

Lithium-Ion Car Battery Recycling Advisory Group

Meeting Minutes for 10.22.2021

1. Call to Order, Roll Call, and Establishment of Quorum – Caroline Godkin, Deputy Secretary for Environmental Policy and Emergency Response, CalEPA

- Advisory Member roll call:
 - Ana-Maria Stoian-Chu (AS)
 - Mohammed Omer (MO)
 - Hannon Rasool (HR)
 - Terry Adams (TA)
 - Dan Bowerson (DB)
 - Todd Coy (TC)
 - Steve Henderson (SH)
 - Bernie Kotlier (BK)
 - Nick Lapis (NL)
 - Teija Mortvedt (TM)
 - Geoff Niswander (GN)
 - Lou Ramondetta (LR)
 - Les Schwizer (LS)
- Absent for roll call
 - Mark Caffarey (MC)
 - Toshiya Fukui (TF)
 - Perry Gottesfeld (PG)
 - George Kerchner (GK)
 - Jennifer Krill (JK)
 - Alison Linder (AL)

*Quorum met

2. Administrative items + Review of minutes – Mohammed Omer, Engineer at DTSC

- Meeting is being video recorded and livestreamed
- Public can ask questions and comment via chat or calepa.workshops@calepa.ca.gov
- The minutes haven't been finalized and they will be brought to the meeting in September.

- Today we will be continuing the conversations we had last time about the EPR and Core exchange and vehicle backstop proposal.

3. Interim updates

- Updates and questions
 - PG: There is an announcement from Tesla that they are recycling the batteries in Nevada. Can someone speak to that?
 - *no one from Tesla is at meeting*

4. Discussion of draft report, Dr. Alissa Kendall

Overview:

- In the report the policy recommendations have been broken into two categories: defining responsibility for batteries at end-of-life and the supporting policies.
- The UC Davis here to represent what everyone wants to see in the report and today is to provide opportunity for advisory group members to advocate for any changes to these policies.
- Perry Gottesfeld is not online but he would like to present his opinion. I can try and summarize what I understood. He would like a broader stroke approach, and getting people on board with broader ideas before discussing details.

Comprehensive policy options:

- The survey has been used to get a pulse on the AG members preference.
- For the defining responsibility and financing mechanism section there is no majority when considering only support and support with modifications but there are a lot of no opinions and some modifications. We can see

Caroline Godkin: As a state agency, in creating this type of recommendation, we are put in a tricky position. In the context of the broader policy recommendation, we did not think it was appropriate to provide feedback. When there are more no opinion votes, four of them were from state agencies.

MO: Yes, thank you. It is not that we don't have an opinion as in not understanding or not made up our minds on a personal level. It is about it not being appropriate to put our thumbs on the scale for issues that are better spoken on by industry or outside experts. This fell out of our jurisdiction. This explains why there are no opinion votes.

DB: Was that the process for all questions or just end-of-life.

CG: There were a couple but mostly this end-of-life responsibility section; the big policy questions.

AS: I agree with that they have said.

AK: Thank you. I believe Perry just signed back on. Can you confirm this.

PG: Here.

AK: We went forward a bit, I have reversed the presentation for you.

PG: My thought in looking at the report and reflecting on last week. Many felt the survey was confusing because of the detail. Taking a step back to produce a consensus with a diverse group. I thought we could first debate the bigger picture and then work the way down. My proposal is to do a similar thing by grouping them together: status quo, producer take back, financing mechanism. Then the report can outline these options to the legislature.

DB: My sense is we did do this when we first starting meeting. I think we have covered this and I don't know why we would be taking a step back now.

NL: I have always felt we could make any of this work. If there is something approaching a consensus for one of the two it would be great to narrowing down.

SH: I don't know if we have time to do what PG suggested. This does feel like the start of three larger options. This makes sense but I don't know if the process allows us the time.

T: I feel like we have done this and to start over again debating a take-back program or handling fee. Why?

