

The Dentons logo, consisting of the word "DENTONS" in white, uppercase, sans-serif font, enclosed within a white chevron-shaped border pointing to the right.

**DENTONS**

Wednesday, November 29, 2023

# Investing in the North American EV battery space

Grow | Protect | **Operate** | Finance

# Speakers



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An aerial photograph of Washington, D.C., featuring the U.S. Capitol building, the White House, and the Lincoln Memorial. A large purple rectangular overlay covers the left and center portions of the image, serving as a background for the title and speaker information. A smaller purple rectangle is located in the top right corner, containing the date.

DENTONS GLOBAL ADVISORS

# Investing in U.S. EV Battery Industry

Elizabeth Tate  
Associate Partner

November 29, 2023

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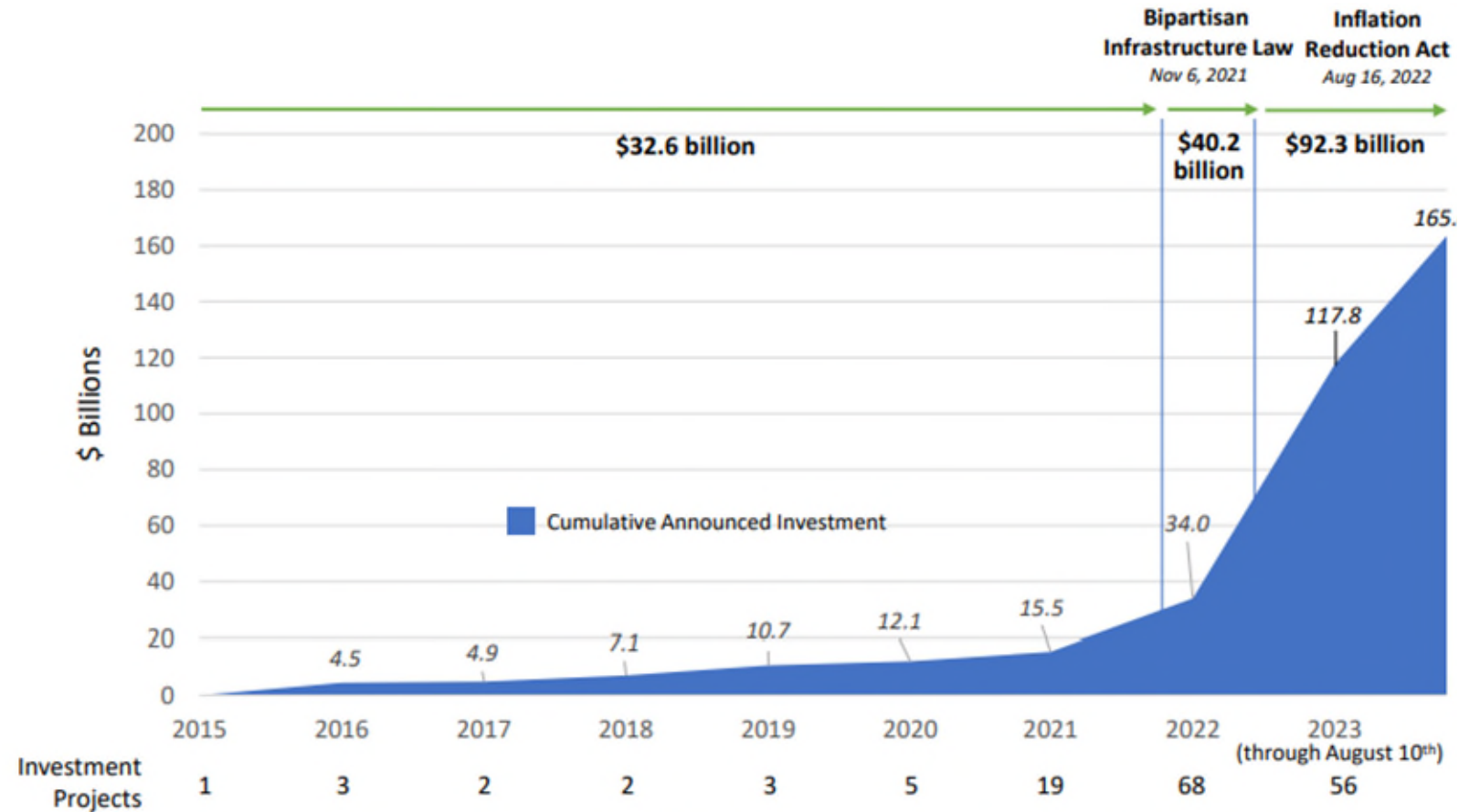
## 45+

