DOCKETED	
Docket Number:	22-ERDD-03
Project Title:	Clean Hydrogen Program
TN #:	252821
Document Title:	Energetics Incorporated Comments on H2ONSITE
Description:	N/A
Filer:	System
Organization:	Energetics Incorporated
Submitter Role:	Public
Submission Date:	10/27/2023 5:08:44 PM
Docketed Date:	10/30/2023

Comment Received From: Energetics Incorporated
Submitted On: 10/27/2023
Docket Number: 22-ERDD-03

Energetics comments on H2ONSITE

Please see the attached comments from Energetics for the Distributed Hydrogen Solicitation Concept 22-ERDD-03 â€œH2 Onsiteâ€□

Additional submitted attachment is included below.

energetics
Clean Energy Consulting

Energetics Response to Draft Solicitation Concept for Distributed Clean Hydrogen Production with Onsite End Use (H2ONSITE)

Energetics is a clean energy consulting firm with experience in hydrogen and an office located in San Diego. We help government and private entries evaluate opportunities to use hydrogen for transportation, industrial, and power generation needs. Energetics appreciates the opportunity to provide input to the H2ONSITE program.

We are pleased to provide the following responses to questions 4, 5, and 6 of CEC's Questions for Stakeholders. We do not have any response to questions 1, 2, 3, 7, or 8.

4. **To ensure that funded projects and their impacts can inform future deployment of hydrogen in California, should the CEC consider additional performance metrics beyond those proposed for the M&V plan in Section IV?**

   - Metrics quantifying the community benefits and impacts, including waste reduction (or increase) and economic development, should be included in the M&V plans.
   - Metrics quantifying impacts to disadvantaged communities should be included in the M&V plans.
   - Verification of the advancement of the TRL by at least one level should be included in the M&V plans.
   - Safety-related metrics (e.g., number of safety incidents, cost and other consequences of safety incidents) should be included in the M&V plans.
   - Metrics quantifying the energy content of the hydrogen should be included in the M&V plans.
   - Metrics quantifying the projects' indirect costs should be included in the M&V plans.

5. **What type of technical assistance is needed to ensure equitable participation and project success, if any?**

   - Energetics' clients with interest in producing clean hydrogen do not have extensive experience with community engagement. Technical assistance is likely to be required by hydrogen project developers and operators to conduct community engagement and to assess community impacts and benefits.
   - Hydrogen project developers may require assistance in identifying and engaging minority-, women-, and LGBT-owned businesses.
   - CEC should consider setting aside funding to help small (especially disadvantaged) businesses that may not otherwise have the resources to complete the application process or that cannot contribute the required cost share.

7075 Samuel Morse Drive
Suite 100
Columbia, MD 21046
(410) 290-0370
Fax (443) 285-0693

901 D Street, S.W.
Suite 1010
Washington, DC 20024
(202) 479-2748

3 Kirkland Avenue
Suite 102
Clinton, NY 13323
(315) 214-1995

2907 Shelter Island Drive
Suite 217
San Diego, CA 92106
(619) 614-3987

2950 Newmarket Street
Suite 101-156
Bellingham, WA 98226
(360) 752-2494

- CEC should consider requiring that a minimum percentage of the project budget or a minimum dollar value be designated specifically for community engagement.

6. **Are there specific end uses we should target with the one to five metric ton hydrogen capacity? If so, why?**

- Energetics recommends targeting heavy-duty truck refueling stations. Heavy-duty fuel cell trucks are expected to refuel with up to 50-70 kg H_2 per fueling event. A station serving 100 trucks a day would require one to five metric tons capacity.
- Energetics also recommends targeting long-duration energy storage (LDES) applications using reversible fuel cells (fuel cells that are also able to operate in reverse as electrolyzers). Hydrogen has been identified as well suited for seasonal (up to 1000 hours) LDES.

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