PG: I wasn't suggesting that we start over, that the conversations and report could be organized this way. If we start with the broader proposal and add in details.

NL: One of the downside of the zoom meeting is that we are very polite and raising our hands. I am not sure if we can get over this. I don't have any suggestions. I keep thinking about this as we are going to introduce a bill and I don't have a good sense of where advisory group members are at.

AK: The purpose of the survey was to get a pulse. I think PG's suggestion is great and I know there is opposition to the survey itself. The way that we structured the report is based on those that have lowest opposition and highest support, although not a majority support. There is a big mix of support. One way to move forward is to bring more transparency as to what the comments were:

- The first two reflect the narrowness of the policy
- Then there are more detailed comments in terms of who should be subject to the policy.

DB: I believe we talked about the first bullet and we were getting at almost every battery. The comment on the broader strategy, the core exchange could be used with any policy but it is paired with the backstop. We can incorporate repurposers and remanufacturers.

AK: I think the other bullet is bringing up that there are a lot of parties that will be responsible for batteries and that leads to difficulty in tracking.

- I think to increase support, we need to plug any holes that were addressed by those comments. Our job is to represent your goals and we want everyone to bring up changes that they want to see.

DB: Some wordsmithing, there might not be a switching of batteries if used in stationary storage in the definition.

PG: I missed the introduction, sorry. I am still at a loss as to why this is viewed by the proposal with the most support. I see kind of a complete mix of views and a lot of people who didn't express a view. If this is a producer responsibility, I think we can agree on a general policy.

AK: The agency folks explained their choice of no opinions. The dominance of no opinions are contributed to the agency folks who didn't want to put their thumb on the scale.

MO: Dan, great point, but our job is to look at EV batteries, and not stationary storage. Perry, we the government group (4), expressed no opinion because this is a strange way of expressing recommendations to legislature. It is not that we don't have an opinion professionally or personally, we don't feel this is appropriate for us to express our opinion.

PG: Is there a policy about state employees participating in the committee.

CG: There is no official policy. When looking at these recommendations we didn't feel it was appropriate for the subset to be weighing in. We went with no opinion because we felt it was more important for the experts to express their opinion. The report is a product of the AG under EPA and the secretary's responsibility, but in this context, the industry experts should take the lead.

BK: The no opinion, did they include the state agency representatives?

AK: They are included in the graph.

BK: Why are they in the graph? If you want to be outside, then why aren't we?

AK: We want to do a straw poll leaving out the agency at the end of the meeting.

LR: The concern is that a lot of the no opinions are skewing the results and it is difficult to see the results.

AK: Absolutely LR. I think a better approach is removing the no opinion. If you removed the no opinion, we have a pretty good level of support and low opposition.

SH: I think I am building on LR and BK. I think what you are saying is that it is not that the state agency are disguising their opinion, they are thinking to remove their opinion.

MO: There are some policy buckets that fall out of our purview. I think we can remove no opinions from state agency from each policy. As AK mention, it wouldn't change the overall results but enhance the readability and the concerns.

AK: The survey isn't setting in stone the recommendations; it is guiding how we recommend policies. A goal today is talke through policies, specifically the core exchange and the vehicle backstop proposal. We want to have a straw poll at the end of the meeting.

PG: I feel uncomfortable using survey results and I would like to take out all of my votes as well. I don't think this is a useful way to achieve.

AK: I hear you and this is your opportunity to voice support and modify the recommendations. This is the one we selected to move forward with because it very little opposition.

PG: This falls under the broader category of producer take back but I think the details should be left for others to decide.

GN: I want quick clarification, in terms of the next calculation. We are looking at excluding no opinion from state agency.

AK: Our goal is not the survey. Our goal is to have policy recommendations.

GN: That works for me.

MS: I just want to note that we are coming on 10AM and our goal is to discuss the policy as we have in subcommittee meetings. I hear another option is to not go into detail, but I think if we have the opportunity to discuss details, we should.