Countries with on-the-  
ground presence



- Ford to Invest \$1.2 Billion in Michigan Battery Plant (January 10, 2023)
- Hyundai Motor Group to Invest \$5 Billion in New Battery Plants in the United States (February 22, 2023)
- Stellantis to Invest \$2.6 Billion in New Battery Plant in Indiana (March 15, 2023)
- Gotion to Invest \$1.9 Billion in Second Battery Plant in Illinois (September 12, 2023)
- LG Energy Solution to Expand Michigan Battery Plant and Invest \$5.5 Billion in Arizona (September 14, 2023)
- Toyota to Invest \$3.4 Billion in U.S. Battery Plant (September 22, 2023)
- Lithium Americas to Invest \$1.3 Billion in Nevada Battery Plant (October 19, 2023)

## The U.S. is in a “Battery Boom”



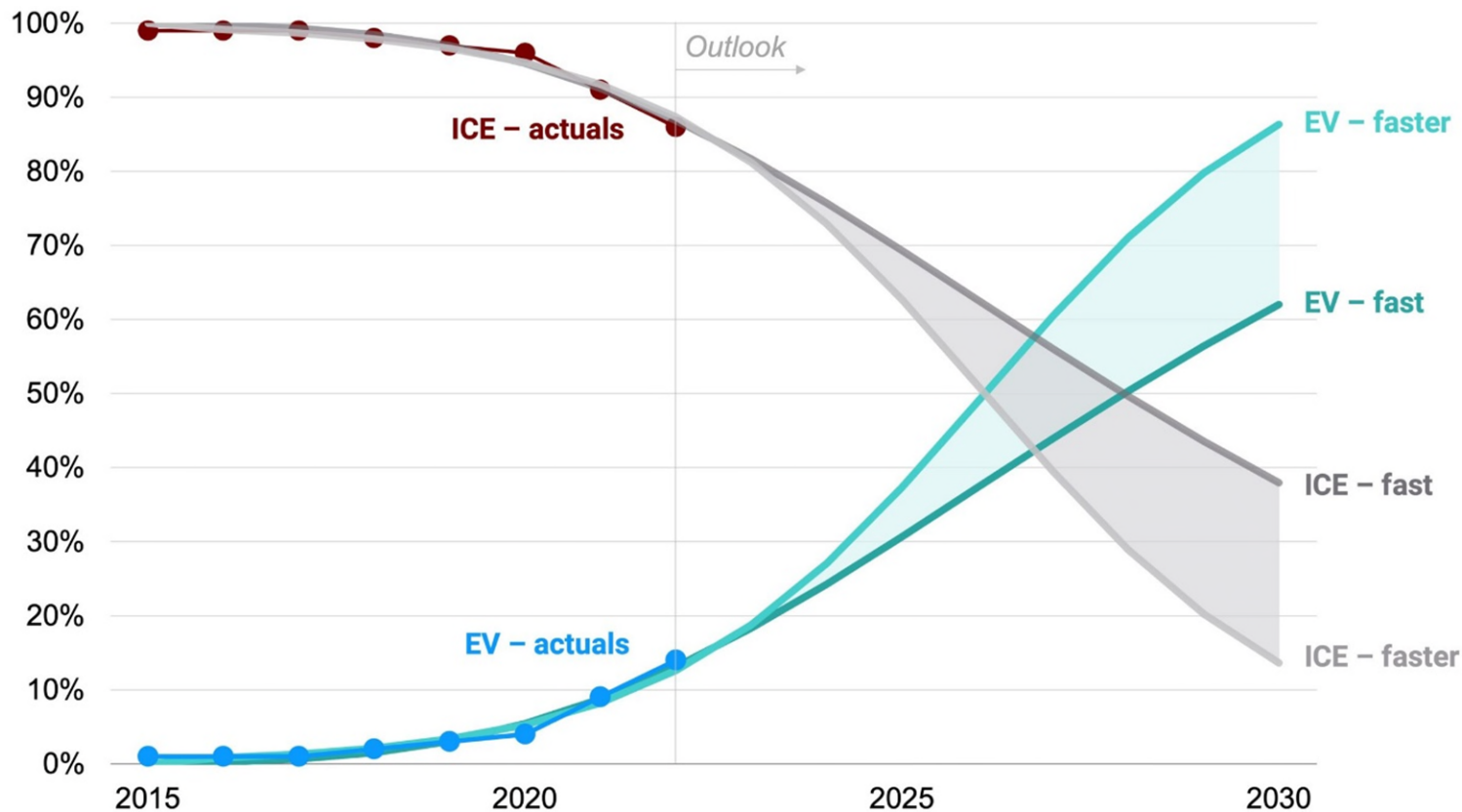
*\$92.3 billion in announcements, representing 56% of all announced EV investments, have occurred in the 12 months since the passage of the IRA.*



