

# AES Growth: A National Priority

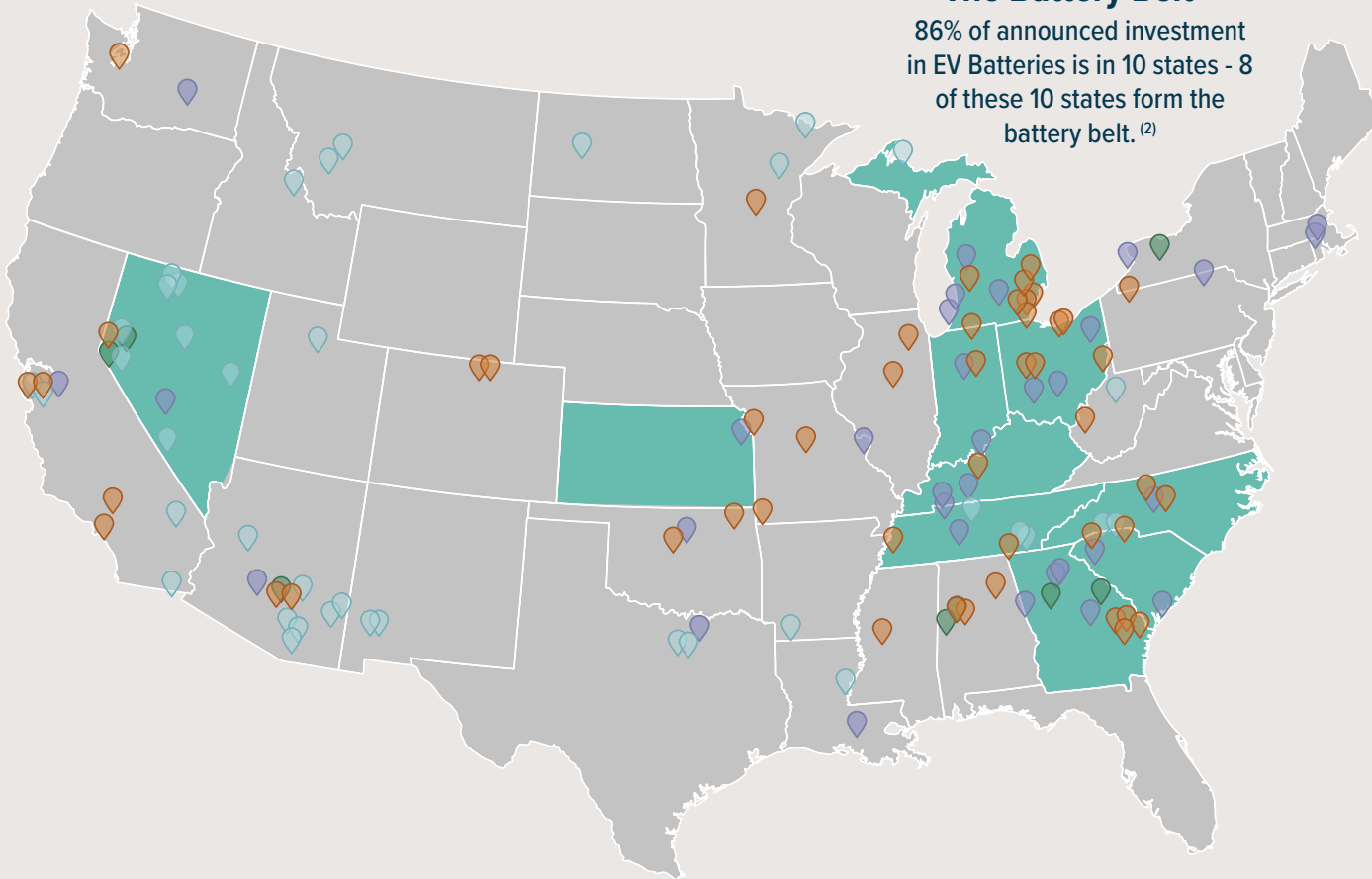
The U.S. has an opportunity to on-shore and benefit from the **\$100 billion market** for EV battery manufacturing which currently takes place mostly outside of the U.S. <sup>(1)</sup>

## The Growing EV Market

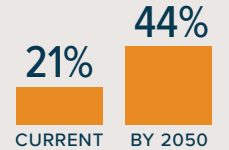
By 2040 **17%** of worldwide EV sales are expected to be in the U.S. <sup>(1)</sup>

## The Battery Belt

86% of announced investment in EV Batteries is in 10 states - 8 of these 10 states form the battery belt. <sup>(2)</sup>



## Increasing Demand for Renewable Energy



The percent of total energy generated by renewable sources in the U.S will **increase by 110%** over the next 30 years. <sup>(3)</sup>

## 10 Million Automotive Jobs

**5%** of all U.S. jobs depend on the automotive sector and **10 Million** U.S. jobs are directly associated with the automobile industry. <sup>(1)</sup>

## Legislation Prioritizing EVs

The Clean Vehicle Tax Credit, part of the Inflation Reduction Act of 2022, **subsidizes electric vehicles containing North-American-made batteries**, for individuals and fleets.