LR: I think we are hung up on the survey because it is what everyone agreed to and then built on as we proceed. I think folks are concerned because it is a building block.

MO: I do understand the concerns. I think it will be more clear when we remove the state agency no opinions. We do ask for a little patience but we do hear the concerns.

MS: I would like to put forward the option to suggest discussing a different policy or perhaps looking at this policy and addressing the gaps.

BK: My concern is that with that core exchange and producer take-back being the one area with high support, as it was being discussed, and support coalescing, it was a narrow discussion, and inly effect a few batteries. I am worried that this may take on more importance and coverage than it should. The overriding concern of manufacturers with liability, it could squeeze out the opportunity for reuse and repurposing of batteries. I want it to be clear that these proposals are narrow and not meant to replace opinions of reuse and repurposing.

MS: Can anyone think of cases that are not covered?

DB: We saw that an advantage is that it doesn't preclude reuse, it is covering when those batteries are unwanted.

BK: I do agree that is the proposal. My concern is that sometimes when these things get put into a report, some of that may be lost. My concern is not the specifics, it should also be a parallel policy and does not replace repurposing and reuse.

MS: Does anyone else have comments or suggestions on this policy?

LS: So, just to be clear, this is just outside of warrenty? Should we specify?

DB: I thought we did but maybe that was in the presentation.

LS: When you say "the entity removing is responsible". What does that mean? What does the responsibility entail?

DB: The entity removing is required to pay for reuse or recycling and the entity putting the battery into service is required to do paperwork.

LS: I am concerned with the burden it puts on the party removing the battery.

DB: That is vague but I think it can be something worked out in the core exchange process.

Tom Novak: I am looking at page 29 and number 2, the core exchange program: there is language that there should be proof of reuse when removed. This seems difficult to achieve. There is usually an incentive and not proof.

DB: The reason for that is making the core charge an option but not required. Maybe we can massage that point on page 29 to make it more clear.

MS: I hear the comments that we are getting more in the weeds than needed. If anyone has a more general comment or alternative, please bring it up.

GN: We are still talking about this being the backstop that slips through the cracks for whatever batteries aren't under warranty?

MS: Yes, and also all the batteries that people don't want.

GN: Based on what Tom is saying, my concern is related to labeling. In some of these LIB batteries, are we saying just the intact vehicle batteries? Are core charges going to be invalidated if broken down? Will each be labelled?

DB: ARB proposal requires labeling on the smallest component on the battery.

Thomas Novak: I think the core charge will be the full battery, not just a module.

SH: Are we going to specify what properly recycling means? I will suggest that we classify proper handling/recycling as handing over to an entity that is permitted to do recycling.

PG: In regards to that last point, I am not sure what licensing to recycling would be in China or out of the US. I don't think that is something we can address.

BK: I would add that I am not sure if we want to rely on the transfer to be proper recycling. Once they leave our shores we can't know what happens.

NL: We can affect what happens in other countries as a condition of sale here (the US). We've done that with mixed plastics in a bill here. In the e-waste program we require payments only go to recyclers for processed e-waste.

DB: Nick, are you referring to once it is recycled, selling the processed materials is a stipulation? Or prior recycling?

NL: The point of leverage is when we pay, we can condition payments on treatment downstream.

AS: I don't think we can compare this to e-waste. We make payments in that program from consumer money. We can't do that in a program that doesn't have the sets of requirements. We can tie this to the recovery of recycled materials. My review of the proposed policies is that this program doesn't have goal, oversight, and enforcements, but more about the free market.

PG: I agree with AS and BK. There is a huge problem with materials leaving the US because it hasn't been covered in prior legislation. We know currently the model is to create the black mass in NA and ship elsewhere for recycling. We know those places

don't have the same environmental standards. I think we would have to pair it with another policy or prohibit export.

MS: Is your suggestion to require or recommend a third-party certification of the recycling process.

MO: I agree. I think what is being done here is done. I just want to make sure that we aren't combining this with another recommendation of third-party certification. I don't want to tie that with the backstop and core exchange. It is a different item opposed to this one.

