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CALIFORNIA ENERGY COMMISSION

In the matter of:)
)
Hydrogen Fueling)
Infrastructure Solicitation)
Development for the) Docket No.
Alternative and Renewable) [12-HYS-1]
Fuel and Vehicle Technology)
Program (ARFVTP))

PUBLIC WORKSHOP

JULY 10, 2012

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

21865 COPLEY DRIVE

DIAMOND BAR, CALIFORNIA 91765

Reported by:
Joyce Holbrook

1 A P P E A R A N C E S:

2

3 CALIFORNIA ENERGY COMMISSION

4 Jean Baronas

5 Charles Smith

6 Jim McKinney

7 Tobias Muench

8

9 PANEL

10 Matt Miyasato, SCAQMD

11 Tim Brown, UCI

12 Alex Keros, General Motors

13 Steve Ellis, Honda America

14 Ghassan Sleiman, Hydrogenics USA

15 Robert Boyd, Boyd Hydrogen

16 Matt McClory, Toyota

17 David Raney, Santa Barbara

18 Tyson Eckerle, Energy Independence Now

19 Garrett Poppe, Frontier Pioneer

20 Dan Poppe, Frontier Pioneer

21 Matt Forrest

22 Mr. Lawrence

23 Jordan Ucrobie

24 Wally Dubno

25 (continued)

A P P E A R A N C E S:

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(Continued)

Shane Stephens, National Fuel Cell Partnership

Steve Eckhardt, Linde

David Blehman, CSU Los Angeles

Bill Elrick, California Fuel Cell Partnership

Daniel Dedrick

Stephanie White

James Provenzano, Clean Air Now

John Johns

Robert Oestene

Rosario Berretta

Tim McGuire

Roxanna Bekemichammadi

Paul Wright, SCAQMD

1 Diamond Bar, California

2 Tuesday, July 10, 2012

3
4 PUBLIC WORKSHOP

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6 MR. MCKINNEY: Good morning. My name is
7 Jim McKinney. I am member of the staff of California
8 Energy Commission from Sacramento, California. Welcome
9 to the July 10, 2012 workshop. We will be recording on
10 WebEx today, and also with an official court reporter,
11 all audible sounds will become part of public record.

12 We do have sign-in seats. Please sign in
13 and please see me afterwards if you are unable to locate
14 the sign-in sheet. Today's workshop objectives include
15 summarizing input from the June 29th workshop that
16 occurred in Sacramento, California Energy Commission.
17 Also to present some possible funding details in the
18 spring priority for the development of new
19 solicitation for a hydrogen. Thirdly, to receive
20 feedback and suggestions on these things.

21 At this time I would like to hand the mike
22 over to Matt Miyasato from the South Coast Air Quality
23 Management District.

24 MR. MIYASATO: Good morning, Jean. So Jean
25 mentioned -- Matt Miyasato for Technology Advancement,

1 South Coast Air Quality Management District Technology, a
2 public district. We just want to welcome everyone to
3 the workshop. So I know the partnership and the
4 Energy Commission took over to host the third and final
5 workshop here at the South Coast Air Quality Management
6 District in southern California, for this next round of
7 funding. So very happy to see the Energy Commission
8 here hosting as well or co-hosting stakeholders here.

9 A couple of rest rooms are out the
10 auditorium and to your left. And in case of an
11 emergency, the evacuation procedures going out of the
12 auditorium into the parking lot, which is to your right.
13 Hopefully we'll have a rich discussion without too many
14 evacuation procedures here, but look forward to the
15 dialogue.

16 MS. BARONAS: Thank you very much, Matt.

17 At this time I would like to introduce
18 Jim McKinney from the California Energy Commission.

19 MR. McKINNEY: Good morning, everybody. Thank
20 you very much for the third workshop in our series of
21 workshops as we prepare for the next solicitation, which
22 will be 29.7 million dollars. I think all of the
23 stakeholders now, as Matt says, it's important for us to
24 come here. We were hoping to get the station developers
25 and station owners ongoing representation from the car

1 companies and agencies as well as our academic partners
2 here.

3 For the first workshop that we had in
4 Sacramento on June 22nd, we had a full day, a long
5 discussion with a great presentation, and we really dug
6 into location. What defines a high-value location, what
7 are the issues associated with identifying applicants
8 and how does the Energy Commission want to shape its
9 core criteria. Again, so we can kind of reflect and
10 capture what is the optimal site and location for
11 renewable hydrogen station. At the June 29th, we had a
12 strong presentation and discussion on technical
13 standards. We started getting a little bit into the
14 CEQA standards. We will get into that a little bit more
15 today.

16 We had a great workshop with the
17 presentations. Today we want to continue the discussion
18 on CEQA. We had a little bit of discussion about that
19 the last time around. We want to dig more deeply into
20 that today. We really want to hear from station
21 developers and perhaps the partnerships or others with
22 direct experience working with local lead agencies on
23 these issues, and that we want to start digging into our
24 scoring criteria. So we will be speaking hypothetically
25 about our future and also on our 2010 solicitation.

1 Slide please. Next slide please. There we
2 go. It looks like I forgot the top. Funding levels and
3 incentive in the partnerships and some of the car
4 companies and station developers have done a tremendous
5 amount of work on funding, economics, of getting the
6 station up, covering the short run deficit period in the
7 first couple of years and getting to even margins and
8 profitability.

9 And so, again, I know that's a very large
10 and general topic, and we are going to ask for
11 people to participate in that discussion. It's really
12 zeroed in to what are things that we can, you know,
13 identify and capture in our scoring criteria in this
14 solicitation.

15 Lunch, and then I guess in the afternoon
16 we'll go through the scoring criteria and have public
17 comment here.

18 So just a brief summary of the Energy
19 Commission's involvement with hydrogen station funding.
20 We are the primary public funding source for hydrogen
21 fueling stations in California.

22 And with the adoption of our fiscal year
23 '12, '13 investment plan, we will allocate a total of
24 \$55 million to hydrogen fueling stations. And you can
25 see on the slide it includes a new station and three

1 upgrades from the 2010 cycle. We are anticipating 15 to
2 20 new stations with this current \$20.7 million
3 solicitation.

4 We got a \$3 million award into AC Transit
5 for Advanced Technology and renewable hydrogen fuel cell
6 transit bus fueling. We have a \$4 million contract with
7 City of Weights and Measure to develop retail standards
8 for retail sales.

9 MR. WRIGHT: Speak into the mike more.

10 MR. MCKINNEY: Okay. Thank you.

11 And then we have recent -- I think it's \$2.4
12 million award with more CALStart for a fuel cell
13 station demonstration that will be associated with
14 some stations in San Francisco Bay area.

15 The San Francisco Airport does not wish to
16 have a station on its property so we are working with
17 ARB to find an alternative site.

18 So we're heavily committed to hydrogen
19 fueling station infrastructure support. It's critical
20 that we get these words out. We get the stations up and
21 running by 2014/2015 timeframe; all of you know that,
22 those of you with cars in the wings know that best of
23 all.

24 So I think that concludes my opening
25 remarks. Is there anything else from the team here?

1 For those of you who don't know our
2 Hydrogen Team Energy Commission, the gentleman with the
3 red hair is Charles Smith. To my right, much to my
4 right is Jean Baronas to my left. And again,
5 Jim McKinney, program manager from Alternative Fuel
6 Vehicle Technology Program.

7 So Jean, I will turn it back to you.

8 MS. BARONAS: Thank you, Jim. So moving on the
9 agenda. On the first discussion topic this morning is
10 the California Environmental Quality Act and the
11 potential to develop criteria and discuss expectation
12 for environmental documentation.

13 Jim, this is yours.

14 MR. MCKINNEY: Okay. Do we have Kristin on the
15 phone? Let me ask staff counsel. Okay. I was going to
16 ask her to chime in if it's necessary.

17 So, again, building off some of the
18 discussion from last week, or the last two weeks ago, so
19 as we described, it can be very challenging to get CEQA
20 compliance in time to complement and execute a grant
21 agreement.

22 We've had some serious issues with the
23 biofuel solicitation. Most recently, there can be a bit
24 of a gray area where, say, a local lead agency will say
25 this is not a project under CEQA. It doesn't require

1 discretionary approval from our agency, and we see no
2 potential for adverse effect. As the funding agency, we
3 still have an obligation under CEQA to ensure that there
4 are no adverse effects.

5 Our decision to issue a grant is a
6 discretionary action so that triggers our obligation to
7 hire CEQA, which means that our grantees also have to be
8 part of the CEQA.

9 So what we are looking for are ways to get
10 evidence and documentation of outreach or initial
11 conversations, if not actions, with the local lead
12 agency as part of the permit application package. And I
13 know this accelerates a timeline, and we really welcome
14 public comment on this.

15 Some of the other concepts that we're
16 thinking about, again, up to 180 days after a future
17 NOPA; that's Notice of Proposed Award; we could require
18 final documentation from the lead agency. And if not,
19 we can say sorry, your report -- your grants are awarded
20 and we are going to go on to the next highest scoring
21 applicant.

22 Again, if a station falls into this gray
23 area where a local lead agency authority does not want
24 to assume the lead agency's jurisdiction, we can pick
25 that up, and we would have to do a initial study which

1 would require more input from the applicants potentially
2 from consultants working with the applicants.

3 I don't think we will be getting any refill
4 sites here. Most of these we anticipate as a standard
5 will be part of existing stations.

6 So, again, these are kind of
7 work-in-progress, a series of concepts from our
8 legal office.

9 And one last point here from
10 Christine Driscoll's notes to me. I think, as you know,
11 with the Walkowski Bill, it would be '13/'14. After the
12 Notice of Proposed Award has been posted by the
13 Energy Commission on our Web site prior to execution of
14 agreement, any cost incurred for CEQA compliance and
15 accounted as matched. So that's something that we're
16 starting to implement across the board.

17 And as I recall, we had comments from some
18 of the station developers last time. I think it was
19 Linde in particular, and perhaps some of the others too.
20 But we'd really like to get an initial reaction to some
21 of these concepts.

22 And, again, I know we're pushing CEQA
23 compliance further forward in our grant-making process,
24 and it's traditionally been done. So we really want to
25 ensure that this is feasible and workable and especially

1 from the station developers. So with that, I would like
2 to open this floor for public discussion on this
3 particular issue.

4 MS. BARONAS: Commenters, please raise your
5 hand.

6 MR. McKINNEY: And please identify yourselves.
7 If you go to the public microphone here up at the table,
8 identify yourself and affiliation.

9 MR. MIYASATO: Matt Miyasato, South Coast Air
10 Quality Management District. The question I have is,
11 could you just get background, Jim or Jean, on what was
12 requirement previous solicitation in terms of CEQA for
13 the proposals? And then what if there's a suggestion to
14 change or just the same as you're suggesting moving
15 forward?

16 MR. McKINNEY: Yeah. No, there was
17 no requirement for documentation at the point in time
18 for the proposal. What we did in this last round, the
19 2012 round of solicitations, is we had a new concept
20 called Project Readiness where, again, to try to ensure
21 timely CEQA compliance where we were giving higher
22 scores to companies in proposals that demonstrated
23 outreach with the local lead agency.

24 And so what I'm trying to get across here is
25 that we want to accelerate that even further, and we

1 want to make sure that we don't get stuck in a situation
2 where we have a NOPA and then we have many, many, many
3 months going by before there's CEQA documentation and
4 before we can execute the grant agreement.

5 Does that answer your question?

6 MR. MIYASATO: Yes, thank you.

7 MS. BARONAS: Any other comments?

8 MR. KEROS: Alex Keros, G.M.. so were they --
9 was the concept -- is the concept to penalize somebody
10 for not having it or is it to give somebody credit for
11 being prepared, or is this what's up for discussion?

12 MR. MCKINNEY: Good question. This is up for
13 discussion. It may, as I said in the last workshop,
14 this is a serious issue for us, and it may evolve from
15 something where we get extra credit or higher score for
16 good project readiness to something that becomes a
17 minimum qualification that applicant shall have some
18 level of documentation with the local lead agency that
19 demonstrates to us that there will be timely approval of
20 CEQA with that.

21 And if the lead agency does not want to
22 assume that responsibility, we need to know that early,
23 and then make provisions to ensure that there's enough
24 technical data in an initial study so we can make our
25 determination.

1 MR. ECKHARDT: Steve Eckhardt with Linde.

2 The reference to lead agency age, does that
3 mean the lead agency such as municipality that would be
4 responsible for granting an exemption or approval?

5 MR. MCKINNEY: I think you have to speak more
6 closely into the microphone, which is why I am hunched
7 over.

8 MR. ECKHARDT: Steve Eckhardt with Linde. When
9 you reference the lead agency, are you referencing the
10 municipality or responsible authority that would review
11 the CEQA approval and give the negative declaration or
12 whatever would be required?

13 MR. MCKINNEY: Correct. Initially start with a
14 local, you know, building counter and kind of work your
15 way up from there. And it really depends on the level
16 of potential impact from the, again, assumed addition to
17 these gas and fueling stations.

18 MR. ECKHARDT: I think you mentioned the last
19 discussion --

20 MS. BARONS: Please identify yourself for the
21 record.

22 MR. ECKHARDT: Steve Eckhardt with Linde. Each
23 town looks at it somewhat differently, and some of them
24 will provide great deal of information upfront. Others
25 will hold back, and some believe the State, well, submit

1 it with your permit, for example, which in my view that
2 does indicate some level of a timely approval because
3 they do it with the permitting process when there's a
4 significant amount of information provided, and then
5 they provide ideally not only the permit, but then the
6 CEQA approval at the same time.

7 MR. MCKINNEY: Right. I think it was you and
8 your firm the last workshop that said some local lead
9 agencies are under resource and don't want to take the
10 time to look at, say, a conceptual proposal and allocate
11 the resources for that and they really want a bona fide
12 project to come in.

13 And I know historically, Air Products said
14 they don't consider to be a full proposal until they've
15 executed an agreement. So we think that's too far out
16 on the timeline for this.

17 So, again, we are looking for ways to kind
18 of reel that in and have a timely process.

19 MS. BARONAS: Yes. Are you done, Steve, with
20 this comment? I think so.

21 Please identify yourself.

22 MR. POPPE: Hello. Garret Poppe from Hydrogen
23 Frontier. We have a question. I think I heard you say
24 that we have 180 days after the granting of the award to
25 complete the CEQA; is that correct?

1 MR. MCKINNEY: No, that is a concept from our
2 counsel's office that we are putting out for public
3 discussion. Do you have a reaction to that?

4 MR. POPPE: No. That sounds good.

5 MS. BARONAS: Any other commentators this
6 morning?

7 MR. RANEY: Yes.

8 MS. BARONAS: Please identify yourself.

9 MR. RANEY: Dave Raney, Raney Associates of
10 Santa Barbara. I guess the question is: Where are we
11 in understanding of the CEQA process itself in the state
12 of art of understanding of how it will apply to hydrogen
13 specifically? Are we breaking new ground here? And
14 from what we know about CEQA today, are there other
15 things we can say that these are unique that need to be
16 looked at?

17 MR. MCKINNEY: I think -- Jim McKinney here. I
18 think one of the things we all have to be mindful of is
19 the Emeryville recent incident, so AC Transit. And I
20 know fuel cell partnership and station developers, and I
21 think some of the car companies as well, there is
22 ongoing work in collaboration and; dialogue with local
23 first responders and fire marshals as hydrogen stations
24 become more prevalent and we expand into more
25 jurisdictions. I think there will be an increasing need

1 to make sure we have a good practices and consistent
2 messaging for those local jurisdictions. So CEQA may
3 become a little more complicated going forward. And,
4 again, that's something we're trying to anticipate and
5 make sure we have a timely process.

6 MR. KEROS: Jean, this is Alex.

7 Just to clarify.

8 MS. BARONS: Your affiliation for the record
9 please.

10 MR. KEROS: G.M. General Motors.

11 MS. BARONAS: Thank you.

12 MR. KEROS: Jim, my understanding of the CEQA
13 processes, which is similar to the NIVA process of
14 comparable national effort is a lot more of a -- what I
15 call a phase I approach, for those who know of, you're
16 cleaning up hazard waste sites, which is more than just an
17 initial review if there's anything that jumps out at
18 you.

19 It has -- I mean, one option would be to
20 rather than put the entire onus, let's say, on the lead
21 jurisdiction but maybe on the person or organization
22 submitting the proposals to do, some of that initial leg
23 work on their own to be able to say, hey, this, you
24 know, this looks like it's going to be something. So
25 maybe using their own professional judgment might be one

1 way of addressing that initial hurdle, if you will.

2 MR. MCKINNEY: Okay. So traditionally under
3 CEQA for those of you who are less familiar with it, you
4 know, it is the applicant's responsibility and say, you
5 know, burden to ensure that all appropriate technical
6 data project information is compiled in the package,
7 that is ready for use and review by the local lead
8 agencies. So you know, here at the top of AQMD, and
9 there's a whole permitting section that works on that
10 for resource review and major emission sources.

11 The level of the potential effect from a
12 hydrogen station is part lower than that. But, again,
13 sometimes we're -- again we're seeing challenges with
14 catching attention of local lead agencies ensuring that
15 station developers take this seriously and build it in
16 very early in both their proposal and the subsequent
17 work if they win a reward.

18 I see a lot of furrow brows but no more
19 hands going up.

20 MS. BARONAS: Please introduce us yourself.

21 MR. ELRICK: Bill Elrick.

22 MS. BARONAS: Thank you.

23 MR. ELRICK: California Fuel Cell Partnership.
24 Thinking back to the previous discussion we had on the
25 word project readiness, I know some of you had the other

1 programs you've done, community readiness, and I wonder
2 if this might be an opportunity acknowledging that there
3 may be breaking new ground and there may be negative
4 declarations that start to become more commonplace.

5 This is where the CEC's community readiness
6 activities might dovetail into helping this process.

7 I'm not sure where I'm going with this
8 exactly other than it sounds like these two would
9 connect in a way that would help the CEC get its needs,
10 which is a little more certainty going in and yet also
11 help the proposals and the local jurisdictions all come
12 to an agreed place.

13 MS. BARONAS: Jim McKinney.

14 MR. McKINNEY: And something I -- this is just
15 my kind of personal thoughts on this. But it does seem
16 to be a relatively finite number of municipalities where
17 we expect petitions to go in the next round, and that
18 may be something that the Energy Commission could help
19 with is outreach and building an understanding with
20 those local municipalities to give them a clear idea of
21 what we are looking for.

22 I know we have a comment on the WebEx, and I
23 see a hand over here.

24 MS. BARONAS: Okay. We will take the WebEx
25 next. Commenter would you please identify yourself.

1 WEBEX COMMENTER: Hello. Can you hear me?

2 MS. BARONAS: Yes, we can hear you. Please
3 identify yourself and your organization.

4 WEBEX BACKGROUND: I would rather hear this.

5 MS. BARONAS: Would the other people on the
6 WebEx please mute their microphones. Yes, we hear you.

7 WEBEX COMMENTER: The comments about the CEQA
8 and the timeline, I believe that would serve the
9 communities that we've spoken with. Six months might
10 be -- the process may be longer than six months within
11 certain of the community to get through some of the
12 permitting effort, and it's not clear that CEQA would be
13 completed independent of that overall permit activity.
14 So I would be worried that a six-month timeline might
15 be -- might eliminate certain the early market
16 communities for consideration.

17 MS. BARONAS: Thank you for that.

18 WEBEX COMMENTER: With respect to the process,
19 I believe that Mr. McKinney stated very well, that
20 looking over this, the past two solicitations that
21 clearly the local agencies are interested in being the
22 lead agencies for these -- for these stations and that
23 they are not able to make judgments until they have a
24 full design package for submittal, review and approval.

25 So if the process supports contacting lead

1 agencies and get the assertion that they are willing to
2 act as the lead and will review the whole permit package
3 once submitted by the applicant, then I think that's
4 something that makes lot of sense and can be supported
5 from a station execution process.

6 MS. BARONAS: Thank you for your comment. I
7 know there is a person here.

8 MR. MCKINNEY: And this is Jim McKinney again
9 from Energy Commission.

10 MR. HEYDORN: This is Ed Heydorn.

11 MR. MCKINNEY: Is this Ed Heydorn?

12 MR. HEYDORN: Yes, it is.

13 MR. MCKINNEY: Hi, Ed. Thanks for weighing in
14 on this.

15 Let me ask you something and also for the
16 other station developers here. How different is the
17 level of design and planning or planned drawings? How
18 different is what we typically get in a proposal from a
19 company such as yours compared to what you would submit
20 to a local lead agency for permit review or CEQA
21 compliance.

22 MR. HEYDORN: This is Ed Heydorn from North Air
23 Products. The agencies would like to see these full as
24 the package. I think Steve Eckhardt from Linde stated
25 it correctly that they aren't able to deal with, say,

1 proposal level information that doesn't have all the
2 details design information in hand, and applicants would
3 not complete that until they have the award in hand. So
4 that's part of the disconnect in terms of the earlier
5 processes that I think the most recent solicitation had
6 to address.

7 MR. MCKINNEY: Jim McKinney here again. Does
8 anyone have say a plan to submit or some kind of
9 quantified estimate for what it takes to develop a full
10 permit package for local agency review?

11 I'm just trying to get a sense for how big a
12 job this is.

13 MR. BOYD: I'm going to throw a number you
14 probably --

15 MS. BARONAS: Please identify yourself.

16 MR. BOYD: This is Bob Boyd, Boyd Hydrogen.
17 I'm going to a say you know, a full-planned package
18 could be anywhere between 50 and \$200,000.

19 MR. MCKINNEY: Thank you, Mr. Boyd.

20 And I'm seeing lots of nods, so --

21 MR. ECKHARDT: Steve Eckhardt with Linde. It
22 seems a reasonable range to me. There's a lot of work
23 that needs to be done internally, a lot of engineering
24 work which is time consuming.

25 MS. BARONAS: Thank you, Steve Eckhardt from

1 Linde.

2 Mr. Boyd, would you please identify yourself
3 and the organization for the public record.

4 MR. BOYD: This is Bob Boyd with Boyd Hydrogen.
5 I guess one of the questions I have is, why are we
6 involved with CEQA at all? Hydrogen is nontoxic.

7 THE WITNESS: It's not a pollutant. It's not
8 a VOC. It's a flammable fuel that has no toxic value
9 at all. So when we're are looking at a project, we're
10 really looking at the dirt that has to be pulled out of
11 the ground; we're looking at the trucks that have to be
12 involved in construction, and then analysis, you know,
13 should show the vehicle traffic, and things like that.
14 So that's the type of review that needs to be done. And
15 it doesn't seem like there's any reason to do it.

16 So putting a focus on it makes the local
17 municipalities -- it turns a red flag -- and so we need
18 to do this. This is important. I'm not sure exactly
19 why this all needs to be done.

20 MR. MCKINNEY: So, again, Jim McKinney. Thanks
21 for your observation there.

22 I tried to lay that out in my opening
23 comments. I'm not going to repeat those. I can assure
24 you that we are doing this across all fuel categories
25 and appropriate vehicle categories.

1 And, again, under state law, under CEQA, the
2 California Energy Commission that, as a funding agency,
3 when we take a package to a business meeting in our
4 Commissioner's vote to approve that package that is a
5 discretionary action under CEQA, and that triggers
6 everything else that we're talking about right now.

7 MS. BARONAS: Thank you for the comments.
8 just a comment from the moderator. I want to reiterate
9 one of the concepts that Jim McKinney -- this is
10 Jean Baronas with California Energy Commission. I want
11 to reiterate one of the concepts than Jim McKinney
12 brought up earlier. And, again, we are interested in
13 our dialogue and reaction.

14 One of the comments as a concept is after
15 the notice of proposed award prior to the execution of
16 the future agreement, the cost of compliance could
17 potentially be applied to match funding. And then I
18 heard comments from this point \$50,000 to \$200,000 for
19 the cost of compliance. So can someone speak to both of
20 those points and give us the nexus of both of those
21 points?

22 MR. BOYD: Jean, this is Bob Boyd, Boyd
23 Hydrogen. First, the question that I had answered was
24 how much would it cost to put a set of plans together
25 that someone could review? That's not exactly the same

1 as the cost of dealing with CEQA. In addition to the
2 plans, you need all of the outreach to the local
3 community and the time spent at the municipality and et
4 cetera, et cetera.

5 MS. BARONAS: Just a question -- thank you,
6 Mr. Boyd -- a question from the monitor. This is
7 Jean Baronas with the California Energy Commission.
8 And, therefore, could you give us an estimate of the
9 cost of the outreach activities that you're describing?

10 MR. BOYD: Well, from -- this is Bob Boyd
11 again. From my experience and what I heard from others,
12 it depends very much on the local community. Having
13 some sort of a white paper that everybody could agree
14 on, you know, when you look at the difference between
15 underground storage of diesel fuel or any other fuel in
16 the marketplace as environmental effects, and hydrogen
17 doesn't, and some sort of a white paper would help, I
18 think, going into these communities.

19 MS. BARONAS: Thank you for your comment. If I
20 may continue a discussion with you. This is Jean
21 Baronas, the moderator, with California Energy
22 Commission. Then let's delete the cost of outreach.
23 And earlier you gave the cost of developing plans and
24 engineering drawings and so forth at \$50,000, \$200,000.
25 And so the concept that we'd like to talk with you about

1 is if that cost of the compliance could potentially be
2 applied to match funding. Are there points that you
3 care to communicate to us today?

4 Hearing none then, I would like to open that
5 up to the full meeting. Steve Eckhardt from Linde.

6 MR. ECKHARDT: If a municipality requires CEQA
7 and permitting and parallel, it does open up the amount
8 of work and the amount of time necessary to proceed with
9 both of those processes which Mr. Boyd said would
10 include outreach which could be minimal to extensive
11 depending on the community, depending on location, where
12 you go, depending on what the neighboring several blocks
13 dictate to some extent.

14 To the extent of which public outreach is
15 necessary, public outreach in the near term is
16 relatively high. It will decline over time, but for
17 right now it's going to be relatively high in each of
18 these communities. Frankly, I think we owe it to the
19 communities to make sure the people who live and work
20 in those communities understand what we are doing and
21 can then be educated in terms of their decision making.

22 So, again, the two processes are aligned
23 which oftentimes they are. It can be a very extensive
24 process. Secondly, commencing in the processes without
25 having agreements in place or without having formal

1 approvals in place, at a minimum, is a challenge.

2 MS. BARONAS: Okay. Thank you. We have two
3 people on WebEx.

4 I have not heard an answer or any discussion
5 on my specific question. Is there a lack of
6 communication in the way I'm portraying the question?
7 Do you not want to comment? Is it out of the scope of
8 the work?

9 So the question I'm raising from the
10 moderator is the cost of compliance for CEQA, and we
11 understand that it seems to be the board as between
12 \$50,000 and \$200,000. If it were applied to match
13 funding and people have opinions or reactions or
14 feedback to help guide us in this process on that
15 concept.

16 MR. ECKHARDT: This is Steve Eckhardt with
17 Linde. Without an agreement in place for funding, there
18 can be reviewed simply to without a customer who is
19 committed to paying for an equipment without an
20 agreement in place. There's elevated risk to proceeding
21 with spending money without a firm contractual
22 commitment. That money would be repaid.

23 That's the reference to the challenging
24 comment I made that you're asking companies to go ahead
25 and spend money without a contract in place.

1 MR. MCKINNEY: Jim McKinney here. So I think
2 that's interesting. So from our perspective, you know,
3 when we issue the Notice of Proposed Award, that's
4 pretty close to money in the bank. That's a pretty good
5 guarantee that if the awardee at that point fulfills all
6 of their obligations that they will, in fact, get this
7 award from the Commission.

8 So I think part of what Jean is trying to
9 tease out here is that period from the NOPA to the
10 execution of the grant and, you know, Business Meeting
11 approval.

12 MS. BARONAS: Okay. Thank you. So we have two
13 commenters on WebEx and then an individual in the room
14 today.

15 MR. HEYDORN: Hello, Jean.

16 MS. BARONAS: Yes. Hi.

17 MR. HEYDORN: Hi. This is Ed Heydorn for Air
18 Products. Following up on what Steve Eckhardt from
19 Linde was saying -- without a selling contract, we're not
20 able to initiate engineering work that would be needed
21 in order to prepare the document package. We would also
22 need to prepare subcontracts with any of our suppliers
23 that would be providing engineering services. And so we
24 need to have those in place before we can begin the
25 process of preparing the permit package. Even though

1 the NOPA says that there is a selection for an award,
2 until there's a signed agreement, we're not able to
3 proceed with work within our -- within our processes of
4 that basis.