The threshold for portion of batteries supplied domestically starts at 50% in 2023 and increases 10% each year until it reaches 100% in 2029. <sup>(4)</sup>

## MAP KEY | NATIONAL BATTERY MANUFACTURING <sup>(5)</sup>

- Vehicle Manufacturer (OEM)**  
ex: Ford, GM, Stellantis
- Battery Production**  
ex: LG, Samsung
- Top 10 States for Battery Investment**  
Michigan, Indiana, Ohio, Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Kansas, Nevada
- Mineral & Mining**  
ex: Nickel, Copper
- Battery Recycling**  
ex: Direct, Reuse, Re-purposing

# Why West Michigan is Poised for AES Supply Chain Growth

Significant private sector investment in battery manufacturing, an affordable and growing labor pool, and robust state support make the West Michigan region ideal for future AES sector growth.

**1/3** of U.S Battery Manufacturing takes place in Michigan. <sup>(10)</sup>

Michigan is ranked **6th** in the nation for EV Battery Manufacturing Employment. <sup>(10)</sup>

## 1. Access to Talent

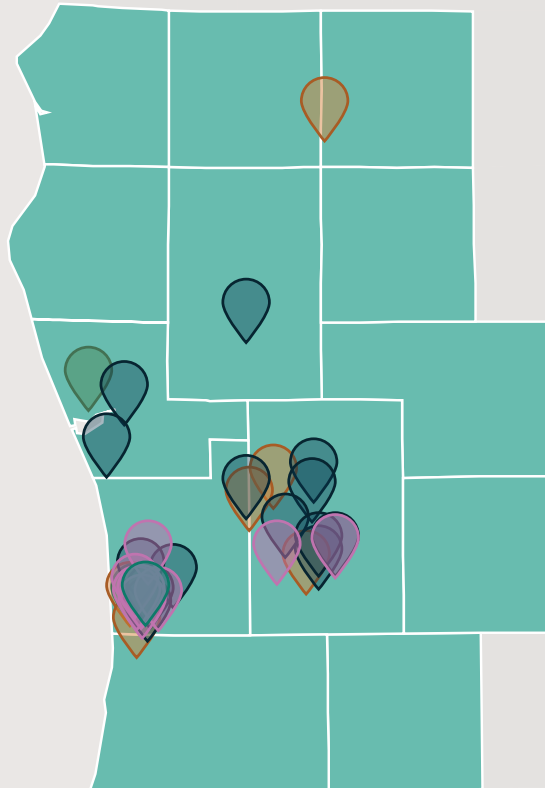
**POPULATION GROWTH:** West Michigan is home to two of the fastest-growing counties in Michigan which experienced a **10%** increase in population between 2010-2020. An additional **4% growth** is expected in 5 key counties in the region by 2050. <sup>(25)</sup>

**SKILLED WORKFORCE:** **23%** of West Michigan's economy is in manufacturing, giving employers a wide talent base to choose from. <sup>(9)</sup>

**AFFORDABLE LIVING & LABOR:** The cost of employing workers is more affordable than other regions due to **lower cost of living and average annual wage.** <sup>(8)</sup>

### INNOVATIVE EDUCATION

- Ferris State University's new Center for Applied Battery Technology & Production will be a hub of EV technology training.
- Grand Valley State University's Blue Dot Lab will be a center for new technology, innovation, and hands-on, experimental learning.
- Michigan State University's Bioeconomy Institute provides lab space and acts as an accelerator for startups pioneering new biochemistries.
- Grand Rapids Community College is launching a Battery Bootcamp providing degrees/certifications in battery manufacturing and power storage.
- Muskegon Community College offers an alternative and renewable energy degree.



## 2. Battery Manufacturing Investment

Since 2022, LG Energy Solution & Gotion have announced **\$7 Billion** of total investment in expansion of battery manufacturing in Holland and Big Rapids. <sup>(6, 7)</sup>

## 3. State of Michigan Support

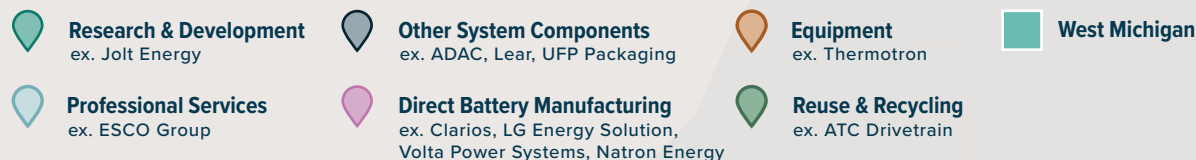
### GRANTS & INITIATIVES

- **\$2.2 Billion** from the SOAR Fund continues to help Michigan businesses win large manufacturing projects and create thousands of jobs. <sup>(11, 12)</sup>
- **\$125 Million** is being invested to electrify school buses in Michigan. <sup>(6)</sup>
- **\$25 Million** has been invested in the Mobility Futures Initiative to strengthen Michigan's economy and enhance communities. <sup>(13)</sup>