BK: I agree that this is a different question but we want to point out the narrow application of the backstop. This is the elephant in the room. Are we going to take this up separately?

MO: Yes and I think we will later in the process.

BK: I would support that and also discuss market forces and what core charges would impact? We need to think; are the batteries going where they need to go? And will the black mass go where it needs to go?

LR: There is a reason for free market and I want to caution that we don't overregulate. We don't want an oligopoly and eliminates free market entrepreneurs.

AK: Thank you. We want an unofficial poll to see how folks feel about this policy recommendation. We can do a roll call or ask that AG members use a thumb up or down.

PG: my suggestion is that we first vote on the broader policy and then maybe on the second round vote on the specific policy.

AK: Lets first vote on if we would vote for EPR.

DB: I disagree. My support for an EPR would by no means support the voluntary take-back. Is there anyway that we could go back to the support with modifications and no opinion and see if people have changed their opinion.

AK: Yes, we could do that but not during the meeting.

MO: You know, we are meeting in a week and I recognize that providing opinion on the spot is difficult, but I think if we can do a couple of things like remove the agency no opinion, make the changes that we talked about at this time, then strengthening the policy and provide time to think about it. It seems that people are not ready to provide a response, perhaps we can delay a vote. Does that sound appropriate.

BK: Thank you. I think one of the issues for me is that we have had a lot of discussion and many of us have been indicating that we can support it if certain policies recognized. Supporting this without seeing it in writing is a challenge. We need a clear update or revision about what is specifically asked to approve or not.

Nathan Nye: Referring back to the context of what constitutes "properly recycled": I feel that the Advisory Group's report to the Legislature would be incomplete if it does not recommend actions that also promote in-state recycling operations, to include pre-treatment & physical processing activities, black mass production in state. Whether this

takes the form of expedited permitting, conditional authorizations or conditional exemptions, would be a good topic of discussion.

PG: Can we go back to that slide with the questions. I didn't hear DB respond to the questions.

DB: The only battery that won't be covered are those that were removed and not purchased. I don't know if there is anything we need to do to make this a comprehensive policy.

PG: I thought you were only proposing to cover batteries if they are orphaned if they weren't

DB: If they are reused or repurposed, it would be the responsibility of the entity putting it into the second or third application.

PG: Okay, what about if it is reused in another vehicle?

DB: Is that the same manufacturer?

PG: Some mechanics are reusing them in EVs.

AK: If it is reused in a vehicle without alterations that it will the responsibility of the OEM.

BK: Can we send this to the committee for changes and then have them vote?

MO: Please continue to make changes and revisions and send them to the UC Davis team.

- Reading from the chat:

- NN: "Referring back to the context of what constitutes "properly recycled": I feel that the Advisory Group's report to the Legislature would be incomplete if it does not recommend actions that also promote in-state recycling operations, to include pre-treatment & physical processing activities, black mass production in state. Whether this takes the form of expedited permitting, conditional authorizations or conditional exemptions, would be a good topic of discussion."
- Thomas Novak: "Will the updates be sent in redline format?"

AK: We can provide redlined edits. If the edits are too extensive, we will provide comments explaining what was changed.

MO: I want to be sure people will feel free to be candid in the edits

AK: We will present edits to the final version but not individual changes

BK: I think this is too important and too complicated for that kind of a simple response and there have been many examples today of possible support for a position when a question was answered or a concern was addressed. I think it's important to have an option for "I support if"

AK: We also have supporting policies. Some of these are enabling policies. This list was generated using majority support including no opinions. Some had majority support with minor modifications which are denoted by an asterix. Now we are talking about them to

change them as needed. For access to battery information, we have the physical labeling requirement. We had comments that AG members support in accordance with what CARB decides to include. We also have a digital identifier. For supporting reuse/recycling/repurposing, we have recycling incentive packages, disassembly packages, streamlining a DTSC permit timeline, and expanding eligibility for battery storage systems.

