



# Electric Vehicle Manufacturing

A growing U.S. industry and market for low carbon metals

## The Opportunity

The past few years have seen unprecedented investments in electric vehicles, with many automotive companies committing to ending internal combustion engine (ICE) vehicle manufacturing entirely in the coming decades. As a result of increased market demand and government incentives to support reshoring of manufacturing, dozens of EV and battery production plants have been announced over the past few years in the United States, concentrated mainly in the Midwest and Southeast. Indiana is well positioned to be a leading state in the EV manufacturing value chain, but it will need to invest in transformative technologies for metals manufacturing and clean energy infrastructure (wind, solar, battery storage, and interconnection, transmission, and distribution system upgrades) in the coming years.

As a major producer of aluminum and steel—two key materials for EVs—Indiana already has the manufacturing capacity and knowledge to support the EV market's anticipated growth. Continued investment in industrial technology upgrades will be necessary to ensure the metals manufactured in Indiana meet automotive demand for cutting-edge, low-carbon materials. The state's business-friendly environment combined with a skilled workforce has already incentivized major EV suppliers and car companies such as Stellantis to invest billions of dollars into new EV plants and operations.

## Current Challenges

Indiana's challenges include relatively high electricity costs and an energy sector still reliant on emissions-intensive and inefficient coal power plants.

Automotive Manufacturing Company	EV or ICE	Supply Chain Carbon Emission Goals
Toyota	ICE	Eliminate carbon emissions from supply chain by 2050
Subaru	ICE	Carbon neutrality, including products, by 2050
Honda	ICE	Carbon neutrality, including products, by 2050
Stellantis	ICE and EV	Carbon emissions cut in half by 2030, including products, and carbon neutral by 2038
GM	ICE and EV	Joined First Movers Coalition and made commitments to purchase low-carbon steel and aluminum; carbon neutrality in products and operations by 2040

**Sustainability commitments made by automotive manufacturers operating in Indiana, showcasing potential for growing regional demand for sustainably produced metals**

Company	Facility Type	Location	Press Release Date	Facility Cost	Additional Jobs
Stellantis + Samsung SDI	EV battery plant	Kokomo, IN	May 2022	\$2.5B	1400
GM + Samsung SDI	EV battery plant	New Carlisle, IN	June 2023	\$3B	1700
GM	ICE truck expansion	Fort Wayne, IN	June 2023	\$632M	0
GM	EV assembly	Marion, IN	September 2022	\$491M	0
ENTEK	EV battery plant	Terre Haute, IN	March 2023	\$1.5B	642

**Selection of recent EV manufacturing investments in Indiana**

## Key Takeaways



EV manufacturing supply chain can bring substantial economic investments and job opportunities to Indiana, including expanding the market for cutting-edge, low-carbon aluminum and steel



Indiana's assets include a robust manufacturing ecosystem around aluminum and steel supply chains, vehicle manufacturing, regional research hubs to support workforce training and technology deployment, a welcoming business community, and state policy support for economic and technical manufacturing investments



For Indiana to become a hub for EV and battery production, it will have to develop a cleaner electric grid to support the demands of sustainable manufacturing and EV charging capacity