<sup>1</sup>Climate Nexus; [Job Impacts from the Shift to Electric Cars and Trucks](#) and Nevada Governor's Office of Economic Development; [Economic Impact of Tesla Gigafactory on Washoe and Storey Counties](#)

# Electric Vehicles (EV) are rapidly gaining global market share

Global EV and Internal Combustion Engine (ICE) Market Share %



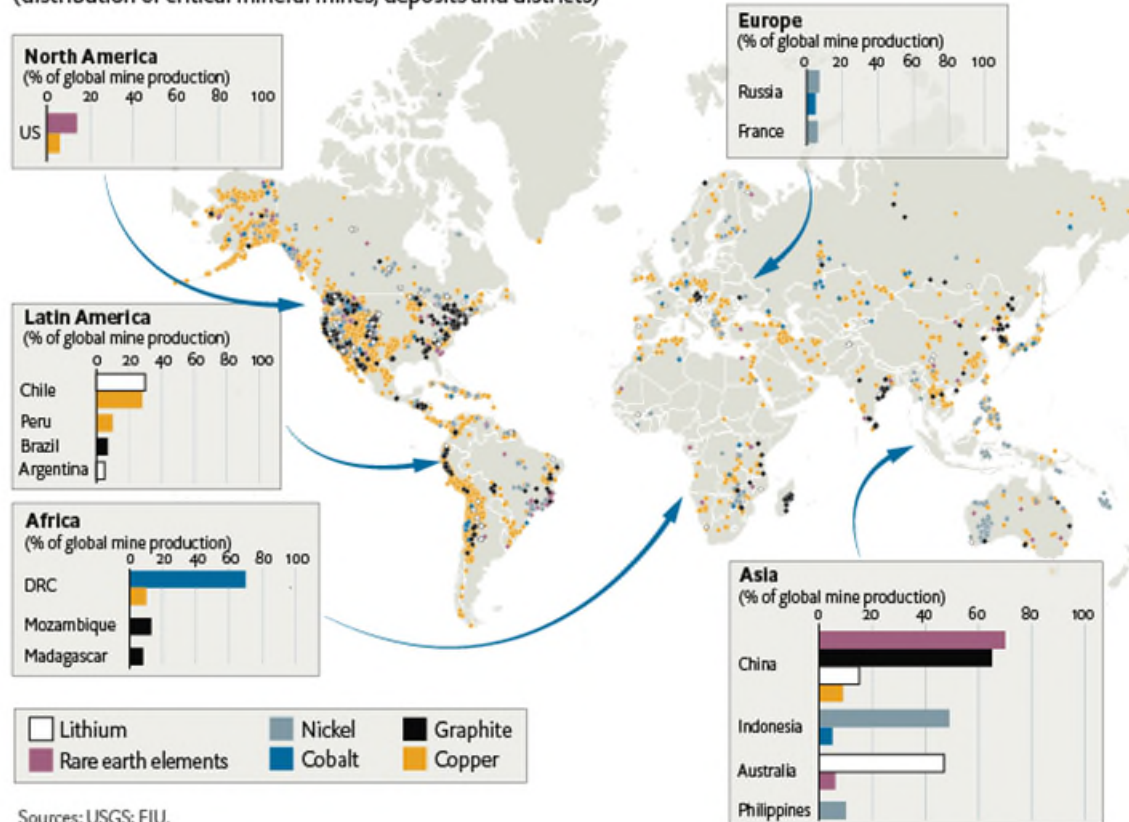
RMI - Energy. Transformed.