### WORKFORCE DEVELOPMENT

- Scholarships up to **\$10,000** are being offered to 350 top tech students at participating universities by The Michigander EV Scholars program. <sup>(14)</sup>
- MI is **8th** in the nation for higher education R&D and **10th** for STEM degree completions. <sup>(15)</sup>
- Michigan has **479** First Robotics teams - the most in the nation. <sup>(16)</sup>

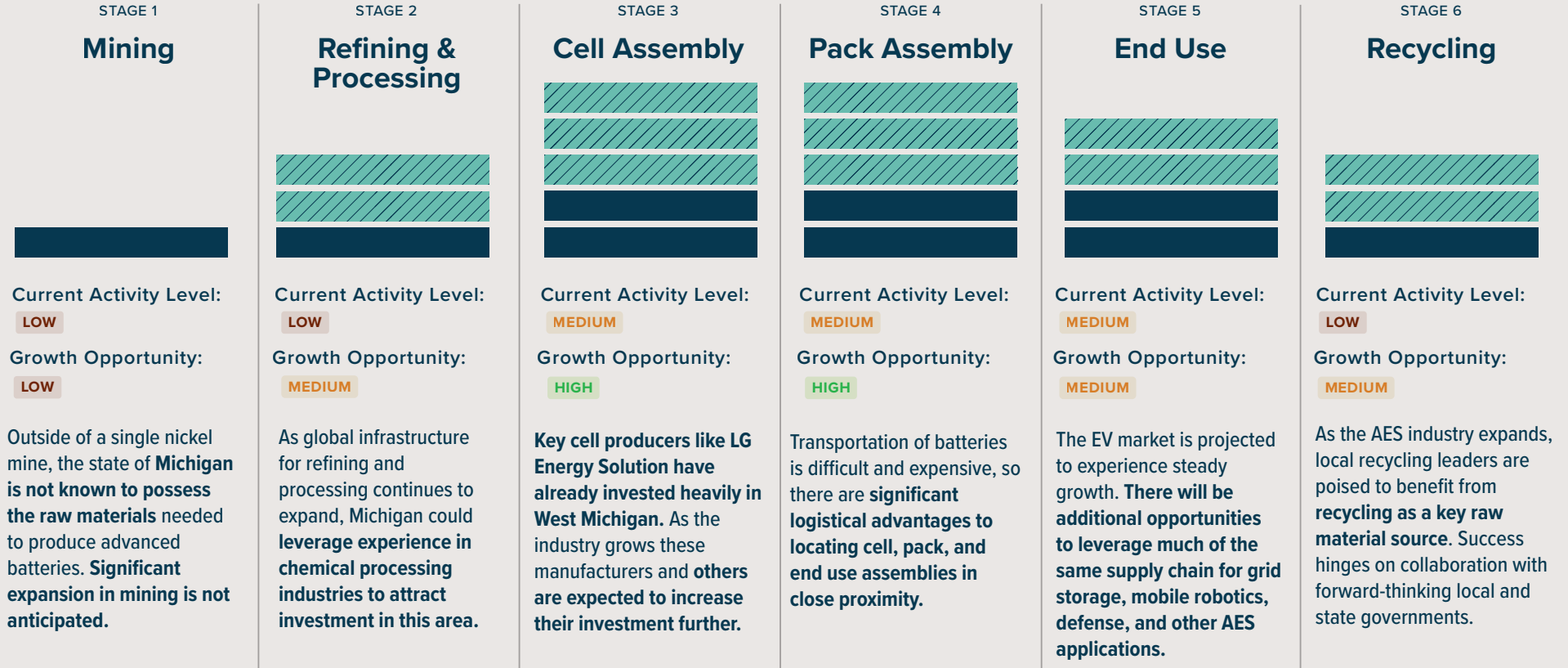
## MAP KEY | Battery Manufacturing in West Michigan <sup>(17)</sup>



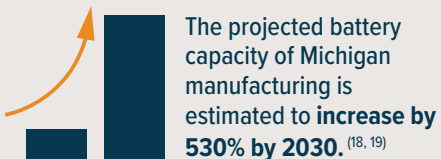
# WEST MICHIGAN'S ROLE in the BATTERY SUPPLY CHAIN

West Michigan is active in each stage of the advanced energy storage supply chain. In several stages, there is **opportunity for significant growth** in the near future.

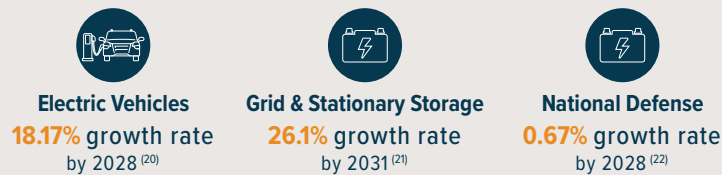
 Current viability for Michigan based on economic contributions.  Projected viability by 2030 determined by stage-specific outlook.



## Becoming one of the Largest Battery Producers in the Nation



## End Use Growth Projections



**A Future in Recycling**  
95% of materials in advanced batteries can be recycled into new batteries. <sup>(23, 24)</sup>

# West Michigan: Advanced Energy Storage (AES) Ecosystem Report

DECEMBER 2023

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## Sources

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