5 MS. BARONAS: Okay. Thank you for that.

6 MR. HEYDORN: In terms of the timing you
7 also -- it will take more time than in order to prepare
8 the document package; that's something else that wasn't
9 discussed. It's not a matter of days or weeks. It's
10 several weeks into months before that permit package is
11 completed. So that would not be completed before the
12 timing that you're looking for before between release of
13 NOPA and execution of grids.

14 MS. BARONAS: This is Jean Baronas, moderator.
15 And if you could comment on the reuse of engineering
16 drawings and such data that support previous stations.
17 Are any of those documents reusable within the context
18 of the new station?

19 MR. STAPLES: Ed from Air Products. Some of
20 them are, but every site has different plans drawings
21 that have to be completed. Part of that is site
22 specific and part of that is based on the dialogue with
23 the various planning offices. And as stated before,
24 they will -- the planning offices won't get into serious
25 discussion until you have the full package that, you

1 know, coming together in full hand.

2 MS. BARONAS: This is Jean Baronas from
3 California Energy Commission. Where are the planning
4 offices? Are they within the private sector? I'm not
5 understanding the point.

6 MR. STAPLES: Sure. These are the planning
7 commission's offices within the various communities, so
8 within each of these cities as part of their permitting
9 process, I believe all the one's that I've spoken with
10 have a CEQA checklist or the box they have to fill out,
11 and based on information that's provided by, for
12 example, Air Products, they determine how CEQA is to be
13 applied. Until they have the full engineering package
14 that Mr. Body described, they are not able to determine
15 whether there are any actions or whether a negative
16 declaration would be decided upon.

17 So that is all part of the permitting
18 process that happens once the award is in place and we
19 can kick off the engineering work.

20 MS. BARONAS: Okay. Thank you, Ed, for that.
21 There's another individual on WebEx to speak and an
22 individual to my left to speak.

23 Just a general comment, as a member of the
24 staff, I will assure there's a docket open for further
25 discussion if all the other team members are in

1 agreement with that. Jim?

2 So we'd like to have a live docket open. We
3 need education. We need enlightenment. We need
4 processes here. We need refinement of our understanding.
5 And so we will have a docket open. If there is not one,
6 we'll open one and keep it open so that you all can
7 continue to send public record input on this topic.

8 Are you people generally in agreement that
9 might be a constructive way to go forward here? I see
10 some people, that look somewhat satisfied.

11 Okay. Just a moment. We have Paul Staples
12 on WebEx. Kindly speak, Mr. Staples.

13 MR. STAPLES: Hello.

14 MS. BARONAS: Yes, Paul, we hear you.

15 MR. STAPLES: Okay. I'm sorry, I stepped off
16 the get my coffee.

17 First of all, I'm having a hard time hearing
18 you speak, okay, a lot of what you're asking for.
19 First, you're asking for a response on the actual
20 cost, and it's all relative to the local areas you're
21 dealing with.

22 And I have to concur with AP, we don't agree
23 too often on many things, but when it comes to
24 permitting you have to have the contract in your hand
25 before you can go there, because it's not cheap. It's

1 expensive to lay that money out, and you can't do that
2 before they -- before they develop a contract fund.

3 Finally, on the CEQA thing, again, that is a
4 (inaudible) Bob Boyd on it. (Inaudible) -- deliver
5 hydrogen that generates some of those, or you are
6 generating some renewable resources onsite, there's
7 absolutely no need for any of the quality issues because
8 there is none. Okay.

9 Now on site generation of proper fuel, I can
10 see that you may need a CEQA approval because you will be
11 generating some pollution onsite and stations resource.
12 That's another thing you can have to deal with. I hope
13 that they are not just going to go ahead and give
14 people (inaudible.) They're going to have to deal with
15 the initials that they are producing on a stations
16 report.

17 So that's the situation there I think we're
18 dealing here, and I really see that is some type of
19 CEQA thing we put -- I mean I just want to object on
20 myself whenever I was doing anything with renewable
21 hydrogen because it is, and there is no pollution;
22 there's no safety issues. I mean, if you're at a gas
23 station, you have 30,000 gallons of really, really,
24 really toxic, very explosive material on the ground.
25 Okay. So, you know, 100 kilograms, 200 kilograms, you

1 know, of clean -- maximum cleaning, certainly no more
2 dangerous and less dangerous than what you got
3 underneath you. So for a gas station that seems a
4 little bit too much, that or, you know, detail CEQA work
5 on something that you know is zero emission from
6 (inaudible) to grade. So that's just my response.

7 And yeah, when it responds, when it comes to
8 need to the program, you can't do that before you
9 actually get an award.

10 MS. BARONAS: Okay. Thank you.

11 MR. STAPLES: You have to have an award first.
12 You have to have a contract in your hand knowing that
13 you are going to -- that that money is going to show out
14 to go to be.

15 MS. BARONAS: Thank you very much, Mr. Staples.
16 So noted and thank you very much for your contributions
17 today.

18 MR. STAPLES: You need to turn the mike up.

19 MS. BARONAS: Yes, we will work on that. Thank
20 you very much.

21 I would like all the WebEx people to know
22 that there will be an open docket for commenters on this
23 topic. So please write to us with your comments.

24 And at this time, I would like to ask
25 Steve Ellis to give his comment.

1 MR. ELLIS: Actually I was thinking of
2 something a little earlier. I did want to note that as
3 an automaker, I'm not here to speak an expert manner on
4 CEQA, for example. But at the same time I do have to
5 pay attention to things that impact the development of
6 the station. So I hear a number of different points and
7 one of them is that I pay attention to, say, date of
8 award to beginning of construction and beginning of
9 construction to when the first kilogram can be delivered
10 to my customer cars.

11 So I kind of want to embrace what Bob Boyd
12 had brought up, which is this point about -- it seems to
13 be calling into question the level of intensity or the
14 need for the CEQA process as hydro stations. It's an
15 area I'm not familiar with, but I appreciate you putting
16 it on your Agenda, but I guess my question is -- Jim and
17 Jean, do you think that there's room at the state level
18 for further analyzing whether this fuel actually does
19 need that same process or the same level of complexity,
20 because to go back to what I said in the beginning, this
21 is July '12 and we're aiming for 68 stations by the
22 beginning '16.

23 It troubles me to hear how much effort and
24 complexity goes into it and the time delays that
25 can happen as a result. Thank you.

1 MR. McKINNEY: Mr. Boyd.

2 MR. BOYD: Yes, I was just going to follow-up
3 with that thought in that if we can have some sort of a
4 white paper generated and sort of compare different
5 fuels and environmental impact of the different fuels to
6 give some guidance to the local jurisdiction as they are
7 trying to review the CEQA permit, I think it would be
8 very helpful if perhaps the state or, I'm not sure if
9 it's in the purview of car, but somehow get some sort of
10 a finding that this is a great fuel. It reduces
11 environmental impact of the vehicles and has no
12 environmental hazard.

13 MR. McKINNEY: Jim McKinney here. Thanks for
14 that comment, and I think that kind of ties in with what
15 I was suggesting earlier that perhaps there would be a
16 resources board, South Coast, hydrogen fuel cell
17 partnership, we may be able to develop some type of
18 white paper educational package form letter -- I don't
19 know what form that would take ultimately, but get the
20 information into something on an official letterhead
21 that station developers can use. I think that might be
22 a good approach here.

23 MS. BARONAS: Okay. We're now on schedule to
24 talk about the concepts of some of the SEA standard. Is
25 that okay if we move on?

1 MR. KEROS: Jean, this is Alex from G.M.. I
2 have one question since you asked people to respond
3 through a docket is, when I heard the 180 days, I didn't
4 necessarily hear it needs to be complete. I heard it
5 needs to be sort of in process. Jim, can you clarify
6 the thinking there? Were you -- is the 180 days we want
7 from NOPA to completion or do we want some level of --

8 MR. McKINNEY: No, we're throwing that out.

9 MR. KEROS: Okay.

10 MR. McKINNEY: We want feedback. Is it
11 feasible to require in half a year to have this work
12 done so we can get an executed package out?

13 MR. KEROS: Okay.

14 MR. McKINNEY: And go to construction.

15 MS. BARONAS: Any other last comments or
16 questions on CEQA? Okay. Thank you for that. Hearing
17 none, let's move on with the Agenda to what's listed as
18 intellectual property included in SAE standards. So this
19 has been placed on the Agenda as follow-up from the
20 June 29 workshop primarily because this was brought up
21 by three companies during that session.

22 So we do have an individual calling in
23 between 2:00 and 3:00 p.m. today to talk about the
24 activities at the SAE. He is the working chair of the
25 SAE standards development process, and he has submitted,

1 for the record, a substantial publication on the suite
2 of standards for hydrogen fueling.

3 I would also like to comment for purposes of
4 the record that I have in front of me the letter of
5 insurance, which is a form issued by the SAE
6 Intellectual Property Department, and for those of you
7 who are asking that's the profit in the last session.
8 This does allow a firm to declare on either going to
9 grant the free license or going to grant a license under
10 reasonable and monetary basis; RAM it's called; or that
11 they are unwilling to grant a license.

12 So anyone who would like to see this letter
13 of insurance, this is a public document available from
14 the SAE Web site. And so for the expert of presentation
15 today from the representative who is the chair of that
16 SAE working group, we'll need to hear from him between
17 2:00 and 3:00 p.m. today.

18 Moving to the next topic: Funding level and
19 Incentives. So here's an idea for format to get a
20 discussion going here.

21 If you think in terms of if the Energy
22 Commission were to put the following, some or all or
23 none of the following topics in a future solicitation,
24 how would that be perceived, used, applied and helpful
25 to future solicitation? So we have in front of us four

1 topics: Cost, funding levels, O & S support, and
2 performance innovation initiative.

3 And our team will present these topics for
4 discussion at this time. To start us, we also have a
5 presentation from Mr. Tyson, I believe. Could we please
6 see that presenter and he could use a microphone, and
7 either at your seat or over here. We do have a
8 PowerPoint that has been submitted.

9 I'm sorry, is there any practices, if you
10 could please present that.

11 For the record, this is Tyson Eckerle. Is
12 that correct, Mr. Eckerle?

13 MR. ECKERLE: Yes, that's correct.

14 MS. BARONAS: I'm so sorry for the error.

15 MR. ECKERLE: That's okay. I get it
16 frequently.

17 MS. BARONAS: Thank you so much.

18 For the purposes of the record, would you
19 please introduce yourself.

20 MR. ECKERLE: Yes. I'm Tyson Eckerle with
21 Energy Independence Now. We are a nonprofit that focus
22 a lot on hydrogen and hydrogen fueling.

23 So today I just wanted to put out a couple
24 of thoughts in looking at hydrogen station cash flows
25 and understanding how the location can really impact the

1 station's bottom line; something I think we should
2 consider in moving forward.

3 So just a quick background on the project
4 and what we have been doing with the energy that is now
5 developed, the model that we've used to estimate the
6 funding needs, and the fuel cell partnership roadmap
7 plan. So, again, that would be collaborated with
8 multiple parties and focus our analysis on the 2014/2015
9 time frame.

10 And if anybody is interested, you can get
11 the report on our Web site. It's also referenced in the
12 fuel cell partnership roadmap plan. I'll submit it to the
13 docket.

14 So today I just want to focus on a small
15 piece of what we've done with that model and looking at
16 the individual station economic based on location. So
17 the thesis is that in the cluster and connector or
18 designation, stations really do face different
19 circumstances.

20 So to kind of orient ourselves, I want to,
21 you know, first, we have to consider how many vehicles
22 are out there and where they are going to be fueling so
23 we made some assumptions that will help us answer that
24 question.

25 So that on the graph here on the top, you

1 see there's two lines. There's a blue line and the red
2 one. The blue one represents the vehicle projections
3 that were done by the fuel cell partnership up to 2017.
4 And this is our baseline projections.

5 So after 2017, we assume that the jump from
6 2016 to 2017 which we extrapolated would continue on
7 moving forward into the future.

8 And so in the bottom line there is the clean
9 fuel (inaudible) clean fuel outlet regulation, that's
10 the lower bound of our illustration that I wanted to
11 show today. So that's basically the most likely
12 compliance scenario that they are looking forward to
13 develop in general omission vehicle regulation.

14 So this kind of orients you in the baseline
15 growth assumption that the fuel cell partnership we're
16 aiming at 52,000 vehicles by 2017 are on the road. And
17 the lower bound is saying that 52,000 vehicles will be
18 there in the early 2020's.

19 So we kind of have an idea of how many
20 vehicles that might be on the road. Also figure out
21 where the vehicles will be and where they might fuel and
22 where they will not fuel.

23 So we have two graphs here. One on the top
24 is just showing market share versus by percentage, and
25 so we started this on the left-hand side in 2012 which

1 is about where the vehicles are now, where we think they
2 are now.

3 And then move moving forward, we gave market
4 share as stations are introduced into the market. So
5 you can see the big green thing on the top, that's
6 Orange County, the large area you see right now. And
7 then moving through time it becomes less and less a
8 relative share.

9 And then you can see this orange light here
10 is the South Bay area which we expect to become a major
11 cluster area when the stations become available.

12 And so that kind of -- we can test those
13 assumptions and make them different -- different ideas
14 in how to do that, but once we know where these vehicles
15 are, we can start making -- we need to figure out where
16 they might fuel.

17 And so the best data we have is actually
18 from the 1987 paper I think that Tim Brown shared with
19 us, but again, Dan Irving helped author, and it found that
20 people tend to fuel close to home and work, so it's kind
21 of intuitive. So it's about 75 percent of people fuel
22 within 20 minutes of home and work. And what we did
23 here -- this is an example table and these assumptions,
24 again, can be adjusted, but a vehicle based in
25 Santa Monica, West L.A. would tend to buy most of its

1 fuel in Santa Monica and West L.A. And we've assumed 80
2 percent, a little bit more just because there's less
3 fueling available.

4 And then we also assume that an average
5 vehicle in Santa Monica sometimes going to fill in
6 Torrance, sometimes in Orange County, and probably go to
7 San Diego and other connectors. The contrast that we
8 looked at was, San Diego was kind of a connector
9 destination location, but in all likelihood a vehicle
10 in San Diego will spend most of its time in the
11 San Diego area as opposed to Santa Monica, Torrance,
12 Orange County.

13 And then the southern California connectors
14 scenario, well it's in a connector region. It's
15 probably sold there with the idea that that person can
16 use it to commute into a primary cluster region. So,
17 again, we can adjust it with assumption. We just wanted
18 to orient ourselves.

19 So we now going to look at taking all that
20 data, funneling it through filters to figure out how
21 this actually affects an individual station. So we have
22 a number of fuel cell vehicles in California. The market
23 share by location and then the fueling pattern, and we
24 assumed .7 kilograms of fuel per vehicle per day, and
25 that we can use that to develop stations as it occurs.

1 So we've generated some average stations
2 that demand curves include two lines again. The blue
3 line is for an average cluster station, and on the
4 left -- I'm sorry it's hard to read even for me -- but
5 it's kilograms per day.

6 So then on the Axis, you have the years. So
7 year one, you have a little -- little utilization of
8 that ramp so that's pretty quickly. And so, but by the
9 end of the year two, the average cluster you're selling
10 150 kilograms a day. And, again, if we use all of these
11 inbred assumptions people made.

12 An average connector station would reach
13 that same capacity until the end of the year 5. So you
14 can imagine that affects the station's bottom line.

15 So just to kind of orient -- the more
16 assumptions we have -- this is actually from the
17 financial analysis we did with a slight variation.
18 These costs are based on delivered gas miles. And so
19 they have the capital cost. You can see here --
20 100 to 170 programs a day -- sorry it doesn't look like
21 it's very clear. It's about \$900,000, and you know, 250
22 kilograms a day, that's about .14 million dollars in
23 capital cost.

24 And we've put in a bunch of different input
25 that I won't read to you here, but to figure out what

1 the annual operating and maintenance cost is. At no
2 load, and there's, you know, rent and property tax, and
3 electricity base load that needs to be paid for, and
4 then at a max load so as you have more throughput here,
5 operation costs go up.

6 And so we compare the cost to the revenue
7 that you can potentially generate, and so here just for
8 the illustration we assume the hydrogen sold at \$9 per
9 kilogram retail. So embedded in that assumption is that
10 the \$6 wholesale cost and 9 percent sales tax, so it's
11 81 cents and that leaves the margin, I think it's \$2.19
12 if I remember right. It's hard to see. I'm sorry it's
13 hard to see. That gross margin is what an operator
14 would use to cover their expenses.

15 And so the conclusion here is that a cluster
16 station has early potential. So I have these two graphs
17 to orient you. There's revenue per quarter on the left
18 axis. Kilograms per day on the right. And I'm going
19 through the bottom. So we have -- each of these bars
20 represents the different expense. So the very bottom is
21 the loan payments, which we made a broad assumption just
22 to kind of illustrate the 15 years, five-and-a-half
23 percent loan for the remainder of whatever was not
24 capital cost share.

25 So in this example, we are saying 70 percent

1 of the capital cost is brought down by the solicitation,
2 so the remaining 30 percent is finance somehow. Of
3 course, it's going to be different, but this is to show
4 the representation.

5 So if we have a 2 million dollars,
6 500 kilogram a day station, this green line shows the
7 revenue coming into the station. So on the early years,
8 it's operating at a loss, and then breaks through for a
9 profit.

10 And so if you're using the baseline, you
11 know, about year 3, you start to see some profit coming
12 into the station. Using the lower bound, it delays the
13 profit but they still can't come. And so in contrast to
14 that we look at here's a connector station that has a
15 bigger challenge. These are 250 kilogram stations at
16 1.4 million dollar capital expenditure, and you can see
17 even under the baseline growth scenario that station
18 doesn't break even.

19 And the same thing happens if you use a 100
20 or 170 kilogram a day station at 900,000, so it comes
21 down to, you know, cost per kilogram. And so at \$9 per
22 kilogram of hydrogen, it's difficult to make money in a
23 connector location under either deployment scenario.

24 So the key takeaway, I just wanted to get up
25 there that, you know, connector cluster stations face

1 very different scenarios, and we need to plan
2 accordingly, so we might need a different incentive
3 structure or different minimum requirement to motivate
4 investors to invest in the connector location. And we
5 are working on a potential strategy using our model to,
6 you know, to suggest ways to do -- moving forward and be
7 happy to work with others stakeholders on this.

8 That's all I have for now.

9 MR. MCKINNEY: Great. Thanks, Tyson.
10 Actually, if we can go back to your last slide. You
11 really left me hanging there on that last bullet point.
12 That's where the action is.

13 MR. ECKERLE: Yeah.

14 MR. MCKINNEY: Is there more to your
15 presentation today?

16 MR. ECKERLE: Well, we're really in
17 development. We have ideas like in the white paper that
18 we submitted to the record, there's kind of a cash flow
19 support. One of the ideas is to give a certain amount
20 of money each year to the stations and in a cash-flow
21 basis. And it might be a defined amount, you know, based
22 on you have to make a lot of assumptions in there where,
23 you know, perhaps the station operator- if they are able
24 to do better than that number, they can take a profit,
25 if they were able to do worse- they take a loss.

1 So it's a challenge to bring the incentive
2 down. That's one of kind of the key things, but we are
3 working the numbers down.

4 The other thing is potentially smaller
5 stations are cheaper equipment than the connector
6 location, and we have to look at some of those options
7 as well.

8 MS. BARONAS: Thank you for the clarification.

9 So at this time please go ahead, Steve.

10 MR. ELLIS: To build on that, Tyson, just a
11 quick question. When you say difference in structure as
12 it relates to connectors, does that operate also
13 looking at destinations or is that synonymous?

14 MR. ECKERLE: It's synonymous. And I think
15 connector and then destination, so really I think we
16 need to look at them in three separate: A cluster
17 station, a connector station, and destination station.

18 MR. McKINNEY: Okay.

19 MR. ELLIS: And I would imagine there would be
20 different criteria potentially for each of those. You
21 know, with the highest bargaining in the cluster and
22 second highest in the destination.

23 MR. McKINNEY: Thank you.

24 MS. BARONAS: Thank you for the question.

25 Next comment. Please identify yourself.

1 MR. POPPE: Okay. Garret Poppe with Hydrogen
2 Frontiers.

3 I think another idea would be if you can
4 come up with a lower cost design for the connector
5 station, perhaps you can decrease the amount of match
6 funding to build that station.

7 MS. BARONAS: Thank you for your input.

8 So at this time I would like to ask
9 Toby Muench, a staff member of the Energy Commission, to
10 explain the potential of including hydrogen stations
11 called in future solicitation.

12 MR. MUENCH: This Toby Muench from California
13 Energy Commission. Let me refer a little bit to the
14 2009 PON where we had a mechanism built into the
15 solicitation that we'd like to refer to as a sliding
16 scale. I'm sure that most of you will remember this
17 where a mechanism was put in that incentivized, lowering
18 the station cost by tying the cost of the funding share
19 to the overall cost of the station, and it helps to --
20 quite significantly reduce the station cost.

21 And I believe it's somehow -- I have to look
22 it up. It's something along the lines of the station
23 was under the cost was a million dollars to funding
24 share from the -- 70 or 80 percent. It went all the way
25 down to stations over 3 million dollars with total cost

1 down to a cost share of 50 or 60 percent.

2 And I guess my talking point that I wanted
3 to throw out there is, if we were emphatically going
4 to put out a similar mechanism again in a future
5 location, we'd like to kind of get the input from
6 everybody on whether that would be a feasible solution
7 of something that would be doing or achieving what we're
8 looking for, or potentially alternative mechanisms.

9 So if anyone has a suggestion or something
10 similar or different that would work, please speak up
11 now.

12 MS. BARONAS: Please go ahead.

13 MR. SOLA: Garrett Poppe from Hydrogen
14 Frontier. I think another incentive of this inspires
15 competitions for more efficient design so the big
16 companies aren't going out there and building huge
17 stations. They can still be competitive to try to
18 design lower cost stations, and that this incentive will
19 also be for them as well.

20 MS. BARONAS: Any other commenters?

21 MR. MUENCH: If I could add something else that
22 I forgot to say.

23 MS. BARONAS: Please identify yourself.

24 MR. MUENCH: I'm sorry. Toby Muench,
25 California Energy Commission.

1 We've also talked much in those three
2 workshops, especially today, about including models of
3 treating the three station types: Cluster, connector,
4 and destination stations with different -- through
5 different requirements, I guess, and mechanisms. And I
6 guess my question is, should we use a model like this,
7 like what I've just described or should we have a
8 sliding scale or should we use different mechanism and
9 how should they apply or should it apply at all to the
10 different station types?

11 I guess Tyson kind of touched on that, but
12 please comment in that regard to what we are looking for
13 right now please.

14 MS. BARONAS: Please identify yourself.

15 DR. BROWN: Tim Brown, UC Irvine. Just to
16 comment that I think that they pretty well -- sort
17 of three categories that would account for the past if you
18 want to ignore capacity when we talk about the cost.
19 Whether it's a -- trying to bring down the cost through
20 a sliding scale and having a total cost, maybe a cost
21 per kilogram, and maybe divide that in categories such
22 that, you know, the 25, 30 stations, I've done work
23 everywhere, and 500 (inaudible) weigh stations
24 (inaudible) and we need to score the difference.

25 MR. SLEIMAN: This is Ghassan Sleiman from

1 Hydrogenics USA. By maintaining that last sliding
2 scale, you've practically chosen single future Hydrogen
3 stations, which is delivered hydrogen, and the onsite
4 generation which can be more green or more removable,
5 and when dealing with hydrogen there is no competition
6 today because of the energy costs that we have in
7 California. I haven't addressed your-the second part of
8 the question, what solution do I offer. I will submit
9 something but before the docket expires.

10 MS. BARONAS: Thank you for your comment,
11 Ghassan.

12 So now I understand that there's a WebEx
13 caller that would like to comment.

14 MR. HEYDORN: Yes. Hello.

15 MS. BARONAS: Please go ahead.

16 MR. HEYDORN: Hi, Jean. This is Ed Heydorn
17 from Air Products. With respect to the comments on
18 stations, we believe that there's potentially different
19 stations configurations that you could enable for
20 destination locations compared to the main clusters that
21 could provide lower cost. It might be lower capability,
22 but the lower the cost of the infrastructure being the
23 void today.

24 With respect to the sliding scale, I think
25 the sliding scale makes sense from the lowest cost

1 stations, which is what the objective is of the program.
2 And that cost of production is an added cost version to
3 the project, to any of these projects. And if you add
4 in a cost of production, then you take away the
5 capability of potentially putting in additional
6 stations.

7 So with the objective of the program is the
8 maximum number of stations, then going with the sliding
9 scale service for that.

10 MS. BARONAS: Thank you very much, and we
11 appreciate it.

12 This is a comment from the moderator
13 Jean Baronas, California Energy Commission.

14 What do you say about the concept that the
15 definition of these three categories of stations, for
16 lack of a better term, is evolving, and a connector
17 station of today could, in fact, be a cluster station of
18 tomorrow; and a destination station that was categorized
19 as such a year ago is currently a cluster station; and
20 so this -- what little I know about this business, it
21 seems to be very much an evolution in these categories,
22 and so I have need of guidance from you in how to
23 proceed because this is not a bright line. This is very
24 much evolving work. Any comments or questions?

25 MR. ELLIS: Yes, please.

1 This is Steve Ellis for
2 the record, Honda. Jean, I think in specific answers to
3 your question, the general thinking is that from the
4 model standpoint, the goal of the destination would
5 essentially be to mark, so to speak, just because it's a
6 called a destination station. It may be a temporary
7 definition driven by the voice of our customers, for
8 example, as to the place they want to go. At the same
9 time, we recognize the challenge that it's simply a
10 standalone place to go to park. So,
11 hence, in general our consensus is that should
12 eventually become the market.

13 MS. BARONAS: Thank you for the explanation.
14 And Gerhard, did you have a comment?

15 MR. ACHELNIK: This is Gerhard Achteplik with
16 the Air Resources Board. I was looking at the bullets
17 that we have, and I guess I will answer both this
18 question and one that makes a comment on the funding
19 sliding scale too. But yes, I think this one comment I
20 will say that the term "destination station" is -- means
21 in sometimes we refer to the margin expansion stations.
22 It's not that fixed, you know.

23 If we look at -- I will give an example. If
24 you like at San Diego, it's really a market expansion.
25 If we look at South Lake Tahoe, I would call it a

1 destination station. So it makes it sort of tricky.

2 And I would say that definitely putting in a
3 station in San Diego, while it might be first-call
4 destination, it will literally grow into a marketing
5 expansion very quickly.

6 And then as far as the sliding scale, I'm
7 not, you know- the funding levels, I'm not sure if this is
8 the point or if it's Point D, but I just want to throw
9 out performance also. I mean, to go strictly after
10 low cost could -- could miss performance of a station,
11 and I mean in performance as in if you could do four
12 consecutive fills, you know, as cost is going to be much
13 greater than if you can only do one fill at a time. I
14 mean four sequential fills. I mean at the same time.
15 Sorry. Or if you do ten fills an hour, that's
16 completely different than doing four fills an hour. So
17 this simple target low cost might miss that.

18 So I just want to throw all that in there.
19 And I'm not sure if that's the B or D.

20 MS. BARONAS: So noted and your comments are so
21 well-accepted and it's part of the public record.

22 I understand we have two commenters or
23 questionnaires on the WebEx, and then there's an
24 individual in the room who is also raising his hand.

25 Can we please go to WebEx now for the

1 comment and question?

2 MR. ED: Hello, Jean. This is Ed that works
3 for Air Products.

4 MS. BARONAS: Please go ahead. Yes, with
5 respect to stationing capacity and capabilities, my
6 comment before was not suggesting necessarily lower
7 performing stations. It all comes down to what the
8 network is going to cost in order to enable OEMs to be
9 able to begin to deploy vehicles, and there are
10 different solutions to get to that point.

