



**CDTFA**  
CALIFORNIA DEPARTMENT OF  
TAX AND FEE ADMINISTRATION

# Lithium Valley: from Promise to Reality

## Taxation Considerations

April 25, 2024  
Genti Droboniku



# Lithium Extraction Excise Tax

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- SB 125 (2022)
  - Established a three-tier tax based on cumulative metric tons of lithium carbonate (LCE) extracted, effective January 1, 2023:
    - Tier 1: \$400 for each metric ton up to 20,000 metric tons
    - Tier 2: \$600 for 20,000 to 30,000 metric tons
    - Tier 3: \$800 for each metric ton over 30,000 metric tons
    - Beginning January 1, 2025, rates will be adjusted annually consistent with changes in the California Consumer Price Index
  - Required CDTFA to prepare by December 31, 2023, a study of replacing a volume-based tax on the extraction of lithium with an equivalent tax based on gross receipts.

# Lithium Extraction Tax Study

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- SB 125 required CDTFA to evaluate the following:
  - The **administrative feasibility** and considerations for converting a volume-based tax to an equivalent tax based on gross receipts.
  - The **revenue stability** of a tax based on gross receipts compared to a volume-based tax.
  - Potential impacts on the **tax burdens** of in-state lithium producers.
  - An analysis of the **reliability of gross receipts data** in terms of providing a meaningful measure of the value of lithium including the characteristics and structure of lithium-extracting firms, types, and frequency of sales by producers, price-setting mechanisms, and market volatility.
  - An **evaluation of alternatives** to a volume-based tax structure that may protect lithium producers if the lithium price declines.



# Lithium Extraction Tax Study

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- **Administrative Feasibility**
  - Compared to a gross receipts tax, a volume-based tax would likely be easier to administer, as it is only based on the volume of lithium carbonate equivalent (LCE) extracted and does not require any price verification.
  - However, the difference in administrative costs associated with a volume-based tax compared to a gross receipts tax would not be significant.



# Lithium Extraction Tax Study

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- **Revenue Stability**

- If extraction volume does not fluctuate widely, the volume-based tax system could be slightly more stable than a gross receipts tax system.
- However, since total worldwide volume is also typically correlated with price, fluctuating prices will likely cause production volume to fluctuate.
- The tiered structure of the volume-based tax also offers stability and an initial lower tax burden for producers who are likely to incur many upfront costs early in the extraction process.



# Lithium Extraction Tax Study

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- **Reliability of gross receipts**

- A gross receipts tax could more reliably measure the most up-to-date value of lithium, accurately keeping pace with changing trends in lithium prices.
- However, actual production prices would most likely be unknown as they would be set by private contracts and not by public markets.
- Furthermore, battery manufacturers that purchase or enter into joint ventures with mining operations would have no market transactions associated with their mining activity.
- Spot prices are the only available indicator of current and recent lithium prices. Chinese spot prices (measured in Chinese Yuan) have been primarily used as the LCE price reference since no individual price index has been accepted as the current industry standard.
- The average Chinese spot price has been very volatile over the past year and a half, rising to \$80,000 (in U.S. dollar equivalent) in late 2022, then declining to \$15,000 in November 2023. (current spot price is \$15,000)
- Prices included in negotiated contracts are typically lower than spot prices.

# Lithium Extraction Tax Study

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- **Tax Burden Impact**

- To compare the tax burden between the current volume-based tax system and a gross receipts tax system, CDTFA used hypothetical estimates for extraction volume and average price.
- For producers starting with a low initial extraction volume at the Tier 1 volume-tax rate of \$400, the tax burden is relatively minimal under either tax system
- Once the Tier 3 threshold (30,000 metric tones at \$800/per ton) is met, the price of lithium plays a determining factor related to tax burden. Inverse relationship between price and tax burden under current volume based tax structure compared to gross receipt tax structure.



# Lithium Extraction Tax Study

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- **Alternatives to a Volume-Based Tax**
  - The only practical alternative to a volume-based tax structure is a tax based on gross or net receipts. A gross receipts tax would likely be more straightforward than a net receipts tax, since it would avoid the complex deductions that accompany a net receipts tax.





