPPELLO: So if there's a question about a certain station location within a group of stations that are submitted in a batch there's an iterative discussion, rather than having the application not approved?

MR. CAZEL: Oh, I see what you're saying. Yeah, I have -- this kind of ties into the

question about if, you know, if a station is disqualified because it's within one mile of another one, what do we do? So I do have some information on that coming up. So if that doesn't answer it, then -- one more?

Go ahead, Matt.

MR. MCCLORY: Question. This is Matt with Toyota.

Going back to the previous page on eligibility, regarding disadvantaged communities, is there a state information resource that can be provided or is provided that defines where those communities are?

MR. CAZEL: There is.

MR. MCCLORY: I'm not sure if I --

MR. CAZEL: I'm trying to think of the acronym that goes with it. There is a state agency that provides that map.

UNIDENTIFIED MALE: It's CalEnviroScreen.

MR. CAZEL: Yeah. Sorry. CalEnviroScreen is the name of the mapping.

MR. MCCLORY: And related to that topic, you had it defined at the batch level. Is that something that is based on a criteria that the state has or the Commission has or is there an

opportunity to consider it at a tranche level or some other criteria?

MR. CAZEL: Our thinking on this is we don't want to wait until the end to get something that we want to be a requirement.

MR. LEVIN: Jaime from CTE.

So in terms of planning for the tranche in the proposal, I assume we should assume July 1st of each year would be a $20 million allocation for the remainder of the funds of $110, plus or minus, and one-third of that. So in our planning for subsequent batches, that should sort of be the guideline here. You're anticipating awarding that. In times past, you've delayed awards and you've combined years and what have you. But just for purposes of this proposal, that's what we should assume?

MR. CAZEL: Yes. So the assumption is the state will still be here. We'll all come to work on July 2nd and the funding will be available. The difference here is we're not going to wait until we see that funding to then write a solicitation and then go out with it. We're going to have this as our ongoing coverage for, you know, continuing the funding as it's

available to us.

MR. BUTLER: So John Butler, Energy Commission.

So you'll see that the $110 is not divisible by $20 million. So the only exception to that rule is on July 1st, 2023, because we're only authorized through January 1st, 2024, so we only have a half-year's allocation or appropriation in that year and that's what we're anticipating. So on July 1st, 2023, I would only assume $10 million is available.

MR. LEVIN: So one-third of $10 million?

MR. BUTLER: One-third of $10 million for each application, based on the single applicant cap, yes.

MR. CAZEL: Yeah. And again, that doesn't mean just because we got $20 million into our account, that we're going to turn around and give it away in the next week. The stations that are under construction still have to meet the milestones in order for the next batch to be authorized using that funding, so --

MR. MCCLORY: A question, going back to eligible applicants, Part 17.

In Section B there is a statement on past

experience with the Energy Commission or, in the last sentence, experience regarding another organization's grant or contract. Could you clarify that a bit more? If I'm thinking of this in the bigger picture of engaging industry to invest in the network, if they don't have state, for example, experience in other states, how would they pass through this criteria? This seems to be screening. Could you clarify that?

MR. CAZEL: Yeah. So the contract with another organization doesn't have to be a public agency. It could be, you know, a developer that has worked as a subcontractor for a larger company. You know, they completed that work, there was a contract. They can show us that as evidence that they know how to fulfill a contract. That's all we're looking for.

Okay, finished that one.

Okay, so other required information in the application includes a description of the station selection approach, so how did you arrive at, you know, providing the station addresses in the application? And we want that information for the initial batch, but then we also want something that describes how that same technical

or whatever process that, you know, was used by the applicant will be applied for the subsequent batches. Because we're not getting the addresses for the subsequent batches up front, we at least want to know that you're going to use some reasonable criteria to come up with them in the future.

And then other information, we want a description of how the application -- you know, the stations that are in it and the future stations that are, you know, proposed or will be proposed for future batches will make adjustments to keep up with any changes in codes or protocols or, you know, any other standards over time, since we foresee this as being not a one time but, you know, an ongoing rollout of stations. So especially for, you know, in the areas of safety, we don't want, you know, something proposed that the station is going to be obsolete by the time it gets around to being built.

And then station performance, as well. You know, things change over the years. We want you to tell us how that will be implemented as you get to the batches that are further down the road.

MR. SLOTH: Maybe just one question on that. In the previous GFO the table of content that was outlined for the safety plan were quite prescriptive and detailed. And in order to address those headlines, those need to be very equipment-specific. However, in this new GFO, if we are to cover multiple batches and, also, potentially that you will be modifying the minimum requirements for future batches, it may be difficult to be very specific on the safety plan if the equipment configuration has to be open.

MR. CAZEL: Yeah. Later, I want to say this afternoon, probably, I have some slides on the safety plan and requirements. And we do understand that it was difficult to provide a very complete safety plan without knowing, you know, the exact equipment, the exact location, that kind of thing. And even more so with these stations because of, you know, the future implementation.

So more on the list of required information in the applications. We touched on this off and on already, the initial batch of stations needs to include an address for each

station. And the classification, station classification, needs to match one in the table. And we want a schedule for completing the batch within 30 months.

And so then here's Jaime's question. You were so far ahead of us. So in the initial batch of stations, if there are two or more applicants that propose a station, you know, within close proximity, one linear mile, the applicant that's the higher scoring applicant will be awarded that station. This is a little different than the way we've scored in the past where each station was scored. This will affect the stations' locations but it will be the applicant's overall score that will trump the lower-scoring applicant. So if one of those stations is disqualified, we'll come back to the applicant and say give us a replacement or a list of replacement stations within 60 days to replace this one that got bumped because it was too close to another previously awarded station.

So the -- and then the other option would be do you want to continue with a smaller batch with, you know, subsequently lower funding to match and just continue with the stations that

were awarded, you know, except for the one that was disqualified.

MR. LEVIN: What if I -- what if I came back to you to say that the station that is not -- you know, the applicant did not get the highest score, so my station is within a mile, within that mile, and I can show that there's capacity demand that would justify that, what would you do under those circumstances?

MR. CAZEL: As it's written now, this would be the rule going forward in the next solicitation. If you think there's a good argument for why it should be different, by all means, please give us something in writing in the docket that we can consider.

MR. SLOTH: One additional question on that.

If an applicant chooses to go with fewer stations, if one of the stations is bumped because of the one mile, if that one station has a certain configuration that has a big impact on the dollar per kilo or dollar per station, would you then have to rescore again or --

MR. CAZEL: Yeah, I think this would all be within the initial scoring process. And so by

giving us backup stations when we request them, we would have a chance to look at those and say this is going to work or this is not going to work.

So then information about the second and subsequent batches of stations in the initial application, we want, you know, how many stations you're going to do, but then when it comes to funding, they'll be one batch at a time, first come, first served. And these same bullets that we discussed earlier have to be met before the next batch can be authorized. So that's the 18-months' building approval for the batch ahead of the second batch or the subsequent batch. And a schedule and justification that shows that the stations that are underway will be completed within 30 months and open.

Again, funding has to be available. Critical milestones one and two need to be met. And the new addresses for the subsequent batch have to be in an eligible area.

MR. MCCLORY: Question. This is Matt with Toyota.

Regarding the comment or the statement on the first -- I'm sorry, the second bullet, "or

are expected within 30 months of the Energy Commission authorizing the stations under the agreement," does that mean that there's criteria that can be defined, progress towards opening, so that subsequent batches could be awarded and work begun on those projects?

MR. CAZEL: Yeah. Part of that schedule and the expectation of meeting the 30 months includes showing us that you -- showing that progress has been made toward that and justifying why the 30 months is reasonable. What we don't want is, you know, to require that all stations be open before we start moving on the next batch. We don't want to slow down progress in that way but we want to see that the prior batch is progressing. So we haven't defined what those would be, other than, you know, maybe in the reimbursement schedule. You need to start moving through that schedule and getting reimbursement and showing that those steps have been completed in order to justify saying that, you know, some future date is going to be met.

MR. MCCLORY: As a follow-up, this is Matt with Toyota, is there any other criteria on the opposite side of that as far as the first

batch or subsequent batches that if progress is not being demonstrated within the 30 months, that some kind of review can be done to understand if those sites are viable or will be built? Is there any discretion from the Commission?

MR. CAZEL: Yeah. We also have, in our agreements, you know, our critical project review meetings where, you know, we go over the project, where it's at, should it continue, and are there major problems? And there's always language in our terms and conditions in our, you know, any of our agreements that allow the Energy Commission to cancel an agreement and move on if things are not going well or if, you know, milestones are not met or, you know, any number of reasons that show us that, you know, it doesn't look viable.

MR. ELLIS: Steve Ellis with Honda.

So in this particular example, I'm trying to understand either what problem is trying to be solved or what you're trying to accomplish with this, being very empathetic to a need for vendors to perform. At the same time, I think I want to speak out of concern for things that would slow down next activities. There are things within control. Some things are beyond our control, you

know, a vendors.

And when I read this and see this and understand it, I want to just make sure that, you know, at a time like now, somewhere between the bookends of some places that you need to build more stations more quickly, you need to catch up versus the constraints that may exist with the AB 8 funding, $20 million annual funds and things like that. Somewhere between those two, I worry about whether this will have an unintended consequence of slowing things down. I think we now have some track record of seeing that certain cases are exceptions; it's not the rule.