11 With respect to the station sizes when
12 you're not limited by onsite production, you can grow
13 with the demand of the customers. So there are
14 advantages for prolonging configurations that can allow
15 that, put in the lowest capital cost today to meet the
16 coverage need that the automakers are asking for, and
17 then have the market grow when the demand is fixed up.

18 So I would ask you to consider that as part
19 of the structure and not look at the project or the
20 program as individual station deployment; look at the
21 network that's being created and how that then can be
22 sustained. With some of these connector destination
23 stations as the presentation on the OEM showed that as
24 the price of gas profitability in the stations,
25 especially if the station is in an outlying area, you

1 know, it can be longer than the five years that's stated
2 in that growth curve.

3 Certainly some of the stations could become
4 clusters and then new elements and new points for
5 launching markets, but I'm not sure, you know, where we
6 are today in terms of putting stations out. If that's
7 not putting -- getting too far ahead of ourselves. So
8 with an extended modular type of approach that grows with
9 the customer seems to be the lowest cost method for
10 producing these stations.

11 MS. BARONAS: Thank you for your comment. And
12 just to comment and just to clarify, this is the
13 moderator Jean Baronas from California Energy
14 Commission.

15 If one were to look at this totally as a
16 network then you would look at the -- I think the value
17 of one of representative of last session of a large
18 station that's next to a small station combined
19 together, that externality would both equal maybe
20 one-and-a-half, more than three-quarters, if they
21 separated by a long distance; it may only be 1.1. So we
22 need your feedback on this complex network management
23 approaches for lack of better term.

24 Thank you, Ed.

25 We have another commenter on the WebEx.

1 Mr. Staples, please go ahead.

2 MR. STAPLES: Okay. Hi. Thank you very much.
3 Yes, this is a little comment on something that is cost
4 with as far as connector stations and all of that.

5 First of all, onsite generation, it only
6 takes once you start reaching 50, 60, 70 percent
7 capacity in fact of the entire system, it's
8 easily -- it merely is a lot easier to scale it up.
9 Okay. Then you may think, okay, this is global; the
10 footprint is much lower. So from that perspective, I
11 don't see that as being a barrier.

12 Now on the connection stations, my feeling
13 is the lower the cost the connector stations is a good
14 thing. And you can do that by simply saying okay, each
15 connector station is going to be one; people are going
16 to come in to fill up on when they need to get to their
17 destination because, you know, there's a need for -- it
18 needs to be there.

19 So in those situations, I think if you go
20 ahead and say, well, those connection stations from the
21 beginning need to be separate and far. It could be 50
22 and people can come in with brick and mortar, and people
23 thought it was a bad idea at the time. We have to
24 apply, but I'm working with the auto companies and
25 others to allow for that kind of a situation as well as

1 possibly with other stations within the cluster.
2 Everyone is not going to fill up their car every time.
3 Okay.

4 So if we can get that kind of understanding
5 and allow for that in specific situations, especially if
6 in making connector stations a little bit more cost
7 effective so that you can get the systems out there and
8 more of them, I think is a very good idea.

9 MS. BARONAS: Okay. Thank you for your input.

10 MR. STAPLES: Thank you very much.

11 MS. BARONAS: Thank you very much, Mr. Staples,
12 for your continued contribution.

13 So we have another commenter in the room.
14 Bill.

15 MR. ELRICK: Bill Elrick. I think some of my
16 points were made, but I will just reemphasize, Jean, to
17 your first point, the stations' definitions are
18 evolving. Much of that is by plan, as Steve said these
19 grow and they are not chosen lightly.

20 I think very few, even though some will grow
21 at different speeds, really the inter-connector, that
22 mid state where it's the true connector, the rest of
23 them really do look like markets that will grow rather
24 rapidly once they get established.

25 As far as cost, as we were sitting here

1 talking about it, I wanted to point out the -- while
2 you drive cost down, you also drive down the performance
3 and the capability of not just the stations but the cars
4 sometimes, and perhaps there's a way to look at the base
5 cost of the station in that sliding scale method, but
6 adding on performance capabilities in a way that doesn't
7 jeopardize your criteria or your point system. So you
8 might get a dollar per kilogram and do that as a base
9 cost sliding scale, but then when somebody wants to add
10 multiple hoses for the ability to add fuel for multiple
11 cars at one time, which in 2015 should be common and
12 normal, not an exception, or more cars an hour, maybe
13 that doesn't go against the penalty of the
14 sliding scale. So you do get greater performance.

15

16 And then the last thing in thinking about
17 this -- how we take this in a little bit different
18 direction, how we look at some of the other slower
19 starting stations or the correctors destination and how
20 do you distribute the money.

21 Just looking at Tyson's slide and this is
22 arbitrate ember valve (inaudible)- to throw something out
23 there, and I think it might be supported by some of the
24 priority set up that Tim showed from before, that it
25 comes from the automakers and customer requests. If

1 80 percent of people fuel near their home, meaning
2 20 percent out and about may be looking at funding going
3 80 percent towards clusters and 20 percent going towards
4 these destination connectors.

5 I think the prioritization that's put out in
6 the February 22 workshop that the OEM provided, probably
7 about that same ballpark of how to distribute clusters
8 versus destinations.

9 MS. BARONAS: Thank you very much for your
10 input. Any other? Thank you. We have two more
11 commenters in the room.

12 MR. KEROS: Yes. Alex Keros with G.M. Again,
13 in the same vain as Bill, I think the points have been
14 made but it's probably a good tip to reiterate it
15 especially from automaker's perspective. Like with the
16 clusters connector destination, just one, probably be
17 careful calling it such. So I would say if we're
18 designing a solicitation, you might want to use those
19 words in the description but not as the moniker in and
20 of itself, because the truth is a connector might be a
21 destination. A destination might be a connector and a
22 cluster station might be in a fringe that acts like a
23 connector.

24 We use these as, I think, for everybody's
25 benefit in discussion to capture an idea. So I would

1 just be hesitant calling it as such. You might want to
2 call it a low throughput, medium throughput, high
3 throughput type of approach.

4 I will respectfully disagree with
5 Mr. Staples on the 700 bar being needed; may be less
6 needed in a destination or a connector location. My
7 logic would say if somebody was going a farther
8 distance, they want -- they need to capture as much
9 range to be able to take advantage of the vehicle to go
10 that distance. And any lower pressure would mean less
11 range to do so.

12
13 The other side of things is, I agree with
14 Bill and Gerhard strongly, you know, I can envision a
15 scenario where we have \$990,000 station and to add a
16 performance characteristic such as metering or
17 independent control systems put them over that million
18 dollar mark, they choose not to do it because they get
19 more incentives to stay at that mark.

20 I think there's two ways of looking at
21 performance. One is we don't want to penalize
22 high-performing stations. I think it is different. I
23 think we want to sensitize higher performing stations.
24 So let's not penalize anybody for adding. Let's
25 actually find a way to seek out, to actively seek out

1 higher-performing stations within the independent
2 control systems with metering arrangements and those
3 aspects.

4 And my last point is -- and this is slightly
5 nebulous, and I apologize, but the commitment to
6 challenge, in my opinion, is how do we allow some risk
7 to be taken by each of the different business models for
8 these station providers? In scoring, criteria would be
9 very difficult, I think, to capture that piece of
10 element, and I respect that very much so. But what, I
11 guess, I'm saying is we have to find a way to do that.

12 If we all look at the same -- in terms of
13 stations, low cost, you know, delivered, not on-site
14 generated -- you know, all the same stations is not going
15 to benefit the network at the end of the day, so how do
16 we create the point system to be able to manage that?

17 MS. BARONAS: This is Jean. Thank you, Alex.
18 California Energy Commission, question from the
19 moderator to the form of speaker.

20 So the risk management of the whole network,
21 et cetera, how can we have it interim process other than
22 workshops to make sure all people in the room, all
23 people attending, all people impacted, are fairly
24 impacted and reasonably impacted with supposed
25 impacted. How do you put that into something, really?

1 You said you apologize if it was nebulous and all of
2 this stuff.

3 MR. KEROS: Yeah.

4 MS. BARONAS: You know we go back to the office
5 and we're there in the office and so we're trying to
6 solve this.

7 MR. KEROS: There are different proposals that
8 obviously we're trying to accomplish something. There's
9 some proposals on the table to say our goal is
10 renewable-based hydrogen. That's, you know-- we have
11 other proposals that you know what, I want to take
12 advantage of an anticipated growing network and I want
13 to put in larger stations. Others say I want to
14 mitigate my risks. I think each has to be scored
15 accordingly, and I do believe the buckets that we're
16 trying to characterize here, and for lack of better
17 term, the connector cluster destination, I think is a
18 good way to start. We just need to characterize those
19 buckets perhaps in more detail, and maybe it's just not
20 three buckets. Maybe it's six buckets. Maybe it's a
21 little bit more to be able to try to draw in different
22 characteristics that we're trying to build in the
23 market with.

24 And, of course, it's tied back into
25 location. This ties back into what we've discussed

1 in the first workshop, which is I think that only OEMs
2 can help along with others, can help paint sort of the
3 picture of how to put these networks together. You
4 know, a smaller station in a cluster area might make
5 sense based on the goals of that area.

6 So how do we work together and use the right
7 word, Jean, in my opinion is that interim process to get
8 there. So I think it is a challenge, but the more we
9 can characterize the types of stations that we're hoping
10 for based on what we've heard from the market that I
11 think we can accomplish, at least, some of these goals.

12 MS. BARONAS: Thank you for your indulgence in
13 answering such a broad question.

14 Next commenter please.

15 MR. BOYD: This is Bob Boyd with Boyd Hydrogen.
16 I just want to comment, acknowledge one of the things
17 now: 350-bar and 700-bar stations. For your destination
18 stations, it will be important to have 700 bar so that
19 you have a full range and allow vehicles that needs 700
20 bar to reach that destination and then get back.

21 The benefit or the market for a 350-bar-only
22 station might be in an inner city area where people are
23 able to stop and fuel once every three or four days
24 or as they need it at their convenience.

25 MS. BARONAS: Thank you for your input.

1 And Steve, please.

2 MR. ECKHARDT: This is Steve Eckhardt with
3 Linde. Yes, it's our opinion that the -- we strongly
4 encourage the CEC to consider two objectives in this
5 whole program and that is being cost effective and also
6 meeting consumers' needs. We have to meet consumers'
7 needs, which is the drivers as well as the OEMs. We
8 want to make sure the OEMs look at the network that we
9 have, and therefore bring cars here and then people will
10 buy those cars and have a good experience buying those
11 cars. So we think it's a dual objective that we
12 strongly encourage the CEC to take it on.

13 The last workshop I presented on, you know,
14 the consumer need and relating to the performance aspect
15 and just a summary. At first, is all stations are not
16 the same. There is no average station. There's no
17 average family. So I think what Tyson presented was
18 excellent and would encourage that to be expanded to kind
19 of what's the range around those stations because not
20 all stations are going to fuel the same on volume, which
21 I talked about last time.

22 When you consider that all these stations
23 will be deployed and domestically late 2013 into 2014 in
24 year 2 of operations. A good number of these stations
25 are going to be experiencing very high demand, hence,

1 one of the performance criteria that we think is --
2 needs to be incentivize is higher volumes, higher than
3 the 100 kilogram a day, if that's the minimum; higher
4 than the minimum requirement as well as, you know,
5 significant ability to fuel for many hours and fuel a
6 fair number of cars, which I outlined in my
7 presentation.

8 The second point is with respect to, you
9 know, I think, everybody is proposing stations that can
10 be expanded. It makes sense. It's a pretty good
11 concept to grasp. I think everybody looks at it a
12 little differently and there's points at which different
13 companies are going to expand just based on the
14 technology or whatever they are choosing.

15 I think we do need to recognize we don't
16 want to run into a situation where we need all 68
17 stations expanding at the same time, or we have a bunch
18 of hundred kilogram stations but all of a sudden they're
19 at capacity and then the OEMs are hoping they can
20 expand. That's the self-filling process whereby the
21 cars don't get purchased and then we're in a rough
22 situation at that point.

23 So in terms of -- oh, and the final thing
24 that was commented on. The OEMs presented and a number
25 of comments here about performance criteria they would

1 like to see, I think that that performance criteria
2 needs to be sensitized, and I provided some input in the
3 past. I will send something to the docket that would
4 provide our input on how that incentive could take
5 place, but we think of incentivizing, adding features
6 whether it be a second dispenser, fueling two cars at
7 the same time, whether it be more cars being fueled back
8 to back, or more cars per day. All of those are good
9 things that the sliding scale, which incentivize the
10 cost effectiveness, is very good yet it does penalize
11 performance. So adding an incentive then along with
12 that scale that then you can meet both the objectives
13 awarding cost effectiveness but then also awarding,
14 based on your view of this and what the OEM provide in
15 their input, performance where it's needed.

16 And just a final question. When does the
17 docket close?

18 MR. MCKINNEY: Jim McKinney here.

19 Our general schedule is to have a draft
20 internal solicitation put together say August 20 where
21 we're looking at a public release a month thereafter for
22 all internal reviews. So let's say if you want to give
23 us time to really substantively evaluate comments, let's
24 say probably early August would be good.

25 MR. ELLIS: Okay. It's not tomorrow or

1 anything?

2 MR. MCKINNEY: No.

3 MS. BARONAS: Thank you for the question.

4 And so I am looking at our announcement. There is no
5 close date on it about the docket, but we will take
6 action so there will be an open docket. So what does it
7 read on the --

8 Early August, so how about August 10th; is
9 that a reasonable date for people to get their comments
10 in?

11 Hearing no objection, let's go with
12 August 10. So our staff will act accordingly.

13 So we have another call or WebEx. Please
14 I.D. yourself.

15 MR. ED: This is Ed from Air Products. With
16 respect to the discussion on the stations sizing and
17 performance, these are interesting elements for the
18 Commission to consider. And, again, you have to
19 consider what the overall investment is going to provide
20 for total network. Is it more advantageous to put
21 funding into additional capability on that one station or
22 to add additional stations within the network to provide
23 greater coverage?

24 You had a question whether, you know,
25 precisely what markets are going to be successful today

1 that, you know, based on today's information, that a
2 particular station at a given location will be
3 successful and can be loaded.

4 And if you start really to provide coverage
5 to get the maximum number of markets to get the
6 automakers' confidence to sell vehicles to a large
7 number of people instead of people in a concentrated
8 area, that's something for the Commission to consider.
9 And we, Air Products, provides a station in Torrance that
10 has four dispensers that's been operating for over a
11 year. That station has moderate use, but it doesn't
12 have, you know, it's not being, you know, it's being
13 limited by the compression, but there's plenty of time,
14 we are not hitting station capacity. So that's part of
15 the risk of putting out larger stations instead of
16 putting out broader coverage and then growing with
17 customers as the demands increases.

18 Thank you.

19 MS. BARONAS: Thank you for the comment. And
20 so we have one person in the room that would like to
21 comment and then the moderator would like to comment.

22 Thank you.

23 MR. MIYASATO: Thanks, Jean. Matt Miyasato,
24 South Coast AQMD. It's a comment and perhaps a
25 clarifying question for the moderator of the Energy

1 Commission.

2 You mentioned you have a large sum for the
3 solicitation as your vision that you come out with one
4 solution that would encompass a full amount because you
5 did kind of opine that how do you manage the risk of the
6 network evolution. And I guess my comment is that is a
7 phased approach and allowing yourself flexibility for
8 that award, and then the growth of the stations as
9 probably the most prudent, but I'm not sure if you have
10 time lines on these monies.

11 And so the final question I guess is, are
12 you planning to award all of the \$30 million in the full
13 network when you go out for solicitation?

14 MS. BARONAS: This is moderator Jean Baronas
15 from California Energy Commission. We're still in the
16 listening mode and the phase approach is under
17 consideration.

18 MR. MIYASATO: I highly recommend that you take
19 that approach.

20 MS. BARONAS: Thank you very much.

21 Dr. Brown.

22 MR. BROWN: This is Tim Brown from UCI. I want
23 to remind Dr. Miyasato of the timeline as money as these
24 monies is this -- funding comes through when the
25 stations have to be built and what you -- when you want

1 to speak I want to add a comment.

2 MR. MIYASATO: Matt Miyasato, South Coast AQMD.
3 Let me remind Dr. Brown that apparently a black hole is
4 not a good investment, so I'm just urging caution.

5 MS. BARONAS: Yes.

6 MR. MIYASATO: And to make sure we do it right.

7 MR. KEROS: You reminded me -- just thought of
8 it. (Laughter)

9 MR. BROWN: I have a comment I want to follow
10 up on what Steve was saying that maybe this isn't the
11 right section, but as our station at UCI we have 25
12 programs a day at the capacity now. We are very
13 successful. But it was a demonstration project, so I
14 think almost all the stations were prior to CEC
15 demonstrations. We make sure that, therefore, the
16 stations are built as actual commercial projects and not
17 the administration's anymore because these are the --
18 this is going to be foundation that commercializes
19 vehicles.

20 So we need to make sure the capacities that
21 go in are sufficient that the station can cover some
22 OEMs. As I said, 25 programs, and we never can in a
23 commercial environment. And I can get away with it
24 through the commercial automakers, but the perfect
25 situation would never be successful for that low

1 capacity so I'm not suggesting the CEC included it on a
2 program forbidden planned in effect. It needs
3 to be reasonable capacity such that if they get near
4 their operating capacity they would be successful on
5 their own and not need further dependence on state
6 funds.

7 MS. BARONAS: Thank you both for the dialogue.
8 It's very good. The complexity of all of it together is
9 almost a Rubik's Cube sometimes because I feel like we
10 get good internal discussion and then yet another input
11 comes to make it something that needs to be mixed up
12 again and discussed again.

13 And so back to the solicitation and staging
14 process, we've looked at everything from two rounds for
15 two solicitations, two rounds for three solicitations,
16 one solicitation with one round and we've gone in all
17 the permanentation. And so it's all built under
18 development and under discussion, and any input you can
19 provide and implications of one decision or another is
20 really helpful because I personally agree and
21 professionally agree, it's a very fundamental question
22 of how to manage the funds and the risk.

23 MR. McKINNEY: Jean, I have a follow-up
24 question format. Jim McKinney.

25 Do you have something specific in mind in

1 terms of phasing where you're thinking in terms of
2 sizing stations locations or just a more general slow
3 down phases for that approach.

4 MR. MIYASATO: This is Matt Miyasato from the
5 South Coast AQMD. I'm not in any way suggesting you
6 slow down your process. What I would pitch is that you
7 look at the fuel cell partnership with a roadmap and the
8 street UC Irvine model because there is, I think they
9 adopt a phased approach in that regard.

10 The concern I keep coming into is that I
11 agree that we need to move quickly to get stations out
12 there, however CEQA requirements are going to lock you
13 in at the very initial portion of the NOPA and the
14 process, which I think is a hurdle. So if you can have
15 the same requirements for the stations that perhaps as
16 you go up the solicitations, say, it's the first round
17 is going to be- do you have a certain day that's going to
18 cover clusters with fewer destinations or clusters,
19 and a second round you'd come out after review of the
20 first one, but you have to have a timeline established. I
21 think you're giving it a schedule but giving yourself a
22 flexibility to change some of those awards, and that way
23 you're not locking yourself into the various onset.

24 MR. BROWN: Thank you for that. May I just,
25 before Steve comments, this is the moderator Jean

1 Baronas from California Energy Commission.

2 So as our summary and follow-up in working
3 sessions internally last week with staff met quite a few
4 times, and so we looked at the phased approach from the
5 fuel cell partnership roadmap, collapsed phase 1 and 2
6 together and made columns and saw that and imagined that
7 network just too close over an existing stations, learned
8 about the performance of existing stations from our
9 sister agency and then saw a path that made some sense.
10 But then I want to remind you that when we displayed Dr.
11 Brown's chart, which is the chart I'm talking about,
12 with phased approach, we use it as the last chart the
13 June 29th workshop. The feedback that I heard from
14 everybody or the crowd in general was, Oh, no, no, these
15 numbers need to be updated.

16 So imagine trying to come up with a phased
17 approach milestone and the serious responsibility here,
18 and you tell me the numbers need to be updated. So now
19 we just heard that there's a docket closing on
20 August 10th. A draft is going to be around our office
21 around the 20th. When am I going to get the numbers is
22 what I want to know, for these charts?

23 MR. KEROS: This is Alex with G.M. Updated is
24 a big word. I would say fine tuned.

25 All right. I don't think either anybody at

1 that meeting suggesting that there needed to be a
2 complete revamping of those charts and faces.

3 We know projects have fallen off. SFO has
4 just been told removed. So I think what we were talking
5 about is more about the fine tuning associated with that
6 table and avoiding a 1-through-68 approach to this
7 process that we can give you some senses and buckets but
8 there probably needs to be a little bit of flexibility
9 as we work through it.

10 And I'm speaking on behalf of the maybe
11 station providers. I imagine they want some flexibility
12 as well because maybe a site owner isn't ready to put a
13 station in even though it's important that we get a
14 station update on that corner. That maybe they need to
15 work on them. In a year down the road they might be
16 able to convince them. So we need some flexibility
17 with, quote, unquote, "the phased approach."

18 And I think you're asking us as an industry
19 that's fair to say, hey, can you get us your latest and
20 greatest list. I'm sure we can get that for you.

21 I will bounce back. There needs to be some
22 flexibility with the latest and greatest list based on
23 ongoing learning and feedback.

24 MS. BARONAS: So fine tuning. When will the
25 fine-tuning numbers be available?

1 MR. BROWN: This is Tim, UCI, before
2 August 10th.

3 MR. ACHELNIK: Gerhard Achtnik with the Air
4 Sources Board. I would say that the fine-tuning numbers
5 would come after you've received your first round and
6 made your awards, because it will allow you to fill the
7 holes. That's the way I see the two phases. You know,
8 we don't know what we will get and so the second
9 round -- and I would imagine I would put two -- most of
10 your, you know, two-thirds, one-third type split, or
11 something like that, to where you put the big slug out
12 now and then fill the holes in the second phase.

13 MR. BROWN: Thank you. But I will assert that
14 we still need the numbers for phase one. Absent that we
15 are using the data we projected on June 29th. Do you
16 need any more inspiration to have a meeting, do the
17 work?

18 Okay. Please, Steve.

19 MR. KEROS: Alex with G.M. You have pretty
20 good numbers as to G.M.

21 MR. ELLIS: Steve, I don't knock that for
22 fear of what you have-- it's closer in terms of --

23 We want to bring us back to my testimony of
24 the first hearing. It builds a little bit on the word
25 that was put out earlier, this is an interim process.

1 We might -- what I suggested is that we
2 also -- that you, the CEC, try to build in the process
3 of understanding all the challenges, some type of a
4 feedback mechanism trail ward that's lined
5 to better, newer technology.

6 I think that process, if built in, can cover
7 the concern that I hear from you, Jean, and even Matt
8 for bringing that up about the importance of prudent use
9 of the (inaudible) declaration knowledge. So that way
10 you get that voice of automakers that gives you the
11 knowledge of the voice of the customer and our market
12 intent for award without a phase throwing all of our
13 cards on the table. Okay.

14 MS. BARONAS: Just a second.

15 All right. Thank you for your input at this
16 time. I would like to call for a ten-minute break.
17 Please hold your questions and comments and return back
18 at 11:00 a.m.

19

20 (Break taken.)

21

22 MS. BARONAS: Thank you for starting again. So
23 we have until noon to cover three more topics --

24 Okay. Thank you for continuing on. I just
25 want to note one individual here made a comment on

1 funding levels and possible mechanism to determine cost
2 share.

3 Did I see a hand raised here before we
4 broke? Hearing, seeing none -- are there any? Okay.
5 Please.

6 MR. BEN: This is Ben (inaudible). I would
7 just like to add to some of the comments that were made
8 earlier.

9 I think in the slide that you presented in
10 the first meeting where we showed the OEMs contributing
11 to a third party, in this case the UCI street model to
12 provide an outflow of location. There's additional
13 detail that was also envisioned that approached that we
14 would look into station attributes in addition to
15 location.

16 And so I think part of this discussion as
17 far as questioning, capacity of stations as far as there
18 being cluster bay stations versus destination that could,
19 would be part of that outfit and that would be in addition
20 of that output to help make some of the selection on
21 station pumps.

22 MS. BARONAS: Please comment specifically on
23 the document you are talking about, where is it and what
24 is it.

25 MR. BEN: I apologize. The Toyota provided the

1 document for the record for the first part of the
2 workshop, I believe on June 29th, that showed an
3 approach for station, kind of a selection process prior
4 to the PON solicitation that would go into the
5 development of the PON. So I think part of that comments
6 that were made -- a lot of the comments were talking
7 about location. What I wanted to also add, that the
8 document also illustrated that there are metrics such as
9 the station capacity that would be a part of that or
10 could be a part of that output. That would be location
11 base. So if we're talking about destination location,
12 destination location may in that type of study show to
13 be a capacity per day, does not necessarily -- may not
14 necessarily need to be in that time frame. The same as
15 the cluster-base station at a larger -- would expect to
16 have a large number of vehicles served.

17 So to reiterate -- that type of output from
18 this process that was defined could also include some of
19 those attributes to help in that selection.

20 MS. BARONAS: Okay. Thank you for clarifying.

21 So I want to move onto the operation and
22 maintenance cost in the support topic. We have
23 Charles Smith from the staff to present this as possible
24 mechanism in the future PON.

25 MR. CHARLES SMITH: Yes. Good morning. This

1 is Charles Smith with the California Energy Commission.

2 As Jean mentioned, there is the one
3 possibility if we look at, would be to provide specific
4 O & M support costs that extend beyond the upfront
5 capital of cost of the station. This might be funds
6 that of a specific dollar amount per year. And so we would
7 be curious about feedback on what the recommended amount
8 might be for that O & M support, whether that amount of
9 funding would need to vary by station type, or if
10 there's some way that we could tie it to the business
11 case of the station so that it supports itself early on
12 to the extent possible. So we'd be interested in
13 getting any feedback that you might have on that
14 possibility.

15 MS. BARONAS: Any one of the participants have
16 comments?

17 MR. SLEIMAN: Ghassan Sleiman for Hydrogenics
18 USA.

19 MS. BARONAS: Ghassan, please go ahead.

20 MR. SLEIMAN: This term of the amount of 50 to
21 75,000 per year intinally until the cars are deployed.
22 If the cars are not deployed, then the station is not
23 going to make any money and we can't cover the OEM cost.

24 MR. SMITH: And just to be clear, per year, I
25 didn't necessarily hear a duration you say until the

1 cars come that, of course, is something that, you know,
2 we don't necessarily know when we make the solicitation
3 or even when we execute the grant agreement.

4 So did you have something in mind more
5 specific to how we would know and how far along we would
6 provide support?

7 MR. SLEIMAN: I think that Tyson showed
8 maybe the first two years, possibly three, but if --
9 again, if the cars are not deployed, are not deployed in
10 that market then an extension of that -- of that OM
11 otherwise that station would be shut down.

12 MR. CHARLES SMITH: Right.

13 MR. MUENCH: Toby Muench from the Commission.
14 Keep in mind that our the grant agreements are typically
15 three years' duration.

16 MR. SLEIMAN: This is Ghassan Sleiman,
17 Hydrogenics.

18 Is there a possibility if, say, the cars are
19 delayed for an agreement where it's a possibility to
20 extend that O & M service funding?

21 MR. SMITH: I think we would have to go back
22 and take a look. We've generally been able to do no
23 cost timing extensions on projects, but it's possible
24 that it might be another matter to increase a funding
25 allocation for a project. I think that would be a very

1 different matter.

2 MR. MCKINNEY: Jim McKinney again. And to add
3 to what Charles is saying. Yes, so each grant award is
4 for an affixed amount that comes out of an allocation, a
5 fiscal allocation approved in the investment plan by our
6 commissioners. So allocating more money, say that
7 hypothetical three-year period of 50 to 75 K per year,
8 that would be challenging. I think that would require
9 setting up an additional fund just for that.

10 MS. BARONAS: Any other comments and questions
11 on O & M?

12 Please, Steve.

13 MR. ELLIS: Steve Ellis with American Honda.

14 I know this isn't necessarily what you want
15 to hear, but I have developed this over time and with
16 many mistakes with the various gill, but -- and I think I
17 mentioned that in either in the first or second hearing,
18 and that is that there's probably a requirement for some
19 X factor, as to be, you do your best math, you do your
20 best projections, but we failed the perfection of data.
21 And that means that I think there also has to be some
22 flexibility.