Source: IEA, RMI forecasts

- EV sales have increased **90 percent** in both the United States and Europe since 2020, and by more than 300 percent in China.
- Globally, **EV's were 14% of market share** in 2022 – up 3x from 2020.
- Still, today **EV's account for less than 1/5 of cars sold** globally, although that number is growing.

# Supply Chain Security

**China is the largest global producer for 60% of critical minerals**  
(distribution of critical mineral mines, deposits and districts)



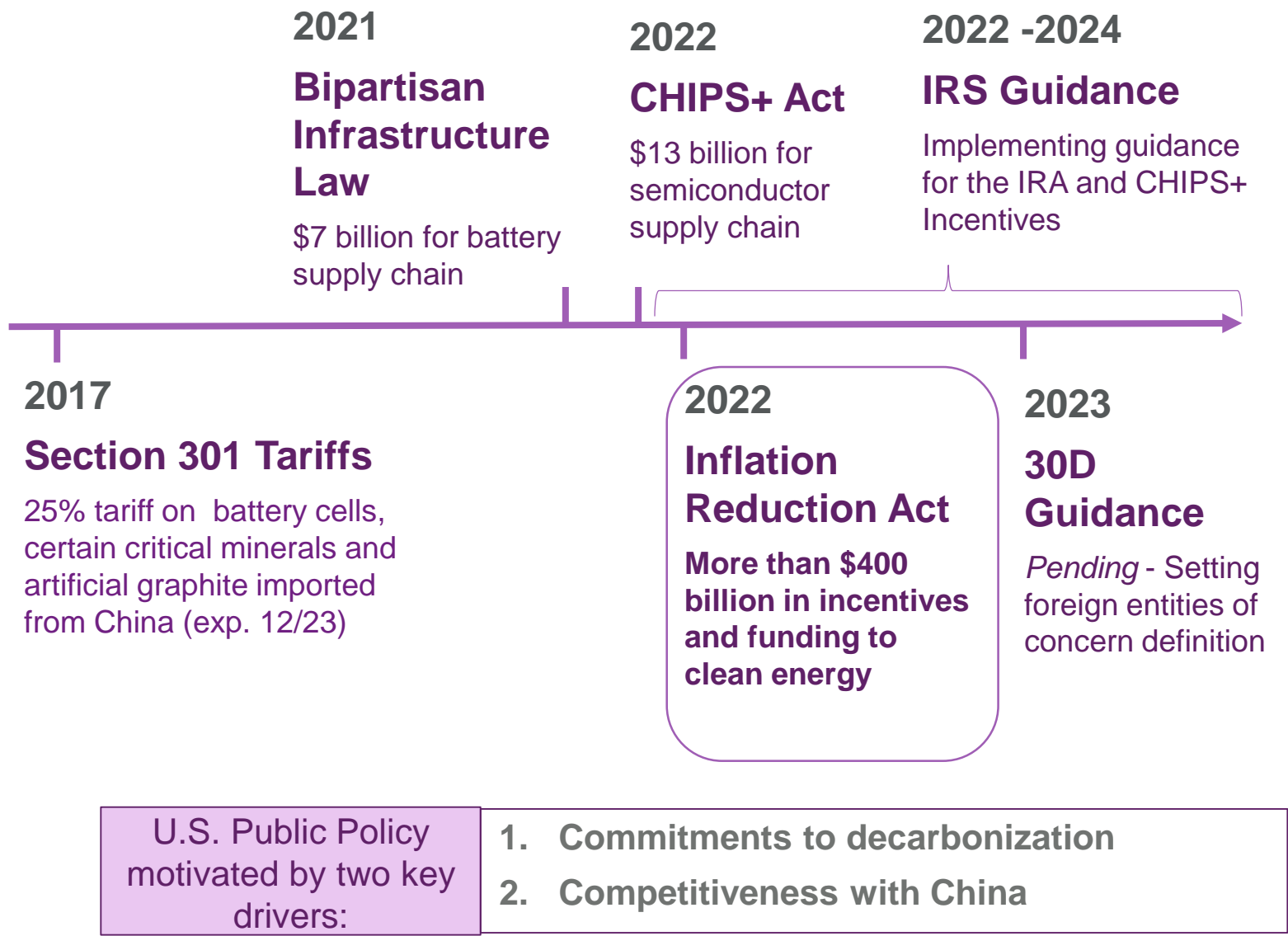
Sources: USGS; EIU.

