

DOCKETED

Docket Number:	20-EPIC-01
Project Title:	Development of the California Energy Commission Electric Program Investment Charge Investment Plans 2021-2025
TN #:	250595
Document Title:	Tobias Hecht Comments - Comments from ReJoule regarding Concept 4 (Repurposed batteries)
Description:	N/A
Filer:	System
Organization:	Tobias Hecht
Submitter Role:	Public
Submission Date:	6/11/2023 10:52:09 AM
Docketed Date:	6/12/2023

Comment Received From: Tobias Hecht
Submitted On: 6/11/2023
Docket Number: 20-EPIC-01

Comments from ReJoule regarding Concept 4 (Repurposed batteries)

Comments:

Comment by

Comment

SC

Project focuses need to address establishing a repurposed battery supply chain with UL certification UL1974 in mind for multiple battery types from various OEMs

SC

Project focuses should also establish key performance and cost metrics for repurposed batteries, and a means of sharing that data to foster trust and confidence in the repurposed battery ecosystem

TH

Each piece of this as articulated now is entirely appropriate. However, it may be helpful to remember that repurposing will move beyond one-off demonstrations only if deploying decommissioned batteries ultimately becomes considerably less expensive than deploying new ones. That is a tall order, but envisaging a clear roadmap, identifying the hurdles, means CEC dollars could be transformative.

One of the biggest hurdles lies in the cost of permitting and fire safety engineering. The current stated priorities rightly call out these challenges. But at the end of the day, without a UL-1974-certified facility anywhere in North America, there is no hope for streamlining the process very much. The industry can't be scaled without such a facility. Why not aim for this, and for building it in California? This is a realistic, achievable goal, and California could be the first state in the country to have such a facility.

Other roadblocks? New batteries are eligible for a 30% investment tax credit under the IRA even before various "adders." The federal government will shoulder much or even most of the cost of deploying new batteries. It's uncertain if repurposed batteries will qualify for the credits. If they don't, repurposed batteries will never compete with new ones, no matter how many other hurdles are overcome. Sorting this out is not up to California or the CEC. But there is a way we could help to set a precedent. California has SGIP incentives and if the state is forward-looking, it will make certain that repurposed batteries qualify. At present, they don't (correct?). Even if that piece changes, another problem will persist: the SGIP program as we know it is a form of bureaucratic torture that has failed installers and rate payers alike. In contrast to the simplicity of the federal program, SGIP incentives materialize only after months of torment. The CEC could issue a call for proposals for a rational system of incentives for repurposed batteries. Without one, how could used batteries compete? All new batteries, or at least their primary components, will be imported for the foreseeable

future. But repurposed batteries can be readied for market with an entirely California-supply chain. This would be a huge benefit for California ratepayers. But it will require subsidies in the short term, if only to compete with the massive subsidies for batteries imported from East Asia. The minimum requirement is a level playing field and that does not exist today.

While we need to move beyond demonstration projects, there are things that have not been demonstrated. For example, in the first round, CEC focused on commercial and industrial sites. In a future round, we might focus on critical infrastructure – foodbanks, fire stations, police stations, affordable housing, community resilience hubs, homeless shelter, etc.

One of the other participants at the public forum suggested building solar-powered off-grid DC charging stations for electric vehicles. That’s actually a sound idea. Why not build these with repurposed batteries? Perhaps the IOUs wouldn’t want this, but this is a unique and powerful way of demonstrating the potential of second-life batteries.

Finally, we all want to get to a point where we can build before-the-meter installations. Why not sponsor demonstration projects with our three IOUs? Before we know it, we’ll have enough batteries to replace peaker plants. But we need to prove that repurposed batteries are useful in this context. And if permitting is never going to be simple, we need to work in economies of scale, amortizing what we invest in permitting, planning, and safety.

Comments:

Comment by

Comment

SC

Project focuses need to address establishing a repurposed battery supply chain with UL certification UL1974 in mind for multiple battery types from various OEMs

SC

Project focuses should also establish key performance and cost metrics for repurposed batteries, and a means of sharing that data to foster trust and confidence in the repurposed battery ecosystem

TH

Each piece of this as articulated now is entirely appropriate. However, it may be helpful to remember that repurposing will move beyond one-off demonstrations only if deploying decommissioned batteries ultimately becomes considerably less expensive than deploying new ones. That is a tall order, but envisaging a clear roadmap, identifying the hurdles, means CEC dollars could be transformative.

One of the biggest hurdles lies in the cost of permitting and fire safety engineering. The current stated priorities rightly call out these challenges. But at the end of the day, without a UL-1974-certified facility anywhere in North America, there is no hope for streamlining the process very much. The industry can’t be scaled without such a facility. Why not aim for this, and for building it in California? This is a realistic,

achievable goal, and California could be the first state in the country to have such a facility.