And I would ask that this be looked at carefully, that it not be such a bright line that would prevent a next wave of station activity funding, development and opening for some rule like this that could be a hindrance to accelerated growth of stations.

So I just want to pose it more as a concern than a specific question requiring an answer.

MR. CAZEL: Yeah. This is written fairly strictly. We do have some language on page six that, you know, is kind of our standard language

that allows the Energy Commission to make decisions on projects if they're not progressing, that kind of thing. So you know, we wanted to present, you know, here is the minimum, you've got to get these going. If they're going to come in sooner, we're not going to wait 18 months; right? And if these stations are permitted quickly and constructed quickly, the next batch could roll out as soon as the funding is available.

So we're looking at these as more of the outer limits of, you know, where we would start to flag things and start to consider, is this not going to go forward because they haven't met these dates?

MR. ELLIS: Yeah, so, thanks. And a follow-up to that is -- only because, you know, when I read this, some of it is literal, so when it says stations in prior batches are open retail or expected within 30 months, it seems to be a broad brush without defining that if one of that group is facing challenges and behind, I just don't read it as flexible.

So again, think carefully about the intent and then how it might be applied, while at

the same time I understand protecting the taxpayer dollars, and you're interested in the funding.

So thank you.

MR. CAZEL: Thanks.

MR. SLOTH: Mikael from NEL.

I think you mentioned earlier that the following batches would be awarded on a first-come basis. What would you do your banking for the entire tranche so that you know who the awarded ones potentially would be in following batches, so you can also check the mix of the one application, the cap? Because then I guess the need for first-come basis is not linked to, you know, availability of funding, that whoever is first will get that funding.

MR. CAZEL: Yeah. So that question applies more to what if? So this slide kind of covers some of that. So for subsequent batches, they're first come, first served, not based on the original application ranking, unless we get two stations that are within a mile of each other. They would have to be received on the same day.

So if two applicants were ready for their

second batch on exactly the same day and they went in their list of stations and we ended up with this conflict again, it would still go back to the higher-ranked applicant. If they're received on different days, it's the first one received gets that location, regardless of where they were ranked initially. And then the other, you know, the other points follow. You know, the disqualified station can be replaced by, you know, a substitute station.

MR. SLOTH: Maybe in another scenario because I guess in this setup, if you're not awarded an initial batch, then you are also not included in the second or following batches that are allocated. But what if too many initial batches are delayed or maybe second batches aren't, you know, completed? You may run out of batches. And then the, you know, other applicants that were not awarded the initial ones and all their additional batches were not included, they may not be available, potentially.

MR. CAZEL: Yeah. Thanks for your negative outlook, but we're anticipating we're going to get great stations that are all going to go forward and --

MR. LEIGHTY: Hi. Wayne from Shell.

May I ask just a little more granularity on what CEC authorization of subsequent batches looks like? Is that a revised NOPA? I think I heard you say the anticipated NOPA is for the full tranche as a number, and then the initial batch as a list of locations. And then authorization of a subsequent batch, is that a NOPA? Does that -- I think I also understood, there's some kind of amendment to a grant agreement. Is that a business meeting to encumber funds? Maybe just a bit more on your anticipation of what that authorization looks like.

MR. CAZEL: Yeah. All of those things are more our internal process. So we'll look at, you know, what makes it, you know, most efficient to roll out. But our intent is to award, you know, the number of stations in the tranche, but only knowing the addresses of the first batch, and then encumbering the funds that are available in the agreement for that first batch. So we're only, you know, giving the money out as we have it and only for the batch that's in front of us at the time. When we get to the next batch, you

know, the subsequent batch, the funding will have to be added to the agreement and that would require, you know, most likely a business meeting approval of the next batch and all of those steps.

So those are things that, you know, we'll have to work out internally, but that's kind of how -- you know, the terminology of whatever we call it, whether it's a NOPA or a business meeting approval or an amendment, you know, I think is, you know, less important than when the funding is ready or available and the batch is ready, we'll try and make those two things comment together.

MR. LEIGHTY: Thank you.

MR. BROWN: Hi. Tim Brown with First Element Fuel.

You said it's more about the mechanics of the CEC but it does affect us in a way as to when match funding would count. So, for example, if there as a tranche of ten stations, five in the first batch, five in the second batch, can we order equipment for all ten up front and have that cost share count? Because if it's actually an amendment to the contract, that cost share, in

theory, wouldn't count. We wouldn't be able to preorder that equipment and spend that money.

MR. CAZEL: Yeah. That's a really good question. So in most cases -- thanks, Patty -- so in most cases the match counts under the umbrella of an agreement with start dates and end dates. So we'll have to look at, you know, how does that apply to a batch that's only authorized with additional funding at a new data, you know? Thanks.

Okay, according to the clock and according to where we're at, I think this is a perfect time to break for lunch. We'll come back at one o'clock and we'll start with minimum technical requirements, and then go into some of the scoring and go from there.

Thank you. See you at one o'clock

(Off the record at 11:58 a.m.)

(On the record at 1:05 p.m.)

MR. CAZEL: Okay, so welcome back. We're going to go into minimum technical requirements to begin the afternoon.

But before that, for those of you in the room, we do have a period at the end for public comment. And so we'd like you to go ahead and

fill out a blue card, you can put your name on it, we know what you're here for, and put them on the corner of the desk here. And then we'll at least know how many people we have and we can get them in order and make some quick work of the public comment period.

For those of you that are online on WebEx, go ahead and send a message saying that you'd like to make a public comment. I'll announce this again when we get to that point, but that will be our procedure.

Okay, so are there any questions that we, you know, didn't get to or that you thought of over lunch that pertain more to the stuff we covered this morning? We can do those now, before we get too deep into something else.

If not, oh, okay, so we'll go into minimum technical requirements.

So the next solicitation will have minimum technical requirements and they must be met before the station will be considered open retail by the Energy Commission. This is a little different than our past solicitations. In the past we've called it operational, so now we're going straight to open retail. We know

operational is a step. We're just not going to call that out as something separate. And the requirements, each requirement needs to be met at the station. So where all the equipment is installed at the address of the station is where the minimum technical requirement has to be fulfilled.

Okay, so the minimum technical requirements include these different aspects. Most of them are familiar to you, quality, type, evaluation, et cetera. We'll go through each one. In the actual document, they're not titled like they are in a solicitation but you'll recognize, you know, the contents of the minimum technical requirement. I'm not going to read each one. Some of them are long. But we can put each on the screen and if there's questions, we can address them at that time.

So the main differences between what is proposed for the next solicitation and the last GFO, GFO-15-605, is new compliance with SCA HGV 4.9 will be required. There's a change to the hydrogen quality readings; it will be every six months instead of every three months. And part of the minimum technical requirement to become

open retail will include emergency shutdown covers of some type to prevent, you know, false shutoffs or accidental shutoffs. And then in addition, station lighting and signage will be a requirement.

So beginning with quality, this is the language from the last solicitation. We think it's pertinent now. Test frequency will be every six months. And if I don't see a hand go up or if we don't have comments online, I'll just go through these.

So then for type evaluation, this is a portion of the language that's in the requirement. And essentially it, you know, directs that DMS approval is required for dispensers. Local agencies have to be involved if installing a type approved dispenser. This language is similar to what we've had in the past.

The plan for obtaining DMS or a registered service agency testing of the dispenser has to be included in the application.

And this time around, this is slightly different, the stations need to be designed to be able to fuel all different sizes of light-duty

systems. So this takes into account vehicles that may be coming with larger tanks than we've had in the past.

So then for fueling protocols, dispensers need to comply with the most recent version of SAE J2601, and this is H70-T40, and this includes table-based MC method, MC formula. H70 is mandatory and H35 will be optional in this next solicitation.

And then in order to verify that the station meets different protocols, we'll be requiring HySCapE to be used or a functionally-equivalent apparatus and, if all else fails, at least OEM best practices.

Go ahead. Question?

MR. MCCLORY: So kind of a question or maybe clarification regarding the last part on 4.3 and HyStEP. In the document, the way it's read is that it seems to talk about a third party but it seems a little bit inconsistent with some of the discussions that we've been -- that the automakers and others have been having with ARB. There is a discussion and a proposal that is being drafted right now with ARB to try and clarify the role of the third party and the

involvement of the CARB HyStEP team. And I think we would request to have maybe an opportunity to review that or try to clarify that within the Commission.

MR. CAZEL: Is that something that could be submitted to a docket, you're saying, or you want more discussion around what third party means?

MR. MCCLORY: There is language that is intended to be submitted to the docket, that's correct. I think from the perspective of Toyota, the comment is, is that there is a level of vetting and confirmation of the third party itself, as has been demonstrated in a number of examples, both within California and externally. And so the request would be is to try to encompass that within the language that's proposed as part of the solicitation.

MR. CAZEL: Thanks. Yeah, we welcome that kind of input. The way we worded it here, the functionally-equivalent apparatus, it contemplates third party. But if you have ideas to submit on what that could be defined as, that would be great.