The Economist Intelligence Unit. "Climate ambitions threaten a new wave of trade protectionism." 2023.  
<https://www.eiu.com/n/climate-ambitions-threaten-a-new-wave-of-trade-protectionism/>

- Countries are racing to ensure **access to raw critical minerals supply** as well as processing capacity.
- **China currently controls over three quarters of the global lithium-ion battery cell capacity**, and accounts for nearly half of the battery materials refining capacity.
- **“Green Protectionism”** is a key element of the **recent industrial policies** of the U.S. and EU, with incentives that center on domestic manufacturing and sourcing requirements.
- Countries are looking to **“de-risk”** and **“friendshore”** EV and advanced technology supply chains.
- Tensions further strain companies and countries already grappling with **supply chain challenges** and **energy and resource constraints**.



# U.S. Public Policy



# U.S. Industrial Policy is Driving Significant Investment

**Update:** US Electric Vehicle Supply Chain

**IRA** + 15 months

What's happened since the IRA passed?

**77** new projects announced

**\$79.6** billion in new investments

**48,605** new jobs announced

Nov. 2023

● **50** in Planning  
● **13** in Construction  
● **6** in Partial Operation  
● **5** in Operation  
● **3** in Piloting

Projects Announced by Month and Year



# What you need to know about IRA: Variety of Incentives

1

Incentives for Supply and Demand

2

Credits Stack Together

3

Bonus Credits

4

Requirements and Restrictions

5

State and Local Considerations

*Examples of Incentives in IRA (not exhaustive)*

## **Demand Creating: Purchasing Incentives for EV's (30D)**

Up to \$7,500 for a consumer buying a new vehicle.

- \$3,750 of the credit must meet critical minerals sourcing requirement
- \$3,750 if a rising percentages of the battery components were manufactured or assembled in North America

*Note: IRS Guidance still pending on which could further restrict certain vehicles from qualifying.*

## **Supply Creating: Advanced Manufacturing Tax Credit (45X)**

Incentives for each stage of the battery production process (as well as other clean energy components).

For Example:

- 10% of the cost of battery electrode active materials
- \$35/kWh of battery cell capacity
- \$10/kW of battery module capacity (or, for a battery module that does not use battery cells, \$45/kWh)
- 10% of the cost of producing a battery mineral.

## **Supply Creating: Qualifying Advanced Energy Project (48C)**

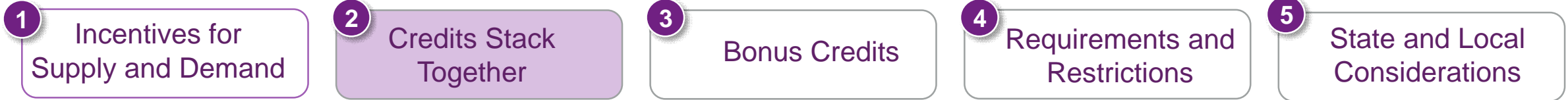
Up to 30% of capital investment. Critical materials is an eligible category. \$10B available through an application process.

## **Supply Creating: Grants and Loans:**

- **LPO:** (LPO) has more than \$400 billion in loan authority across four priority areas.
- **\*\* NEW – Battery Materials Processing and Manufacturing Grants:** Cover up to 50% of the total project costs, with maximum awards of \$300 million. \$6B available through an application process.



# What you need to know about IRA: Credit Stacking



**Stacking:** Certain tax incentives can be combined, reaching 50-70%. Note that some incentives prohibit stacking with specific other credits.

For Example:

45X applies for each stage of the battery production process (as well as other clean energy components). One company could get credit for:

- 10% of the cost of battery electrode active materials
- \$35/kWh of battery cell capacity
- \$10/kW of battery module capacity (or, for a battery module that does not use battery cells, \$45/kWh)
- 10% of the cost of producing a battery mineral.

# What you need to know about IRA: Where a project is located and how it is structured matter

1

Incentives for Supply and Demand

2

Credits Stack Together

3

Bonus Credits

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Requirements and Restrictions

5

State and Local Considerations

## Bonus Credits

- **Energy Communities:** Communities that have been historically disadvantaged or are transitioning from a fossil energy dependence.
- **Wage and Apprenticeship:** Must meet local prevailing wages requirements and employ apprenticeships for a certain amount of time.