23 If you look at the models proven long and
24 long and studied for years in business schools about why
25 businesses fail, it's under capitalization. And it

1 would be sad to see that the brink of the growth in
2 vehicle sales, you know, the station fails just because
3 of the perfect approach that is taken to that amount as
4 opposed to what's necessary to ensure success. So
5 that's what one commenter meant.

6 MS. BARONAS: Thank you very much. Any other
7 comments or questions? Please go ahead.

8 MR. BLEKHMEN: Thank you. David Blekhen, Cal
9 State L.A. My comment is that operation and maintenance
10 funds would be made available to existing stations rather
11 than only new stations.

12 MR. MCKINNEY: Again, Mr. Jim McKinney. I
13 appreciate there could be a need for that, but again,
14 the way our funding structure is set up, the monies are
15 finite and they are for specific grants for specific
16 period of times tied to the conditions of the
17 solicitations. So there will not be an opportunity to
18 retroactively provide operation and maintenance funding.

19 MR. BLEKHMEN: I didn't mean that backwards. I
20 meant for existing stations.

21 MR. MCKINNEY: This is to clarify. So your
22 existing stations that perhaps were not built with the
23 Commission funding --

24 MR. BLEKHMEN: Correct.

25 MR. MCKINNEY: -- public funding. I don't

1 think anybody has proposed that before so that's
2 something we can consider.

3 MS. BARONAS: Alex.

4 MR. KEROS: Thank you. This is Alex, G.M.
5 Actually that's where my thought was going is -- is
6 there a way to disassociate perhaps the capital
7 investment in the OEM? Is that something the Commission
8 would consider?

9 And, two, I believe it's the contracts to
10 date have been three years. Might those who are
11 proposing stations have the ability to offer up what
12 their contracts might be? So, for example, if three
13 years is sufficient for eight. Maybe they propose I
14 want to operate the station for five years, it offers a
15 little bit more credibility to their long-term plan, and
16 if at the same time they could be -- I will use the word
17 awarded with continued O and M expenses as well.

18 So perhaps in the proposal or solicitation,
19 somebody could offer their timeline for the project
20 being three years, four years, five years, and associate
21 a specific O and M funding associated with that time
22 period.

23 MR. MCKINNEY: Thanks, Alex. This is Jim. We
24 just have to think about it. So I guess one question back
25 to you -- are you thinking of perhaps trading off some

1 of our capital cost funding for longer term O and M
2 funding?

3 MR. KEROS: That didn't come immediately to
4 mind, to be honest. I'm trying to generate some ideas
5 for the Commission here. So this is not necessarily
6 something I'm advocating, and this is something that
7 came to me on the spot here where we're looking at the
8 opportunities, you know, here to -- I can see a proposal
9 that is only ceased three years of O and M funding.
10 Let's say they start in 2013, the end of 2013. That
11 station might be still ramping up into early
12 commercialization. That might be a daunting challenge
13 or a risk that a station provider is not interested in,
14 but having the ability to denote their own timeline
15 associated with it might be attractive.

16 So maybe they are willing to give up some of
17 the upfront capital to have insurance that they would
18 have an O and M going into the future or a couple more
19 years of O and M. It sort of lends itself a little bit
20 to the types of modeling efforts which is sort of a
21 cash-flow perspective.

22 Personally this is, again, an idea. The
23 proposals having the flexibility to dictate is what is
24 attractive to them, might be something the Commission is
25 willing to consider.

1 MR. SLEIMAN: This is Ghassan Sleiman,
2 Hydrogenics USA. Just adding onto David Blekhman's
3 point, there are a number of stations in the next maybe
4 two or three years may lose the private funding that's
5 keeping them going. And if, you know, by adding a few
6 100,000 dollars to O and M to those stations taking, you
7 know, keep on going until the market matures and
8 have enough vehicles or to make them profitable. So
9 you know, I second David Blekhman's point in that we
10 should be able to apply some OEM funding -- sorry --
11 some funding to O and M, stations that already exist.

12 MS. BARONAS: Thank you, Ghassan.

13 Do we have online or other WebEx people who
14 are interested in commenting?

15 MR. ED: Yes, hello. This is Ed, Air Products.
16 With respect to operating and maintenance cost support
17 for the stations that we're looking at, again, the type
18 of support, the type of costs that station owners will
19 incur is in excess of 100,000 dollars a year. Most
20 station operators are not going to tolerate losses for
21 an extended period of time, waiting for demand to come
22 to stations. So this is an important piece of the
23 puzzle when it comes to rolling out infrastructure in
24 terms of the number of stations and locations of
25 stations, both either within clusters or certainly in

1 destinations or connector stations.

2 We believe the Commission's effort in the
3 prior solicitation was to address this and provide some
4 valuable contributions, but certainly it becomes a
5 decision of whether the Commission's fund should be
6 spent towards OM support or towards putting up
7 additional stations and developing other mechanisms to
8 fund OM support.

9 So I think that something that needs to
10 be continued to be considered is, you know, certainly
11 the Commission support for it, but also the support for
12 other stakeholders to ensure that station owners are
13 going to be open because station operators won't wait
14 three months or six months if they are losing 25 or
15 \$35,000 a quarter. They'll shut the station down
16 instead of waiting. So I think that's the key element
17 that the stakeholders need to consider.

18 MS. BARONAS: Thank you, Ed. Any other
19 comments or questions on O and M support?

20 Hearing none, let's go on to item B on the
21 agenda. This is the concept of innovation. Toby, could
22 you please explain some of the issues and opportunity we
23 have?

24 MR. MUENCH: Toby Muench from California Energy
25 Commission. As most of you know and remember in the

1 2009 PON, we had a number of innovative incentive
2 performance incentives built in, and if we
3 hypothetically would put one or more of those out again
4 in a future PON. Examples of those are, for example, a
5 fast tract incentive that incentivizes rewards, projects
6 that can get a station built and open within 18 months
7 counting from the beginning of permitting, the
8 permitting process all the way up until the station is
9 open for public use.

10 Another example would be an incentive for
11 exceeding the minimum capacity that a station provides,
12 and another one would be -- well, I guess I will leave
13 it at that for now.

14 Those are the incentives that we'd bring up
15 for examples here. We incentivize with higher funding,
16 5 or 10 percent higher funding that would be provided
17 commensurate with the higher project costs for achieving
18 these performance increases or performance elements.

19 And I guess our question is, if we were to
20 put out one or more of those incentives or these either
21 ones that we didn't mention here, would this be something
22 that stakeholders agree with or disagree, and if not,
23 are there other incentives that people desire, or should
24 we, you know, not put any out altogether? So I want to
25 open up the discussion about this.

1 I guess I did forget one more. Forgive me.

2 An incentive for exceeding the state's
3 renewable mandates, it is also an example for something
4 that's been done in the past in the 2009 PON for
5 exceeding the state's 33.3 percent renewable hydrogen
6 standard set forth on SB 1505. And for any projected
7 that exceed that, I believe we have 5 or 10 percent more
8 funding available since renewable -- providing renewable
9 fuel at a private station today is, as we all know, does
10 cost more than one of conventional hydrogen. So
11 comments please.

12 MS. BARONAS: Please go ahead.

13 MR. ECKERLE: Tyson Eckerle with Energy
14 Independence Now. I just wanted to voice strong support
15 for that last point that Tobias made about giving extra
16 support for renewable hydrogen. As a member of the
17 environmental community I think it is important to -- I
18 like the fact that if you get people excited about
19 hydrogen, you really do need to highlight its long-term
20 potential for renewable production. And natural gas
21 still is a great story as well. I think renewable is
22 even better. So to the extent that we can incentivize
23 traditional renewable production, I think it's a good
24 thing for the community.

25 MR. SLEIMAN: Ghassan.

1 MS. BARONAS: Please go ahead.

2 MR. SLEIMAN: I agree with Tyson on renewable
3 production of it. I also want to add maybe have a
4 sliding scale where the minimum is 33 percent and then
5 as you go higher you receive additional funding, you
6 know, beyond the percentage, as well as approximating
7 differentiating between renewable and great hydrogen
8 where you want to get people the incentive to vote for
9 hydrogen in general. And, you know, people drive
10 Priuses today because it's more green, not because it's
11 more fuel efficient.

12 So they want to have that green aspect
13 in their vehicles that they drive every day.

14 MS. BARONAS: Thank you.

15 Mr. Boyd.

16 MR. BOYD: This is Bob Boyd with Body Hydrogen.
17 I would just like to say -- as we talk about renewables,
18 I would like to bring up my point I made the other week.
19 And that is that just using hydrogen of a liquid source
20 is a major reduction in greenhouse gas emissions over
21 the usage of gas in the traditional vehicle.

22 We've heard testimony from UCI, UCI Davis,
23 and from Honda talk about a 60 percent reduction in
24 greenhouse gas omissions using hydrogen from natural gas
25 delivered by a diesel tractor-trailer after being made

1 at the level. So there's no requirement for renewable
2 electric vehicles. There's no requirement for renewable
3 fuel for CNG buses or CNG vehicles. There's no
4 requirement for any renewable elements on any other
5 transportation product. Why is there a requirement for
6 hydrogen, when hydrogen reduces greenhouse gas omissions
7 across the board.

8 MS. BARONAS: Thank you for your comment.

9 Online Mr. Staples.

10 MR. STAPLES: Thank you. Yes, I appreciate the
11 opportunity. In reference to what was just said,
12 clearly 100 percent reduction is better than 50 or
13 60 percent reduction. And if you're generating on-site
14 that means that now you have paradigm that is expandable
15 along with the grid. Yes, you have to buy renewable
16 electricity to do that, but there are all kinds of
17 incentives for that, and that is very easy to arrange.
18 Okay. So it's not a typical thing that takes places to
19 get to renewable.

20 Operation and maintenance cost and support
21 in reference to the statement that was -- he was saying
22 I really would like to know where it came up
23 100,000 dollars for a year for the gas station when a
24 team that 80 percent, 70 percent, or whatever is being
25 covered by the CEC for the infrastructure, and

1 possibility of operation and maintenance in the hands of
2 the developer, I don't see the 100,000 dollar cost then,
3 unless there's some kind of additional cost that is
4 brought on by the fact that you're adding it. I
5 can't comprehend what that would be at this juncture.

6 I spoke with, you know, over 100 stations
7 and 20 different owners who are interested, and they
8 don't see any real downside that in the short time as
9 long as these costs are covered for them. Okay.

10 If we're going to get into expansions, I
11 will be first in making money. If they are making
12 money, they will gladly shell out the money to do the
13 expansion for these businesses if needed.

14 So yeah, I'm not finding that. I'm finding
15 a lot of expenses associated with other issues like the
16 700 bar, the additional cost of infrastructure for that,
17 and many of those for the gas station owner. I'm not
18 seeing where they're going to have a great deal of
19 expansion. They'll become rightfully (inaudible)
20 generate the hydrogen onsite, but then they get that
21 back when it's sold. So that could, would possibly be the
22 main thing they have to deal with, but other than that,
23 that's my comment.

24 MS. BARONAS: Thank you very much, Mr. Staples.

25 I wanted to call peoples' attention to the

1 fast track incentive that Toby raised. Any comments?

2 Please go ahead, Steve.

3 MR. ELLIS: Steve Ellis for American Honda. I
4 want to make two comments. One about the renewable side
5 of it.

6 I think clearly to what we just heard,
7 there's different opinions on that, but I'd like to put
8 it in perspective of what the voice of the customers.

9 We've asked our customers what they think
10 about renewable energy versus non, and I think the best
11 comment that would apply to this is what I would call time
12 and place. There is a time and place praise for
13 everything. Today, there's desperations just for
14 stations. So their answer is, "That's nice, it provides
15 an added benefit, but I just need more hydrogen stations
16 today." So I think in some summary when it comes to
17 time and place, it should have be incentivize with an
18 importance aspect of it, absolutely; but not at the
19 expense of timing of getting stations going or cost
20 driven, the cost of the fuel. So there's a day forward
21 where that would be more critical, but today at this
22 very immature moment in time, let's not be distracted by
23 that point.

24 The second is upon the point of the fast
25 track timing. I was a little bit concerned when I heard

1 the last 18 months as an indication of possible theft in
2 term of fast track. In my book, I'm not sure 18 months
3 is a fast track for anything. So I would just offer
4 that if there's an opportunity to fast track in just --
5 going to throw it out -- like three months or six months
6 increment that that should be considered. A six-month
7 fast track is more in line of my type of thinking.

8 Thank you.

9 MS. BARONAS: Thank you very much.

10 Please go ahead, identify yourself.

11 MR. STEPHENS: Shane Stephens National Fuel
12 Cell Research Center. I have a comment also on the
13 renewable hydrogen. I would just urge that if you
14 decide to incentivize renewable hydrogen stations to
15 assure that delivered renewable hydrogen is included as
16 well as on-site. I think arguably delivered renewable
17 hydrogen is probably a potential for greater amounts
18 of it and so that could mean lower cost for on-site
19 renewable hydrogen. So certainly you would want to do
20 the hydrogen renewable incentive.

21 MS. BARONAS: Yes, Mr. Boyd.

22 MR. BOYD: Thanks. Bob Boyd, Boyd Hydrogen. I
23 did want to make a comment about renewable and certainly
24 one of the great things about hydrogen from renewable
25 fuels. And I would argue that when we have a million

1 cars on the road, we have a thousand tons a day of
2 hydrogen required, that's the time when we have large
3 renewable projects that can be leveraged and we can be
4 making lots of hydrogen where we have stranded biomass
5 or solar, and we can ship it into marketing.

6 So, renewable is a great thing, and hydrogen
7 is the pathway for renewables. But burdening the
8 stations today with the cost local production is not
9 productive.

10 MS. BARONAS: Thank you.

11 From the moderator, people haven't discussed
12 performance yet in the independent prospect.

13 We have two people on WebEx. Would you
14 please go ahead.

15 MR. MCKINNEY: Actually, Jean, before people go
16 ahead.

17 MR. ED: This is Ed for Air Products. With
18 respect to capacity incentives, I think that ties into
19 my comments about the comments about the sliding scale.
20 I think any additional cost at the, you know, taking
21 away from coverage of stations is something that the
22 Commission needs to consider with respect to what the
23 overall network would look like.

24 If providers believe that the stations'
25 event is going to rise quickly and that the stations

1 will be loaded, then they don't need as much incentive
2 in order to get across the valley of death to getting to
3 profitability on the station.

4 With respect to the question on fixed
5 operating cost, we've known the analysis looking at
6 rent, insurance, maintenance. There's also data from
7 anywhere else from maintenance and operating cost
8 associated with stations. And based on those numbers,
9 someone is going to have to pay on the order of a hundred
10 thousand dollars per year to keep the station open.

11 We looked at maintenance in terms of
12 stations- not just underutilized stations that we might
13 have had in the earlier days of electric fueling but now
14 looking at stations that are used near to their capacity
15 like we are seeing in some of our mature handling
16 applications when we are at reaching 50,000 fills per
17 year at a particular site.

18 MR. MCKINNEY: We just have to think about
19 that.

20 MR. ED: Other sites, we can better understand
21 and qualify what those costs are and project what those
22 cost impacts would be to the market. So we feel that
23 those costs are important. It will impact someone who
24 is organizing, providing the funding to keep the station
25 open. If people are able to provide that and if you

1 have CEC funds, then that's important to know. We feel
2 that the stakeholders, including automakers, and others,
3 need to be able to stand up in order to ensure that the
4 stations are kept open to allow the market development
5 for light duty fuel cell vehicles to emerge.

6 MS. BARONAS: Thank you for that, just a
7 comment from the moderator. Are there any network
8 performance studies of the business structure that are
9 publically available?

10 MR. ED: I'm sorry, Jean. Could you please
11 repeat that?

12 MS. BARONAS: I'm curious to know if the
13 industry has done any network performance studies of the
14 infrastructure?

15 MR. ED: Well, there's individual -- this is Ed
16 from Air Resource. There's certainly been reports on
17 the different elements in terms of making cost of
18 stations, operating costs of stations, cost for
19 everything from electrolyzer through onsite reformers to
20 delivered product. Enron was probably the best source for
21 those. There's also work that's being done in Europe
22 under the McKennedy study that's lead to the evolution
23 of the small station size that is now being rolled out
24 to support the initial marketing in Germany and in
25 Europe.

1 MS. BARONAS: Right. I know these, but I'm not
2 referring to elements. I'm referring to elements of the
3 network work together and make rationality and all the
4 issues of rationality management. That's what I am
5 talking about. Any studies?

6 MR. ED: This is Ed again. If you refer back
7 to my comments from the June 22nd. Part of what we're
8 looking to do is to develop enough of the network, and
9 we talked about 20 stations in a given region, and we
10 talked about southern California being that region, to
11 be able to develop those learnings to be able to then
12 roll hydrogen infrastructure out to other regions of the
13 state and the country.

14 So I think that's part of the learning that
15 we're getting out of the point for all these stations is
16 to try to get that network, the network costs in line so
17 we can then forecast how this thing rolls out to other
18 areas.

19 MS. BARONAS: Thank you so much. This is Jean
20 from the Energy Commission. I got to reread my notes
21 from that presentation you made now that you're
22 reminding me. Yes. Okay. Thank you.

23 Please go ahead, sir. You've been waiting
24 so long so patiently.

25 MR. PROVENAZANO: That's okay. Thank you,

1 Jean. This is James Provenazano. I'm with Clean Air
2 Now. I provide comments, I didn't realize I could have
3 spoken earlier on some of these issues, so I will save
4 most of them for my public comment period. Even though
5 with I'm Clean Air Now, I also make comments on behalf
6 of Clean Air Now and also as a resident of the state of
7 California and as a user of hydrogen fuel cell vehicles.

8 You know we are running behind, and I would
9 like to make the recommendation that if the potential
10 proposers, if you can come to some consensus, that maybe
11 you close the docket earlier, maybe at the end of the
12 month instead of August 10. I would recommend that you
13 maybe close it sooner than August 10th.

14 The question regarding -- the issue
15 regarding the incentivizing adherence to a tight or a
16 short project timeline, I'm all in favor of that. And I
17 think one of the best examples is after the Northridge
18 earthquake, Government Wilson did a fantastic job with
19 Caltrans to get the damaged infrastructure up and
20 running in historic timeframes. So if there's something
21 that can be learned from the contract they wrote during
22 that period, if you can apply similar concepts to these
23 contracts, I think that could be favorable to the whole
24 process in getting these stations up. Thank you.

25 MS. BARONAS: So noted.

1 Back to the points raised by Toby on
2 incentive, performance incentive. Are there any
3 commenters that can come forward to talk about performance
4 incentives?

5 MR. McCLORY: Hello. This is Matt McClory,
6 Toyota, I would like to comment.

7 MS. BARONAS: Go ahead, please.

8 MR. MCCLORY: The discussion of performance has
9 been very interesting and changed and kind of modified
10 or kind of morphed over the past couple of years, but I
11 would like to distinguish the difference between a
12 fueling interface standard to the vehicle versus a
13 station performance as far as the ability of the station
14 to fill a number of cars in an hour or in a day, and the
15 ability of that station to be upgradeable or scalable
16 to be consistent with fuel cell vehicle performance
17 numbers.

18 So regarding interface, we are very strongly
19 supporting the type A standard from SAE J-2601
20 interface. We feel that is an item that's really
21 non-negotiable. In other words, if we don't have that
22 level interface, we don't have market for the vehicles,
23 because customer feedback of not being able to have
24 appropriate refills in a short time, to have that
25 sufficient amount of range when they are done with the

1 fill. So if the station is not designed correctly to
2 meet that SAE interface, then the customer is going to be
3 exposed to a vehicle that doesn't have the driving range
4 that it should, and the experience of the fueling took
5 longer than it should. So we feel that meeting that
6 requirement is imperative.

7 I think in addition to that we also don't
8 want to lose what there is not at this point in
9 time third party certification of what it means to be
10 meeting that interface. So I think as part of this
11 process going forward, I think there's going to be have
12 to be maybe some additional comment to maybe clarify
13 what does it mean to meet to J-2601 type A interface.

14 Regarding performance, we see a daily
15 capacity or -- sorry -- a peak capacity, a capacity per
16 hour is probably more important than a daily capacity.
17 The ability to be able to fill multiple cars
18 simultaneously or back to back is the -- kind of the
19 biggest sensitivity to a customer rather than a daily
20 capacity where that's really an issue of does the
21 station size accordingly for the amount of vehicles that
22 are in that market. And we see the daily capacity as
23 being something that could be scalable consensus.

24 So where we see an incentive, like if a
25 station is built or is awarded that it has that

1 capability for a scalability in a future date and it
2 thinks that project, we see that as a benefit.

3 The other item regarding schedule of fast
4 track. We see fast track as being very important
5 because it allows us to show our constituents, to our
6 management, that stations are actually going to come out
7 in a timeframe consistent with our plans for people roll
8 up. And having some way to have a metric or a tracking
9 to show that stations can be built by a certain
10 timeframe. For example, to lead with 21 days to have
11 58 stations in the state of California that goes to
12 support having -- being demonstrated that we have that
13 covered in that timeframe to show the confidence to our
14 management that California is going to be a real market
15 because it's going to have that type of coverage.

16 And as far as the comment on renewables, we
17 feel strongly that the biggest issue right now in using
18 the funding available is wisely, smartly as possible
19 within the timeframe to get the coverage that we need.

20 One aspect of being able to utilize the
21 renewables is that it's cost effective. For example,
22 using hydrogen that's already sourced from a central
23 location such as the biosource plant in Fountain Valley,
24 we think is a great demonstration project to show that
25 as a feasible solution. It's already being used right

1 now for the pipeline station in Torrance, because of
2 some of that hydrogen is being cut from that plant. So
3 that may be one aspect of being able to use hydrogen.

4 We feel strongly that giving a number of
5 stations out there by the timeline of 2015 end is the
6 most important use of trying to assess what stations are
7 popular or how to select stations.

8 MS. BARONAS: Thank you for that.

9 Garrett, please.

10 MR. POPPE: Garrett Poppe from Hydrogen
11 Frontier. I'd like to also maybe include some sort of
12 a negative point or something for stations that weren't
13 previewed for the conclusion on time from
14 previewed funding or maybe there are some mistakes that
15 they had made during a couple of rounds of go funding or
16 something like that.

17 MS. BARONAS: Okay. Thank you for that,
18 Garrett. Back to the gentleman who spoke at the podium.
19 What are the impacts of closing the docket early? Let's
20 say we don't use August 10th of the deadline, what if we
21 close it July 31st. Any comments or questions? I don't
22 see any push back.

23 MR. KEROS: This is Alex with G.M. Maybe you
24 can explain where your thinking was coming from on
25 closing early, but it certainly gives people opportunity

1 to come together and negotiate a little bit. So unless
2 you're pleased with individual responses then I think it
3 might be helpful to have some of these collective issues
4 as well. So that certainly takes a little bit more
5 time.

6 MR. PROVENZANO: James Provenzano with Clean
7 Air Now. My comment was just based upon that we're
8 running short on time, and to expedite the process to
9 shorten the time giving the comments that will be given.
10 If you fill the time you give them, if you, you know,
11 August 10th they'll be working on August 8th; if you
12 give them July 30th, they'll be working on it July 28th.
13 So I think, you know, you have to get consensus among
14 the people that will be putting a proposal in. I'm
15 not putting a proposal in, and the stakeholders have to
16 come to a consensus I think just to shorten the timeframe
17 so CEC can get on with issues of PON.

18 I actually wanted to make one comment. I
19 agree with Matt and Tim about their approach
20 to substation (inaudible) of lumping all the monies at
21 one time or not, and I think if you could have an
22 initial -- an initial PON that includes the almost
23 30 million dollars and funds that could be disbursed
24 after the first round but then you reserve of the right,
25 you keep the process of going -- you get the proposals

1 in, but you reserve the right to go into a second phase,
2 if those monies wouldn't be accounted for appropriately
3 to support what the OEMs need.

4 And I think what I am also hearing -- and
5 I'm hearing some -- a lack of confidence in what is
6 needed. I think I would encourage you to listen to the
7 OEMs. The OEMs have the biggest chunk here at stake.
8 They know what they need to get these vehicles out, so I
9 would encourage you to please listen to the OEMs on what
10 is required to build this infrastructure.

11 MS. BARONAS: Thank you.

12 MR. KEROS: I just wanted to make that comment.

13 MS. BARONAS: So noted. And we have first
14 Dr. Brown.

15 MR. BROWN: This is Dr. Brown. I want to jump
16 in here. I want to say I've been corrected by Matt here
17 on the break. I completely agree with him that now we
18 should move the phase approach time in to have some
19 understanding that to (inaudible) stations you built and
20 then go back and solicit perhaps more money. I think
21 the phase makes more sense as long as it gives some
22 opportunity for feedback and a better role. So I stand
23 corrected.

24 MS. BARONAS: Okay. So noted. And the public
25 record will also record this.

1 We have one person on the WebEx and then
2 Matt McClory.

3 MR. STAPLES: Paul Staples again with
4 Hygen Industries. First of all, why do we
5 assume that they're all states and local economy called
6 for quickly. Really I have no problem making an
7 18-month deadline. I can get to a live in six months.
8 (Inaudible) okay. Produced and delivered in six months.

9 The whole thing about getting it done on
10 time has to do with permits. Okay. If you guys put the
11 pressure on the permitters to get these systems in and
12 approved, I don't think we're going to have that much
13 problem meeting the next month off.

14 As a matter of fact, if you really want to
15 get to the second reformer, take 100 (inaudible) you can
16 get renewable hydrogen and you're going to get it within
17 18 months, that would 8 or 9 percent (inaudible) if
18 you're fossil fuel, delivered hydrogen, or whatever you
19 want to do, but that would be an incentive, that would
20 get people (inaudible). To tell you the truth, I think
21 it's going to be the only thing in my life, okay. So,
22 and with all my teams that would be the main objective
23 of everything we're doing. They have to roll-up the
24 distractions that we're going to be involved in.

25 So as far as now on the performance

1 incentive, that's pretty much what I was talking about
2 is less than -- of getting rich. There's so plenty
3 companies out there that have the technology to go
4 forward, and it's not ten, not hundred, but ten or
5 thousands of our (inaudible) -- that technologies that
6 could put into it. So the function that the only way to
7 do this really quick right now is to talk to hydrogen is
8 wrong, dead wrong.

9 Okay. You don't need to be a build
10 corporation in order to do it either. So we got you've
11 got to basically give more incentive to small business,
12 you got to say that one of things we need to do is give
13 more incentives to small businesses to at any rate and
14 you will get more of people applying for renewable. So
15 that's my comment.

16 MS. BARONAS: Thank you, Mr. Staples.

17 MR. STAPLE: Thank you very much.

18 Ms. BARONAS: Matt, please.

19 MR. MCCLORY: Matt McClory for Toyota.

20 Regarding the timing, I believe it was the August 10th
21 timing. I support the other comment that August 10th- we
22 would support that in order to put together separate
23 responses to your questions that you've mentioned
24 earlier in order to provide sufficient detail, we would
25 support that date to have that.

1 MS. BARONAS: So noted and thank you.

2 Please go ahead. We are trying to break for
3 lunch at noon, and Jim McKinney also has comments.

4 MR. STEPHENS: Shane Stephens from National
5 Fuel Cell Research Center.

6 I know it's a little bit of a difficult time
7 right now with cost hydrogen customers because we can't
8 sell it on a per kilogram basis, et cetera. But is
9 there any way or are you considering a consideration of
10 what the delivered cost of hydrogen to the customers
11 would be as part of the solicitation process?

12 And that might be an important factor or
13 incentive in terms of considering an award to go to.

14 MS. BARONAS: Thank you for your input. We're
15 at this point just seeking input open to. It's in the
16 public record.

17 MR. MCKINNEY: Jim McKinney.

18 MR. ECKHARDT: Steve Eckhardt with Linde. With
19 respect to incentives, it's our opinions that incentives
20 need to be focused on meeting consumers' needs, making
21 sure we get the cars out there. We also have to meet a
22 33 percent standard. Going above that does not meet
23 consumers' needs. It makes us feel better but it
24 doesn't meet consumer needs, and we have a limited
25 amount of money. So I think it's about meeting consumer

1 needs, and I think that's where it should be focused.