Okay, so then some other minimum

technical requirements. You need to comply with HGV -- SCA HVG 4.9, conform to the most recent communication, J2799, as well as the nozzles and connectors and hoses, J2600. So each of those is written to look forward to any changes that may come to those. So the most recent version is what we'll look for.

Additionally, a point of sales terminal that accepts all different types of payment. This is been fairly standard. The language has changed over the years.

And then this is new. So H, the hydrogen fuel supply and delivery agreement, that includes a backup plan for delivery of hydrogen if the initial -- if the primary source fails to delivery. And then also I mentioned earlier, a utility connection. So we wanted the plan as to how you're going to get the utility connection. And then the minimum technical requirement in order to pass and move on to open retail is it has to be an energized utility connection.

MR. MCCLORY: This is Matt with Toyota. A question.

On the item H, regarding the second supply arrangement as a backup, is the criteria -

- is there criteria from the Energy Commission on what that means?

MR. CAZEL: No. I think, as we discussed earlier briefly, that we just want to see, what's the plan? I think for the initial delivery agreement, we want some kind of proof. And whether that is in the form of a contract or some other form of agreement, I think we're, you know, seeking input from. But then for the backup, again, you know, what is doable, what is, you know, most effective, and what's a good way to convey to the Energy Commission that you've looked into this problem.

We have a question online.

MR. JOHNSON: Robert Wegeng asks, "What is the expected schedule for the following programmatic milestones, issuance of the final solicitation, proposals due date, selection of winning proposals, and start dates for work?"

MR. CAZEL: So none of that has been determined yet. That will be laid out when the solicitation is developed. So these concepts are pre-solicitation. When we get to the solicitation, when that gets published, that will have its own schedule with all of those dates you

asked about in it.

MR. ELLIS: On item H, again, this is Steve Ellis with Honda, you know, again, I appreciate the desire to have a backup supply, but it also makes me wonder about, you know, constraints and storing and things like that. So on one hand, what we know is that in some cases there is an exclusive supply agreement that, you know, can't be breached, so to speak, short of an enforcement issue or something like that.

So I'm just wondering, how do you consider that where, in some cases, a less mature vendor might have more flexibility in achieving that type of agreement than one that's, say, been in the business, have been doing this already, and they have locked in supply agreements? I just want to hear a little bit about that.

MR. CAZEL: Yeah. We know some of the agreements that are out there are locked in. And we wanted to put this out as, you know, a requirement for future stations to have more than just that one option. And you know, those of you who have agreements like that, do you have -- you know, are there ways to work this in? We'd like to have feedback, you know, since this seems to

be an issue. You know, what is workable? What we want is a plan so that we don't have stations that run out of fuel and there is no option. So we're looking for a way to at least have some forethought on that.

MR. ELLIS: Thank you.

MR. CAZEL: So then another minimum tech requirement is lighting, so dispensers should have lighting or be in an area that is, you know, adequately lit so that it's safe for station users.

And then signage at the stations could depend on -- you know, the local jurisdiction has some oversight. The Energy Commission wants to approve things that are posted, you know, at the site that describe where the funding has come from. Caltrans has policies for putting station -- or putting signs, you know, on freeways. And then the trailblazer signs, like I said, the local agencies are involved with. So they'll -- you know, there's language in here about, you know, taking steps toward getting proper signage for the stations.

And then we want all of the open retail stations to be connected to SOSS. And, of

course, have all the required permits to operate the station. So the assumption is they have the operation -- or they have the building permit. We need final signoffs and permission to occupy or operate the station before it becomes open retail.

And then the step of having some kind of protection on the emergency stop device to prevent accidental shutdown of the station.

And then the station needs to be accessible to the public, and this is our standard. It needs to be open, no pin codes, no, you know, memberships to get to the station.

MR. BROWN: Tim Brown, First Element. I'm sorry to go back to your previous slide.

You said you need signage about method of sale requirements. What does that mean?

MR. CAZEL: Something at the station that walks the customer through how to swipe a card, how to use the nozzle. I mean, it seems basic, but if we're going to say put a sign there, let's put one there that tells people how to use it, so -- all right.

MR. ELLIS: Sorry. Can you go back one more time?

MR. CAZEL: One more?

MR. ELLIS: No. This is good.

So are you providing, for example, boilerplate language on things like public funding? I'm just trying to avoid the inconsistencies with how people might see that or perceive it at a customer level.

And when you say trailblazer signs on local roads, is that -- how is that different from highway signs that I'm familiar with? There are a few examples of the highway signs but I'm not sure I know the trailblazer sign. That sounds like a Ian Penden specific reference there.

MR. CAZEL: Sorry for the room.

MS. BARONAS: First joke of the day.

MR. CAZEL: Yeah. From what we've learned on the signs is Caltrans has jurisdiction over freeways and highways. And the trailblazer signs are off of highways and freeways, so those more up to the local jurisdictions to give permission to. And each has requirements for, you know, placement, size, color, all those criteria.

And then as far as the signs that the

Energy Commission wants to have some oversight on at the station, we don't necessarily have boilerplate but we want to have, you know, veto power over what's posted there, just so that it makes sense and conforms with, you know, what the state agency wants their message to be.

MS. VACIN: This is Gia with GO-Biz. I can add a couple of comments about the trailblazer sign. So they have their specific requirements, two of which had come to mind for a hydrogen station.

The trailblazer signs are basically the directional signs that get you from the highway to the station. And you need to have one anytime there's a directional change, really, is kind of what they are intended to do.

And the other requirement are that Caltrans will pay for the freeway signs but the station has to be within three miles of the highway. And it has to be open 16 hours a day.

MR. ELLIS: So to be certain, Gia, thank you, you're saying if it's a highway sign and one that Caltrans will fund, there's requirements, and I think I just heard you say that one requirement is the station has to be within three

miles. And then is there also a requirement then for the trailblazer signs to make sure people don't get lost and stuff?

MS. VACIN: Yes. And they have to be in place before Caltrans will actually place the freeway sign. The track can happen in parallel but the sign won't actually be placed until the trailblazers are in place.

MR. ELLIS: And the station developer is responsible for the placement permitting and costs --

MS. VACIN: Yes.

MR. ELLIS: -- of the trailblazer signs?

MS. VACIN: Yes.

MR. ELLIS: Okay. Thank you.

MR. CAZEL: Okay, so then in the back of the draft concepts document that we published, there's Appendix D. And this is kind of a ripped in half and put back together version of that. I do have an image of it later but this gives you kind of a list of all of the requirements, puts them all in one place. It gives a placed for the applicant to look at and, you know, remind themselves of what the requirements are.

So anything else on minimum technical

requirements? As always, if something, you know, comes up, send it into our docket. It helps us to get feedback, even after this.

So required letters of support and commitment, there are mandatory letters that are required, and that's one from the site owner or the operator who has, you know, jurisdiction over the station or the site where the hydrogen will be installed, a match share commitment letter which explains to the Energy Commission from the applicant where their match is coming from. And then if there are any key project partners, we need a letter of support from each of them. And referrals from subcontractors that the applicant has worked with in the past. And then an optional set of letters could be third-party letters of support. That could be from, you know, a local agency, a car dealership, whatever.

MR. LEVIN: Jaime from CTE.

Those referral letters are just letters of reference to the applicant, whether they are, indeed, going to be subcontractors to this project or --

MR. CAZEL: Correct. Yeah. Like a letter of reference would be for a job

application, you know?

MR. EDWARDS: Dave Edwards from Air Liquide.

So from the perspective of a hydrogen supplier into this market, there's a couple of places where hydrogen supply contracts and agreement have some up now. Milestone five where you talked about a requirement for a supply agreement, and then this minimum technical requirements for a supply and a backup plan.

Would it be sufficient, for example, for a station operator to have a letter of support at this level saying that they have the agreement in principle to pursue a contract, and then for milestone five, to have that be formalized once the project is awarded? We would have difficulty, obviously, signing a supply agreement before we knew the stations were going to be a real network and dedicating molecules to that pathway. Is that the kind of consideration that would go in here?

MR. CAZEL: Yeah, that's good input. I know earlier this morning we talked about, you know, what constitutes proof of having a supply agreement and, you know, what would be

acceptable. And so along those lines, you know, we developed, what is, you know, what is the initial step? What is the step to say it's finalized?

MR. EDWARDS: Okay. Because at this point we could get a letter of support with a good faith effort to negotiate a contract but we wouldn't be able to be more specific unless there was already a supply agreement in place with that company, for example.

Thank you.

MR. CAZEL: Okay, we touched on this briefly earlier also. Data collection will be required for five years after the station is open retail. And the data should be -- or shall be reported on the NREL tool, just like the stations that are operating today.

MR. MCCLORY: This is Matt with Toyota.

As maybe -- well, as mentioned in prior workshops, one of the items on the NREL data collection tool we would encourage is for the CEC to request that the state of charge for each fill be tracked and reviewed as one of the metrics to understand the customer experience. And then this would -- this should have been added or, I

think, was contemplated to be added to the data collection tool but I'm not sure if the latest version reflects that, so --

MS. BARONAS: Thank you, Matt. Jean Baronas, California Energy Commission.