## Tax Monetization

New provisions such as tax transferability and direct pay make it easier for early stage companies or other entities without tax liability to take advantage of the credit.

## Restrictions

- Certain credits have eligibility restrictions based on **location, critical minerals sourcing, domestic content and wage and apprenticeship requirements.**
- These criteria can significantly affect the value of the credit and even if applicability at all.

## State Incentives can be key

In addition to federal incentives, states have individual incentives and tax breaks for investment in their states. State have given out billions in tax breaks and local investment incentives.

80% of investment has gone to red states.

# Sourcing Considerations in U.S. Battery Investment

## Lawmakers Challenge Ford and Chinese Battery Partner Over Forced Labor

ENERGY & ENVIRONMENT  
DOE won't award \$200M to battery company criticized by GOP over China links

Microvast had been conditionally selected to receive the federal funds for a factory in Tennessee.

Energy Source Electric vehicles + Add to myPT

Biden needs a 'Goldilocks' answer to electric vehicle subsidy question

Also in today's transition  
ENERGY & ENVIRONMENT

## Looming Treasury rule could make or break Biden's electric car hopes

Guidance from the Treasury Department will spell out how hard a line the U.S. is drawing against electric vehicles with battery parts or minerals sourced from China.



A primary consideration in the U.S. is decoupling from China and China-related EV supply chains.

- Under the purchasing incentives only vehicles that meet the sourcing requirements will be eligible for the full amount.
- Key to this is that critical minerals sourced from countries with which the U.S. has a **free trade agreement** in place (such as Canada) qualify.
- New IRS guidance on criteria for what constitutes a “**foreign entity of concern**” (FEOC)
- In other regulatory contexts, the FEOC definition has included any entity that is “owned by, controlled by, or subject to the jurisdiction or direction of a government of a foreign country that is a covered nation”—typically **China, Iran, North Korea, and Russia**.
- Several lawmakers assert that **full exclusion of Chinese companies** is necessary to protect supply chains for the nascent U.S. battery industry from Chinese coercion.
- However, such limiting regulations could instead **stifle recent growth** in the U.S. battery supply chain.



# Key Considerations for Inbound Companies

As the U.S. EV battery industry continues to grow, inbound companies should consider a number of key factors.

- ✓ **Regulatory Environment:** The U.S. regulatory environment can be complex and vary by state and even by locality.
- ✓ **Partnerships:** Partners can be a critical element of success for U.S. projects. China-tied partnerships may result in a limited access to tax incentives or other federal grant and loan programs.
- ✓ **Supply Chain and Logistics:** Inbound companies should evaluate the U.S. supply chain and logistics infrastructure for the EV battery industry. This includes assessing the availability and cost of raw materials, transportation and shipping options, and potential challenges related to supply chain disruptions.
- ✓ **Location:** Certain states are offering significant investment incentives. Inbound companies should carefully consider what in terms of existing infrastructure, proximity to customers and logistics hubs, as well as what is on offer at a state level. Additionally, certain federal incentives have bonus credits that are tied to the qualities of a given location.
- ✓ **Workforce and Talent:** Inbound companies should also consider the U.S. workforce and talent pool for the EV battery industry. This includes evaluating the availability and quality of skilled workers, assessing local training programs and educational institutions, and understanding the potential challenges related to workforce shortages or turnover.





