

DOCKETED

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S8.2 Demonstrate Emerging Clean Energy Technology Solutions in Disadvantaged Communities

The attached recommended initiative focuses on addressing environmental injustice for disadvantaged communities through demonstration and education. An initiative is needed to educate students and other stakeholders in disadvantaged communities on ZNE home construction and on-site power generation. By demonstrating ZNE-built affordable homes to students and surrounding community members through structured outreach and learning opportunities, a message of possibility and inclusion will be made while supporting the adoption of ZNE design packages for building investment. Students in disadvantaged communities will also receive ZNE knowledge and skills needed for employment in future home construction.

Additional submitted attachment is included below.

EPIC Third Triennial Investment Plan Initiative Recommendation

S8.2 Demonstrate Emerging Clean Energy Technology Solutions in Disadvantaged Communities

Initiative Description

Low income families and communities rarely benefit from clean energy technologies and energy efficient building methods that can result in lower costs, greater comfort, and a healthier living environment. The focus of this initiative addresses environmental justice for disadvantaged communities through demonstration and education. An initiative is needed to educate students in disadvantaged communities with a focus on Zero Net Energy (ZNE) affordable homes and renewable energy resources to equip students with the knowledge and skills needed for employment in future home construction. By demonstrating ZNE built homes to the students as well as surrounding community members, through structured learning opportunities, a message of possibility and inclusion will be made and support the concept of including ZNE design packages in other community projects.

The educational goals of this initiative would be multifaceted. One goal would be to train students in construction related programs at community colleges on energy efficiency and on-site clean energy generation methods supporting ZNE home construction. The technical aspects of this training could be incorporated within the curriculum of programs covering building, architecture, electrical, codes, and design. It offers many educational opportunities from the planning, design, and permitting processes, to financing, ground breaking, building and construction. Another goal would be to educate both students and interested community members on benefits, finance, emerging regulations, and advocacy. A third component would be research on issues pertaining to building and retrofitting energy efficient homes in existing disadvantaged communities.

The technical and/or market barriers addressed by this initiative include overcoming environmental injustice in disadvantaged communities by offering educational opportunities that provide resident students with skills needed in the coming ZNE-impacted job market, information to community members (including developers and investors) on what is possible for affordable homes within their community, and energy efficient and healthy homes for the selected community members.

Proposed Organizations/Partnerships

Community colleges serving disadvantaged communities, community-based job training organizations, apprenticeship programs, charitable organizations involved in the construction of homes for low income residents, charitable organizations installing solar energy systems for low income residents

Primary Users and Beneficiaries

Community residents/rate-payers, community advocacy groups, local governments, California utilities, developers and investors

Impacts if Successful

The benefits of this initiative are several fold -

- Promoting renewable technologies to disadvantaged communities
- Helping meet 2020 ZNE goals for California (information and education facilitate adoption)

- Developing a skilled labor force that understands ZNE construction
- Creating employment opportunities for disadvantaged community residents
- Promoting the California Solar Initiative

Potential Impacts if Following Topics Are Incorporated in Program

- Assisting the development of community micro grids
- Assisting in the proliferation of EV charging stations within the state

Metrics and/or Performance Indicators

Quantitative metrics -

- Internship numbers
- Graduation/certificate numbers
- Job placement or apprenticeship numbers
- Continuing Education numbers
- ZNE home/buildings constructed
- PV panels installed
- EV charging stations installed

Qualitative Metrics -

- Estimated energy savings from dissemination of energy efficiency education classes to the community
- Innovations from research education in classes