So for the last two solicitations, that's been an optional field. Are you stating you'd like it a mandatory field?

MR. MCCLORY: This is Matt with Toyota.

Yes, we would recommend that to be a mandatory field. We think this is a stronger metric than other mandatory fields in the data collection tool to be able to indicate the actual customer experience of their ability to get a full fill at the stations and understand what the capability of that, basically, decay or the retention of being able to provide full fills, how that is achieved, during an interval time period or throughout the day or throughout the week?

So it's really the first indication of customer experience at the station, is the state of charge.

MS. BARONAS: Okay. Thank you for that.

Phil, if I may? This is Jean Baronas,

the California Energy Commission.

So can you place comment to the docket? The reason is not every materially-affected party is here today or online. And we want to make sure that people would understand this conversation was ongoing.

MR. MCCLORY: This is Matt with Toyota.

That would be in my comments that are written to the -- submitted.

MR. CAZEL: So in the next solicitation, we've touched on these a little bit earlier, there will be three written plans that will be required. So one is the Hydrogen Safety Plan, we're calling it the Preliminary Hydrogen Safety Plan, an Operation and Maintenance Plan, and then a plan for dispensing renewable hydrogen. I'll cover each of those a little.

So the Preliminary Hydrogen Safety Plan will be confidential. It should include the things that are in the safety planning for Hydrogen and Fuel Cell Projects Guidebook, and that's at H2Tools.org. This is exactly what we asked for in the last solicitation. This time it will be kept confidential, so that's the difference. The H2Tools is online. It's

available. It's this document. It will lead applicants through the process of, you know, what we're asking for.

And so included in the Preliminary Safety Plan should be an outline that follows those guidelines, a description of how the tranche of stations as applied for will follow safety practices over the entire tranche. And this is knowing that some of the locations haven't been identified yet. And then how stations, you know, as they're developed over time will continue to follow, you know, safety protocols, especially NFPA 2 and the local safety codes. And then a description of ongoing safety training.

So the Hydrogen Safety Panel knows, you know, based on applications that were received in the last solicitation that it is difficult to get all the information for a specific site when some of the sites are up in the air. So they want to work with applicants who become recipients to fine tune their safety plan.

And so we want a statement in the application that says applicants will work with the Hydrogen Safety Panel to, you know, finalize or, you know, work on their safety plan as the

design of the station is further developed, and this should happen before plan check. It's not a guarantee that the permitting process will be faster or smoother. But the Hydrogen Safety Panel and the Energy Commission feel that working together in this way, we can come up with better, you know, a better process to go to the local agencies with.

And then additionally, this is the same as in past -- in the past solicitation, there will be a three-year period where the Hydrogen Safety Panel will follow up on, you know, where the station is, review the safety plan, look for anything that may have fallen out of, you know, not being followed. It's more of kind of a check-in.

MR. EDWARDS: Dave Edward from Air Liquide.

So the hydrogen safety plans, one of the biggest changes is that they moved to confidential. What's the thinking behind moving those to confidential, given that safety is one of the things that we want to raise to a best practice standard and have good communications within the industry and within -- in those

practices, for example?

MR. CAZEL: Well, I think our main reason for going with the confidential plan is the feedback we received in the last round, in our last solicitation, was that more information could have been given to the Safety Panel if it was confidential because of proprietary concerns with equipment design or setup, that sort of thing.

So our thought is the Safety Panel is still going to be able to review that confidential material but then it won't be released to the public and reveal too much about what different developers are planning.

MS. BARONAS: Jean Baronas, California Energy Commission. I just want to build on Phil's remarks here.

So the manager of the Safety Panel is in discussion with the agency presently about aggregating the safety plan, the key features of each safety plan, for public use after stations are awarded. But they would be aggregated so that a person familiar with the state of the art could not discern what developer put forward what. So that's the balance we think is

appropriate.

So as Phil said, high level of detail under confidential status to be kept by the agency for seven years in a confidential state. And then aggregation on the part of the manager of the Safety Panel to explain to industry and post on USDOE's H2Tools site the key features of how safety is being implemented throughout the life of the stations.

MR. BROWN: Hi. Tim Brown, First Element.

You had early station design review. That's a review with whom? And what is the outcome of that?

MR. CAZEL: This is between the recipient of the award and the Hydrogen Safety Panel. They want to be able to review, knowing that, you know, the application will contain a certain amount of detail. But then when the station, you know, is getting ready for plan check and, you know, designs are complete, they want to have a chance to look at it again at that stage. And they're not going to judge it or tell you you're wrong, but there may be some things they could help out with in that phase, the earlier phase,

rather than waiting.

So then another plan is the Operations and Maintenance Plan. This has always been part of the scoring process. So we've always asked, you know, tell us how your Operations and Maintenance Plan will make your station better?

In this new solicitation, we will ask for a specific plan. We wanted to include, you know, expected maintenance costs, how those costs are going to be paid for, how LCFS HRI credits are planned on being part of the support for the station. And then along with the other things, you know, how uptime will be optimized?

How -- what's the plan for responding to problems, scheduled maintenance, unscheduled? And then what's the process for when there's, you know, a failure of a piece of equipment? What's the response time for that? What kind of assets will be mobilized to get the station back online?

And this is all keeping in mind that operations and maintenance funding is not anticipated for this solicitation. It will be the LCFS program.

MR. EDWARDS: So Dave Edwards from Air Liquide.

I would suggest perhaps addition of a bullet here where we talk about the structure of the organization and the location of resources in order to respond. In a lot of cases, that's the limiting factor for optimization and planning, for example.

MR. CAZEL: Thanks.

So then the third written plan that will be required will be the Renewable Hydrogen Plan. And we want the description to include how the stations that are awarded or the entire portfolio of stations, if there are stations that are already awarded in prior solicitations, would combine together to dispense at least 33 percent renewable hydrogen.

And then also we want included in the report -- or the plan is what is the calculation of the well-to-wheel GHG emissions? What LCFS pathway is being used? And the other assumptions that are in the calculation.

MR. EDWARDS: So Dave Edwards from Air Liquide again.

So one of the significant changes for the Renewable Hydrogen Plan is the selection of feedstocks eligible and, under renewable natural

gas, the specific exclusion of landfill gas as a renewable feedstock to meet the 33 percent. It's unclear from us whether this is driven by a policy or a regulatory requirement or whether this is a CEC expectation. And a little fidelity on where that comes from would be helpful.

And then further, has there been any analysis to look at, with those exclusions, the effects on the cost of hydrogen to the consumer and the availability of hydrogen renewable in the market, for example?

MR. BUTLER: So John Butler, Energy Commission.

The exclusion of landfill gas is policy-driven, statewide policy-driven. Our colleagues at CalRecycle asked that we exclude landfill gas, so we are not unduly incentivizing or somehow incentivizing not diverting organics from the waste streams. And we prefer feedstocks that are pre-landfill organics from waste streams, so to be used to make the biogas. So again, it's a statewide policy that we're trying to support here.

In terms of have we done an analysis on the effect of the cost of hydrogen, we have not

done that.

MR. ELLIS: Steve Ellis with American Honda. So I had another question relative to it.

But hearing that statewide policy, it strikes me a little bit unusual. I mean, I'm not sure what's trying to be served with that type of policy directing or protecting landfill gas for purpose X versus Y, but that's kind of what I hear. It seems that, you know, we're trying to achieve bigger goals here. And anything that is limiting toward these goals of decarbonizing transportation seems to be counterproductive. I know that people in this room may not be the ones that can affect that change. But at the same time, I just want to put that out there and say that that maybe should be left -- best left to those in the business of that supply and the commerce of capitalism to make those business decisions.

In a nutshell, something about hearing what you said just doesn't make sense, it doesn't wash, you might say. Again, not -- I think I hear you saying you're simply responding to other policies.

The other is, I think, the second bullet

calculation on a well-to-wheel basis, I think that's good. But I also am concerned because the total well to wheel is made up the basis of the renewable content, and there's calculation under the great model that define that. But I think there's two parts to it, it's well to tank and tank to wheel. And my concern with this being put on the backs of the station developers is the tank to wheel is a variable based on vehicle fuel economy, which varies across the array of vehicles in the market.

So maybe take a look at whether it's best to just simply define this as a well-to-tank, hence, supply to the tip of the nozzle. And the assumptions then are, you know, all the vehicles will vary across the board.

Yeah, and then just last, I think on the final bullet there you should, I would suggest, just remain open to many supplies of the feedstock, whether it's renewable electrons or the grid of renewable molecules for vehicle transportation. In this case, it seems like less constraints are better than additional constraints.

Thank you.

MR. EDWARDS: So Dave Edwards from Air Liquide.

To come back to the question on landfill gas, we think there's a balance to be played between the cost of hydrogen we can offer to the consumer and the ability to rapidly increase the amount of renewables in our portfolio. And that balance, really, is something we need to take a careful look at.

Today, I believe that landfill gas to hydrogen is probably the single largest source of renewable hydrogen in our portfolio. And as we go from thousands of cars to hundreds of thousands of cars the challenge for renewable hydrogen at the scale we need is going to become increasingly challenged at a cost that's competitive with existing fuels.