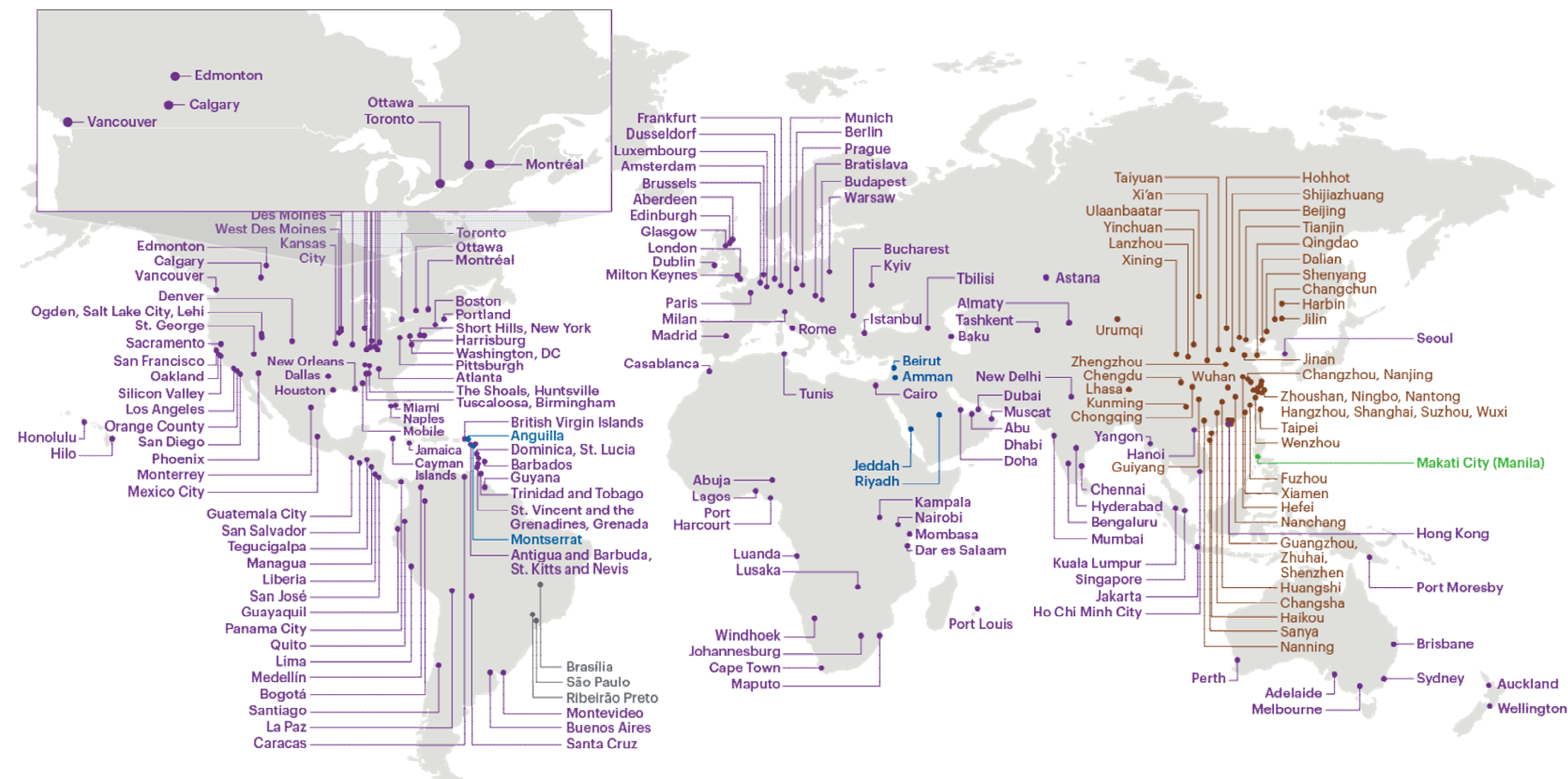
# **Investing in the Canadian EV Battery Industry**

**Ali Amadee**

Partner, Head of Dentons Canada's Battery & Energy Storage Group



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Our national Battery & Energy Storage Group



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- We have one of the most experienced teams in this industry among law firms in Québec/Canada.
- Deep knowledge of this industry & contacts among major industry and government leaders.
- Experience in negotiating with local, provincial and federal governments, as well as municipalities and industrial parks, in relation to a gigaplant project.
- Strategic advice on how to structure and present the project and liaise with industry leaders, local communities and government.

# Why Dentons?

Leaders across the battery & EV supply chain

**We offer proven expertise in the following:**

**Assisting players in  
the battery supply  
chain**

**Establishment of  
factories and  
industrial  
complexes**

**Community  
relations and First  
Nations matters**

**Government affairs,  
public policy and  
strategic advisory  
services**

**Corporate,  
securities,  
commercial and  
transactional  
matters**

**Regulatory and  
permitting matters**

**Intellectual  
property and  
technology**

**Employment and  
workforce mobility**

**Litigation and  
dispute  
resolution**

**Project finance**

# Canada's advantages in building a strong EV Battery Supply Chain

- **Strong in mining & mineral processing:**

- Only country in the Western Hemisphere that has all of the critical minerals required to manufacture batteries: graphite, nickel, aluminum, copper, lithium, cobalt, manganese, molybdenum and rare earth elements.
- Canada currently ranks 1<sup>st</sup> in North America and 4<sup>th</sup> in the world for raw material capacities in the battery supply chain.