PG: You used acronyms I'm not familiar with and I don't know about these incentives.

AK: Yes, that was referring to an incentive program through the CPUC that subsidizes battery storage. The next page has minimum material recovery targets, design for repurposing, reuse and recycling, and third-party verification. For safe and efficient reverse logistics, we have support enforcement of unlicensed dismantling laws, develop training materials, support transportation research, develop strategic collection and sorting infrastructure, and universal waste interpretation.

DB: ARB's proposal puts the onus on the manufacturers so I think that would address the comment.

MO: From chat—Ben Wender: "has the committee heard from CPUC regarding the SGIP program and their reasoning behind excluding second life batteries?"

MS: Does anyone oppose recommending that the label align with CARB?

DB and SH: Would strongly prefer that

AK: *Reviewed policies encouraging industry development*

PG: Could we also add the requirement for take-back for the repurposer or battery producer? Since this is a state-incentive program the state would have greater control over end-of-life requirements

TC: I agree with Perry on this, end-of-life should be examined concurrent to the second-life.

BK: I think this captures it, I agree there should not be a loophole for repurposing. My other comment is that as far as the SGIP program, assuming the CPUC accepts the use of repurposed batteries the requirements for EOL should be the same as whatever the CPUC rules and regulations for a new battery.

TA: I think this is a slippery slope, I don't have a problem where somebody is taking advantage of incentive programs but if you start extrapolating this out, the requirement on a recycler if they send it to somebody who is getting black mass and then they send it to somebody else. At what point do you draw the line of responsibility. As a dismantler, if we send a battery to a licensed facility, we can't be responsible for where they send it for refining and so on. The more requirements, the more unintended consequences there will be.

Audrey Depault: I agree with this last sentence that was just added. In terms of adding precision to that, EOL requirements are tied all the way to the labeling that the EOL *and* management requirements apply to repurposers. For example the batteries should be relabeled to ensure that responsibility is correctly attributed.

PG: That's a great point, and can we clarify that EOL requirements means supplier takeback

AK: Minimum recovery rates, recycled content, third-party verification

SH: Is the idea that this would be a way for the government to determine who is acceptable to send a battery to?

AK: Yes I believe that was the intent

TA: The term "production scrap" is way too broad. Production facilities produce all kinds of non-battery scrap metal which should not be included.

AK: Does anyone object to removing production scrap?

MS: Suggest modifying consensus standard development to include which materials are included

SH: Agree wholeheartedly with Terry, there will already be many processes in place to ensure production scrap is managed efficiently and this is additional regulatory burden

LR: If there are already standards in place this may be unnecessary

TC: Question about who pays for third-party verification and what is the authority granted to the third-party verifiers? At which point does the transactional phase occur? Is the onus on the party sending the party that they need to secure verification? Does the recycler have to pay for third-party verification? I generally oppose this policy recommendation

PG: This is commonly used in industry if people are familiar with ISO 14001, environmental certification management, there is a standard that gets updated and companies decide voluntarily to meet those standards. If they decide to meet them they pay for an auditor to come in, the auditor reviews their processes and approves them. This would pertain to facilities that are recycling and processing batteries and black mass in this case. In terms of the question why this is necessary if we already have regulation, this provides an even playing field since other jurisdictions do not have the same regulations as California.

TC: We are familiar with ISO, our facilities are ISO certified so I know what you are talking about.

TA: I am concerned about this state agency approval process, as an example Retrieval has been exporting batteries to a facility in Canada for 25 years out of California. The customers tend to be the ones who are more concerned and do all the auditing. This has all been done without a state agency and approval process. Having a third-party standard is fine but I could see situations where the state agency is more inclined to approve things in-state vs. out of state. I would keep this limited to the third-party

PG: The state would only be responsible for reviewing the standard here.