Along those lines, we do agree with the state's position on not encouraging additional landfills, non-separated landfills, for example. But viewing existing landfills and existing sources of methane within those landfills as a renewable resource is actually the best steward of those resources available, is to convert them to hydrogen for transportation fuel, in our

opinion.

MR. BUTLER: No. Thanks for all the comments, appreciate them. Certainly on this topic, comments to the docket would be greatly appreciated. And certainly, any sources of information that would help drive the -- you know, inform the policy call on this, so this is where we stand today but certainly open to your comments and appreciate them today.

MR. MCCLORY: Question. Maybe, John, you want to keep that microphone.

Can you provide -- maybe just to clarify a bit of a black and white answer, this seems like a fundamental change from the last solicitation of the last GFO. It appears that it's restricting the ability to use purchased bio credits, biogas credits that may have come from landfills outside the state. Is it -- is this proposal or the concept drafts -- drafts concept document saying now that that is no longer eligible?

MR. BUTLER: I'm going to kind of look to Jean for the answer to that one as compared to the last GFO.

MS. BARONAS: It's still eligible.

This is Jean Baronas with California Energy Commission.

Still eligible. The purchase of biogas credits from out of state is still eligible as a feedstock in California.

MR. MCCLORY: Could you -- this is Matt with Toyota.

Could you please clarify then how that -- how your response interacts with the statement in the document regarding landfill gas? I guess maybe I missed that and I apologize that I missed it.

MS. BARONAS: Give me a second. Let me pull up the text.

MR. MCCLORY: It's on page 25 at the top.

MS. BARONAS: It may be eligible. Is that the phrase that bothers you under 27, "Systems using other waste biomass feedstock, such as biomass, waste or residues, may be eligible if the applicant demonstrates the proposed system?"

MR. MCCLORY: This is Matt with Toyota.

So if -- in the preceding sentence there's a statement on excluding landfill gas. And so if the biogas credits are coming from

landfill gas that's out of state or a biogas that's made up of some part of that, is that -- how do those reconcile each other?

MS. BARONAS: You can't use them if they contain landfill gas biogas credits, any portion thereof.

MR. EDWARDS: So this is Dave Edwards from Air Liquide again.

So just to be clear, so feedstock from landfill gas, whether that's done through a credit process or directly used within the state of California, they will not be eligible the way it's written?

MS. BARONAS: That is correct. Jean Baronas, California Energy Commission.

MR. CAZEL: Any other comments on this topic?

MR. BONNER: Brian Bonner from Air Products.

Just to build further on that, the question is that if there were previous solicitations that were awarded funding that allowed for landfill gas to be able to meet the renewable requirement, will they still be able to use that landfill gas to satisfy the renewable

requirement going forward?

MR. CAZEL: Yes, they would. It would play under whatever the rule was that the funding came from. So if it was a prior solicitation that allowed it, then it would be allowed for those stations that were constructed under that rule.

MR. BONNER: Thank you.

MR. CAZEL: Okay, so another requirement will be participation in R&D projects. This doesn't mean you have to come up with a proposal for research and development project but we want each applicant to include a statement that says they will commit themselves to participate in any R&D projects that come along from the USDOE, other national agencies, or state or local research. So this is more making your station or your data available to help the good of the industry.

And now we'll go into screening and scoring.

So beginning with screening criteria, these are the elements that will determine whether an application even moves forward to be scored, so these are pass/fail. So the way

they're listed, they have the section and the page. So the station has to -- or the application has to provide project requirements and eligibility that allows us to say it passes this.

The applicant has to be determined to be an eligible applicant.

The statement that the applicant will participate in Hydrogen Safety Panel reviews has to be there.

And then the previous slide, same thing, a statement saying that participation in government research and development projects will be part of the commitment.

So then as far as evaluation and evaluation criteria and points, this is fairly standard. The applications will be evaluated using the evaluation criteria they have to score at least 70 percent to be considered eligible for funding. Proposals will be ranked according to score.

And then if partial funding is offered for a tranche or a batch, this is where we'll have some back and forth between is the funding available or do we need to offer a lower amount?

We'll work with the applicant to choose which stations might be eliminated in their batch or in their tranche so that they can still move forward with the funding that's available.

And then tiebreakers, highest score. And then we'll go through tranche budget, project readiness, station performance, each of those scoring criteria will act as a tiebreaker. And the proposals will be recommended for funding in rank order.

Again, this last line pertains to the tranche. So the stations won't be scored and ranked like they have been in past NOPAs. This will be the applicant winning the tranche and that's -- they'll be ranked first, second, third, in that order.

And then here's a summary of the evaluation criteria showing the possible points. The highest weight is the budget, followed by readiness and performance. And then the remaining criteria with the lower weighting, totaling 100 points possible.

And I'll go through each.

Go ahead. Question? Oh, sorry.

So I'll go through each criterion

individually for tranche budget; 20 points is the weight given to this. And the evaluation will look at the degree to which the project is cost effective, and that's looking at both dollar per station and dollar per kilogram.

And just to clarify from the discussion we had earlier, when we say dollar per kilogram and dollar per station, we meet state dollar, not total project dollar, o that's 50 percent match, 50 percent Energy Commission funding. So all of our scoring goes along those lines too. It's Energy Commission collar per kilogram and per station.

MR. LEIGHTY: Sorry. Just Wayne with Shell. Just a clarification.

And it's Energy Commission dollars on the equipment, since the Energy Commission dollars are limited to equipment?

MR. CAZEL: Yes. Correct.

MR. LEIGHTY: Thank you.

MR. CAZEL: And then the second bullet for the tranche budget will look at the benefit cost score, and that's using greenhouse gas emissions reduction per Energy Commission dollar.

Additional scoring points include match

funding, so the strength of the match funding. The budget that includes estimates for taxes, that may not be, you know, included in part of the equipment. So the main one we run into is the California Use Tax. When equipment is imported to California, there a use tax that gets attached to it.

And we want to have applicants describe how they propose station upgrades, but then we want them to specifically talk about the upgrade as far as the difference between the existing station's equipment and functionality with what the upgrade will provide. So is that better dispensing, more back to back, more fueling possible? Whatever that includes, we want to be able to look at the difference between not just the total improvement of the station at the end.

MR. JONES: Hi. Steve Jones, ITM Power.

That upgrade one is there potential criteria, as well, price at pump?

MR. CAZEL: No.

MR. FORREST: Good afternoon, Matt Forrest, Mercedes Benz.

I'm curious, in regard to the tranche in the first batch that you'll be using for the

scoring process, in instances where there might be a potential for a station project relocation, as we've seen in the past, how is that going to be handled or essentially dissuaded, giving -- given the fact that it is scoring relative? Can you kind of share the plan for that?

MR. CAZEL: Good question. Yeah. We're looking there at how do we score the initial? But then your question is: What do we do if something changes; right?

Yeah, we've looked at some internal scenarios. We're still working with, you know, our internal legal processes. And if you have an idea, if you have some input to that process, go ahead and submit it to the docket. That's something that's more of a future, right, what if?

MS. BARONAS: Well, it's Jean.

Would you ask Matt Forrest to repeat his question?

MR. FORREST: Sure. The question was: In regard to the tranche and the scoring of which, which will also look at the first batch, I'm wondering in particular if a station needs to be relocated due to a viability issue, given that

it's scoring relevant, in terms of approach, how are you going to dissuade or disincentivize the relocation of the station that, essentially, may or may not be completely viable in its repose? Is there a mechanism that you have in mind for the solicitation process?

MR. CAZEL: Okay. Thanks for the question.

So for project readiness, applications will be evaluated based on information that describes how the station is properly zoned, timelines for achieving planning approval, steps that have been taken already, you know, how far down the road is the permitting process, including CEQA. And this is more important for the initial batch of stations because the subsequent batches have not been named yet. And the application will also be evaluated for, as I said, how many steps down the road has the station made it toward permitting?

How strong is the documentation? Is it just, you know, a story that you heard, it's going to easy or is there some concrete evidence that shows that steps have been taken and it can be relied on?

So the same information will be required for subsequent batches. We want that milestone one and two completed, which includes meetings with the AHJ and site control.

Other bullets under project readiness that will be scored have to do with the design for the initial batch and how it relates to traffic flow in the station, within the station and going in and out of -- onto the street. And again, the same information will be required for future batches.

MR. ELLIS: Just a question on that. When you -- I understand ingress, egress, things like that. That's always an important part of what we've lived with, with the current stations.

But foot traffic, I just want to make sure I understand, is this in reference to foot traffic on the sidewalks or foot traffic at the station itself? What is being defined there?

MR. CAZEL: Yeah, it could relate to either. This is taken from, you know, instances where we've seen designs in the Planning Commission phase get kicked back because they didn't do a property study of how are people going to walk from their car to the convenience

store without getting run over by, you know, a car that's going somewhere else that doesn't seem to be a fueling island, that kind of thing.

So we're trying to pull out these points of, hey, did you think of this?

MR. ELLIS: Okay. Thanks.

MS. BARONAS: May I, Phil?

Jean Baronas, California Energy Commission.