- **Manufacturing expertise**

- Manufacturing costs lowest in G7
- Ranked 2<sup>nd</sup> best battery supply chain by BloombergNEF annual global li-ion battery supply chain ranking

- **Strong in R&D/Talent**

- **Clean Energy**

- **Strong existing automobile industry**

- **Government & popular support**

- ESG culture
- Federal, provincial and municipal governments very supportive





# Incentives



# Federal incentives, incl....

- **Favorable tax measures, incl.**

- **Investment Tax Credit for Clean Technology Manufacturing**

- Expected to provide CA\$4.5 billion in incentives to qualifying stakeholders over five years, starting in 2023-24, and an additional CA\$6.6 billion from 2028-29 to 2034-35
    - As regards batteries: investments in certain depreciable property that is used entirely, or substantially, for eligible activities, such as battery manufacturing, fuel cells, charging stations and hydrogen refuelling stations for zero-emission vehicles, qualify for a refundable investment tax credit of 30% of the capital cost of eligible property associated with such eligible activities

- **Reduced tax rates for zero-emission technology manufacturers**

- The corporate income tax rate for zero-emission technology manufacturers is currently reduced by 50% until 2032. Budget 2023 proposes the extension of the tax reduction for an additional three years.
    - **A 15% refundable tax credit** for eligible investments in stationary electricity storage systems that do not use fossil fuels and equipment for the transmission of electricity between provinces and territories

- **Canada Infrastructure Bank (CIB)**

- Government's primary financing tool for clean electricity generation, transmission and storage projects (at least CA\$20 billion attributed in Budget 2023)
  - EV charging stations (50-80% of the upfront capital costs for EV charging networks, subject to specific conditions)

- **Strategic Innovation Fund**

# Provincial incentives and support, incl....

- **Examples: Quebec and Ontario's proactive battery development strategy**
  - Significant financial support available in various forms
  - Proactive assistance in securing land and local partners
- **Local battery R&D ecosystem is in development nationwide**
  - **E.g., Québec's Energy Transition Valley,**
    - Spanning Bécancour, Trois-Rivieres, and Shawinigan, is an Innovation Zone that is structured around three pillars: Investment in Research, Support for Innovation, and the Amplification of the Industrial Sector
    - The Québec government will pour millions into a variety of infrastructure and research projects. These projects predominantly target the battery sector, transportation electrification, industrial-port sector decarbonization, and green hydrogen production

# Examples of government incentives in recent Canadian projects

## AddÉnergie, operating under the name Flo

Secured a CA\$220 million loan from the CIB to expand its battery charging network across the country.

## Lion Electric Battery Plant

Fed & QC government provided CA\$100 million of forgivable loans to Lion for its new \$185 M battery-pack assembly plant in QC.

## General Motors and POSCO Future M

The joint venture Ultium CAM is backed by a CA\$147 million forgivable loan from the Canadian government and a CA\$151.87 million loan from Investissement Québec.

## Northvolt

Quebec and Ottawa will invest C\$2.7 billion in the construction of the Northvolt plant. This is in addition to C\$4.6B in production incentives to match the IRA measures.

## Volkswagen battery plant

Canada's Government is set to provide CA\$13 billion in incentives for Volkswagen's new CA\$7 billion battery plant in Ontario.





# **Our observations**

Investments in the Canadian  
battery supply chain



# Timing is great!

- **Opportunities**

- Significant support by governments and local communities
- Return of great manufacturing jobs, therefore a positive reaction from communities

- **Types of investments we currently see**

- **Greenfield Projects**

- Lot of FDI (e.g., Northvolt)
- JVs – foreign battery industry expertise matched with local market presence/expertise

- **R&D ecosystem (tech start-ups) taking shape**

- lots of opportunities for angel, VCs and strategic investors

- **M&A and take-overs**

- May become more prevalent as certain companies are having financial difficulties

- **Challenges**

- Availability of energy for major projects
- Environmental permitting and acceptability issues
- Financing – market correction vs. 2020-22 – Importance of a **STRONG** business case
- Location and talent (often inter-related)

# Speakers



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