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Advanced Battery Bankability Accelerator (ABBA) Concept

I want to start off saying that the presented Advanced Battery Bankability Accelerator (ABBA) Concept has identified some of the important challenges faced by the battery industry, but when you look at some of the small startup companies, there is an additional layer of challenges and difficulties beyond the cell performance (typically a part of the innovation, not a challenge, but a goal), supply chains (good point, new materials such as LMFP could replace some of the reliance on NMC and NCA), safety (less critical for small test cells, more critical for the large battery packs. most startups are not at the pack level).

One blind spot in your evaluation is not giving enough attention to the manufacturing and new tools that are a critical part of going from A - battery materials to B - battery cells/packs.

Currently, most of the battery manufacturing equipment is produced outside of the US. Also, the state-of the art tools rely on old technologies, that are not energy efficient (just to make 1 kWh of battery electrode, 20kWh of energy is needed). Also, electrode coating machines use carcinogenic toxic solvent, this is a huge issue for permitting as well as for startups who want to test their materials - it is simply a very messy endeavor and expensive on the top of it.

I suggest that you please take a look at each step of battery manufacturing: mixing, electrode coating, slitting, electrolyte cell filling etc. - there are a lot of low hanging fruits that should be addressed. This would make US battery manufacturing more sustainable and competitive. And also, would accelerate commercialization of new battery tech. It is important that the pilot production environment is an environmentally safe and cost-effective, and not just a small copy of already existing old technologies.

Companies, such as LiCAP, based in Sacramento, could provide dry coating solutions for battery manufacturing. We would be happy to partner up with California-based battery startups and help them to prove their technology.

Regarding the Stakeholder Questions:

What should be the top-priorities for the bankability center (and why)? - scalability. Economic performance at scale should be evaluated very early on. If technology is not cost-effective, it should not be supported by public funds.

What other activities could the Center undertake that would accelerate adoption and scale-up of new battery storage technologies? - one of the pain points of many startups is related to IP. Sometimes companies choose not to partner up because of the IP issues/fears to lose IP. IP attorneys are very expensive. If CEC could help to navigate these issues somehow, i.e., providing resources for contract/agreement screening it would help.

Additional submitted attachment is included below.

Which technology you would choose for your pilot manufacturing facility?

Wet Coating



Your Energy Consumption to Manufacture Battery Electrode:

20 kWh
/ 1kWh Storage Capacity

vs.

Dry Coating



Your Energy Consumption to Manufacture Battery Electrode:

3 kWh
/ 1kWh Storage Capacity

LICAP
Activated Dry Electrode™