So just based on the past eight years now of watching the permitting flow, having diagrams that show how pedestrians will be walking around the station, in light of the fact there may be new deliveries coming in that weren't coming in before, large trailers of gas or liquid, and I've seen a number of permitters hold back permitting because there was no yellow brick road. There was no path to follow through the station that the permitter could take and trust would allow for people to walk through the station with this new dispenser and all the gear that goes along.

So it sounds benign but super important to the permitting agencies, is what we're thinking.

MR. ELLIS: No. Thanks, Jean, for that

additional clarification from your perspective of that permitting challenge that existed. It just, it had me wondering how that differs from what people do at gas stations today. So that helps. Thanks.

MR. CAZEL: Okay, and then, also, project readiness will be evaluated you on the plan for connecting utilities, which was mentioned a couple times already. This is looking for the overall plan, not necessarily each specific station but is there a plan? You know, what's your timeline for approaching the utility, getting them -- getting on their schedule, getting them onboard?

MR. SLOTH: Is it possible to apply just for one batch and not have a tranche of multiple batches?

MR. CAZEL: Yes. We would still consider it a tranche. It would be a tranche of one station with the initial batch of one station. Yeah.

So then another readiness scoring point is that the application includes information about the supply, so what's the primary, what's the backup? I think we've talked about that.

And then, what's the schedule? Is the schedule reasonable? Does it get the stations built in a realistic timeline? And this will be looked at for the batch and for the entire tranche.

For hydrogen refueling station performance, this is one of the 15-point criterion, the performance will be evaluated on meeting the minimum requirements and exceeding those, so for capacity, and also for the minimum technical requirements, and also the degree to which the station can be scaled up. So can the capacity be easily increased to meet the needs without coming back for additional funding? And are the hours maximized for operation? And that would include lighting. So we through that all in one bullet. And overall, does the plan -- does the station optimize the customer experience? So is it safe, convenient, open when they need to be there, able to fuel back to back when there's high demand? All of those go into that.

So approach to station selection is kind of a new concept. It's been in bits and pieces before but this is its own criterion for the next

solicitation. And what we're looking for is, you know, is the plan to select the station sites and put the right sized station in the right place result in a successful station? So is it going to be financial -- or financially self-sufficient? Is it going to be able to provide fuel to vehicles and customers when they need it? Is it going to be the right size based on the map? And does it complement the existing network?

So also in this criterion, we'll be evaluating how the station selection sites align with the OEM priority station letter. I know this link is the older letter. And my understanding is today a new version of this letter was submitted to the docket, so we'll be updating this criterion to use that new letter.

And then how does the station selection and the site relate to the possibility of fueling a fleet or any other type of, you know, fleet-type base that could support the station and increase the number of vehicles serviced?

MR. PARK: David Park with the California Fuel Cell Partnership.

And, yes, we did indeed submit the

updated OEM recommendations to the docket. And we also posted that letter on our home page to our website.

MR. CAZEL: Yeah. Thank you. So since that has been posted to the docket, it's available for anybody to come to the Energy Commission website and find it there, as well.

So the criterion for qualifications of the applicant, this is very similar to what it's been in the past. The evaluation will look at the level of experience with high pressure gas, specifically hydrogen.

We'll look at the team or team members' experience in cost accounting and financial control, things like commercial real estate which has become more and more important because of the viability of some sites that seem to fall out.

And experience with permitting for hydrogen or other types of alternate fuel stations, equipment procurement, supply chain management, all of those will be evaluated.

And then also the degree of experience that the team has in project management in general, hydrogen specifically, including getting fuel to where it belongs in time.

And then what kind of experience for planning maintenance, whether it's planned maintenance of, you know, surprise maintenance, to help the station maintain itself in an available state.

MR. SLOTH: The project team, is that only employees at the applicant or can it also be employees from suppliers or other product partners?

MR. CAZEL: Yeah. So this could include anyone who has something to do with the station. If they're a subcontractor, if they're, you know, a team member, because they're supplying the equipment, they could be included in this in order to make the qualifications. So you don't have to have, you know, a staff real estate agent, but you could have one of your team members that is.

So then, also, we'll look at what's the degree of experience in communicating status of the station, responding to customer needs, complaints, customer service?

And then as we mentioned in the letters before, we're going to be looking for referrals from subcontractors, preferably that are

positive. I don't know why you would send a negative referral.

MS. BARONAS: That's the second funny thing today.

MR. CAZEL: Wow. Tough crowd.

(Laughter.)

MR. CAZEL: Safety protocols and procedures will be evaluated on the degree to which the Hydrogen Safety Plan seems to be complete. As mentioned earlier, we know that these won't be in, you know, a final state because this is early in the project, but we want to see that it's able to be fine-tuned and can, you know, be modified easily to fit the exact station design as it comes up.

MR. SLOTH: Will the CEC assessment of the Safety Panel be based on the feedback from the Safety Panel? And if so, how do you handle that? Members of the Safety Panel can also be potentially or also the employees of advocates or competitors.

MR. CAZEL: Yeah. So the question is: How will the Safety Panel evaluation be used?

So in the last solicitation, and we'll do the same for this one, the Safety Panel is made

up of, you know, a wide variety of people from different companies, different industry members. Those who are directly, maybe competitors or maybe too close to the solicitation process, will recuse themselves from being a judge, so to speak. But what we're looking for is more the completeness of the plan. Does it have the elements that we asked for? Does it follow the guidelines and at least include, you know, the things that should be in a good Safety Panel, knowing that it's going to be worked on as a work in progress as the stations start to roll out?

So then this last bullet here, we're looking for, you know, experience working with first responders. Kind of self-explanatory.

We'll also be looking for, you know, a description provided by the applicant saying how their plan will, you know, continue to stay current with safety protocols and procedures. Both of these bullets kind of relate to that.

So for operation and maintenance, we'll be looking at the plan, the required Operations and Maintenance Plan. And it will be evaluated on the degree to which it addresses all of the bullets that we're looking for. So we want to

know the cost of the equipment. How does the LCFS program play into their plan? Can the station, you know, be supported by itself? And also, how does the Operations and Maintenance Plan address, you know, station uptime, response time for maintenance, and how things will be dealt with if the station has a failure?

Social and environmental benefits will be evaluated based on, you know, what benefits are coming from the station to California-based businesses. What kinds of jobs will the station bring? What kind of full- and part-time jobs? And then, you know, how will those jobs including disadvantaged communities play into, you know, the overall benefit of the station? Whether it's in a disadvantaged community or not, it could provide air benefits, it could provide employment benefits.

And what is the plan for dispensing renewable hydrogen? So does it exceed the 33 percent renewable minimum? Does the plan seem viable? Is it reasonable? And then is renewable electricity used for power at the station? That's an additional environmental benefit.

MR. SLOTH: So system power is station --

power consumed at the station, basically?

MR. CAZEL: Yes. System power, we're thinking of compression, chilling, things that happen at the station after the hydrogen is produced and delivered.

And how do other practices that help the environment, you know, get included in the construction process or in the planning process?

And then does the station's plan include plans, you know, to recycle materials that may be used during construction? And is there a way for the station or its equipment to integrate itself into the grid's curtailable renewable resources increased renewable hydrogen use? Those sorts of things.

Okay, so that was the last of the scoring criteria. Any questions on those specifically?

MR. ELLIS: Steve Ellis at Honda. Go back one slide, if you don't mind please?

Oh, when I read this second bullet, energy storage, you know, that's a large-scale pathway, you know, to cost reduction and other great benefits. But when it says, "or use as curtailed renewable energy as a source for renewable hydrogen," I can't help but think back

to this earlier comment about the landfill gas, hence the value of the landfill gas. You know, one of the big ones that was identified was to take something that otherwise would have been released to the atmosphere and now do something good with it for a net savings in, you know, GHG production.

So I just, I want to point that out, more or less, that these are diverging goals. Doing something like that, sometimes you think of it simply as a fairness issue. Is it fair to tie the hands of one well-known and previously identified supply of making good with something that otherwise would not be? I just wanted to put that out there.

Thank you.

MR. CAPPELLO: Joe Cappello with Iwatani.

Does the selection criteria favor one hydrogen production method over another? Meaning, does onsite hydrogen production at the station get a favorable weighting versus delivered hydrogen?

MR. CAZEL: No, not necessarily. You know, I mean, we didn't design it for that. So that's not what we're looking for, in other

words.

Okay, we're getting somewhere now.

So for regulations and standards, there's a number of regulations and standards in Section 33, pages 31 and 32. And those all begin with "The stations shall comply with," and so these are the minimum technical requirements and those sorts of standards. They're listed in the reference slides after the end of the presentation. They're also all listed exactly the same in the document. I didn't want to list them all here because they're kind of redundant to what we've talked about in the minimum technical requirements. But if anyone has looked with those, has any issues with any of those, we can pull it up and see where we go.

Other regulations and standards, the applicant shall submit reports of unintended releases to the CUPA, and also complete any other required federal reporting. That can be -- information on that can be found at these two links.

And then I have images of the appendix that's at the back and I'm just going to flip through these.

So this -- Appendix A is the mapping you've seen. These are the existing stations in their various forms of development.

Appendix B is our list of funded stations.

Appendix C has the NREL data collection tool as a sample.