2 Thank you.

3 MS. BARONAS: Thank you.

4 MR. MCKINNEY: It's Jim McKinney here. I'm
5 going to go back to how Tobias opened up with this
6 discussion which is that when we created this set of
7 incentives, that was back in 2009/2010 when the world
8 really was quite different than it is now.

9 In looking back over my notes from this
10 discussion, Steve Ellis of Honda saying it would be 18
11 months is really not that fast for construction. Your
12 definition of fast would be quite a bit faster if
13 there is to be an incentive, and the gentleman from
14 Toyota talking about the J-2601 standard, so it seems to
15 me listening to this discussion that some of this -- the
16 things we saw need to create incentives for historically
17 may not be true anymore.

18 Ongoing call for good coverage, so you're
19 open to high advertising maximizing our money for station
20 coverage, kind of more recent calls for O and M funding
21 for stations. I guess I want to be a little provocative
22 here and really put out the question -- do we really
23 need this type of incentive funding? Are we getting a
24 return on what we thought was an investment? Are
25 stations getting built faster today? Do they have

1 higher performance standards than they would otherwise
2 have, can be OEM, and I like this recurring voice of the
3 customer expectation.

4 So it's coming up on lunch time too, but I
5 really am starting to wonder if there are not better
6 uses for some of these incentive fundings, and I'm out
7 here on my own. I have not consulted on my team at all.
8 I think it's a question that needs to be discussed.

9 MS. BARONAS: So the moderator has an interest
10 in the lunch break, but I want to remind everyone
11 there's a docket, and there will be a docket open, and
12 so response to for a while, in response to Jim
13 McKinney's question, I mean that's an open question he's
14 leaving here for you to respond. Okay.

15 So let's adjourn for lunch and come back at
16 1:00 P.M. sharp.

17 Off the record.

18

19 (Lunch recess.)

20

21 MS. BARONAS: So the next item on the agenda is
22 a reviewing of the scoring criteria for future
23 solicitation. And as suggested, the qualifications of
24 the applicant, market transformation and viability,
25 project implementation and readiness, and project budget

1 and cost effectiveness are potential scoring criteria
2 for future solicitation.

3 MR. MCKINNEY: So this last module of the
4 workshop -- again, Jim McKinney, Energy Commission.
5 These are our standard scoring criteria. This is what
6 we pretty much use in all of our solicitations. I think
7 the way we will be talking about these comes from the
8 9/10 solicitation, and we want to make sure we get this
9 right.

10 Again, we got almost 30 million dollars on
11 the table. So we are actively considering revamping
12 some of these substantially, eliminating some, maybe
13 adding some.

14 So, again, we really appreciate the input,
15 the feedback. I know it's after lunch, but we need to
16 hear from you on these things. And what we are going to
17 do is kind of walk through one by one and we will kind
18 of take turns leading the different discussions, but we
19 have a hard job ahead of us after this workshop to
20 really, you know, fine tune these criteria or develop
21 new criterias. If I can get all of the nuisances and
22 desires that we've heard about over the last three
23 workshops.

24 So a lot of great information has come
25 again. We thank you for your future technical

1 information, the marketing information on the
2 seat-of-the-pants expertise, we really appreciate this.
3 We are all learning a lot. This is where the rubber
4 hits the road. All the other stuff is just introduction
5 background. This is where we make the decision which
6 stations get money and which ones don't, so this is
7 really where it counts. And if you guys can kind of
8 gather your intellectual strength for this afternoon, we
9 will have a discussion.

10 MS. BARONAS: Thank you from the Energy
11 Commission.

12 So the staff will discuss the general trend
13 and issue a particular criteria, and we want everyone to
14 feel they can contribute. So Charles Smith.

15 MR. SMITH: Certainly. This is Charles Smith
16 with the California Energy Commission. The first
17 criteria that we wanted to discuss is the qualification
18 of the project applicant, both the individual applicant
19 and then the project team.

20 In general, we want to be able to be
21 confident that the proposed team has the strength and
22 capabilities to perform the tasks that they are
23 outlining in their rest of the their proposal. We're
24 interested in our thoughts on what are these sort of
25 qualifications that we should expect, but then also,

1 what we'll be asking them for all of the criteria, what
2 sorts of waiting do we apply to these criteria. It's
3 just not a matter of how do we define it and how might
4 we be scoring it, but how important is it perhaps in
5 the context of the entire proposal. So I wonder if
6 anyone has any early comments on any of that.

7 MR. SLEIMAN: This is Ghassan Sleiman,
8 Hydrogenics USA.

9 MS. BARONAS: Go ahead.

10 MR. SLEIMAN: I think it should be a go/no go
11 point wherein the applicants qualify or not qualify or
12 the team, not necessarily the applicant, but the team as
13 a whole. I don't see how somebody who can be more
14 qualified as somebody else. You either can do it or you
15 can't do it.

16 MR. BOYD: That is interesting. So you would
17 think maybe something like a -- you would have to
18 demonstrate -- I'm trying to think of something, some
19 objective measurements, so many years of being in the
20 field or something, or have had such and such definitive
21 roles, because if it's going to be a screening criteria,
22 not just a scoring criteria, then it really has to be
23 yes or no very objectively defined. So if you were to
24 objectively define, what would be your -- what would be
25 your guide.

1 MR. SLEIMAN: Definitely past experience as a
2 team, not just the applicant.

3 MS. BARONAS: Right.

4 MR. SLEIMAN: The applicant can have members on
5 their team either so they've had past experience either
6 building a station or OEMs, similar experience in
7 different fields such as CNG, which a lot of them are
8 applicable on hydrogen. But those are a few, but it
9 should be a scoring criteria -- I don't think it should
10 be a scoring criteria. It should be you either qualify
11 or not qualify.

12 MR. SMITH: Okay.

13 MR. SLEIMAN: I think the other scoring
14 criteria are more important.

15 MS. BARONAS: Pardon me. This is Jean,
16 California Energy Commission, Jean Baronas.

17 So Charles used two terms that I think we
18 should talk about. One is the screening criteria, and
19 the second is the scoring criteria. So could you
20 define.

21 MR. SMITH: Yes. So briefly the screening
22 criteria as I'm using them, would theoretically be
23 things like, you know, the project must be located in
24 California, that's a no or a go-no or no-go -- excuse --
25 me -- criteria.

1 Scoring criteria would be past things that
2 are where there's a broader spectrum of possible
3 responses. One hypothetical example would be, station
4 daily capacity would be an example of a scoring
5 criteria, although if you have a minimum daily capacity
6 that would be a screening criteria as well. So a
7 screening criteria I guess would be something that
8 needs to be discreet and objective. Scoring criteria
9 being something that is more fluid. There are more
10 opportunities for possible responses.

11 MS. BARONAS: Thank you, Charles.

12 Would you please describe our processes for
13 screening and scoring in terms of when they occur,
14 either sequence in parallel and/or how long they take so
15 people get an understanding of our process.

16 MR. SMITH: So when a proposal comes in, it
17 gets screened for the basic proposal requirements; you
18 know, do we have assigned copy of the front page, et
19 cetera, et cetera. Then it gets screened for any
20 technical requirements that we may have. And then once
21 those screenings have been done, then we look, we start
22 reviewing the proposals with an intent to score them.

23 MS. BARONAS: So are you saying at the screening
24 stage we can actually eliminate a proposal from being
25 scored?

1 MR. SMITH: Yes.

2 MS. BARONAS: So are you saying that this
3 qualification of that applicants is, in fact, a
4 screening criteria?

5 MR. SLEIMAN: Yes, that's what I am saying. By
6 way of comparing two similar proposals, then maybe you
7 can use the previous, you know, the past experience,
8 maybe the number of fuelings, number of stations, but
9 not as a scoring criteria where now two different
10 criteria, you know, are eliminating a choice.
11 The choice should be based on location, performance,
12 that should weigh really heavy.

13 At the very end should there be, you know,
14 two competing proposals that we can look at, you know,
15 define point of the qualification of the applicant. It
16 shouldn't be all simultaneous.

17 MS. BARONAS: Thank you for that.

18 So Charles, would you comment on our scoring
19 process in terms of the fact that we do not compare
20 between applications. This is getting into the
21 nuisances, but you should probably know this in order to
22 participate in this afternoon's discussion.

23 MR. SMITH: So when we score proposals, we are
24 not looking at them side by side. We're delving into
25 each proposal that we receive on its own. So I think

1 unless we are reviewing all of the proposals'
2 qualifications, the team qualifications, I think it
3 would be tough to use that as an arbitrary only in a few
4 select cases.

5 MS. BARONAS: Thank you.

6 MR. McKINNEY: Jim McKinney here. Just to
7 elaborate in what Charles is talking about. So the
8 state contracting administrative law guides, a lot of
9 our work in this phase proposal review, so we are
10 required to evaluate all proposals against a standard
11 set of metrics or objective criteria.

12 So, again, that's why the words in these
13 paragraphs are so critical, again, the capturing the
14 nuisances and the variances that we've been talking
15 about over the last three workshops.

16 MS. BARONAS: Okay. Thank you. Any more
17 comments on eligibility qualifications on the applicant
18 as a review scoring criteria?

19 MR. McKINNEY: Madam moderator I need to
20 comment on this.

21 MS. BARONAS: Go ahead.

22 MR. McKINNEY: Jim McKinney again. I don't
23 remember if it came from Matt, or somebody in the first
24 workshop, really talked about the role of the station
25 owners as part of the team, and I think traditionally we

1 have not seen that. They have not had a big role. I
2 think that's intriguing and obviously important.

3 So, again, we don't know what that would
4 look like, because we are listening, kind of thinking at
5 the same time here, but that was something in addition
6 to the standard teams yet we have engineers, and we
7 have, you know, Fortune 500 companies, and we have small
8 companies and good marketers, and all that stuff, and we
9 do tend not to think about the station owners in this.
10 So something I put out there as well.

11 MS. BARONAS: Mr. Boyd.

12 MR. BOYD: Bob Boyd. I was wondering if we
13 would, could have a sort of a topic called
14 Community Readiness where we think about the sort of
15 the planned Commission process, the fire department
16 approvals, maybe design review board hearings. I'm
17 thinking about maybe a mail oral support from the
18 community, maybe a fuel cell support owner which that
19 goes in and says hey, I'm part of this community and I
20 want to have a hydrogen station; and, then, you know, is
21 the project a good fit for the property. There has to
22 be some owner interest and some dialogue between
23 stakeholders. And so, you know, I'm looking for
24 stations that can be approved easily that you can fund
25 and get built quickly. And I'm just thinking if

1 Community Readiness is something where we can lump a bunch
2 of things together.

3 MS. BARONAS: Okay. Thank you, Mr. Boyd. It's
4 in the public record, but I want to shift the focus
5 exactly to qualifications of the applicant for now, item
6 A on the scoring --

7 MR. BOYD: Sorry.

8 MS. BARONAS: No, no, it's in the public record
9 and it's in our notes. It's a valid point, a point
10 well-taken. Now we are talking about A, the
11 qualifications of the applicant.

12 So online I know there are two individuals
13 and I think two in the room. Please go ahead,
14 Mr. Staples.

15 MR. STAPLES: Yes. Thank you. Paul Staples of
16 Hygen Industries. I think certainly the qualifications
17 of the paying during the installation, the paying of the
18 manufacturers, and the equipment suppliers, all of that
19 is very critical. The marketing of the (inaudible) have
20 (inaudible) to be people on board that is going to help
21 you with it. That is all pretty much needed. This is
22 all needed very much.

23 How many times has this country actually
24 done some -- an infrastructure changed, not new, but
25 changed from one infrastructure to another? Whether

1 it's controlling paradigm to a renewable to stable
2 hydrogen paradigm or any other situation? There's very
3 few examples to point to where that has occurred. So
4 this is all a learning curve for all of us. So the
5 point is -- which you really want to focus on -- are the
6 equipment suppliers having a product that meets the
7 demand and meets the situation safely and importantly.

8 And the fifth, the inspiration. You have to
9 see it done properly and according to code. Those are
10 the most important things as a cluster. Everything else
11 after that is really going to be market driven, okay.
12 It's going to be more stations; there are going to be
13 more vehicles that are selling based on the station
14 owners and getting people to request it. It's not
15 something -- and there's others who demand it. They are
16 going to do it themselves.

17 Also there's going to be the oil companies
18 have probably done at about the right time, just
19 starting to make money and start doing it. So from that
20 perspective, let's not sit here and say that only those
21 who have base-deduction facilities that have handles,
22 lots of production hydrogen and hundreds of thousand
23 mains and things of cubic feet of it over it and
24 even for them, because they have to market their
25 products to the general public. They have to market it

1 to industry. Different customers, different needs,
2 different qualifiers.

3 And so as long as we keep that open, we keep
4 new business development open and small business to
5 participate, I think we are going to be fine. If we
6 think all one way or another, I can say this right now,
7 as we go 100 percent fossil fuel infrastructure from the
8 beginning, it's going to fail. It's as simple as that.

9 MS. BARONAS: Thank you, Mr. Staples.

10 Are there other online commenters?

11 MR. KICZEK: Yes. This is Ed Kiczek from
12 Air Products. Just on the subject, I think we'd like to
13 mention you ought to consider experienced based beyond
14 just the light duty vehicles, because there are people
15 out there who are commercially selling hydrogen into the
16 market in warehouses, buses, and other applications. I
17 think that that's important proving capabilities.

18 The other thing I think we suggested, the
19 number of fueling advances of barometer. Quite frankly,
20 there are stations that are out there that may only fill
21 very few vehicles. And in number of stations isn't, in
22 our opinion, a true barometer of capabilities.

23 We also suggest that a proven safety record-
24 one of the things that concerns us is that if you have a
25 major incident that negatively impacts and derails the

1 entire effort. So the ability to prove your safety
2 capabilities over some period of time is extremely
3 important.

4 And probably lastly, just really the staying
5 power. I think we all realize that beyond 2015 we may
6 be building 100, 200 stations a year, hopefully if this
7 goes really well, and who has the capabilities, the
8 financial wherewithal and the staying power to continue
9 to stay in this market and develop this market as
10 necessary of the vehicles rollout. Thank you.

11 MR. SLEIMAN: Thank you.

12 So, Charles, I need to define applicant as
13 company or as individual person?

14 MR. SMITH: Well, I guess I was originally
15 thinking of the company. However, we would expect that
16 a company would be comprised of individuals who would
17 perhaps be including their resumes as one option or
18 describing in some other way their experience whether
19 with the company or outside of the company. So we would
20 look at both.

21 MS. BARONAS: Thank you.

22 Other comments and questions?

23 MR. KEROS: Yes. Thanks, Jean. This is Alex
24 with G.M. I would like to tie in exactly with what Bob
25 Boyd said a little bit about the team. I actually don't

1 think Community Readiness is separated from, quote,
2 unquote, "The team," until this instance.

3 I think the Energy Commission ought to be
4 looking at what projects are ready and what traits of
5 those projects within the proposal make you realize that
6 this team is sort of ready to go, obviously, from the
7 applicant all the way down to a local jurisdiction or
8 other folks who are involved.

9 This goes back to a little bit about the
10 CEQA discussion of being prepared. That's part of in my
11 book "The team" to be able to execute the proposal in a
12 timely fashion.

13 I do agree with a key check from your
14 product. You opt not to just look at hydrogen
15 experience. Maybe that's not exactly where that was
16 thinking, but honestly, fueling experience generally
17 speaking, opening up retail stations, there are a lot of
18 different criteria, I think, that a team member can
19 bring to the table to help a proposal get it executed
20 more quickly.

21 In our own experience when we built our
22 station, I can say we purposely looked for those outside
23 of the industry to bring a fresh perspective and a new
24 look at executing.

25 So I think there is going to be a little

1 bit of a balance especially early on due to how new the
2 industry is. I think Paul was right in stating that
3 that there are a lot of newness here. So let's just
4 make sure that we're looking at experience a little more
5 broadly when executing this. And I really do think that
6 team approach, and those traits of (inaudible) age, dates
7 on board is general fire; has some of these readiness
8 activities taken place to be able to help judge if the
9 application in and of itself is sufficient to move
10 forward.

11 MS. BARONAS: Thank you. This is Jean Baronas
12 of California Energy Commission. Reminding me of the
13 June 22 workshop when you gave talk for us, you said
14 this is a team sport.

15 MR. KEROS: Absolutely.

16 MS. BARONAS: Please, go ahead.

17 MR. McCLORY: This is Matt McClory with Toyota,
18 I would like to comment. Regarding the qualification, I
19 think if you're going to get -- the image is that you
20 would have multiple, many stations that in the example
21 of meeting a fuel (inaudible) phase of SAE type A fill.
22 Everyone, I think, would say that they plan to do this
23 requirement. In order to distinguish those types of
24 bitter packages as the qualification metric than looking
25 at demonstrated capability in the field whether it's

1 local or global, I think adds to that justification or
2 rationale for that applicant.

3 In addition to meeting SAE interface
4 standards, it may also be something demonstrated metrics
5 of uptime, station availability; however in, I think,
6 the way you're defining this, perhaps the scoring
7 criteria, rather than an applicant screening criteria.
8 But I think there is probably at this point in time
9 enough station providers to be able to have a database
10 of station availability whether they be for light duty
11 or heavy duty or trail begins (inaudible) application
12 that could go to support that.

13 MS. BARONAS: Okay. Thank you. This is Jean
14 Baronas, California Energy Commission. Right now we are
15 not -- we're just learning and listening. We don't know
16 if this is a scoring criteria or a screening criteria.
17 And Charles will define in terms of the processes, one,
18 the screening comes first, and then the scoring. Okay.

19 Thank you. Any other comments?

20 MR. ACHELNIK: Gerhard Achteplik with the
21 California Air Resources Board. And I guess I have a
22 comment and a question, and I guess one on the
23 qualifications. I think you can do both as I think
24 Charles mentioned, where you would have a minimal
25 criteria and then lower points for experience. You

1 set an absolute minimum but leave it open enough to
2 allow people without the backing of a hundred year old
3 company to support them. So look at both.

4 And then also I guess one question I have on
5 Community Readiness is, I heard the variety of
6 discussion, and it wasn't clear to me, you know, the
7 challenge I see here is if you get multiple proposals
8 from single entity and give them a short time to respond
9 to the PON, that might not be a lot of time to get a
10 bunch of community readiness statements, so my concern
11 is, while I agree there should be (inaudible) that shows
12 maybe something, but be careful about making it not
13 achievable because you're expecting too much in a short
14 time where most of these projects will really be
15 developed once they are awarded; but to the extent, a
16 lot of interactions within, you know, six weeks, if you
17 give them six weeks might be tough to respond because
18 this --

19 If you have -- if you're looking to see a
20 mayor of the city or someone like that it might take six
21 weeks just to get in there, Alex will tell me he did it
22 faster than that.

23 MS. BARONAS: More comments and questions on --

24 MR. ACHELNIK: That is my comment.

25 MR. KEROS: If I may respond, and I certainly

1 respect your comment where you're coming from. This is
2 Alex from G.M.

3 His best proposals are the ones that are
4 being developed ahead of the times, and so I think that
5 type of readiness might show through in a proposal and
6 in planned that the CEC can more properly judge, if you
7 will, versus just a six week timeline. This is
8 something that takes some time to develop the
9 relationships. And those relationships are being
10 developed now ahead of time. I think we should be
11 rewarded those teams for doing that.

12 MS. BARONAS: Thank you. And that builds on
13 the comment. This is Jean Baronas of California Energy
14 Commission. It builds on the comment I made earlier and
15 Ed said he (inaudible) another products (inaudible)
16 engineering drawings are useable, the concepts are
17 reusable, you know. What I was getting at there was
18 exactly this point to be proactive in your research work
19 and in your development work. In your case you're
20 taking about relationship building work when and if
21 there is an PON, you're ready.

22 Thank you. So Charles.

23 MR. SMITH: I just wanted to add, I agree with
24 the emphasizes on Community Readiness. I think it's
25 important. I think we will be going into a little bit

1 more detail about that in the third -- excuse me --
2 possible scoring criteria project implementation
3 readiness.

4 MS. BARONAS: Thank you. And in the interested
5 time, I would like to move on to B, market
6 transformation and viability. So, Toby, can you cover
7 this one please?

8 MR. MUENCH: Yes, certainly. Toby of
9 California Energy Commission.

10 So in these two areas, markets transformation
11 and viability can be summarized in the short statement
12 benefits of transition from petroleum to hydrogen
13 through the deployment of infrastructure that enables
14 the vehicle markets to commercialization, and this is
15 specific to each proposed station. However, I think for
16 better understanding of everybody as a platform for
17 discussion, I would like to read a couple of paragraphs
18 here quickly to show everybody what was included in
19 these commonly used criteria.

20 So from market transformation, describe how a
21 proposed project would provide a measurable transition
22 from a dependent of petroleum fuels to a hydrogen fuel
23 market. Discuss how a post project will drive new
24 technology advancements and promote the deployment of
25 that technology in the marketplace, and how the

1 technology will be an important component of the
2 transportation market in 2020 and 2050.

3 Describe how the proposed project is
4 consistent with California's existing and proposed
5 climate change policies including the updated access.
6 These policies can be found from the links.

7 And then marketability is a slightly
8 different angle. This is a little longer. Allow me to
9 read the Board part. Describe the proposed project will
10 lead to widespread use and consumer acceptance of the
11 technology, describe the niche market addressed by the
12 proposed project, discuss the market population that
13 would be effected by the proposed project, including
14 applicable existing users, existing competition, use
15 throughput geographical need in future demand, provide
16 for each fueling station a description of to an
17 acceptance for each fueling station proposed, so the
18 location component is a generic estimate of the
19 resulting fuel demands from (inaudible) as to the
20 hydrogen, estimate of hydrogen (inaudible) is
21 calculated.

22 This needs to be described in detail
23 with addition to being addressed and agreed upon by
24 (inaudible) in their letters support reached station
25 proposed. Discuss the technical and economical

1 (inaudible) of the proposed project and the steps needed
2 to develop, demonstrate commercialized and/or deploy the
3 technology in the marketplace. Discuss the capital cost
4 input and production cost-end use markets, anticipate a
5 revenue and other relevant factors on how the proposed
6 project will establish the technology and cost
7 competitive option.

8 Please include the project price (inaudible)
9 hydrogen fuel program for the three-year life of this
10 agreement including the amortization of the capital cost
11 expense. The highest performance may be achieved by
12 projects with a lower price cost for dispensed hydrogen
13 fuel. (Inaudible) describe what type of discussion of a
14 planned to be applied. As no hydrogen dispensing
15 equipment is permanently approved for commercial use in
16 California and so on. We all know that.

17 And the proposal must include a proposed
18 retail agreement relation to charge users in the
19 event of no rules and dispensing certification for
20 dispensing and selling hydrogen fuel have not been
21 placed.

22 Describe the business plans of the station
23 operation for three to five years after the
24 infrastructure installation is complete. What is the
25 potential for upgrades, possibilities for commercial

1 distribution, increases in capacity improvement of
2 excess, et cetera.

3 So that's what this is commonly used, for
4 example, in 2009 PON for market transformation and
5 market viability.

6 And I'd like to open it up to comments on
7 what everybody thinks about this approach and about the
8 elements and requirement or elements that we're asked
9 for in these scoring criteria in the past.

10 MR. MCKINNEY: Matt.

11 MR. MIYASATO: Matt from South Coast Air
12 Quality Management District. Just a reaction to the
13 first one on the market transformation.

14 I would imagine the proposal will have very
15 similar text in response to that, so how is that going
16 to be a scoring criteria? It seems like you define the
17 transformation with your solicitation.

18 If someone has a better approach then the
19 other one gets higher points? It doesn't seem like
20 that.

21 MR. MUENCH: I think maybe -- Toby. If we use
22 a similar criteria for solicitation maybe we will make
23 it less research based and more sort of how is
24 this applicable to the proposed station. In other
25 words, how will this specific station given its

1 location, given its capacity, given its specifications,
2 help contribute to events in fuel cell vehicles in the
3 market.

4 MR. MIYASATO: This is Matt again. I think the
5 liability criteria, gets all the locations, business
6 case, retail strategy, all of that, I think is really
7 important. I'm suggesting that with your leadership
8 already established for releasing the PON, your market
9 transformation may already be addressed; you may not
10 need that as a scoring criteria per se.

11 MS. BARONAS: Thank you for that.

12 MR. BROWN: Thank you.

13 MS. BARONAS: Any more comments?

14 MR. MIYASATO: Not for me right now.

15 MS. BARONAS: Thank you. Bill. (Inaudible)

16 MR. BILL: Yeah. If -- when you get these what
17 might be helpful is to say, you know, in the nine PON
18 what percentage of the points overall it was. We
19 understand the importance being put on that, not saying
20 this is where it may or may not go in the current PON,
21 but if I look at quals or transformation understand in
22 the past kind of the importance level it might draw up
23 more discussion.

24 MS. BARONAS: Thank you for that.

25 Please.

1 DR. TIMOTHY: This is Timothy Scott. I have a
2 comment on- I completely agree with Tobias to the idea
3 of market viability, after three years and sort of
4 costing -- I think, it's important to understand,
5 though, that the hydrogen station infrastructure is
6 going to be different than perhaps the liquid natural
7 gas infrastructure which is (inaudible) fleet where
8 metrics like greenhouse gas emissions and poor
9 reduction, probably look better for this type of station
10 rather than hydrogen station initially.

11 It's important to have hydrogen stations in
12 the industry. We've all jumped down a rabbit hole in
13 staying upfront in the marketing ban. It's a huge market
14 where there's stations that will help produce the
15 benefit from one station, and we will all agree, it will
16 be much larger than that one station.

17 MS. BARONAS: Thank you.

18 Ghassan.

19 MR. SLEIMAN: This is Ghassan Sleiman from
20 Hydrogenics USA.

21 MR. BARONAS: Please.

22 MR. SLEIMAN: On the business plan, I would
23 suggest having a standard format that everybody follows
24 as well as when we're pricing the hydrogen, you know, a
25 standard format for the price at uncertain amount of a

1 number of cars being deployed or usage at the station,
2 but the standard mile so everybody is just the same, you
3 know, on the same basis.

4 MS. BARONAS: Thank you for that, Ghassan.
5 Thank you, everyone. I would like to do a time check
6 now. I want to comment that we have presentations from
7 Hydrogenics, and Mr. Staples, a representative of the
8 working group, and Mr. Boyd, and so those will all be
9 presented today on your part of the public record, and
10 they are part of the efforts. And I'd like to move on
11 to the project implantation. One more comment from the
12 previous criteria so --

13 MR. McKINNEY: Jim McKinney here. This is one,
14 again, where we have to incorporate all of this good
15 information on sizing and throughput performance. I
16 think, as we discussed in the previous meeting, we may
17 break out location into a criteria, so we'll have that
18 as a separate item coming up. But this is really the
19 one that I think needs the most careful thought.

20 Again, if we're going to use a bucket
21 approach, if we're going to try some other way to
22 capture some of the nuisances we've been talking about
23 with sizing performance, multiple qualifications; so I
24 know we're asking a lot by asking you to kind of respond
25 on the cuff here in the afternoon, but please give this

1 some thought, put your comments in writing, but get them
2 in the docket for us because this is really a critical
3 one.

4 I think in the question of weight factors, I
5 think either Toby or Charles can run through the weight
6 factors because we got the first four up there on the
7 screen. It really does help to understand how they are
8 allocated.

9 MR. SMITH: So, again, this is just a
10 reflection of the 2009 PON. The categories that we have
11 is scoring criteria may be defined differently, may be
12 weighed differently, maybe there or not there at all in
13 the next solicitation. So, again, for just the 2009
14 PON, qualifications of the applicant and team were up
15 20 percent of the weighed score. The market
16 transformation criteria was at 8 percent. Market
17 viability was 16 percent.

18 Do you want me to keep going through --

19 MS. BARONAS: Yes. Go ahead.

20 MR. SMITH: Okay. And for project
21 implementation and readiness was 20 percent in the 2009
22 scoring criteria. And project budget was 8 percent of
23 the original score in 2009.