# Current Lithium Tax Environment

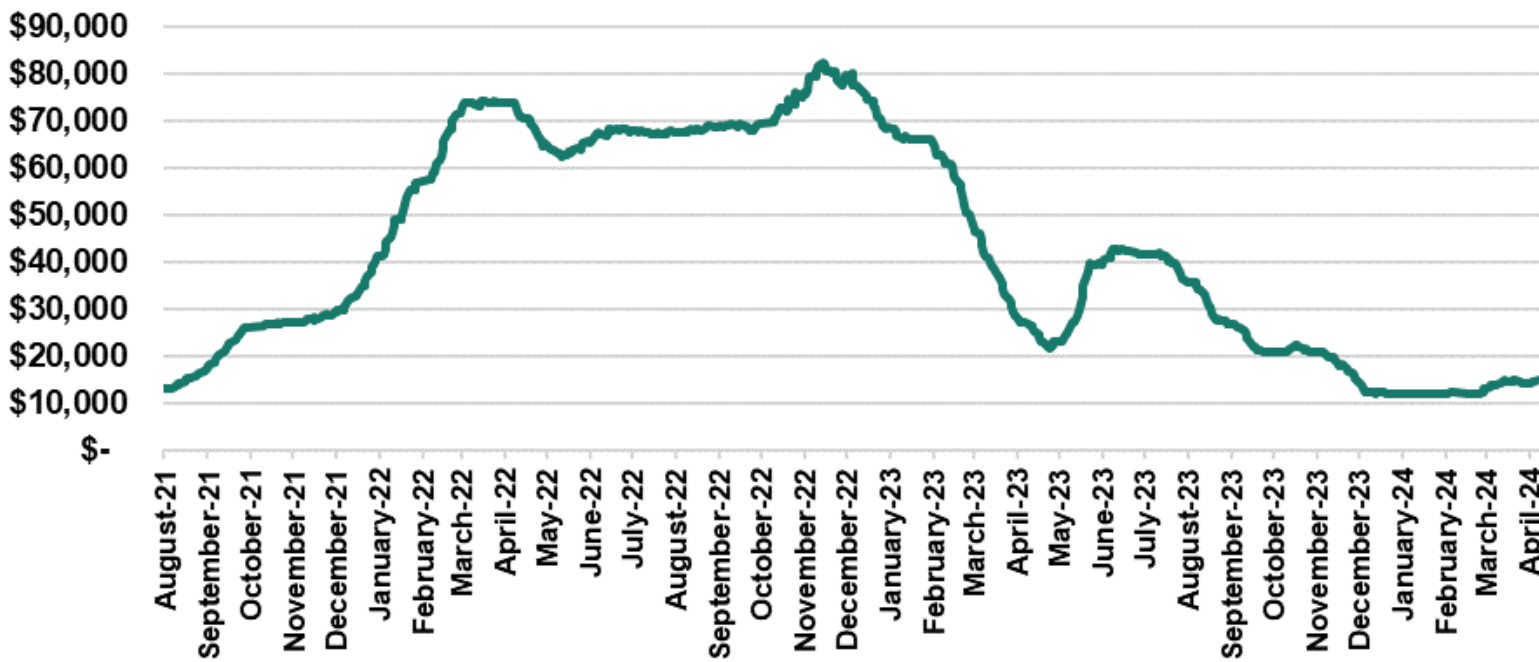
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- No taxable lithium has been extracted in California to date.
- No contract price data is publicly available at this time.
- Contract prices  $\neq$  spot prices, but Chinese spot price is the best publicly available data we have found.
  - Chinese spot price has averaged approximately \$23,000 (usd) per metric ton over last 12 months.
  - Reached \$40,000 per metric ton as recent as July 2023
  - Currently at \$15,000 per metric ton as of April 15, 2024



# Chinese Spot Market Lithium prices

**Lithium Carbonate 99% Min China Spot Price  
Converted to U.S. Dollars**



**Sources:**

<https://www.investing.com/commodities/lithium-carbonate-99-min-china-futures-historical-data>  
<https://www.exchangerates.org.uk>

Note: China spot price converted to US Dollars using daily conversion rates



# Tax Study Recap

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- Volume-based tax would be easier to administer, however difference in administrative costs would not be significant.
- Lithium price and a transparent market are key drivers in comparing both tax systems. Vertical integration could complicate a gross receipts tax.
- Prices are typically set by negotiated contracts, not spot prices.
- Once Tier 3 tax threshold is met, price becomes pivotal in determining the difference in tax burden between systems.