This is the complete Appendix D. It's the open retail checklist, so it has the minimum technical requirements all laid out with a spot to check the box and then sign, yes, we did these. This is required for open retail status.

And then Appendix E, the HyStEP checklist, this has changed from time to time. This is the current version, things that the station needs to be ready for, for HyStEP to come.

And then we're on to written comments. So this is the link to send electronic comments to the docket. And we encourage anybody who has commented today verbally to follow up with more detail, if you wish. For those of you that we requested please do it, please do it.

So final comments are required by February 22nd at 5:00 p.m. and this is the link

for that. And I'll leave this slide up while we have any final questions on anything that was presented today. And then after this, we'll go to public comment period where, if there are any closing remarks anyone would like to make, we'll do that next.

So questions?

MR. MCCLORY: This is Matt with Toyota. Just a question in response to the previous comments.

Regarding the desire to scale up to a large number of stations in the network and understanding some of the, perhaps, new criteria for biogas or renewable hydrogen definition criteria, is there an opportunity to have a deeper review of how to achieve kind of both objectives and the feasibility of that as part of this process?

MR. CAZEL: So comments that are submitted to the docket allow us the opportunity to look at that and then ask for more feedback. So that opens the communication a little bit that way. If it becomes something that we thing would be more beneficial to do that in a workshop setting, then that may be the venue that we would

do that. But I would encourage you to send your comments and concerns in. That gets the ball started.

MR. SLOTH: Just a question or a comment on the slide showing the NREL data. Maybe it would be worth considering having a process with NREL to maybe update the tool now, taking into consideration that the data ought to be collected for five years. So maybe there are some data that are all relevant to collect than other data looking at that timeframe, because that means the last data will be collected sometime in 2026 when there are ten thousands on the road, hopefully.

So maybe, you know, some data points are not that relevant out in time and that could maybe help reduce the resources required for the reporting. Also, a new reporting format may also open up for ways to make that automatic, like with sources and automatic signal. Maybe some of the KBIs [Key Business Indicators] could be done in a similar way.

MS. BARONAS: Mikael, thank you.

This is Jean Baronas, California Energy Commission.

So even if it's a rough description of

the fields that you find out of date or not necessary going forward the next five years, please send that to the docket. Because we just, last week, started to look at all those fields and ask ourselves, you know, whether or not, you know, the cost benefit of companies sending that material, all of that material to us. And then as mentioned earlier, a new field should be now mandatory instead of voluntary. So there's a cleanup need. We know there's a need.

So even if it's a list or if you cut and paste the different worksheets from the tool and put it in the docket and say, don't need, don't need, that would be fine. Anything informal as input would be really great.

Thank you.

MR. JONES: Hi. This is Steve Jones from ITM Power. Just a quick question, or a comment really.

With the tranche setup, presumably it's possible for this first round of $20 million to be split three ways. Three applicants come in at the maximum cap and have a tranche. And so, essentially, three supplier are going to be building stations for California for five years;

is that correct?

MR. CAZEL: That's possible, yes.

Okay, so we'll go to public comments. So this is more of a, you know, gives us your three minutes' worth of comments. So we had four different people put in a blue card, so I don't know that we need -- no, five, so I don't know if there's a preferred order. There's not going to be a line out of the door. Well, now it's getting longer, so -- but -- so you can stay at your seat, you can go to the podium, whatever you want. We'll give each person three minutes and we'll do the public comment section.

If there's anyone online -- is there anyone online that wants to make a public comment? Okay.

Okay, so let's go ahead and start, so whoever wants to go, we'll let you guys decide, since there's a handful.

MR. PARK: I can go first. All right.

MR. CAZEL: Okay. Go ahead.

MR. PARK: This is Dave Park with the California Fuel Cell Partnership. And I want to say on behalf of the members of the Partnership, we're very appreciative of the vision that -- and

leadership the CEC is showing. Certainly, I've heard from the members a resounding -- we expressed our interests and desires to CEC and are very pleased with the current form of the GFO. And we appreciate the opportunity to provide feedback and just as a partnership organization, just make it an even stronger package.

And this -- and you know, continuing in the spirit of partnership, we have published a revised set of OEM station location guidelines. We submitted that to the docket yesterday and it was accepted today, so thank you very much for that. There are a 114 locations total that were submitted in two different groups, 56 group one and 58 group two locations, and I'll get into those details in a few seconds.

But overall the focus is to improve station density and to expand network coverage. We are looking at increasing density in major cities, so the existing locations in San Francisco, Los Angeles, Orange County, the Inland Empire and adjacent areas, and we're also looking at seeding the San Diego market to initiate and grow that market. Our desire would be a minimum

of three stations in the San Diego region.

We're looking at expanding network coverage in the Central Valley, the Central Coast, and then also a feeder into Las Vegas. And Las Vegas is contingent on -- well, the feeder into Las Vegas is contingent on establishing a location in Las Vegas.

And then we -- I did mention, we have group one and group two. Group two are all equivalent priority locations. There's no order to that group. We think that those 58 locations just absolutely need to be populated with hydrogen fueling. In group two, we've binned those stations into three bins, one through three, just to give a sense for what the order or priority, as we aggregated the OEM priorities, the individual priorities.

So I see I'm coming to the close of my three minutes, so thank you very much, appreciate it. And I will be happy to facilitate any conversations with the OEMs.

MR. CAZEL: Thank you.

Anyone volunteering to go next or do we need to pick a card.

(Timer rings.)

(Laughter.)

MR. JOHNSON: Andrew Martinez from CARB.

MR. MARTINEZ: If there are other OEMs who are going to discuss the letter first, then I would prefer to go after them.

MR. JOHNSON: Wayne from Shell.

MR. LEIGHTY: Hi. It's Wayne Leighty from Shell Hydrogen.

First, thank you. This solicitation counts as a big step forward in structure that may help to enable the scale and pace needed for hydrogen to contribute meaningfully to California's emission reduction goals. It is innovative and appears to be seeking the shared objective of accomplishing the most possible with available fund and authorization toward a viable market for hydrogen fuel cell vehicles and California emission reduction goals. We support this objective.

The combination of LCFS capacity credits adopted last year by the ARB and this GFO structure should send a strong signal to those who would bring fuel cell vehicles to market, those who would invest in hydrogen supply, and customers who would consider a fuel cell vehicle

as the buildout of the fueling infrastructure and the customer value proposition. That growing market confidence is important.

These are important steps and pivots in policy from demonstration to supporting pre-commercialization. It is also imperative that industry uses these supportive structures to deliver scale, performance, cost improvements in the infrastructure and the fueling network to accelerate the customer adoption of the fuel cell vehicles.

So we will submit some comments to the docket from that perspective to help ensure these desired outcomes.

As just a little bit of explanation, I think there are few themes that came up today. Efficient, cost effective, timely delivery of the stations, the structuring of batches and tranche -- batches within a tranche, I think is a very innovative structure. Maybe there's a few tweaks that we would suggest.

The competitive structure in the scoring and some other elements I think should deliver some outstanding results. It's also important that we encourage a strong set of applications.

We have a few thoughts on that balance.

Generally, this is big, allowing sufficient time to prepare for all the applicants may be important. The timing between a solicitation and when applications are due should be considered.

Administrative simplification is a key to the overall cost reduction and timely delivery of the infrastructure. There's some great elements in here directed toward simplification and we have a few other comments to make.

And finally, this appears to be decreasing direct public funding toward infrastructure in something of an offramp toward viable market conditions. These are things that have been discussed in other venues. In my mind, that implies decreasing public involvement, decreasing requirements toward the Energy Commission. What I see in some of the latter half of today is increasing requirements. So some of our feedback will be in that vein.

Today was a very high-quality workshop, so thank you very much.

MR. JOHNSON: All right, next up is Steve Ellis from Honda.

MR. ELLIS: Great. Thanks. Thanks again for putting out a well thought out draft of the ideas that have bubbled up. And you know, I think, Jean, you remember years ago, I said to keep this annual (indiscernible) continuous improvement. So I see, you know, good work put into that.

Again, my name is Steve Ellis, speaking on behalf of American Honda based on Torrance, California, and a longstanding history of deploying the hydrogen fuel cell vehicles.

When I first, you know, reviewed this, I first saw the $110 million number and I got a little excited. I'm thinking, wow, this is a response to the governor's executive order, doubling down to 200 station and $93 million. But then of course through reading further and, of course, today, understanding that it's really not. So I do want to emphasize that, you know, just really embrace the idea that the executive order tried to accomplish what industry was asking for, which was to accelerate the stations.

I'm one of a few people that were in the room that developed the first number when we were asked how many stations were needed to launch

vehicles? And I won't get into the specifics of that but simply say that we are clearly behind, we're significantly behind where that was intended to be at that time. So it is fair to say that we do -- would encourage some effort to catch up.

AB 8 report clearly shows that there's this crossover point in the future. And right now we just don't want to see that, those lines meet where we start running out of hydrogen compared to the demand on the stations.

So as far as the funding match, you know, from 15 percent requirement to 50, I would just offer that that's quite a leap in both fact and concept. And simply put, it just begs the question: Why such a big leap and why not something more like 40 percent or 33 percent, something like that? So please consider that.