Other roadblocks? New batteries are eligible for a 30% investment tax credit under the IRA even before various "adders." The federal government will shoulder much or even most of the cost of deploying new batteries. It's uncertain if repurposed batteries will qualify for the credits. If they don't, repurposed batteries will never compete with new ones, no matter how many other hurdles are overcome. Sorting this out is not up to California or the CEC. But there is a way we could help to set a precedent. California has SGIP incentives and if the state is forward-looking, it will make certain that repurposed batteries qualify. At present, they don't (correct?). Even if that piece changes, another problem will persist: the SGIP program as we know it is a form of bureaucratic torture that has failed installers and rate payers alike. In contrast to the simplicity of the federal program, SGIP incentives materialize only after months of torment. The CEC could issue a call for proposals for a rational system of incentives for repurposed batteries. Without one, how could used batteries compete? All new batteries, or at least their primary components, will be imported for the foreseeable future. But repurposed batteries can be readied for market with an entirely California-supply chain. This would be a huge benefit for California ratepayers. But it will require subsidies in the short term, if only to compete with the massive subsidies for batteries imported from East Asia. The minimum requirement is a level playing field and that does not exist today.

While we need to move beyond demonstration projects, there are things that have not been demonstrated. For example, in the first round, CEC focused on commercial and industrial sites. In a future round, we might focus on critical infrastructure "foodbanks, fire stations, police stations, affordable housing, community resilience hubs, homeless shelter, etc.

One of the other participants at the public forum suggested building solar-powered off-grid DC charging stations for electric vehicles. That's actually a sound idea. Why not build these with repurposed batteries? Perhaps the IOUs wouldn't want this, but this is a unique and powerful way of demonstrating the potential of second-life batteries.

Finally, we all want to get to a point where we can build before-the-meter installations. Why not sponsor demonstration projects with our three IOUs? Before we know it, we'll have enough batteries to replace peaker plants. But we need to prove that repurposed batteries are useful in this context. And if permitting is never going to be simple, we need to work in economies of scale, amortizing what we invest in permitting, planning, and safety.

Please see attached

Additional submitted attachment is included below.

Comments:

Comment by	Comment
TH	<p>Each piece of this as articulated now is entirely appropriate. However, it may be helpful to remember that repurposing will move beyond one-off demonstrations only if deploying decommissioned batteries ultimately becomes considerably less expensive than deploying new ones. That is a tall order, but envisaging a clear roadmap, identifying the hurdles, means CEC dollars could be transformative.</p> <p>One of the biggest hurdles lies in the cost of permitting and fire safety engineering. The current stated priorities rightly call out these challenges. But at the end of the day, without a UL-1974-certified facility anywhere in North America, there is no hope for streamlining the process very much. The industry can't be scaled without such a facility. Why not aim for this, and for building it in California? This is a realistic, achievable goal, and California could be the first state in the country to have such a facility.</p> <p>Other roadblocks? New batteries are eligible for a 30% investment tax credit under the IRA even before various "adders." The federal government will shoulder much or even most of the cost of deploying new batteries. It's uncertain if repurposed batteries will qualify for the credits. If they don't, repurposed batteries will never compete with new ones, no matter how many other hurdles are overcome. Sorting this out is not up to California or the CEC. But there is a way we could help to set a precedent. California has SGIP incentives and if the state is forward-looking, it will make certain that repurposed batteries qualify. At present, they don't (correct?). Even if that piece changes, another problem will persist: the SGIP program as we know it is a form of bureaucratic torture that has failed installers and rate payers alike. In contrast to the simplicity of the federal program, SGIP incentives materialize only after months of torment. The CEC could issue a call for proposals for a rational system of incentives for repurposed batteries. Without one, how could used batteries compete? All new batteries, or at least their primary components, will be imported for the foreseeable future. But repurposed batteries can be readied for market with an entirely California-supply chain. This would be a huge benefit for California ratepayers. But it will require subsidies in the short term, if only to compete with the massive subsidies for batteries imported from East Asia. The minimum requirement is a level playing</p>

	<p>field and that does not exist today.</p> <p>While we need to move beyond demonstration projects, there are things that have not been demonstrated. For example, in the first round, CEC focused on commercial and industrial sites. In a future round, we might focus on critical infrastructure – foodbanks, fire stations, police stations, affordable housing, community resilience hubs, homeless shelter, etc.</p> <p>One of the other participants at the public forum suggested building solar-powered off-grid DC charging stations for electric vehicles. That’s actually a sound idea. Why not build these with repurposed batteries? Perhaps the IOUs wouldn’t want this, but this is a unique and powerful way of demonstrating the potential of second-life batteries.</p> <p>Finally, we all want to get to a point where we can build before-the-meter installations. Why not sponsor demonstration projects with our three IOUs? Before we know it, we’ll have enough batteries to replace peaker plants. But we need to prove that repurposed batteries are useful in this context. And if permitting is never going to be simple, we need to work in economies of scale, amortizing what we invest in permitting, planning, and safety.</p>
SC	Project focuses need to address establishing a repurposed battery supply chain with UL certification UL1974 in mind for multiple battery types from various OEMs
SC	Project focuses should also establish key performance and cost metrics for repurposed batteries, and a means of sharing that data to foster trust and confidence in the repurposed battery ecosystem