24 MR. McKINNEY: Jim McKinney. The last one on
25 project budget, all of our solicitations for the

1 2011/2012 cycle had a 30 percent weighed factor on
2 budget. Again, that was trying to achieve conformity
3 with State contracting manual, but cost effectiveness,
4 budgeting will play a major role going forward.

5 MS. BARONAS: This is Jean Baronas from
6 California Energy Commission. Chuck, can you repeat
7 those numbers because people are commenting they didn't
8 add up.

9 MR. SMITH: No, I didn't finish.

10 MS. BARONAS: There's more.

11 MR. SMITH: There's additional criteria that
12 are on the next slide.

13 MS. BARONAS: Shall we move to the slide
14 please.

15 MR. SMITH: Economic benefits in the 2009
16 solicitation constituted 16 percent, 8 percent of the
17 total possible score, and the sustainability criteria
18 constituted 20 percent of the overall score. So I hope
19 that all adds up to 100.

20 MS. BARONAS: So just building on Charles's
21 points on the percentage and the difference therein, can
22 we start a discussion about that? We talked a little
23 bit about the team. We talked a little bit of market
24 transformation and liability.

25 Please go ahead, Gerhard.

1 MR. ACHTELIK: Gerhard Achtelik with the
2 California Air Resources Board. I might not have followed
3 all the scoring criteria. So one comment for me is just
4 seems like viability, which is the parameter that
5 evaluates the station seems really low in scoring. If
6 you look at -- if I understood it right, there's only
7 16 percent that gives you a score on how the station
8 performs. And I guess, you know, 84 percent on
9 everything else, which seems out of proportion to me, on
10 initial reaction. That's a quick reaction.

11 MS. BARONAS: Thank you for that.

12 MR. KEROS: Alex with G.M. I actually tend to
13 agree with Gerhard on this one. It seemed interestingly
14 low. And maybe one thought Tobias as you were reading
15 the multiple market viabilities, there is a lot of heat
16 in that discussion. Jim pointed out maybe trying to
17 simplify it in sort of perception on trying out maybe a
18 standard form, might be helpful.

19 I can see that being very difficult to try
20 to distinguish between one or the other versus all those
21 criterion and market viability. You confused me when
22 you were reading it.

23 MS. BARONAS: Please go ahead. Matt.

24 MR. MIYASATO: Charles, can you describe, I
25 guess, the sustainability that 20 percent of the

1 previous score?

2 MR. SMITH: Charles. Okay. Well, I will tell
3 you what we can --

4 MR. MIYASATO: Is that coming up later.

5 MR. SMITH: Maybe we can come back to that when
6 we get back to this line. Maybe after economic
7 benefits, when we get to other scoring criteria and
8 discuss it.

9 MS. BARONAS: So in the interest of time and
10 structure, I just want to remind you there are other
11 scoring criteria that go down, define, discuss, and then
12 we get to the whole question that Jim McKinney brought
13 up which is the bigger picture of all the criteria and
14 how they can fit together systematically. Then we also
15 got presentations this afternoon.

16 So how do people feel we should progress?
17 We got two more hours. Any suggestions? Any ideas in
18 how to progress? What's important to you?

19 Gerhard.

20 MR. ACHELNIK: Gerhard Achtnik from California
21 Air Resources Board. The question that I have will allow
22 me to think about the answer to your question, is there
23 any possibility that after you guys have assembled all
24 of this information, you actually come back with another
25 workshop or presentation that gives us your first cut on

1 how you think the scoring should be laid out and even
2 that can, you know, might change my answer here, I
3 guess.

4 MR. MCKINNEY: Jim McKinnney. This is
5 something we're discussing internally we have to get
6 legal clearance for it, but we actually have built this
7 into our workshop schedule. We just haven't talked
8 about it yet. I think it might be appropriate and if
9 there's other stakeholders feel so notably now is a good
10 time to voice that view.

11 MR. McCLORY: Matt McClory for Toyota. I agree
12 with Gerhard's comments. We would look forward to
13 being -- see the feedback from all the stakeholders
14 provided by the timeframe and kind of see what the
15 reflection is from that, and they maybe have an
16 opportunity to comment or provide feedback in some
17 manner at that point in time prior to going forward with
18 formal soliciting.

19 MS. BARONAS: So let me see if I'm
20 understanding this. Was the comment that you're
21 interested in, you're seeing how the public, all of you
22 and everyone else, responds with contributions by
23 August 10th timeframe, and then you also want to see
24 some other process following that; is that correct?

25 MR. McCLORY: I'm sorry, let me clarify if I

1 misspoke. It would be interesting to see the process
2 kind of response from the CEC what the approach may be,
3 would be as going forward based on those comments, and
4 we have an opportunity to comment on that detailed
5 approach at that point; at that time we would open up
6 that opportunity.

7 MS. BARONAS: And are you envisioning that
8 would be after the August 10th deadline?

9 McCLORY: I think that is the thought. If
10 August 10th is the deadline for the questions that are
11 established in this meeting, then we'd go feedback and
12 review those and then figure out how to incorporate
13 those or footnote those in your response, but I'm not so
14 concerned about the date, just about the process. So
15 there should be sort of a process to comment and then we
16 get to see what your actual plan for your proposals for
17 the solicitation is and we can comment on that or review
18 that. That would be --

19 MS. BARONAS: Let me remind everyone, we are
20 working with a tight deadline so we are by this day we
21 will do this, by this day we will do this, otherwise we
22 run up against an encumbrance timeline. So that's why
23 we have this kind of structure milestone agent approach
24 and that's why we need flexibility this morning. I want
25 to say sure, we'd love to get as much flexibility as we

1 can. We have a timeline. We have a date. We have a
2 series of dates we have to meet.

3 MR. MIYASATO: So I guess in response to that,
4 we would be, I would be welcome to see a process by
5 which we can provide comment, see the response, and then
6 provide some final comment prior to going back. So I'm
7 open to seeing what the proposed dates would be for
8 that. So it's just a process of the steps.

9 MS. BARONAS: Okay. So one approach would be
10 build up -- the gentleman sitting in the podium stated
11 earlier, make July the first deadline for public comment
12 and then make August 10th period deadline to review, to
13 get the commission time to review the public comments
14 and then show potential scoring criteria. That could
15 that be one approach possibly.

16 MR. McKINNEY: Jim McKinney here. Yeah, I
17 think what you're getting at is really like some more
18 confirmation of the process going forward here as
19 opposed to a specific page, but that makes sense to me.
20 So I would suggest later on to pin ourselves down to
21 specific dates and see how the rest of the conversations
22 this afternoon plays out.

23 MS. BARONAS: Okay. Thank you for that. And
24 please go ahead.

25 MR. PROVENZANO: A quick comment. James

1 Provenazano, a concerned citizen, resident of
2 California, and a current customer of driving a fuel
3 cell vehicle. I think I agree with what the Resources
4 Board and General Motors have done. What's important to
5 the customer is the reliability of the stations. I pull
6 in, the pumps got to work. And so I don't know how you
7 can score that in the meantime between failures, you
8 know, engineering criteria, you know, the past viability
9 of the compressor, hydrogen fuel -- compressor or
10 what's there or the chemical part of it. So whatever
11 the proposer can do to quantify the reliability of the
12 equipment, they are putting in a past performance of the
13 equipment they've used, that would be helpful especially
14 to the customer. Thank you.

15 MS. BARONAS: Thank you for that. I want to
16 rein everyone in and shift the focus to the agenda.
17 We're still market transformation and viability. We're
18 thinking within the context of the entire set of
19 criteria now. Is that everyone's understanding where we
20 are?

21 Okay. So are we satisfied that we discussed
22 market transformation and viability to the extent that
23 people understand what it means? So I'm seeing yes, I'm
24 seeing heads nodding yes and I'm hearing yes, so is it
25 okay if we move on the project implementation and

1 readiness? I sense we might want to go back to market
2 transformation and viability when we are done with
3 what's up here because it seems like one of the larger
4 areas.

5 MR. MCKINNEY: Jim McKinney again. So, again,
6 some of this language is a little bit -- actually it's
7 so personable. So project implementation and readiness,
8 so what we used in '09-'10, describe how the proposed
9 project will be completed and effective in an efficient
10 manner, clearly and logically discuss schedules
11 sequencing tasks, objectives of the proposed project, if
12 applicable, describe how the proposed projects are used
13 towards infrastructure to maximize the outcome.
14 Describe the specific project planned for CEQA
15 compliance including identification of lead agency and
16 related timelines.

17 The plan should fully describe any permit
18 that would be required and schedule for pertaining all
19 necessary permits. Discuss financing and contractual
20 relationships, complete and operate a proposed project
21 and confirmed status of the discussions. Describe
22 content of the plan, implement a three-year data
23 (inaudible) upon completion of the proposed project.
24 And project readiness was not something we talked about
25 in '09-'10, but we have talked about it a lot. And,

1 again, some of that language actually holds up quite
2 well. So we have individual project readiness so really
3 your ability to have a jump start on the permitting,
4 CEQA discussions, all of that we talked about this
5 morning.

6 Jean, I think this is maybe a good place to
7 stand on this community readiness concept that has been
8 put forth. I think that's pretty intriguing. So
9 that's, I mean, Charles already read out the winning
10 factor for this one. So we can open up that up for
11 discussion.

12 MS. BARONAS: Yes, go ahead.

13 MR. BROWN: This is Tim Brown from UCI. I see
14 this project completion with written qualifications
15 for the applicant criteria both following
16 under where they likely would go to projects of
17 successful category. That's the one I'm trying to get
18 at. I just want to make that observation. I see both
19 of these moving towards the same goal. And I see that's
20 the critical in scoring criteria posed to fleet
21 screening, (inaudible).

22 MS. BARONAS: Thank you for that. Any other
23 comments? Okay. So hearing none, I recommend we talk
24 about budget and economic benefits, any other criteria
25 and then hear some of the presentations if we have time,

1 and then I recommend we return back to the bigger
2 picture, which Jim McKinney brought up earlier, which is
3 the distribution of the percentages and eventual, I
4 guess you could call it waiting source and eventually
5 waiting and we'll go back to that. Is that okay for an
6 approach?

7 And then I want to add to that process
8 again. I think we still need to talk about how to
9 correct within certain milestones -- I'm sorry -- for
10 milestones. We don't want to date centric generic, but
11 we do have a deadline that's why we're talking about.

12 Moving onto project budget and cost
13 effectiveness. There's been a lot of comments in
14 previous workshops. Charles, can you explain this one?

15 MR. SMITH: Okay. Project budget is something
16 that has been evolving in our approach. As Jim mentioned,
17 project budget is a criteria that in our new
18 solicitations throughout the program is representing a
19 higher share of the scoring weight, and so it's
20 important that we get it right.

21 What we're looking for on part of project
22 budget is how efficient is this project in completing
23 the stated tasks for the requested amount of funding.
24 And so we're trying to design it in a way it doesn't
25 automatically favor the cheapest station regardless of

1 the -- regardless of that stations's specifications. We
2 want project budget to be able to provide a score that
3 is reflective not just of the cost but the value of that
4 station. And that can be a tricky exercise at times,
5 but so we'd like to get any feedback you might have on
6 how you feel we should apply this important criteria to
7 our scoring.

8 MS. BARONAS: So what was the percentage for
9 this in the '09?

10 MR. SMITH: In the '09 solicitation, this
11 represented 8 percent of the overall scoring criteria.
12 However, as I mentioned, it is more of our more recent
13 solicitations. It has represented a higher portion of
14 the scoring.

15 MS. BARONAS: As 30 percent.

16 MR. SMITH: Yes.

17 MS. BARONAS: Okay. So the discussion point is
18 30 percent budget a reasonable percentage and then
19 building on Charles stated this is about how sufficient
20 is this budget to actually complete the task they are
21 listed in the statement of work.

22 Please go ahead.

23 MR. ELLIS: Steve Ellis for American Honda.
24 This is more a commentary question for a scientist.
25 When I hear this, my nervousness is that we're right now

1 in this period of extreme immaturity with this
2 technology. And when I hear these type of criteria put
3 out there, I can envision that working in a very mature
4 procurement process of, you know, the using budgets,
5 right, that you have a supplier base that's very mature
6 from it, that's very mature, and my fear is that any
7 group, any single one of these criteria can skew to a
8 fault, the wrong direction.

9 So I wanted to provide that thought because
10 I often within our own company, and myself working with
11 others have to keep reminding that it's pioneering work.
12 It's very premature from the normal processes that we've
13 been accustomed to often don't apply. So I think
14 finding a way to give some incentives of what is good,
15 but I get nervous, I started to say it's more
16 commentary.

17 MS. BARONAS: So this is the moderator Jean
18 Baronas, Energy Commission, wants you to please layout
19 some criteria where this technology is in development
20 cycles, or this development cycles, what are some
21 realistic -- what are some that you like, what are some
22 of the forms of structure that would provide fairness
23 and realistic investment direction?

24 MR. ELLIS: Steve Ellis. The word that causes
25 my conservation is just like that (inaudible).

1 Sufficiency applied to the operations is a great thing
2 to aspire to and use as a metric at this early stage. I
3 would just say more challenging, so I think through that
4 and since there's an open docket, if I can give any
5 input.

6 MS. BARONAS: Okay.

7 MR. ELLIS: I will do that.

8 MS. BARONAS: Thank you. I would also like to
9 add some discussion here because the docket is kind of a
10 static approach. We're here in person.

11 Please go ahead.

12 MR. McCLORY: This is Matt McClory from Toyota.
13 I think from a scoring criteria on profit budget, I
14 think my perspective is not on individual station level
15 but on the number of stations that could be funded by
16 that cycle to meet the overall goal of the 60 stations
17 by the beginning of 2016. And so I think it's going to
18 be an interim process to understand what are the sense
19 screened and typical bidder that have gone through the
20 first part of the process selection or evaluation, and
21 then reviewing those as far as a network in that region,
22 as far as how many stations could be deployed as part of
23 that order rather than on a per station specific project
24 of that one station, because we are looking at, you
25 know, from an OEM products as number of customers that

1 could get vehicles within the State of California, and
2 so the only thing that's going to be drawn in a higher
3 fuel cell vehicles is going to be a higher level of
4 investment in the infrastructure.

5 MS. BARONAS: This is Jean from the California
6 Energy Commission. So I understood and so noted, but
7 the point here is the budget of the application, is the
8 budget of the application. Well, thought through to the
9 extent that the tasks will be carried out, that's what
10 we're looking at here. So we're looking at an
11 individual application scoring criteria. Please.

12 MR. MIYASATO: Matt from the South Coast.

13 And that goes back to the comment I made at the
14 previous workshop. How does the staff make that
15 determination? So is that based on previous proposals?
16 I mean, do you have an expertise to judge whether
17 budgets is reflective of realty. How do you go about
18 making that score?

19 MR. KEROS: Alex with G.M. Can I jump in?
20 This is Alex with G.M.? Maybe sufficient is often a
21 nebulous word, so is there an example, Charles, that you
22 might give that shows maybe something being more or less
23 sufficient or insufficient or sufficient? I mean, this
24 criteria seems awkward for us to comment on because a
25 project budget should be a project budget, right. So

1 what are the -- I mean, give us an idea of what kind of
2 criteria or metrics that you might be looking at to, you
3 know -- go ahead. Sorry.

4 MR. SMITH: I think part of it is based on our
5 knowledge of both previously completed solicitations at
6 this point and existing technology, existing
7 installation that have been done. That helps us get an
8 idea for, you know, what should we expect to pay a
9 logical cost to be. If it's a 200-kilogram per day
10 on-site SMR station, et cetera, et cetera.

11 So there's that, but then additionally, we
12 also just look at how clearly laid out is the budget
13 itself. Cities to follow the, you know, cities to trace
14 the cost of each piece of itemized equipment, and that
15 gives us an idea not just of the cost effectiveness of
16 the project but also how well thought out is the
17 proposal.

18 MR. McKINNEY: Jim McKinney here. To add to
19 that, so one of the things that we've looked at say
20 traditionally, you know, does the allocation say between
21 engineering cost procurement, installation construction,
22 you know, operations testing, are those logical? Is
23 there something that's been eschewed and out of whack?
24 Do the budget numbers track with the task descriptions?
25 So that's the essence of what we look for historically

1 with budget.

2 And I think what we're trying to do here
3 when we talk about cost, cost effectiveness, again, say
4 that the '09-'10 solicitation, we deliberately set it up
5 so we focused on throughput. So we tend to award those
6 stations with the highest group of capacity. Again,
7 that was the stakeholders, the partnerships, the
8 automakers, that seemed to be what the system needed.
9 So now we're talking about something a little bit
10 different. Some suite of station of different sizing,
11 the functions, so we need to be able to go after that in
12 this one.

13 So I think the cost effectiveness criteria
14 are really important. You know, is it, you know,
15 dollars per total capacity, per dollars per kilogram,
16 dollars per something else. So I think we had a
17 discussion about this at the previous workshop last
18 fall. This is really important and is a tricky one to
19 us. I know Jean is really encouraging us to be
20 thoughtful here.

21 If you need more time, you can put it in
22 writing. That's appropriate. And I guess personally
23 appreciate what both Steve and Matt had said about the
24 cost effectiveness and the state of relative maturity of
25 industry, but that concerns me as well.

1 MR. KEROS: Alex from G.M. again. Now I'm
2 starting to get where you're going, I apologize. You
3 know, to go along with my fellow OEMs here, and there is
4 a danger by just saying dollar per kilogram installed
5 capacity is the metric. Right. We lost the ability to
6 highlight some of those performance characteristics that
7 we've been talking about earlier. So I think it's maybe
8 this is one of them and that we looked to a minimum
9 value on one level and reward, you know, when you're
10 scoring a proposal, you're going to have a balance --
11 hey, I'm getting shiny new tires, chrome on the bumpers,
12 you know, a nice paint job, and it's worth it to us, and
13 I think what we're saying today is some of those
14 performance characteristics are valuable, so they would
15 count against the project budget, but the performance,
16 something we don't want to give up especially early on
17 for the sake of a budget.

18 MS. BARONAS: So are there any other comments?

19 MR. MUENCH: Toby. Let me -- with you throw
20 one more thing out not mentioned yet-- in the 2009
21 PON we looked at was in this budget, budget criteria,
22 was cost efficiencies in terms of greenhouse gas
23 reduction of petroleum which is some of core role that
24 maybe one of your team. So any comments on that?

25 MR. ELLIS: Sure. This is Steve. I think it's
152

1 been said numerous times. I will be very succinct
2 regardless of the (inaudible) I think the goal, the CEC
3 goals on the energy side, it's not the greenhouse
4 reduction. We care about the purpose, if you will.

5 MS. BARONAS: Thank you.

6 Matt.

7 MR. McCLORY: Just to follow-up on my previous
8 comment. I really encourage the Energy Commission --
9 and if you're able to take advantage of expertise that's
10 around the table, and even with your sister governmental
11 agencies, I think ARB, the air district folks like the
12 national energy lab, Department of Energy, and they
13 scored multiple, multiple stations and, you know, put
14 the offer on the table again. We're more than willing
15 to help in scoring those, but it also helps out the ARB
16 (inaudible) and the initial involvement because its pace
17 (inaudible) it will be very interesting.

18 MS. BARONAS: Thank you for that, Matt.

19 So I'd like to move us along in the
20 interest of time. And so as mentioned earlier, we have
21 presentations related to some of the project readiness
22 issues we've talked about, and I understand we're
23 skipping around the agenda a little bit, but just let's
24 try. Okay.

25 So we have a person on the phone who chairs

1 the SAE working group on the standards under development
2 and some individual sent us a presentation.

3 MR. SCHNEIDER: Hello.

4 MS. BARONAS: Yes, hello. This is Jean
5 Baronas.

6 MR. SCHNEIDER: This is Jeff D. Schneider. Can
7 you hear me?

8 MS. BARONAS: Yes, we can. I just want to set
9 some context for your presentation.

10 MR. SCHNEIDER: Okay. I will wait.

11 MS. BARONAS: We're talking about scoring
12 criteria now and quite a few people have input, and so
13 we have an open docket, we will talk more when you're
14 finished. You're welcome to stay with us. Let's please
15 make your comments brief about the status of the SAE?
16 Standards activity. Thank you.

17 MR. SCHNEIDER: Okay. When you say brief, just
18 give me a timeframe I can put within that.

19 MS. BARONAS: So between 8 and 10 minutes.

20 MR. SCHNEIDER: Okay. That's not a problem.
21 Are you going to put my slides or should I do it from the
22 slide screen?

23 MS. BARONAS: Everyone can see your slides.

24 MR. SCHNEIDER: Okay. Hold on a second. For
25 some reason, I'm not seeing my screen. So hold on.

1 Okay. Are you controlling it or am I controlling it?

2 MS. BARONAS: We're controlling it, so go ahead
3 and speak and we'll --

4 MR. SCHNEIDER: I am going to give an overview
5 of the J-2601 hydrogen fueling protocol. I actually
6 worked at BMW. I also chaired. I'm calling in as the
7 role of the chair of fuel cell efficient emission 15
8 which is a standard committee for fuel cell vehicles
9 which covers the high quality hydrogen nozzle,
10 et cetera. And I also chair the J-2601 and I've been
11 doing so for some time, but this is actually a rare
12 representation of where we're at.

13 And one thing I would like to mention in
14 the beginning is, as I remember, is that mandate
15 referenced a long time ago having -- was it 100 percent
16 in 10 minutes, and since stuff actually does provide for
17 that within hydrogen fueling. So I'm just going to keep
18 it within the 8 to 10 minutes and tell you what 2106 is.

19 It's currently a guideline, a textbook
20 information report or we're actually looking at a fuel
21 data now, and we're planning to do a standard byline
22 draft this year and next year a public,
23 because there's infrastructure not only in the United
24 States but also in Japan and Germany and Europe, which
25 are using this stuff today. So it's truly an

1 introduction standard that's going to be used for the
2 future of fueling protocols. And there's also data --
3 I'm not going to go into those details.

4 So if we can go on to the next slide just
5 very quickly, just a little bit of the theory of the
6 objective, the protocol is to fuel as close as possible
7 to 20 percent (inaudible) seeing no overheating.
8 Overheating, you don't want to go above 85 Cs, and you
9 don't want to over pressure above 25 percent of
10 non-working pressure for 70 mega type gallons of C6
11 (inaudible) combined.

12 What I want to mention just because of the
13 temperature pressure colorization, the black line is
14 what we call a line constant destiny. Any
15 temperature -- sorry -- anything along that black line
16 is actually 100 percent, meaning that if you do a
17 fueling with the ending temperature of 15 degrees let
18 soak overnight, it will equalize to set mega-type scale.
19 If you have gone up to this 100 percent fueling with
20 regards to this 85 C limit, 87.5, it will send it down
21 (inaudible) 70 mega gallon. That's really 100 percent.

22 So we go to the next slide, we're telling
23 you just what 2601 is. 2601 started in succession of
24 the things from the state of California, fuel cell
25 partnership. It was actually in 2002 OEM read a

1 document that was also used for fueling stations. In
2 2007 those documents with the mega pact (inaudible)
3 coupling and infrared data, a document, and that's out
4 there today, but the infrared data portion is actually
5 going to be rolled into the standard 2719B canceled.

6 2010, the guideline was released, and
7 there's currently, I think, about ten stations worldwide
8 which currently have this 2601 documents in their --
9 used in this -- in the fueling protocol. What we
10 realize from the field, there's a few things that need
11 to be corrected before study guides, that's why we're
12 taking the extra year.

13 So let's go forward and just mention,
14 there's been discussions on our part, I wanted to
15 mention this: There have been prior art, an existing
16 hydrogen fueling with communications and density
17 targeted fueling, for example. This is documented in
18 NHA paper. It's a five by eleven from industry members
19 from -- that are around the table, and I'd just like to
20 mention that I know that Frank Lynch had done a lot of
21 work at that time with J. Ward, Steve Mathison, a lot of
22 people, like I said, you know in California also put
23 that into the documentation.

24 And I just like to mention that the
25 table-based approach using J-2601, the lookup tables, as

1 the pressure -- you would start the fueling as set
2 target pressure with -- for non and with communication
3 is not patentable. Actually the -- the actual table
4 itself basically tells you which pressure to stop at and
5 it would actually be published first, J-2106. It's not
6 something that can be put into a document.

7 If we can move to next slide. I just like
8 to mention the acknowledgement of colleagues. I chair
9 with the light duty documents of this standardized
10 chair; the heavy duty document is lead by Niko Bouwkamp
11 partnership which is going to be a guideline next year.
12 Bob Boyd, J-2601 which is also going to be the guideline
13 next year; the effective guideline first standard labor.

14 If you can move on. Okay. I just want to
15 cover a few points, and then I think that will hopefully
16 help your discussion on targets. Move forward if you
17 can.

18 We already mentioned this. One thing that's
19 important to understand is that you will achieve 3-to-5
20 minute ramp rate Type A station with a 90 to 100 percent
21 (inaudible) consistently. In the Type B station, I will
22 show you the exact numbers in a minute, but it's really
23 towards a 15-minute fueling time, Type B station. I'm
24 just talking about mega gallon. You do not have to have
25 communication on the vehicle, which requires station --

1 basically gives you 10 percent better of fuel on the
2 vehicle. And so it's basically-- there is a slight
3 advantage to having communication, and you have to, you
4 know, part of the -- part of what you have to have in
5 order to make this fast fueling possible is to have
6 pre-cooling hydrogen down to minus 40 C for a Type A
7 station.

8 And the objective is, in order to offset the
9 heat of cooling -- the heat of compression of that
10 (inaudible) hydrogen delivery rate is also specified and
11 also fueled intimidation also needed.

12 Could you go to the next slide? This is
13 created by -- it took eight years to make, created by
14 Math Modeling, confirmed by real OEM systems testing.
15 So the actual automakers put their heart into the
16 laboratory, validated it, replacing the (inaudible)
17 inspect within targets communication -- sorry -- to
18 define safety limits over targets, table-base approach,
19 and you all know what a hydrogen vehicle to say gives
20 you three to five mile range in three minutes which
21 something that no one has ever done. And with the
22 Type A dispenser less than 10 kilograms. If you could
23 go to the (inaudible) kilograms, those will be
24 available.

25 You can go to the next slide. I just

1 want to mention the current guidelines today, there is a
2 type of dispenser actually standing into a line of 30
3 (inaudible) category; sensibly the colder that you have
4 the pre-cooling factor you can fill, the faster you can
5 fill to offset the heating compression. So it's also
6 probably the most costly, but that's why we have these
7 ratings, this Type A minus 40, Type B minus 20, C zero,
8 and D no pre-cooling, that's only for 35 mega pack
9 scale. If you don't have pre-cooling for 70 mega pack
10 scale, you could expect to wait over an hour for
11 fueling, which is the reason why there is also going to
12 be pre-cooling for 70 mega pack scale. And like I said,
13 this would be minus 30 category.

14 Moving on, we can go to the next slide.
15 This is just the table-base approach that I mentioned
16 before. And if you have an A that type station we
17 mentioned 3 minutes with a 90 to 98 percent
18 communication, and Type B is 15 minutes with 90 to
19 98 percent plus communication. Okay. This is just
20 acknowledging CSA 4.3. Basically its targets are
21 defined to assist in J-2601. The states limits are
22 defined as well for communications not non-communication,
23 and it was always meant to be validated by a past device
24 which is shown as actually something historical,
25 developed by fuel cell partnership station apparatus but

1 CSA is working on a device itself which you've probably
2 heard. It is called a hydro dispenser apparatus
3 (phonetic), and that is also having a procedure. And
4 that's -- procedure published yet for apparatus crossed
5 list same process (inaudible).

6 Okay. I think I will just go through one or
7 two slides and then hand it back over to you. Let's
8 see, we don't need to look at that heavy duty thing.
9 This is just practice, extra slide; keep going.

10 I just want to mention that the light duty
11 experience has been safe fueling. This has what's
12 already been published within the field. No overheating
13 with correct tables. Communications fueling is very
14 robust and repeatable. Good performance with proper
15 pre-cooling. Worldwide acceptance of guideline.
16 There's room for improvement with the pre-cooling issue
17 with a cool-down window for 15 seconds.