Similar with no more O&M, that's a big shift, that's a big change from in the past. So I would just pose a question: Why not, you know, just reduce the time of that or cut the dollars or something like that? But to go from having O&M to none is a big shift.

And you know, in the context of the fact

that we're just now beginning to build some momentum in the market, so it's very fragile, no different than as in nature. Those that are young and still immature are more fragile and need nurturing along the way. And I would offer that just be careful that getting this wrong can have unintended consequences.

And finally, you know, why? At the end of the day, it's about customers and our customers. And you know, we can do all the math, we can look at what we've done and how we've done it and what's working and what's not but, you know, I'm also here today to speak of them.

And it's troubling to us that we still have customers that are having to wait in line to get fuel when they expect not to. This is not pulling into Costco and purposely waiting in line for the fuel on a weekend day. That's what people choose to do. But people have busy lives. They expect these vehicles to operate just like they did their traditional gasoline vehicles, and that's the model. And we have a need for more stations and available kilograms and to see that accelerate.

The other is we also listen carefully to

our dealers. And when we have dealers that say they have customers that are going to hold off until the station network is more robust, that's troubling. And at the -- and the worst case, and this is true for, let's just say, all vehicles and we lived in this with battery-electric vehicles where people lease of purchase vehicles expecting a certain thing but then it doesn't play out as well as they thought, so they may terminate their lease or turn the vehicles in early. Right now, we do have cases of that occurring solely because of station network being more challenging to them than they expected it to be, and so that hurts. It's tough to see and hear that from people.

Positively, some of them say, hey, I'll be back when you get this fixed. But today, they may be pioneers, they may be trailblazers, you can call them what you want, but everyone has a limit or tipping point that pushes them over the edge.

So these are my comments today. I again appreciate all the hard work that's gone into this. I know that these are tough, tough things to develop and work on, but thank you for your

good work and look forward to how this plays out, accelerating additional stations.

Thank you.

MR. JOHNSON: All right, next up is Dave Edwards from Air Liquide.

MR. EDWARDS: Good afternoon. I'm Dave Edwards from Air Liquide.

First off, I'd like to thank the CEC and the stakeholders in the room. The proposed concepts are clearly a reflect of a lot of hard work, a lot of effort over the last 18 to 24 months, both on the CEC side and from our side on providing inputs. And I think the quality of this process is reflected in the collaborative approach that's been taken from the beginning of the document, so thank you very much.

Today, I'd like to limit my comments specifically to those about the proposed requirements for renewable hydrogen. We are going to request through a letter that the restriction on landfill gas as ineligible feedstock for renewable hydrogen in the proposal be removed. As an industry, through the commitments of the Hydrogen Council, we are fully dedicated to 100 percent decarbonized hydrogen

permeability by the year 2030 on the order of 15 years faster than we would be able to see from battery-electric or a grid-based production, for example. But success along this renewable pathway requires policy and market landscapes that enable the transition, leveraging all the mechanisms and the resources that we have available.

At this critical point in the market transition, we would significantly restrict the market, jeopardize the state's transportation goals, and bring the consumer unnecessarily high fuel prices if we don't think collectively and cautiously about the kind of restrictions we put on our fuel supply.

Given this, we're encouraging the CEC to continue to consider all reduced carbon hydrogen pathways as eligible in this program, and in particular the restriction of landfill gas as ineligible feedstock may unnecessarily eliminate the single largest and lowest-cost source of low-cost hydrogen -- or low-carbon hydrogen available in the U.S. market today.

Landfill is sourced from existing sites and, when converted to hydrogen fuel, provides

the market with an excellent use of this waste stream from both an economic and environmental perspective. Without this feedstock, we are not convinced that there will be sufficient, low-cost renewable hydrogen available on the market from other RNG sources or from renewable electricity in order to meet the state's renewable targets. As the market grows from today where we have tens of stations and thousands of cars, we're going to be challenged with that renewable feedstock stream as we move to tens of thousands of cars, hundreds of thousands of cars, with a target of million vehicles by 2030, for example.

While we understand and support the state's position regarding the funding of new landfill projects, we believe that the use of landfill gas itself from existing sites is a responsible use of this resource and consistent with the state's goals. We're going to request formally that this restriction on landfill gas as ineligible feedstock be removed from the requirements.

Thank you very much for your time.

MR. JOHNSON: Matt McClory, Toyota.

MR. MCCLORY: This is Matt McClory with

Toyota. Thank you for the opportunity to comment.

On behalf of Toyota, we very much appreciate the work of Staff to develop the new Draft Concepts document, we feel that this document positively reflects the discussion in formal workshops. And we recognize that there was significant effort put into this process.

In order for Toyota to expand our sales volume and to prepare for the next generation increased production rate of the vehicle, there needs to be a significant increase or scale-up and acceleration to the buildout of the fueling coverage, in addition to new capacity. And this also includes the addition of redundant stations in areas that have stations today. These are key points in order to allow the increased volume of sales.

The recent OEM letter from the Partnership supports this approach to award a large block of stations. Therefore, we strongly encourage the approach to build out 100 or even over 100 stations in the next GFO. And I can't underscore enough that this type of future award announcement is critical to show the report to

future fuel cell vehicle customers, as well as existing fuel cell vehicle customers, to stay in the vehicle who want to be able to upgrade to the next vehicle.

And then towards this, to enable this type of scale-up, we'd recommend the consideration to increase the cost share funding and/or single applicant award funding limit to enable this type of network scale-up and acceleration.

In addition, as previously mentioned, we'd recommend that the -- that there be added key design metrics to the future solicitation that includes things like state of charge and maximum time between back-to-back fills, as well as peak fueling performance.

In addition, to recognize that there's a dynamic nature of site locations in the awards, there should be language in the solicitation that define the process for site relocations. At a minimum, these should be based on the same criteria as in the Draft Solicitation document today. But if an additional process is needed, then we would recommend that a review process or scenario be considered.

The other part is that the criteria in the solicitation should also support the decrease in customer retail price at the pump. And the approach, as an example, for new feedstock is a part to this topic.

Going into a little bit of detail in regards to the minimum number of fueling positions, the requirement for three positions for the capacity growth for a classification area may actually inhibit a proposal for stations in these areas.

As an alternative, we would promote or recommend redundancy in competition and recommend the idea of multiple stations to be considered for the award and to reach that overall target for the capacity.

And these comments will be included in our written submittal. Thank you.

MR. JOHNSON: All right, last up is Andrew Martinez from CARB.

MR. MARTINEZ: All right. So Andrew Martinez from California Air Resources Board. I want to make just a few quick comments on an auto manufacturer-supplied letter from the OEM group from within the California Fuel Cell Partnership.

Having received the letter also very recently, I only have a few comments to make regarding it.

I do want to note, first of all, that the entire list of all the locations on the letter, they are in agreement with Figure 1 of the GFO. So for those who are looking to the possibilities of what -- how this letter is in alignment with the GFO, it looks like all those letters would -- all those locations would be eligible areas.

We've also looked into how this letter then matches up with what we published in our June annual evaluation for AB 8. And I'm happy to say that all of the areas are in agreement with the priority areas that we had actually published in that report. So if you're not familiar with that report yet, we posted publicly on our site. I don't have any with me today but we also do have some hard copies, if that is of interest to anybody.

And then because of the nature of how the GFO Figure 1 was developed and how both agencies have recognized over the course of many years that this is iterative and collaborative process, you know, that Figure 1 is developed based on the California Fuel Cell Revolution document, so it's

looking towards the goal of 1,000 stations by 2030. And so a station list as an agreement with that is a stepping stone on the way to getting to that 2030 goal.

One thing that I do look forward to hopefully having continued conversations with the auto manufacturers and with, actually, all the other industry members who would be involved in the process, is that there are some locations, there are several locations within the actual GFO and the vision, especially say in the north state or -- and within the Central Valley where we see that there could be the possibility for perhaps taking some of the stations and putting them -- you know, sprinkling a few out in the north state and a few more within the Central Valley to really get the dispersion that we saw would be necessary or would be an opportunity within the California Fuel Cell Revolution, and to meet some of our DAC goals.

So I think that that's part of the conversation that can continue going forward. And I look forward to the opportunity for all the industry members to provide their feedback and provide their insights into how we can make sure

that, you know, all, the letter, the GFO, the Revolution, all these methods of looking at how do we build the most successful network, can really come together and give us the best outcome at the end of the day.

So thank you.

MR. CAZEL: So thank you very much for all your comments. Thank you very much for your input today.

And if there are no further questions, this is, again, the link for written comments. It's in the slides. It will be posted -- actually, it's posted in the workshop announcement that's already online.

With that, I say we're adjourned. Thank you again very much for your input.

(Applause.)

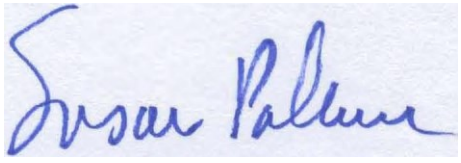
(The workshop adjourned at 2:54 p.m.)

REPORTER'S CERTIFICATE

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

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

IN WITNESS WHEREOF, I have hereunto set my hand this 25th day of February, 2019.



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

MARTHA L. NELSON, CERT**367

February 25, 2019