

**DOCKETED**

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<b>Project Title:</b>	Lithium Valley Commission
<b>TN #:</b>	238451
<b>Document Title:</b>	Presentation - Lithium Valley Commission Meeting 6-24-21
<b>Description:</b>	June 24, 2021 Lithium Valley Commission Presentation
<b>Filer:</b>	Elisabeth de Jong
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
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<b>Docketed Date:</b>	6/23/2021



# Lithium Valley Commission Meeting

June 24, 2021





# Welcome - Housekeeping

- Workshop/hearing conducted remotely via Zoom
  - Recorded and transcribed by court reporter
- To participate in public comment:
  - By computer: use the “raise hand” feature in Zoom
  - Over the telephone: dial \*9 to “raise hand” and \*6 to mute/unmute your phone line
- To submit written comments:
  - Submit through the e-commenting system at:
  - <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=20-LITHIUM-01>



# Welcome and Roll Call

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# Agenda

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- Welcome and Roll Call
- Approval of Past Meeting Action Minutes
- Information and Planning Items
  - Media and Legislation Updates
  - Lithium Valley Commission Updates
- Legislative Report Discussion
- Determination of Agenda Topics, Speakers, and Presentations for Future Meetings
- Public Comment
- Adjourn



# Administrative Items

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- Approval of Past Meeting Action Minutes



# Public Comment

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# Media and Legislation Updates

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# Lithium Valley Commissioner Updates

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# California's Lithium Valley:



## Solutions for America's Lithium-Battery Supply Chain



4,000+  
Jobs



Reliable  
Clean Energy



New Lithium  
Economy

Salton Sea  
Repair



# U.S. Federal Supply Chain Goals and CTR's Solutions



## GOAL 1: Secure access to raw and refined materials and discover alternatives for critical minerals for commercial and defense applications

- CTR can produce 300,000 tonnes per annum of domestic lithium supply for the auto sector and for U.S. national security.
- CTR's process has the highest Environmental, Social and Governance credentials available in the world today.



## GOAL 2: Support the growth of a U.S. materials-processing base able to meet domestic battery manufacturing demand

- Fully integrated process to produce battery-grade lithium chemicals onsite with no offshore processing.
- CTR can rapidly scale up its production to support domestic battery supply chain demands.



## GOAL 3: Stimulate the U.S. electrode, cell, and pack manufacturing sectors

- Opportunities to collocate cathode facilities onsite with direct access to lithium chemicals, greatly reducing costs and transport carbon emissions
- CTR can provide baseload renewable energy to support a cleaner battery supply chain.



## GOAL 4: Enable U.S. end-of-life reuse and critical materials recycling at scale and a full competitive value chain in the United States

- Opportunities for colocation and integration of battery recycling facilities.
- CTR can provide renewable power and steam to support and promote clean energy recycling.



## GOAL 5: Maintain and advance U.S. battery technology leadership by strongly supporting scientific R&D, STEM education, and workforce development

- Approximately 1,500 good paying, union construction jobs and operating jobs and over 2,000 ancillary jobs expected at total operating capacity which will support one of the most economically and socially disadvantaged communities in the United States that has over 16% unemployment.
- CTR is working directly with the National Labs and universities with R & D and new technologies.

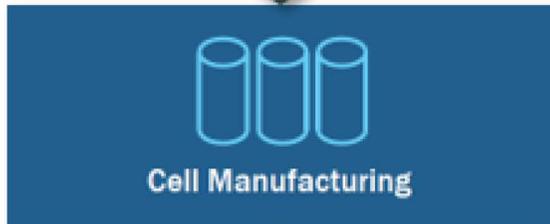
# Blue Print for U.S. Lithium-Battery Supply Chain



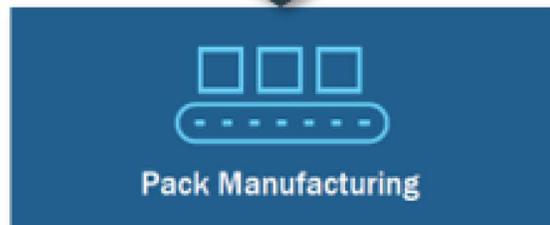
- HIGHEST SUSTAINABILITY CREDENTIALS IN THE WORLD TODAY
- UTILIZING 100% RENEWABLE POWER AND STEAM
- MINIMAL PRODUCTION FOOTPRINT
- NEAR-ZERO CARBON FOOTPRINT WITH ALL BRINE RETURNED TO GEOTHERMAL RESERVOIR