18 Effectively in the document it says that the
19 pre-cooling needs to get to temperature minus 40 to
20 minus 33 within 15 seconds. It was found that it was
21 not possible in all conditions, so it's probably going
22 to be doubled 30 seconds as to the fueling time. This
23 issue is going to toughen the ramp range that will be
24 opened up to the pressure corridor in this draft. And
25 the concerns were too strict for potential drift of all

1 charges (inaudible) stay endurance, and these things
2 that were mentioned before was difficult to meet all of
3 the requirements so we're adjusting to toughness so it
4 can be met in the real world. That's all we are saying
5 here.

6 You can go to the next slide. I also want
7 to mention here J-2601 today is going to be updated, as
8 I mentioned before with realistic tolerance and sensor
9 locations. New pre-cooling categories, updated
10 validated tables, pretty much this is for relaxing the
11 tolerances, the hardware, the rigs, the donut around the
12 nozzle, you see above which is actually an IrDA receiver,
13 the sensor is on the vehicle.

14 The hardware specification and the
15 communication specification is going to be J-2601, and
16 an optional alternative fueling is going to be
17 investigated right now. It could take -- Honda has
18 what's called DMAC method that's currently been approved
19 by the team being investigated, and G.M. is proposing
20 what's called a variable bond of cooling ramp rate.
21 Most of these have the potential of having lower cooling
22 energy required for the station. We hope we can get it
23 done before the standard -- it's not been done validated
24 yet. So the tables will be in the future standard but
25 the alternative method needs to be confirmed. I should

1 mention it's a very international effort. Clean Air
2 Partnership, Linde has been involved. Hi2 from Japan is
3 involved. We have members of the Charles (inaudible)
4 part diesel Fuel Cell Partnership, and other members
5 probably sitting around the table. And the objective is
6 to really help what you're doing in California, to
7 help the initial phase of the commercialization build.
8 So I think that was a really quick version, and there
9 are questions we can go into detail. Is that something
10 you're asking for?

11 MS. BARONAS: Yes. Thank you, Jesse.
12 We will forego questions at this time, in the interest
13 of time, your PowerPoint is part of the public record
14 and available to everyone. Thank you so much for your
15 compressing your work and for calling in at such an odd
16 hour for you. I really appreciate the overseas call, so
17 please stay on.

18 MR. SCHNEIDER: Okay.

19 MS. BARONAS: Thank you. And so this is
20 something to think about. We alluded to this in the
21 morning. We alluded to it in the previous two
22 workshops. Please keep it within context of possible
23 mechanism for the upcoming solicitation.

24 Moving on, let's go back to scoring
25 criteria. So in order to continue on the agenda, give

1 some structure to scoring criteria. Let's review what's
2 been discussed. We discussed A through D. Okay. I
3 think we drilled down a little bit in budget.
4 Personally, I am not comfortable with -- we drilled down
5 in B, which is the market transformation viability. We
6 have time to go back so we will go back.

7 So economic benefits, Item E. So could
8 someone please read from text that describes this?

9 MR. MUENCH: This is Tobias Muench, California
10 Energy Commission. This has what's been used in the
11 2009 PON for the economic benefit criterion. It says
12 describe macro and micro economics benefits of the
13 proposed project, describe how projects -- the proposed
14 projects will expand different opportunities for or lead
15 to the creation of California based technology firms,
16 jobs and businesses.

17 Identify how many and what type of jobs will
18 be created and retained by the proposed project, and if
19 those jobs are permanent or temporary.

20 Describe the local and state taxes that will
21 be generated by the proposed project. Discuss how the
22 project will financially benefit end users.

23 MS. BARONAS: Thank you for that Toby.

24 In the past 16 percent of the total score
25 has been based on-

1 -Mr. Boyd.

2 MR. BOYD: This is Bob Boyd with Boyd Hydrogen.
3 I thought we were going to have a discussion on 2601 and
4 how it can be incorporated into the PON. We have
5 originally scheduled it for early this morning to talk
6 about it, and now we've had a presentation from Jesse
7 who is the Chair of J-2601, and I wonder if it would be
8 meaningful to make some of my comments about 2601 and
9 have a bit of a discussion on 2601, and then we can --
10 while we've got Jesse on the phone.

11 MS. BARONAS: Any opposed to this approach?
12 Hearing none -- Mr. Boyd, is this your presentation that
13 you mailed us?

14 MR. BOYD: Yes.

15 MS. BARONAS: Would it help if we pulled it up?

16 MR. BOYD: It would be helpful.

17 MS. BARONAS: Okay. Would someone please help
18 to pull up the file.

19 MR. BOYD: I will just go through my
20 presentation. If you just move to slide 4 slowly. Go
21 back.

22 I've been involved with hydrogen at SAE
23 since 2002. First four things are all for fuel quality,
24 and we have consistency in fuel quality across SAE ISO,
25 and this document CJ document, and the State's standard.

1 Just move. We don't have much time here.

2 The current status we heard from Jesse, it
3 was published as TIR. It incorporates a table-base
4 approach to non-fueling and also gives some advantages
5 to communications fueling.

6 So as Jesse mentioned, it's included, you
7 get H 70 fueling at minus 40 minus 20, and Toyota has
8 brought up the minus 40 is sort of the preferred cooling
9 temperature, and that's what called a 2601 A station.

10 As mentioned by Jesse, there is going to be
11 new work done on a minus 30 degree cooling bracket, and
12 so we anticipate shortly that we will be able to have
13 2601 stations that have a little bit more flexibility.

14 Let's go on to the next slide. I put this
15 together just for the committee to give a bit of an idea
16 of how this all got together.

17 And at the top of the flow sheet, you've got
18 these two previous documents; the fuel sub protocols
19 from the California Fuel Cell Partnership, which is a
20 communication base protocol and then non-com that came
21 from the OEM release A that was published in 2007. It
22 went into sort of the first triangle box, diamond box at
23 the top, and then at the bottom of that is J-2601 -
24 2010.

25 Off to the left is what's called the CFD

1 modeling team. That's the SAE 2601 modelers that are
2 all modeling the fueling protocol. The tables were all
3 generated by the model and confirmed by actual physical
4 testing.

5 Off to the right-hand side of that, you get
6 a blue diamond, is the CSA issued 4.3 work group which is
7 very close to the SA interface working group. And
8 then out of the bottom of that diamond is the HDTA 4.3
9 document that was published in 2012. Now, the box in
10 the middle is the HDTA, that's Hydrogen Dispensing Test
11 Apparatus. We really need HDTA to be able to test to
12 4.3. We need 4.3 to test, to verify 2601 compliance.
13 So all these things kind of fit together in an intended
14 way. The dotted lines on the bottom half of that
15 flowchart are all what will happen next after we get
16 back some data from the HGTA, although I think as a
17 working group we'll be able to get out a new version of
18 2601 in 2013.

19 If we can just go to the next slide real
20 quick. So what is hydrogen dispensary certification
21 with 4.3 look like. Well, it's compliance with the
22 intent of 2601. So there's hydrogen pre-cooling limits
23 and fast-fill targets. And if you say A station, then
24 you're going to get an A station which is going to be in
25 that 1- to 3- kilogram per minute fueling rate. Of

1 course, no vehicle over temp, will over pressure,
2 vehicle fill is going to be filled to 95 to 99 percent
3 capacity.

4 And then what we call accommodation of the
5 hot soak and cold soak conditions. So that would be
6 these tables take into account the fact that a vehicle
7 might be hotter than the ambient, so it might have been
8 a gotten a previous fill at another station or -- so,
9 and it's actually quite a lot of hot soak; and the same
10 with cold soak.

11 Anyway, I will leave the rest of these for
12 the public record, but I just wanted to go back to 2601
13 and any further questions the group here comments on how
14 we review 2601 so we'll 4.3 into the PON.

15 MS. BARONAS: Thank you very much, Mr. Boyd.
16 Again, frustration of compressing.

17 So Jesse, I understand you have a comment.

18 MR. SCHNEIDER: I'm just trying to understand
19
20 we're presenting here.

21 Are you going to use 2601 as a reference for
22 the station buildup in your whatever-you-do
23 solicitation?

24 MS. BARONAS: So I will respond in general
25 terms. The objective of today's meeting are to present

1 possible funding detailed and scoring criteria for the
2 next solicitation.

3 MR. SCHNEIDER: Okay. And will this be used as
4 an criteria for that?

5 MS. BARONAS: We are still in the listening
6 mode and trying to gather information to move forward
7 with, so we're still learning and listening and
8 appreciate your input in that process.

9 MR. SCHNEIDER: Okay.

10 MS. BARONAS: Thank you. So I'd like to
11 directly address an individual on WebEx. Mr. Staples, I
12 understand your concern that we're moving through the
13 scoring criteria too quickly. Would you please comment
14 on those lines?

15 MR. STAPLES: Excuse me, I'm sorry, I didn't
16 hear very well.

17 MS. BARONAS: My understanding -- this is Jean
18 Baronas from the California Energy Commission. My
19 understanding is from your WebEx e-mail to our operator
20 that your concern is that we're moving through scoring
21 criteria too quickly. Did I understand that correctly?
22 And then can you please help us move quicker?

23 MR. STAPLES: No, I don't believe that was the
24 case. It has to do with my presentation, if I was going
25 to give it, you know, do I have to give it in pieces as

1 opposed to giving it all at once.

2 MS. BARONAS: Okay.

3 MR. STAPLES: I can go through it briefly, if
4 that's all right with you. I can get something and then
5 focus on other things.

6 MS. BARONAS: I can address the question. Both
7 yourself and Ghassan's, we're hoping to have during the
8 section of the agenda called other scoring criteria
9 under innovation, and I would like -- and I recommend
10 both of you to focus on the future so you can move to
11 make the last three to four slides of your presentation
12 where you did not summarize the June 29th workshop, that
13 would be appreciated.

14 Moving back now to scoring criteria.

15 MR. SLEIMAN: Can I just --

16 MS. BARONAS: Yes.

17 MR. SLEIMAN: This is Ghassan Sleiman from
18 Hydrogenics USA. Are we going to talk about SAE and
19 2601 and how it's going to possibly impact these
20 stations? It seems it was a moving target where it's
21 going be amended and maybe new criteria added to the
22 2601, how are we as developers going to be able to, you
23 know, confirm that is that.

24 MR. MUENCH: If I may chime in here. This is
25 Tobias Muench. I think this is the important part that

1 we need to share from everybody here in the room and on
2 the WebEx, whether and how we should include 2601 as a
3 requirement, as a standard, whether it should be scored
4 or not, whether the testing standard CSA 4.3 needs to be
5 included in all or not or scored or not.

6 I believe Bob Boyd and Garrett Poppe were
7 the ones on the sidelines at the last workshop mentioned
8 a possible way of including that. So I think these are
9 the kind of things we need to hear, please.

10 MS. BARONAS: Jesse.

11 MR. SCHNEIDER: As I mentioned, just one
12 comment. The June 2601 is a guideline today and
13 standardized and also being moving towards an FTA, and
14 then in 2601, and then June is going to be applying to
15 NIC CEC circuit, California is an NIC state, so it's
16 going to be incorporated, and it's going to be putting
17 in a request to be incorporated into ICC code as well as
18 AP code (phonetic) as going to be anti-standard. So it
19 will not be a moving target; going to be published next
20 year. It's the guideline. That should be the objective
21 to finalize it at the end of this year and document it
22 and publish it next year.

23 MS. BARONAS: Okay. So if I may add to that --
24 the guidelines provisions are strictly optional and
25 even in the NEC standards, the provisions are strictly

1 optional unless they are integrating a contract or
2 regulation settle, and as Tobias points out should the
3 document in any format draft, guidelines, standard or
4 not, be a part of the next solicitation.

5 MR. BOYD: This is Bob Boyd. I would just like
6 to address the discussion that the standard is changing
7 and in that presents some onerous requirement, and I
8 don't think it does, the fact that the standard will
9 change or could change in the future won't make it
10 easier for stations to be compliant. So I don't think
11 there's a problem with referencing as it is other than
12 the fact it's a TIR.

13 MR. SLEIMAN: This is Ghassan Sleiman,
14 Hydrogenics. Before this, you know, we read our
15 proposals, you know, the standard will change, right
16 afterwards. But now we ask you to predict what's going
17 to change. Are we going to be adding the SAE method,
18 are the tables going to change, are the wheels going to
19 be moved and not having the equation instead. So this is
20 what I'm referring to. I'd rather than not
21 overheat my tank, fill in three minutes, you buy back to
22 back to back.

23 In the proposal, I meant if you're using SA
24 2601 to that, that's fine. If you're using different
25 methods, then that's also fine. In the past what's been

1 done is, this is the last four stations I've worked on
2 going all the way back to the partnership protocol and
3 we've designed it to that protocol, and then it had to
4 be changed. Every single time, it had to be changed to
5 accommodate some special need that was given by some.
6 So strictly having it for one standard, I'd rather it be
7 flexible and inside the box and we, you know, we fill it
8 however we want.

9 MR. SCHNEIDER: If you read 2601.

10 MS. BARONAS: Pardon me, Jesse, for the
11 purposes --

12 MR. SCHNEIDER: On the industry with the text,
13 the concern is that if you put any methods,
14 that's a very big concern to automakers. And there's a
15 provision in 2601, if you use an alternative method that
16 you have to have communications. So without going into
17 too much detail, that's what the form is about, I think
18 it's important to understand that you need to reference,
19 in my opinion, industry standards, industry life
20 documents and not just any fueling protocol.

21 MS. BARONAS: Thank you. For the purpose of the
22 public record, that is the purpose of it.

23 Jesse Schneider, is it BMW?

24 MR. SCHNEIDER: I work for BMW and also -- I
25 represent SAE Fuel Cell Standard committee for this.

1 MS. BARONAS: Ghassan.

2 MR. SLEIMAN: This is Ghassan Sleiman,
3 Hydrogenics USA. Again, every station -- the last four
4 stations I've worked on, it was designed to the standard
5 that was applicable at the time whether it is the
6 customer partnership protocol or the SAE standard, but
7 then it had to be modified because somebody came along,
8 one of the OEMs would come along and say I would like it
9 to be tweaked to our needs. So if we simply adhere to a
10 standard, we may have issues going forward with cost.

11 MR. SCHNEIDER: If you don't use an industry
12 standard, I would be concerned about putting, leaving it
13 open to anything because of the concern of overheating
14 tanks and things and also pressuring.

15 I understand if you talk about the last ten
16 years there have been changes. We're talking about
17 standardizing the document and putting it into code,
18 which has the effect of law, a California, an ICC. That
19 is the direction where we're heading. So once it is
20 logged, we will not be changing it. So do you
21 understand?

22 MR. SLEIMAN: I understand that point. Ghassen
23 again. I'm talking about the last six months where it's
24 happened and --

25 MR. SCHNEIDER: This California sees a

1 partnership protocol investigational it's not the last
2 six or seven years, but I'm talking about six months.

3 MR. SLEIMAN: I'm talking about the SAE 2601
4 where OEMs are complaining it's too fast or too slow and
5 it's has to be okay. If the SAE 2601 is not going to be
6 ready before the station is out, then we are going to do
7 what? Change our design after we --

8 MS. BARONAS: Pardon me. I'd like to exercise
9 the power of moderator here. This is now a discussion
10 back and forth, and I think that it's somewhat out of
11 scope. So the question on the table's one raised by Toby,
12 which is the impact value importance thereof considering
13 the use of the SAE standard series in the solicitation.
14 So if we could please focus on those boundaries and keep
15 our discussion along those lines. Also our protocol is
16 self identification by of name organization. Thank you.
17 Please go ahead.

18 MR. McCLORY: This is Matt McClory for Toyota.
19 To answer Tobias's earlier question -- it's part of the
20 future solicitation. We feel strongly that it needs to be
21 a requirement that SAE J-2601 is a requirement. Any
22 future growth of the protocol is going to be contained
23 within that document, and so just by specifying the SAE
24 J-2601 and in addition to adding some additional
25 clarification to the SAE calling out some of the

1 specifics from SAE is sufficient.

2 I think in addition to that answer, I
3 think you have the other question the Board raised, SAE
4 right now focuses on the interface which is a critical
5 part of the interface of the vehicle, the type of filter
6 you get. In addition to that also within SAE, but
7 also -- I think -- above and beyond that, it would be
8 station performance criteria as far as peak capacity,
9 daily capacity, but that also we would expect going to
10 the PON flow.

11 MS. BARONAS: Thank you.

12 Mr. Boyd, is it within the scope of Tobias's
13 business question?

14 MR. BOYD: It is.

15 MS. BARONAS: Thank you very much.

16 MR. BOYD: I do think it is critical that
17 stations must comply with 2601, and I would suggest that
18 the way to measure that compliance with CEC 4.3. So
19 leaving open that avenue for stations to develop
20 straight compliance with 2601 by 4.3 CSA HVG 4.3
21 testing, but I think it is critical for where we are
22 right now today.

23 MS. BARONAS: Thank you for that.

24 Other comments please. Garrett.

25 MR. GARRETT POPPE: My name is Garrett Poppe,

1 Hydrogen Frontier. Is there a section J-2601, it's
2 page 14 of the 2601 issue March 2010. It's section
3 7.1.2.4, which concerns ensuring that you maintain the
4 average pressure ramp rate plus or minus 10 percent.
5 Now, it has a patent out that says that they should be
6 paid royalties if anyone uses this formula. Do you know
7 anything about that?

8 MS. BARONAS: Jean Baronas, California Energy
9 Commission, one of the second -- I think it was the
10 second topic we discussed as I read the letter of
11 assurance from the SEA, I have a copy of that letter if
12 you'd like to look at it.

13 MR. SLEIMAN: The question --

14 MS. BARONAS: -- its policy and standard policy
15 that is important here, and that is something out of the
16 scope of this workshop at this time.

17 Garrett.

18 MR. GARRETT POPPE: Garrett Poppe, Hydrogen
19 Frontier. You can require government funding to go to a
20 program that requires us to pay into a private
21 corporation, it seems like there's a conflict of
22 interest.

23 MS. BARONAS: So noted.

24 MR. GARRETT POPPE: Thank you.

25 MS. BARONAS: Any other comments or questions?

1 Yes, please.

2 MR. ELRICK: Bill Elrick. I want to just
3 repeat and clarify the last PON. It had a 2601
4 requirement that I think you're hearing pretty strong
5 support for that, but I think part of the detail is how
6 someone will meet that. Some of that is a little bit of
7 additional detail such as how many cars an hour or 12
8 hours, et cetera, but when you look at 2601, it's a
9 lookup table and you can leave it as a Type A station,
10 which is not being said a lot, but I think that what
11 many of OEMs are specifically referencing, or a Type B
12 station which is a little bit slower, Type C, it goes
13 down a list. And I think Type A is the predominant
14 desire here; it's not always being expressed in detail
15 it's not just meeting 2601 but explaining how that will
16 be done, and then the second part of that is then how we
17 go back and verify that it's been done.

18 Stations to this point is really put in the
19 ground and started before this was starting to come to
20 its completion, so there still is struggle of those
21 who have been working through them should not be that
22 same struggle going forward since that pathway is much
23 more clear.

24 MS. BARONAS: Thank you for your input. Other
25 comments? Okay. Hearing none, I recommend we go to

1 economic benefits. This is the fourth attempt on
2 economic benefits, as a scoring criteria. So does --
3 Toby, can you maybe reread what we --

4 MR. MUENCH: Toby. Reread the previously
5 scoring criteria economic benefits that was used in
6 2009. Describe macro- and micro economic benefits of
7 the proposed project, describe how the proposed project
8 will expand business opportunities for or lead to the
9 creation of California based technology firms, jobs and
10 businesses. Identify how many and what jobs, what type
11 of jobs will be created and retained by the proposed
12 project, and if those jobs are permanent or temporary.
13 Describe local and state taxes that will be generated by
14 the proposed project. Discuss how the proposed project
15 will financially benefit end users.

16 MS. BARONAS: Economic benefits. Any comments?

17 MR. ELLIS: Steve Ellis, Honda. I think for
18 the record, I think behind this is the ability for
19 various people to put forth some, you know, documents
20 because round numbers, you know, there are so many
21 people employed within California related to this. The
22 challenge is it sometimes exposes proprietary of a
23 confidential nature of the business. So I just wanted
24 to put that on the record also.

25 MR. ELRICK: Bill Elrick. I just want to add

1 or ask a very pointed question, which is, it sounds like
2 it's jobs, jobs, jobs that's created very timely in the
3 current US climate, it doesn't say how relevant it is to
4 the program.

5 MR. MCKINNEY: Jim McKinney. I think those are
6 both interesting comments, so first back to you. Steve,
7 are you inferring that we're looking for, say, OEM or
8 automaker vehicle-related jobs numbers?

9 MR. ELLIS: When I hear the question, so in
10 response, that's how I interpret it. For example, if I
11 look at the entire change of our operation, we're based
12 in Torrance, you know, it tends to go out, for example,
13 even at the dealership level. So how many dealers have
14 to do this, people you have to train, you're dedicated
15 to activity, there's economic quotients, so all that
16 plus the people on our team, whether it's in business
17 units of a company, and sometimes there will be a
18 question of how many people are, you know, assigned to a
19 project, but that gets into a confidential business.

20 MR. MCKINNEY: Okay. So I'm going to look to
21 my colleagues to the right, Toby and Charles. I think
22 the way we intend this is, it's economic aspects or
23 benefits related to the station. Supply chain aspects
24 of the station so equipment suppliers, fuel suppliers; I
25 don't think we really ever intended for this to get into

1 the vehicle side.

2 MR. ELLIS: Jim, I appreciate that. This is
3 Steve Ellis. When I heard the word macro, I think of
4 oh, boy.

5 MR. MCKINNEY: Yeah.

6 MR. ELLIS: All in.

7 MR. MCKINNEY: Fair enough.

8 MR. ELLIS: As we -- as a station developed and
9 it's halfway forward under the business plan -- I'm
10 sorry -- under the Roadmap, it is an alignment of vehicle
11 volume with station count. So as stations group employs
12 the people with much greater resources, you need more
13 dealers to do that. So that's how I see it, right or
14 wrong.

15 MR. MCKINNEY: So at the risk of being a
16 little facetious -- so Jim McKinney again. Somebody was
17 asked to build the most bang up, awesome station in your
18 neck of the woods and your vehicle sales are so high
19 that you open an assembly plant in that area, and you
20 got, you know, a thousand high value manufacturing jobs,
21 you might want to put that in your proposal for your
22 station because we're going to look at that, probably
23 give you lots of bonus points.

24 MR. ELLIS: I understand.

25 MR. MCKINNEY: And then to your question, Bill

1 Elrick, I think it's a fair question. Some of these
2 criteria were developed for other purposes, and we try
3 to have formality but say for the manufacturing
4 solicitation, biofuel production, things like that, job
5 creation is an important part of it. It's not clear how
6 big the jobs part is of station development. And,
7 again, I don't know if there are any California based
8 supply chains. You're going into equipment, trailers.
9 I'm just not familiar enough with the industry to know
10 that.

11 But that's the kind of thing we look for
12 traditionally in this particular scoring criteria. I
13 think you were suggesting it may not be appropriate or
14 it may not merit a high scoring rate for this particular
15 application.

16 MR. KEROS: Alex with G.M., going along the
17 lines of Bill, it may be that's the question is there a
18 California supplier chain involved with the hydrogen
19 station because other than that, in my mind, it's an
20 incremental benefit of the hydrogen completion, I
21 imagine from station to station to station, it's going
22 to be pretty similar to build one, to operate one over
23 time.

24 So, you know, my first reaction to Bill off
25 the record was exactly what Bill said, is this actually

1 relevant. So maybe the relevant question in all of this
2 is -- are there California suppliers involved in the
3 building and operations for additional sup. So I guess
4 if that's clarified, maybe it's helpful in weighted
5 appropriately.

6 MS. BARONAS: So often the indirect economic
7 benefits are part of it and that does include the buyers
8 -- I don't know if in this case will be included in the
9 solicitation as part of the scoring criteria.

10 MR. KEROS: Yeah, NHA -- when it was an
11 organization, you know, tried to put together an
12 analysis for what the station, what's the mechanic
13 impact and the job impact of this; I know this is
14 something that we've talked about at the partnerships to
15 put together a white paper generally speaking about the
16 benefits of hydrogen fuel cell station and those types
17 of aspects. So, you know, G.M. contributed to those
18 models, counting up all the people that are sitting,
19 operating our stations and helping build those stations,
20 so some information exists. It's just, again,
21 incrementally from project to project, I can't imagine
22 there'll be significant differences for the proposal
23 reasons, but except for this is a California supplier.

24 MS. BARONAS: Okay. Please go ahead.

25 MR. BROWN: This is Tim, UCI. I'm looking

1 around the room here and see all the experts in hydrogen
2 and stations and engine costs and safety, and those sort
3 of things. I'm not sure you guys are really qualified
4 to speak of job creation over the benefits of 2601 -- I
5 am sorry. Maybe it's the wrong audience to ask that
6 question.

7 MS. BARONAS: Thank you. Ghassan.

8 MR. SLEIMAN: This is Ghassan, Hydrogenics
9 USA.

10 MS. BARONAS: Yes, go ahead.

11 MR. SLEIMAN: If this criteria moves jobs to
12 California, I'm all for it. If somebody decides, you
13 know, that I'm going to bring my compressor as opposed
14 to outside of the state, and why not. Again, they are
15 going to maybe change suppliers, somebody in state. I
16 say keep it, but I do agree with Tim, maybe the
17 scoring -- the weight should not be as high as other
18 criteria in the proposal.

19 MR. ELLIS: Keep in mind it says California
20 based businesses and jobs.

21 DR. BROWN: This is Tim. I don't know that's
22 what the weight should be. That's just my point. I'm
23 certainly not one to make that judgment.

24 MS. BARONAS: Okay. Mr. Boyd.

25 MR. BOYD: This was mature technology and we

1 were just ordering a bunch of stuff, it would be
2 appropriate to think about weighting things for local
3 impact, but this is not much technology. There's a few
4 suppliers. Let's not put a lot of burden on the
5 selection process.

6 MS. BARONAS: Thank you. So now we are at the
7 section -- I think we are done with economic benefits
8 and we're at the section of other scoring criteria. We
9 wrote location and nation heard, obviously there are
10 more so I'm sure you're just brimming with new ideas for
11 scoring criteria. I wished we had the time to really
12 delve into it, but we do have an hour, so we can talk in
13 terms of innovation and hear from Hydrogenics who has a
14 presentation, that Paul Staples also has a
15 presentation, and then do I think a big picture
16 assessment like the one Jim McKinney brought up earlier.

17 We look at the market transformation and viability
18 points and then look at the overall percentages. Does
19 that sound like a way to proceed?

20 We have 55 minutes and then we have a public
21 comment period, which is also important for today. Does
22 that sound okay?

23 MR. SLEIMAN: Jean, this is Ghassan,
24 Hydrogenics. Our petition was a wrap up of what we
25 talked about today and so we can add to the docket and

1 save time.

2 MS. BARONAS: Okay. Thank you. So noted. Any
3 other comments. Matt.

4 MR. MIYASATO: You mentioned other criteria may
5 include location so would that not be included under the
6 previous criteria?

7 MS. BARONAS: It can be. This is Jean.

8 MR. MCKINNEY: Is this an appropriate time to
9 talk.

10 MS. BARONAS: Please go ahead.

11 MR. MCKINNEY: Yes, thanks, Matt, for that
12 reminder. Going back to the first workshop, you know
13 where we spent all day talking about location. I think
14 we were inferring there that this would become a
15 separate criterium. And then Toby was reading from an
16 early version of the criteria where that was lumped in
17 market viability, but if I can tee off with what you put
18 forward there. So for locational scoring, I think that
19 was something that was discussed, again, earlier having
20 scoring with that as well as OEM and put in review at
21 some point in the process, and so one of the questions
22 we have is there's a couple of different ways to go
23 about this.

24 One is, I think, somebody said, you know,
25 you're either in or out. And if you're in a target

1 area, you know, one of the target cities as proposed by
2 this partnership, or one of the other methods, you're in
3 and that's that; and then we will look at the other
4 attributes.

5 Another way that Charles and I have talked
6 about is building off of a heat map or a tie-dye map or
7 some type of color intensities so if you're in a target
8 zone, it's red; and if you move further from that target
9 zone, you have different colors; and corresponding lower
10 scores, it would go about that. So that's another way
11 to approach this.

