

## DOCKETED

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*Comment Received From: Alice Sung*

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**â€œCitizen Advocacy for EPIC funding initiatives to benefit PUBLIC K-12 Schools at District-wide Scale towards deep energy retrofit to ZNE â€**

See attached doc.

*Additional submitted attachment is included below.*

## Comment on CEC EPIC 3 proposed Draft Initiatives

### “Citizen Advocacy for EPIC funding initiatives to benefit PUBLIC K-12 Schools at District-wide Scale towards deep energy retrofit to ZNE ”

Submitted by: Alice Sung, AIA, LEED AP, BD+C, GPR, ISSP-SA, Principal, Greenbank Associates

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DATE: March 20, 2017

Thank you to the CEC for its detailed presentation of draft funding initiatives organized in 8 themes, on March 14, 2017. These are worthy areas for research, demonstration and deployment, towards advancing the state’s energy goals, reaching to ZNE.

1. My first comment, for next rounds of public commenting, would be to request more time between presentations and release of copies of presentation materials, to allow for more sharing of the proposed draft initiatives (100 pages in itself,) and more thoughtful consideration from the public, potential applicants, and especially the Public Sectors. Suggest minimum of 2-3 weeks post last public presentation and/or notice with release online of all documents. (I had requested posting of the March 14<sup>th</sup> PPT presentation, that detailed the proposals/activities, yet, I still do not see it on the EPIC website. Still, comments are closing only 4-5 business days post that March 14<sup>th</sup> date.)

2. Regarding ALL themes, where applications are suggested for “commercial” or “non-residential” sectors, I’d like to suggest that the term “commercial” be further defined to *specifically* include “ public K-12 school districts/ campuses,” for building sector deployment, demonstrations and/or applications to scale. It might be important to structure these grant proposals in a way that prevents inundating K-12 Public Sector Facilities personnel (let alone individual school principals) with multiple vendors (potential applicants) soliciting proprietary technologies or products.

3. Building on above comment 2., in Theme 1, specifically, the initiatives calling for deployment at scale in disadvantaged communities, built prior to 1980’s, and those dealing with OPEN SOURCE platforms, large-scale demonstrations, and those dealing with large-scale or behavioral plug load control/reductions would be especially suited to specifying PUBLIC K-12 School Districts as the subject demonstrations, with replicability in all 1000+ California districts. I ‘d like to suggest also that these individual building energy efficiency related initiatives (especially in Theme 1,) might be somehow a.) related to each other as parts of a whole campus deep energy retrofit approach application towards the transformation of existing campuses to ZNE, to help demonstrate aggregated impact towards meeting our 50% existing buildings at ZNE by 2030 goal.

4. Although I have not had the time to consider *each* initiative and many (sub-initiatives) in great detail, in general, I’d like to suggest the CEC take a broad overview of everything and consider (or reconsider?) that the initiative forward BOTH new and , perhaps MORE importantly, RETROFIT applications of the technologies to EXISTING BUILDINGS, and specifically, to our aging, existing K-12 school infrastructure of widely varying condition with large absence of basic sub-metered building data and automated controls. Are there universal gaps or needs in the K-12 sector that we can identify to design a specific sub-initiative around in the EPIC 3 program, that could serve as a model to tap into DISTRICT-SCALE ZNE? Please feel free to contact me further if interested in this discussion.

4. Regarding Theme 2, the CEC might consider this above suggestion, to design or specify that K-12 school districts, and community colleges be specified as one of the priorities to serve as the subjects of : S2.1 Highly energy efficient buildings and communities, S2.2 Low carbon Microgrids, S2.3, improving the business proposition of Integrated distributed storage and S2.4 incentivize DER adoption through Innovative strategies at the Local Level.

As there are a few School districts now with significant renewables spread over a few campuses within a District, these might be ready models for next step DER with the addition of storage, and integrated controls, with smart integration of EV charging, and innovative NEM policy and Rate Schedules for ZNE Public Schools . Perhaps a few more (new?) sub-initiatives in this Theme 2 could be added to explore what these models of “Innovative ZNE School Districts “ could be and what statewide CEC,CPUC and cost models (both soft and hard costs) with incentives we could develop to bring this large public sector to ZNE by 2030.

5. Regarding Theme 3, again, I see the broad application to public K-12 school districts, as serving as a good model for natural integration of DER throughout our neighborhoods, serving as distributed energy storage fully integrated as part of the grid, but allowing for full public benefit (to the school district) of: first use of its self-generated electricity, as well as preservation of local storage back-up, and fair source of revenue generation at full value of peak periods, especially for those school sites that are not running summer school. Perhaps consideration of this could include financial and rate analysis for K-12 public school cases (and by other sectors) in the S3.1 and S3.4 sub-initiatives.

6. Regarding Themes 5, 6, 7 and 8, while these are for the most part, all worthy endeavors, I believe many of the sub-initiatives could be tailored to apply to K-12 school districts; again, at the District /community scale, with many opportunities to impact disadvantaged communities you prioritize in Theme 8.

7. Regarding Theme 6, maximizing synergies in the Water-Energy-Food nexus, it might be interesting to consider the development of a sub-initiative to innovate a demonstration model for implementation of a “School District/ Community-wide distributed non-potable water reuse systems,” both a retrofit pathway (would dual plumbing implementation still be cost-prohibitive?) and a new construction pathway. There are a few interesting water reuse technologies at utility-scale and as distributed building or campus scale, that would be wonderful to see funded in this nexus initiative.

Please feel free to reach out to me if you would like to discuss further. Thank you for this opportunity to submit public comment.