LR: I'm not sure a third-party standard levels the playing field. There are other standards that are incredible involved and expensive, it gets re-audited every single year and the cost associated with it is very expensive especially if you are a smaller company. Incurring that type of cost on an annual basis and it is cost-prohibitive. I think

when we put something in there we need to understand the impact of that on both large and small businesses and entrepreneurial ability. There is a balance of wanting oversight but needs to be balanced.

BK: I would suggest that we acknowledge the fact that certification bodies which are in many cases private companies and for-profit companies have a conflict of interest in raising testing requirements and costs.

LR: Wholeheartedly agree

Lisa Crosby: Can we say they *could* have a conflict of interest

AK: Unlicensed dismantling, training materials, universal waste interpretation, research on transportation

LR: Are we surmising or do we actually think this will be an issue?

TC: This has been identified as an issue, but I think it's a moot point. A strike team was reinvigorated with more resources so this may no longer be necessary.

CG: Just wanted to provide a bit of clarification, SB 366 was just signed by the governor. It won't become effective until January 1 and hasn't been funded. Any agencies request for funding will need to be approved through the budget process.

AK: The last one was developing strategic collection and sorting infrastructure

CG: Public comment via email, from Julia Garcia: "This comment is in regards to the core exchange and vehicle backstop proposal... Recommend issuing fines to companies that do not comply with requirements."

AK: That gets to a broader point

LR: So is this the state setting up depots on a statewide basis where batteries would be accumulated or a private company?

AK: Yes, that is ambiguous.

MO: I think this was related to that presentation we got from the GoBiz ZEV committee, where the State would assist in site selection, permitting, and land use. Not construction of depots

AK: Additional supporting policies. Wanted to highlight that there are also additional policies that were not recommended

MS: If anyone has an idea of additional policies to include you can email us and we can bring them up in the next meeting.

5. Advisory group discussion of progress and next steps

MO: I'd like to go through and ask the AG members to just provide their feedback

TA: This is a difficult and awkward format to establish consensus but I think we are getting close to developing a set of recommendations. It's important that the owner of the battery to have as much control as possible over where the batteries go next.

DB: Is there a deadline before you are hoping for feedback from the committee members?

AK: Our plan is to update the backstop proposal and modify the policies based on the meeting today and present a new version on November 2 and request edits by the next week.

DB: Then my only comment is thanks to the UC Davis team, the easy part is poking holes and the hard part is writing text.

TC: I had no idea what to expect going into this, I feel the group has done a good job and a remarkable job by the UC Davis team. I think we have done an admiral job in terms of winding our way through these things with the upper view of trying to make the right choices for the state of California and balancing our own personal agendas and biases as we walk through this process.

PG: Thank you, I have already expressed my opinions so thank you everyone.

SH: Also want to express my gratitude to the UC Davis team for their patience and think we are making good progress.

BK: Thanks to UC Davis and to everyone representing the state agencies. My concerns are that we focus in on what constitutes proper recycling and what the economic drivers are for recycling and reuse and how the state can actually have an impact on those economic drivers

NL:

NN: Nothing to add at this time, thanks

GN: I'll parrot what a lot of people have said so far, I think we are on the right track. I support any recommendation that keeps these batteries out of our rivers and landfills and the real MVPs are the UC Davis team

LR: Making sausage is never a pretty sight but I think the UC Davis folks and state have done a great job in trying to collaborate lots of different opinions and reviews. Want to caution against overregulating something that we don't have to overregulate. It's a bit of a struggle for us because we have been operating as a required businesses. It would be helpful for me if we could have an in-person meeting. I personally have to read things over and over again so that has been a challenge.

LS: I would echo the compliments to the UC Davis team they have been infinitely patient and I look forward to the process moving forward, I think we have a good start and they say the best negotiation is where nobody is really happy so I think we'll all walk away a bit disappointed but I think our world will be cleaner for it.

6. Discussion of advisory group meeting schedule

MO: Looking towards scheduling the next meeting, decided on December 7 from 9-12

No additional public comment

MO: Summarized and adjourned meeting