12 And, again, this would be combined with some
13 type -- we still don't know what the OEM participation in
14 this part of process will look like. We have the letter
15 approach and then we had some really innovative
16 discussions at the first workshop on some other
17 techniques to build in the OEM review participation in
18 that the locational part of this.

19 So I think with that, we can kind of open it
20 up for public discussion and the presentations.

21 MS. BARONAS: Very good. And so the
22 integration of OEM involvement with participation, how
23 can that work best? I know it's a short question with a
24 whole lot of thought needed at time, but let's try.

25 MR. ELLIS: This is Steve Ellis with American

1 Honda. I would simply be repeating myself so I would go
2 back to my testimony and slide presentation from the
3 first hearing and the key points I emphasize, but in a
4 nutshell, it may come across sounding harsh or firm when
5 I use the term to heed the advice of automakers or
6 suggestions. But that's the result of previous awards
7 where things we had recommended did not come to
8 fruition. So I know we're seeking perfection and that
9 can't always be the case, but at the same time we fail
10 if we don't seize those recommendations, heed to a large
11 degree. So there's an answer.

12 MS. BARONAS: Thank you.

13 Matt, please go ahead.

14 MR. McCLORY: This is Matt McClory with Toyota.
15 I appreciate the opportunity to comment. I refer to
16 the June 29th workshop where I said I submitted a document
17 presentation to the -- in that workshop. And I guess in
18 summary I can reiterate. As far as the locations of the
19 stations go, I think our image was that this be more of
20 a screening criteria as far as this third-party proposal
21 that was presented regarding, for example, being able to
22 use UC Irvine STREET model in conjunction with the
23 partnership to identify the key locations. And then the
24 image would be that part of the solicitation or
25 internally within the CEC, there would be some type of

1 gap analysis. They would look at the proposed sites
2 from the multiple bidders relative to the locations. I
3 think as part of the solicitation process everyone should
4 know where those locations are so that the bidders can
5 respond to those locations. And so it really would be
6 more of a gap closure, and it could be multiple levels
7 of that.

8 The first level of that could be a screening
9 approach, are you close to some locations that were --
10 define in station. Perhaps if refinement would be
11 needed perhaps through additional feedback or through
12 process or internal analysis could be done to assess;
13 but in addition to that speaking in terms of the score
14 criteria in general, there would also be a requirement
15 of the interface so the location and the interface of
16 the stations interface, simply SEC J-2601. Specifically
17 Type A field should be some of the first key criteria as
18 part of the screening or scoring as part of the process.
19 And then I think above and beyond that, then you would
20 then be looking to find out what type of peak capacity
21 does a station have, what type of daily capacity, does
22 the station have what type of scalable capability does
23 the station have; and those are the softer things that
24 could be used to compare one proposal from another
25 proposal.

1 And then in addition to that, all of that is
2 balanced, then, with the cost of the station as far as
3 meeting the overall target of the number of stations,
4 for example.

5 MS. BARONAS: Alex.

6 MR. KEROS: Alex here with G.M. I think
7 there's two sides to this question, Jean. You seem to
8 be asking about test OEM involvement. Again, I thought
9 there was a fair amount of consensus a few weeks back
10 that the OEMs, one, should be involved. Specifically
11 perhaps setting the locations ahead of time for the PON
12 to say here's sort of the target that Matt just alluded
13 to. And then perhaps either still being the letter of
14 writing business as supporting a particular location or
15 not, or coming in after proposals are submitted and
16 helping act as maybe a blind adviser above particular
17 locations.

18 So I think that unless something is changed
19 in the last few weeks, G.M. would still remain
20 supportive of that type of approach. I think what's
21 interesting in general, Jim, with your questions, which
22 is, is this in and out exercise or this is a heat map
23 exercise, and actually I think it's both. And, Matt,
24 maybe you were stating the same thing. You know, some
25 of the -- the first step is. Are you near the locations

1 that have been identified, for example, the roadmap; or
2 as Jean, you asked us to do in the next few weeks to
3 create a phase approach to some of these locations; here
4 are these locations that are prioritized, if you will.

5 After that, there is going to have to be an
6 evaluation of a street corner, if you will, to use the
7 term. I don't think anybody can pick a street corner
8 now and say this is where we want the station, and then
9 ask a station to come back and say we got that location.
10 It's going to be nearly impossible, but what we can do
11 is if there is a community that's been picked and
12 multiple stations have been identified in that
13 community, we as OEMs individually, blindly, however you
14 want to talk about, bring our experience, the voice of
15 the customer to say, hey, maybe this intersection is
16 going to be more likely to generate customers, or
17 perhaps this location vis-a-vis a previous location is
18 certainly an opportunity.

19 The OEMs have always looked at multiple
20 stations being proposed in a particular location against
21 each other. So this is -- unfortunately it sounds like
22 you said you can only evaluate one proposal in and of
23 itself and it's difficult to look at other proposals,
24 but the truth of the matter is, there are multiple
25 proposals for a street corner. You have to be able to

1 balance those discussions.

2 And when I say a street corner, it might be
3 blocks away to understand what's the better location in
4 that sense.

5 So, again, I urge you, I don't know how we
6 do this. You certainly legally, but you know, the OEMs,
7 G.M. certainly offers up our support to analyze this in
8 a blind way to say, hey, we think this particular
9 location might be okay, more suitable, or more likely to
10 benefit our customers.

11 MS. BARONAS: Thank you. Moderator would like
12 to call a ten-minute break. Please come back at 3:25.

13

14 (Off the record.)

15

16 MR. STAPLES: Paul Staples, HyGen. And I'm,
17 first of all, I just commenting on some of the sensibiles
18 that SAE said. I opt for anything that makes the system
19 safer and adds more practicality. And I think they do a
20 great job, and I look forward to this.

21 I don't know if we have suggestions, but
22 with that cost benefit analysis of 700-bar
23 versus 350, and take a look at what the economics are
24 and what it would be and what the safety issues would be
25 in association with that. So I will leave that at that,

1 and move on.

2 Next slide please. Okay. Review approaches
3 to selecting locations just real quick, go over it real
4 quick. How would you choose the optimal best site
5 locations? Well, it's not rocket science, okay. And
6 this is the areas we'll know, don't need to be
7 proprietary or confidential analysis data to locate or
8 overanalyze.

9 If there's a preference needed, always go
10 with the cleanest, most renewable sustainable system.
11 Other than that, that's the best location. And if it's
12 a couple of miles away and both of them are good
13 locations, then fund them both, okay. Nothing wrong
14 with a little bit of redundancy in the system. It always
15 helps to get the word out so that there's fueling for
16 everyone, but I think those are good suggestions.

17 If you need to have an expert, I will term
18 no conflicts of interest, specializing in locating and
19 siting, building and with supplying station equipment,
20 traffic modeling to include provide supplying station
21 equipment, easily provided information. I know I found
22 one. I'm not going to tell you to drag them up for me.

23 Next slide. What's the worst you can do.
24 Certainly couldn't do any worse than asking for a
25 station north of Montana and 14th Street, the hydrogen

1 fueling station location, in Santa Monica
2 where none exist, just million dollar mansions.

3 Okay. Skip to slide 11.

4 MR. MCKINNEY: This is Jim McKinney. What's
5 the title on the slide?

6 MR. STAPLES: Slide 11.

7 MR. MCKINNEY: Got it up.

8 MR. STAPLES: Other than involving the hydrogen
9 fueling infrastructure location or the design of the
10 solicitation. One thing that seems to be designed to
11 basically walk someone through the process, hold their
12 hand, making them confident that everything is right in
13 the world. And the truth of the matter is, that anybody
14 that is doing these proposals better know what's going
15 on otherwise I don't feel comfortable with reviewing --
16 or anyone else.

17 So you can eliminate several things that
18 will just make it quicker and easier and less expensive
19 for small businesses to get involved. A lot of
20 requirements are for proposals for each location, and
21 multiple station proposals especially since they're
22 identical, there's no need for it. Okay.

23 For example, at 15 to 20 stations with a
24 100 percent renewable electrolytic hydrogen dispenser
25 (inaudible) need only to the list of the systems, the

1 footprints for each station, an indication of where it's
2 going to be installed at that location. The rest of
3 the (inaudible) only done with once. After you do
4 multiple technology, you know, some (inaudible) with
5 electric hydrogen, with each one I think you can, could
6 you tell down a lot of extra unnecessary work. Also
7 eliminate market viability. Look, market viability is
8 deemed, right. Okay. The fueling system situation is
9 similar to gas stations, back and forth. The cost per
10 mile is down there as well, so that's good. (Inaudible)
11 also the range situation is also good. So that's your
12 viability right there. The automobile company is
13 (inaudible) vehicle, of course, the biggest thing is are
14 there enough stations out there to make the public feel
15 confident enough to buy fuel.

16 Next slide. So, you know, also part of
17 implementation, all planning outline in task by task of
18 the application of work. Okay. You know, that will
19 tell you what to do because you're going to have to talk
20 about all the things you're going to be doing in there,
21 including the three-year period of (inaudible)
22 operation. So it's up, you know -- I mean, if it's
23 duplicating extra work basically with project readiness,
24 okay.

25 Again, if I identified as the -- you don't

1 take care of all those issues and expensive work, then
2 it's not ready. Okay. And that's really what the
3 situation is. I should be technologically ready to find
4 time then you probably shouldn't be going. In other
5 words, if it inspires a lot of work and no one knows
6 exactly how long it's going to take, the permits or what
7 the terms are going to be and all of that stuff is very
8 expensive to do on a proposal, which is offset so, you
9 know, there's no guarantee, you get reimbursed or going
10 to be used towards probable share. And therefore if you
11 don't get award, we've spent a lot of money to, you
12 know, get it up, you know, to keep projects.

13 Documentation, of course, all the documentation you
14 have for fleet sales is critical because somebody says
15 location, location is very important. Another had to
16 deal with contracts to work, and with this, FedEx and
17 UPS, they are going to open up that station to get
18 metrics that should be a prime location not only for the
19 fuel company to have the access that they need for
20 fueling, but they also have access to green operators as
21 well for additional tasks. So I think that's a really --

22 Next slide. Eliminate the -- again, the
23 possibility -- Contact SCAQMD to get copy of one of
24 their RFPs, unless they have significantly changed the
25 way they do RFPs. Let's say, they changed the way they

1 do the RFPs, 20 pages long for proposal format
2 requirement. Those are about 20 pages long with a
3 proposal format requirement of three page ES, 20 pages
4 to describe your plan. Technical Proposal, an
5 SOW, cost proposals, schedule of deliverables, Attached
6 LOIs, documentations, et cetera, and any attachments, if
7 needed, to expand on your plans.

8 One way you can -- I know this isn't going
9 happen, I know it seems like nobody wants to talk about
10 it or discuss it. Eliminate 700 bar
11 requirement: Not necessary. Can double the cost of
12 Infrastructure over 350 bar: If only 350 Bar, you could
13 easily provide hardware for under \$1 million, 100
14 percent renewable onsite electrolysis. Design into
15 vehicle.

16 You know what is giving me a right reason,
17 why it's important. Under the things it's all that for
18 him, although it's a requirement but it does add
19 a significant cost for fueling stations. All we know is
20 that hydrogen probably under a million dollars if you
21 didn't have that 700-bar requirement. Okay. You're
22 going see what it requires. So let's do it.

23 The point being here, if you really want to
24 do it, that's one of the things I mentioned in the
25 beginning, what is the cost analysis, et cetera, on the

1 350 bar, and it's especially in the requirement aspect
2 of it on the renewal standpoint, and that's an important
3 issue I think you had said we should take up.

4 CEQA documents are attached and are required
5 to be filled out. You fill them out. You attach them
6 to the proposal. Why do I have to explain it in detail
7 on the project narrative? That's really what's it's all
8 about, getting that CEQA approval. Most likely it's
9 100 percent renewable, sustainable electrolytic hydrogen
10 fueling system, no toxic chemicals, no emissions, no
11 nothing into the system zone. So that's basically, you
12 know, where I feel about the whole group approach.

13 Next slide. Can we all agree that state
14 funds are needed to design the hydrogen fueling
15 infrastructure, also why we are here. To really invest
16 any kind of infrastructure, private investment rarely
17 invests in any kind of infrastructure.

18 Return on investment on "Bricks and Mortar"
19 infrastructure requires a longer amortization approach
20 to establish profitability than most private investment
21 is willing to invest in.

22 Most private investors require up to two
23 years of return on investment to get out double their
24 money and additional equity to dump when the stock value
25 shoots sky high. Not the right investment for this

1 paradigm at this time. Needs State to start up. So
2 let's assume that no from the get-go and avoid a lot of
3 unnecessary work to explain that because that's why
4 we're all here. Otherwise we would be a problem, and you
5 really want a good example of what type of investments
6 are asked for, watch the "Shark Tank" once a week. It's
7 on Friday. You really can get an idea of what these
8 guys are going to be looking for in any kind of project.

9 Next slide. Cost effectiveness is relative
10 to the sustainability of the project -- economic,
11 environmental, technological, market, operational,
12 customer acceptance, all of that. Does the cost rise
13 the more you use renewable, or lower? The cost of fuel
14 can rise. Eliminate that part of Number 6 project
15 budget, because renewable onsite, on demand, because
16 clean, sustainable, renewable on site, on-demand,
17 electrolytic hydrogen generation and dispensing is, as
18 the CEO of Valero Petroleum stated, "Funding our own
19 demise."

20 And about all of that stuff, anyone who
21 doesn't know what they are, the common acronym, and
22 doesn't know what they are, they shouldn't be submitting
23 a proposal. Okay.

24 On the last one. So that's why I'm trying
25 to get into it, because the station, you have to make

1 the key decision. If there are any of these barriers
2 why would anyone propose something that has any
3 technical or scientific barriers.

4 Next slide.

5 MS. BARONAS: Pardon me. This is Jean Baronas,
6 the California Energy Commission, would you please
7 conclude your remark in one minute.

8 MR. STAPLES: I will do that. I am right at
9 the end right now.

10 This is not an R & D program. It's a
11 deployment program. Most of the technical and
12 scientific barriers should have been dealt with before
13 submitting a proposal. Market barriers, simply product
14 recognition and familiarization, will be addressed by
15 simply getting enough stations out there.

16 Institutional. CEC/ARB needs to get on
17 these local permitting agencies to cooperate and permit
18 these systems as soon as possible. Use your clout.

19 Most of this section should be added to the
20 contract as part of the reporting requirements. Not as
21 part of the proposal.

22 Environmental. If there is, it won't pass
23 CEQA. If it doesn't, it's not necessary. I can't
24 imagine why you would fund it if there were an
25 environmental problem.

1 Final slide. Products. Much of the section
2 can be completed after the award and/or before signing a
3 contract. Okay. You know, adds unnecessary workload
4 and costs to producing a proposal.

5 Much of this section should be added to the
6 contract in the reporting requirements, not as part of
7 the proposal process.

8 The rest -- K and M question. Is it
9 relative to the proposal or is it just info for
10 contractor after award?

11 And Attachment F. If there are no health
12 impacts due to zero emissions, as far as from production
13 onsite and meets all safety codes, couldn't the response
14 in the proposal simply be due to the fact that there are
15 no criteria emissions from the facility, and all other
16 facilities meets or exceeds all safety codes? There are
17 no negative health impacts. And I think that pretty
18 much covers it. It's not perfect, but it doesn't mean
19 to make it fair. Thank you for your time.

20 MS. BARONAS: Thank you, Paul, and your
21 presentation is part of the public record.

22 MR. STAPLES: Thank you.

23 MS. BARONAS: So let's move on to the public
24 comment period. Would the public commentators please
25 come forward.

1 MR. BLEKHMEN: This is David Blekman. I'd
2 like to thank you, California Energy Commission staff,
3 for this opportunity to contribute. So I'm representing
4 before the California State University of Los Angeles,
5 David Beckman. And we have a hydrogen fuel cell
6 facility which was funded by Air Resources Board; it was
7 funded from Department of Energy, also from the
8 Foundation USC and AAA.

9 So the four points I'd like to bring kind of
10 into discussion because of dispense, what we just talked
11 about today, talked a little bit about central
12 Los Angeles cluster, making some operations support,
13 maintenance and station upgrades, and research
14 opportunities.

15 As you can see, Cal State Los Angeles
16 cluster station is located right in the intersection of
17 Highway 710 and 10. It is a key location with a lot of
18 highways, access to Pasadena, continues on the highway
19 then to Pomona. Clean corridor, Long Beach and close
20 proximity to downtown L.A. Currently we are kind of
21 fueling alone there. And so we would like to express
22 our interest in having more stations around us. And,
23 you know, I'm not particularly interested in business,
24 in station in and of itself, however, you know, from the
25 point of OEM and for point of, you know, real viability

1 and fueling now for (inaudible) bureau. We'd have to do
2 any technical maintenance. We would like to have a
3 backup station there, and that is close to metropolitan,
4 and according to government executive order, he would
5 like to see more metropolitan areas available, you know,
6 with clean vehicle infrastructure. Yes.

7 Next. Now, I think the last time we had a
8 presentation from UC Davis, we discussed the prices.
9 What I see is the prices here, approximate with pure
10 cost of generating hydrogen with electrolysis, that's
11 right there in the circle. So that's the actual cost if
12 you just buy electricity, make it the reality that the
13 rest of the station, the rest of the chillers and
14 coolers work continuously. Then there is the rest of
15 the facility that used to be working. And so the cost
16 should be higher. The real cost when you sell is
17 higher.

18 Then the reality is that the stations don't
19 reach full capacity for a while, and so we can't realize
20 any, you know, benefit from selling hydrogen. So it's
21 kind of a plus. And so we would really appreciate the
22 California Energy Commission consider supporting
23 existing fuel facilities, not the only ones that would
24 be put forward, but the ones which were built before,
25 and we're just to come online. So we're not -- we're

1 just about come online, so we are going to be new to
2 this process.

3 All right. You can see this is a picture of
4 our facility from the inside of the station, and that
5 actually is the walkway for public tours in the future.
6 And so we also were built awhile ago. I mean the
7 solicitation was in 2008, and so our level was
8 60 kilograms of storage. And so the real potential
9 equipment could be looking for upgrades and would be
10 visited if you could fund upgrading stations.

11 The capacity at 60 kilograms of storage
12 would not deter us from potential funding.

13 And the next slide is to the upper -- that
14 you could realize with the electrolysis base hydrogen
15 station, so beyond tradition performance optimization
16 and the fleet for working with the vehicle fleet
17 research. We would also be interested for support, the
18 concepts introduced by Hydrogenics, utilizing network of
19 hydrogen stations. As an (inaudible) upload and
20 shedding total peak loading and load shedding that are
21 actually more complex now which would involve California
22 and so and energy companies like DWP or Edison.
23 But that's something -- and here's a common thread
24 there, I would like you to look at -- the Department of
25 Energy provides funding for hydrogen infrastructure and

1 provides funding for vehicle operation research, and
2 that usually comes with the co-share of 50 percent.

3 And I would be -- I'd like to kind of give
4 you a concept that if you were to follow the model which
5 would be developed by California Energy Commission
6 when there was an area of funding a few years back, that
7 their -- California would support cost share. And it
8 would not be cost share for this year. It could be cost
9 share for this year, it could be cost share you would
10 support the second or the third year of the project, so
11 it's not like you depend on the financing this year
12 because you utilize for cost share for the future years.
13 Right.

14 So a quick ability to make a good decision
15 because DOE usually gives you one month or 45 days. So
16 a mechanism for quick decision for cost share support
17 for the future funding.

18 Next slide. And so at the University we are
19 interested not only in the technology itself, but also
20 in the broad spectrum educating future engineers, future
21 technology and future leaders. So this is one of the
22 examples beyond hydrogen station is we are competing in
23 equal (inaudible) car to commission, which is designing
24 our traditional, conventional Chevy Malibu vehicle of
25 General Motors. And so you can see it's a very close

1 competition only, 15 (inaudible). And so we're
2 obviously going to institutions in California and the
3 only institutions in California that are competing, so
4 maybe in the future we could solicit your support, but I
5 was to hoping to secure funding for fuel cell hydrogen.
6 I know it's going to be ethanol based hydrogen, plug-in
7 hydrogen. That's it. Thank you.

8 MS. BARONAS: Thank you very much for your
9 presentation.

10 MR. PROVENZANO: Thank you. I'm James
11 Provenzano with Clean Air Now, and actually my following
12 comments, OEMs is being made as a private resident of
13 California; and, again, as a customer of a driven fuel
14 cell vehicle.

15 First of all, I just want to say that CEC,
16 this process that I've experienced in the last three
17 workshops for me is unprecedented. It's an open
18 process. I commend the work you're doing to address
19 these issues, to really get everything on the table and
20 to have a complete and full discussion. I know it's an
21 onerous job, and I think you're doing a great job.
22 Thank you for your time and energy to make sure that
23 this is done right.

24 A couple of quick comments. I think as a
25 customer, I would like to see uniformity among the

1 stations. Right now you go to a station, the signage is
2 different. The instructions on the keypad is different.
3 I think what would help would be uniformity across all
4 stations so people get comfortable with the process.
5 They do it quickly just like they do gasoline. I think
6 that would be helpful.

7 Also I notice this is an issue from last
8 time, but I think -- especially in the early stages,
9 it's comforting to know that the stations are open
10 24 hours. I think that needs to be a requirement early
11 on for a few stations we're going to have over the next
12 five years. That is very helpful.

13 I'm not a big part here, but sometimes you
14 come home from an event; it's 2:00, 3:00 o'clock in the
15 morning, and you'd like to know the station is there;
16 you want to recharge before you head out the next
17 morning, so I think 24 hour access is important, that it's
18 available. It's just a psychological impact that
19 knowing the stations are there. Just like your local
20 the grocery store even though we don't go shopping at
21 3:30 in the morning. It's nice to know that it's open
22 24 hours.

23 The other thing is the timing of all this.
24 I think it's critical that, you know, right now I'm
25 relying in my neighborhood on one dispensing hose in my

1 neighborhood. And I'm excited to be driving a fuel cell
2 vehicle, and I took that risk on at this early stage and
3 I'm happy with it, but I know a lot of people would not
4 be happy with that and it would be very stricken.

5 So I think the timing is critical. We need
6 to move this process forward and getting the stations
7 that have already been funded need to go in quickly.
8 Those hurdles have to be overcome. Talking about
9 permits and working with the local entities at this
10 time, and I don't know what the governor's office, what
11 you can do to bring effort to move those conflicts to
12 resolution. But it's going to be something you can get
13 them to expedite the inflating of the stations that have
14 already been funded.

15 So that is -- there have been delays that
16 just don't make sense to me personally. I think that's
17 all I have to say.

18 Thank you so much. I want to thank the OEMs
19 too. I think the OEMs -- I've said this privately to
20 OEMs, but the OEMs have kept the hydrogen dream alive.
21 They decided 12 years ago that they weren't going to do
22 this, we wouldn't be talking to them, and it's critical.
23 They saw the need for it. They saw the ability of fuel
24 cell electrics to take the automobile out of the CEQA
25 equation and to protect public health, and that's what

1 this is all about. It's about protecting the public
2 health, and I appreciate you doing the work in order to
3 do that. Thank you.

4 MS. BARONAS: Thank you. Steve please.

5 MR. ELLIS: James, can I ask a question?

6 MR. PROVENZANO: Yes.

7 MR. ELLIS: You're in Santa Monica market area
8 for the station?

9 MR. PROVENZANO: Yes, I live in Los Angeles.

10 MR. ELLIS: So let me ask you real simply -- if
11 you had gone to the station this morning before you came
12 here and it wasn't working, could you have made it to
13 this meeting?

14 MR. PROVENZANO: I would have been late, very
15 late, but no, I would have had to -- maybe Stephanie
16 would have picked me up or something.

17 MR. ELLIS: That's all I have.

18 MR. PROVENZANO: Okay.

19 MR. ELLIS: Thank you.

20 MS. BARONAS: Thank you. And I would like to
21 turn it over to Jim McKinney.

22 MR. MCKINNEY: So at this point we're coming to
23 the conclusion of the third of our series of three
24 workshops that we've been holding here to solicit
25 stakeholder input on what our next hydrogen station

1 should be, what it should look like, what should be the
2 key aspects of that.

3 Again, we learned a lot and I think we
4 shared some of our thinking at this point with all of
5 you. So just to briefly rundown what we've discussed
6 today -- so in terms of CEQA, we alerted you as to some
7 of the issues current awardees are facing across the
8 board and fuel categories, not just hydrogen. Our
9 desire to celebrate with CEQA compliance process, and I
10 think we've heard some feedback from some of the station
11 developers that this may not be as easy as one would
12 like, and there's some real issues, and there's also some
13 internal contractual issues with some of the companies
14 to determine when they can start to expand funds for an
15 award that's been made, but there's no executed grant
16 agreement yet. So that's good feedback input, we will
17 take that back.

18 And I think we had very good discussions
19 of the funding levels and the cost, different costs
20 attributes associated with the stations over several of
21 the meetings.

22 The O and M cost issue, I think it was good
23 for us to revisit that and have that discussion again,
24 again with different perspectives and points of view on
25 this.

1 I think the discussion Jean tried moderately
2 to really get the discussion going on some of the
3 performance incentives, are they good, are they still in
4 need, have they kind of outlived their usefulness, so we
5 will take that back as well.

6 And then for this scoring criteria, again I
7 think we talked about the major ones here. So keep
8 qualifications or qualifications of the applicant
9 whether that's, you know, key engineers, CEOs, the
10 corporations, teams of multiple experts, local station
11 developers, all of that is a good discussion.

12 I don't think we still have a clear sense
13 yet of what you think the relative weight factors should
14 be on this, so let me, again, ask all of you to collect
15 your thoughts, put them in writing, get them into our
16 docket as we continue to develop the next solicitation.

17 Market liability, I think that was a good,
18 robust discussion on how to factor in the different
19 station performance attributes, sizing, et cetera. And
20 then project readiness and community readiness are good
21 concepts. One of my takeaways is I do see a roll. And
22 actually I like Doctor -- is it Blekhman?

23 MR. BLEKHMAN: Blekhman.

24 MR. McKINNEY: Dr. Blekhman's reminder that
25 this is part of the governor's mandate for local

1 readiness. So I think there is a role for our agency,
2 South Coast AQMD, the fuel cell partnership to really
3 continue to educate local jurisdictions on what's coming
4 and what we need from them.

5 In kind of enclosing, kind of a good
6 reminder discussion on locations, so it's incumbent on
7 Commission staff to go back and really review the good
8 presentations of testimony from the first workshop and
9 continue developing those concepts.

10 A couple of other things in conclusion.
11 Matt, I think you were most articulate about this from
12 Toyota about really wanting to see the fruits of your
13 investments and what's the next envelope look like and I
14 think asking very clearly for an opportunity to see a
15 draft document before we really submit solicitation.
16 Frankly, we have to take that back and get management
17 and legal support for that. There is some precedent for
18 that within the Commission, so we'll see what we can do
19 in that one. But I've heard the comment pretty clearly
20 from all the OEMs on that one.

21 And I think lastly, I just want to, again,
22 thank Matt Miyasato and all the staff from South Coast
23 AQMD for hosting this event, sponsoring this event, to
24 our young court reporter whose fingers I hope are okay
25 there. She worked very hard today.

1 And again, and mostly all the stakeholders
2 of the car companies, station developers, the
3 partnerships, the academics, groups with us, our fellow
4 agencies, thank you so much. Your input is critical.
5 My only regret is that we didn't have time or make time
6 to do this last year or in early years. It's a critical
7 set of dialogue and relationships so we look forward to
8 continuing that.

9 Matt, do you have any words of wisdom?
10 Thanks again for hosting.

11 MR. MIYASATO: No words of wisdom. I just want
12 to reciprocate and thank the Commission for being open to
13 having the workshop here at the South Coast base here.
14 I think it's important that we review our reasons ground
15 zero for fuel cell deployment. So we thought it was
16 important to have that perspective reflected here by
17 having a workshop, so we really appreciate you and your
18 staff coming down.

19 MR. SMITH: Madam Moderator, with that, I think
20 we can adjourn that this workshop.

21 MS. BARONAS: So adjourned.

22
23 (Whereupon, the Workshop concluded
24 at the hour of 4:09 p.m.)

25