

**DOCKETED**

<b>Docket Number:</b>	03-AFC-02C
<b>Project Title:</b>	Los Esteros Phase II Compliance
<b>TN #:</b>	228237
<b>Document Title:</b>	Staff's Data Requests Set 2 A1 through A6
<b>Description:</b>	Post-Certification Petition for Los Esteros Critical Energy Facility
<b>Filer:</b>	Raquel Rodriguez
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	5/13/2019 2:38:49 PM
<b>Docketed Date:</b>	5/13/2019



May 13, 2019

Ms. Barbara McBride  
Director of Environmental Services  
Calpine Corporation

4160 Dublin Blvd.

Dublin, CA 94568

Re: **Post-Certification Petition for Los Esteros Critical Energy Facility  
(03-AFC-02C), Staff's Data Requests, Set 2, A1 through A6**

Dear Ms. McBride:

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests the information specified in the enclosed data requests regarding the proposal to add battery storage at the Los Esteros Critical Energy Facility. The requested information is related to recent project changes regarding the proposed flow batteries. The information requested is necessary to: 1) more fully understand the proposed changes to the facility, 2) assess whether the changes would be constructed and the facility would continue to operate in compliance with applicable regulations, 3) assess whether the changes will result in significant environmental impacts, and 4) assess potential mitigation measures.

These data requests, numbered A1 through A6, are being made in the technical areas of Hazardous Materials Management and Worker Safety and Fire Protection. Written responses to the enclosed data requests are due to the Energy Commission staff on or before June 10, 2019.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 653-8236 or email me at [John.Heiser@energy.ca.gov](mailto:John.Heiser@energy.ca.gov).

Sincerely,

John Heiser  
Compliance Project Manager

Enclosure (Data Request Packet)  
cc: Docket (03-AFC-02C)

Ms. Barbara McBride  
May, 13, 2019  
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**POST-CERTIFICATION PETITION FOR LOS ESTEROS CRITICAL  
ENERGY FACILITY  
(03-AFC-02C)  
Flow Battery Storage**

**Energy Commission Staff's Data Requests Set 2, A1 - A6**

**May 13, 2019**



**Technical Area:** Hazardous Materials Management  
**Author:** Brett Fooks

## **BACKGROUND**

The petitioner submitted a change in the chemistry of the flow batteries. The original vanadium flow redox battery proposal has been replaced with a proposed titanium-manganese flow battery. Due to the change in the battery chemistry, staff needs additional information about the new flow battery.

## **DATA REQUESTS**

- A1. Please provide the volume and composition ranges of the titanium-manganese electrolytes required for 6 MW with up to 18 MWh energy storage capability.
- A2. Please confirm that the 6 MW and 18 MWh are still correct for the energy storage capability of the titanium-manganese flow battery. In addition, please provide an estimate as to how many containers would be required to meet the 6MW/18 MWh.
- A3. Please provide a preliminary drawing showing the configuration of the titanium-manganese flow battery installation. Please clearly label the location of the negative and positive electrolyte tanks.
- A4. Please explain how secondary containment would be provided for the negative and positive electrolyte tanks, and whether potential mixing of positive and negative electrolytes in a secondary containment would be a problem due to incompatibility.

Ms. Barbara McBride

May, 13, 2019

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**Technical Area:** Worker Safety and Fire Protection

**Author:** Brett Fooks

## **BACKGROUND**

The petitioner submitted a change in the chemistry of the flow batteries. The original vanadium flow redox battery proposal has been replaced with a proposed titanium-manganese flow battery. Due to the change in the battery chemistry, staff needs additional information about the new flow battery design and specifications.

## **DATA REQUESTS**

- A5. Please provide a written narrative detailing what fire protection, fire alarm and life safety systems would be provided for the titanium-manganese flow battery installation. Please clarify if the fire suppression system would be water, a clean agent, or both.
- A6. Please provide any information that shows that the titanium-manganese flow battery would be certified as UL 9540 compliant.