- INTEGRATED PRODUCTION (no off-shore processing)
- LESS THAN 1 HOUR TO PRODUCE FINISHED PRODUCT
- COLOCATION WITH CATHODE MANUFACTURE
- CAPACITY TO PRODUCE 300,000 TONNES LITHIUM PER ANNUM



- OPPORTUNITIES TO ATTRACT CELL MANUFACTURING - CREATING MORE JOBS
- CLOSE TO ESTABLISHED INFRASTRUCTURE
- LOCAL WORKFORCE AT THE READY



- OPPORTUNITIES TO ATTRACT BATTERY PACK MANUFACTURING - CREATING MORE JOBS
- USE OF 100% CLEAN POWER AND CONVENIENT TRANSPORT LOGISTICS
- LOCAL WORKFORCE AT THE READY



# CRITICAL CHALLENGES



Hell's Kitchen Lithium and Power Project Site

- **INVESTMENT** - Investors are risk-averse to longer than average development timelines in California and the U.S.
- **COMPLEX PERMITTING** - Complex permitting frameworks can affect project timelines, cost efficiencies and future development expansion planning.
- **COMPETITIVE INCENTIVES** - Incentives to attract cathode and battery manufacturing is highly competitive in many U.S. states. Federal and state support for a consolidated approach is required.

# PRIORITY U.S. ACTIONS



- White House **Council on Environmental Quality** to declare Lithium Valley developments as **“high priority”** or **“major infrastructure projects”** for permit streamlining and accountability.
- Encourage Local, State and Federal support to establish a **Lithium Valley “Opportunity”** or **“Enterprise” zone** that incentivizes development of cathode and battery manufacturing to create the world’s first **Clean Energy Battery Hub**.



# Lithium Valley Commissioner Updates

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# Public Comment

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# Legislative Report Discussion

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# Report Outline

## CHAPTER 1: Background

- AB 1657 Overview and Mandates
- Lithium Valley Commission Overview
- Vision for Lithium Valley

## CHAPTER 2: Areas of Analysis

- Furthering Development of Geothermal Power
- Market Opportunities for Lithium
- Benefits of/to Geothermal Plants
- Overcoming Challenges to Lithium Extraction
- Lithium Extraction Methods
- Economic and Environmental Impacts
- Importance of Incentives

## CHAPTER 3: Legislative Recommendations and Regulatory Changes

- Centralized tracking system for project permitting



# Chapter 2: Areas of Analysis

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## Topic 4: Overcoming Technical and Economic Challenges

Methods of overcoming technical and economic challenges currently limiting lithium extraction, processing, and production from geothermal brines.



# Chapter 2: Areas of Analysis

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## Topic 5: Lithium Extraction Methods

Safe environmental methods and standards for lithium extraction from geothermal brines and how this compares to other methods for deriving lithium.



# Chapter 2: Areas of Analysis

## Topic 6: Economic and Environmental Impacts

Potential economic and environmental impacts to the state resulting from extraction, processing, and production of lithium and lithium-dependent products from geothermal brines.

### Suggested sub-topics:

- How to prioritize local benefits; public health; Salton Sea restoration
- Workforce needs and opportunities; training needs
- Infrastructure needs and opportunities



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# Future Meetings Discussion

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- Determination of Agenda Topics, Speakers, Presentations



# Future Meetings Discussion

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- **Planning for July, August, September Meetings**



# Sample Workshop Template

## **Introductory remarks by sub-body members (10 min)**

Commissioner presentations (optional)

## **Presentation (10 min)**

- Guest Speaker

## **Panel (1 hour)**

- Moderated by member of sub-body
- Brief presentations followed by moderated Q&A
- 4-5 panelists: environmental, community representative, EJ/equity, industry, academia, etc.
- Commissioner Q&A

## **Commissioner Discussion (20 min)**

## **Public Comment**



# Planning for Workshops

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## Logistics:

- CEC will initiate contact with the sub-body Commissioners
- Sub-body Commissioners will create agenda



# Planning for Summer Workshops

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## Potential topics:

- Lithium Extraction Methods
- Furthering Geothermal Development
- Market Opportunities for Lithium
- Economic and Environmental Impacts



# Future Meetings Discussion

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- **Planning for Initial Community Engagement Meeting**



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# Adjourn

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**Webpage:** <https://www.energy.ca.gov/data-reports/california-power-generation-and-power-sources/geothermal-energy/lithium-valley>

**List Serv:** Lithium Valley Commission

# Thank you!

[LithiumValleyCommission@energy.ca.gov](mailto:LithiumValleyCommission@energy.ca.gov)



# Break

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[LithiumValleyCommission@energy.ca.gov](mailto:LithiumValleyCommission@energy.ca.gov)