Detroit Regional Partnership

GLOBAL EPICENTER OF MOBILITY

REVOLUTIONIZING THE DETROIT REGION

THE ROAD TO 2030
E-MOTOR ANALYSIS

INTRODUCTION

Mobility Sectors

Mobility Sector Definitions for Road to 2030 Initiative

Light Vehicle: Passenger cars, pickups and light commercial vehicles up to 6 tons.

Medium & Heavy: Trucks above 6 tons and bus chassis.

Construction, Agriculture, Mining & Off-Road: Tractors, off-road vehicles and ATVs.

Aerospace: Aircrafts -Piston airplanes, turboprop airplanes, business jets, helicopters, and eVTOLs.

Maritime: Recreational boats - personal watercrafts, wake sport, fishing & pontoon and others.

First Mile & Last Mile: Commercial drones.

E-Motor Technology Key Findings

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E-MOTORS KEY FINDINGS

+91% Annual Growth Rate
Forecast from 2024-2030

In Michigan E-Motor production for Medium & Heavy-Duty Vehicles – more than double the national growth rate

+1,226% Growth
Forecast from 2024-2030

In Michigan E-Motor production for the Light Vehicle sector

70% Penetration Rate in Light Vehicle Sector
In the U.S. by 2030

Including Battery Electric Vehicles, Hybrids, and Plug-In Hybrids

+12.7% Employment Growth
from 2020-2030

In Detroit Region E-Motor Manufacturing Employment - nearly double the national average

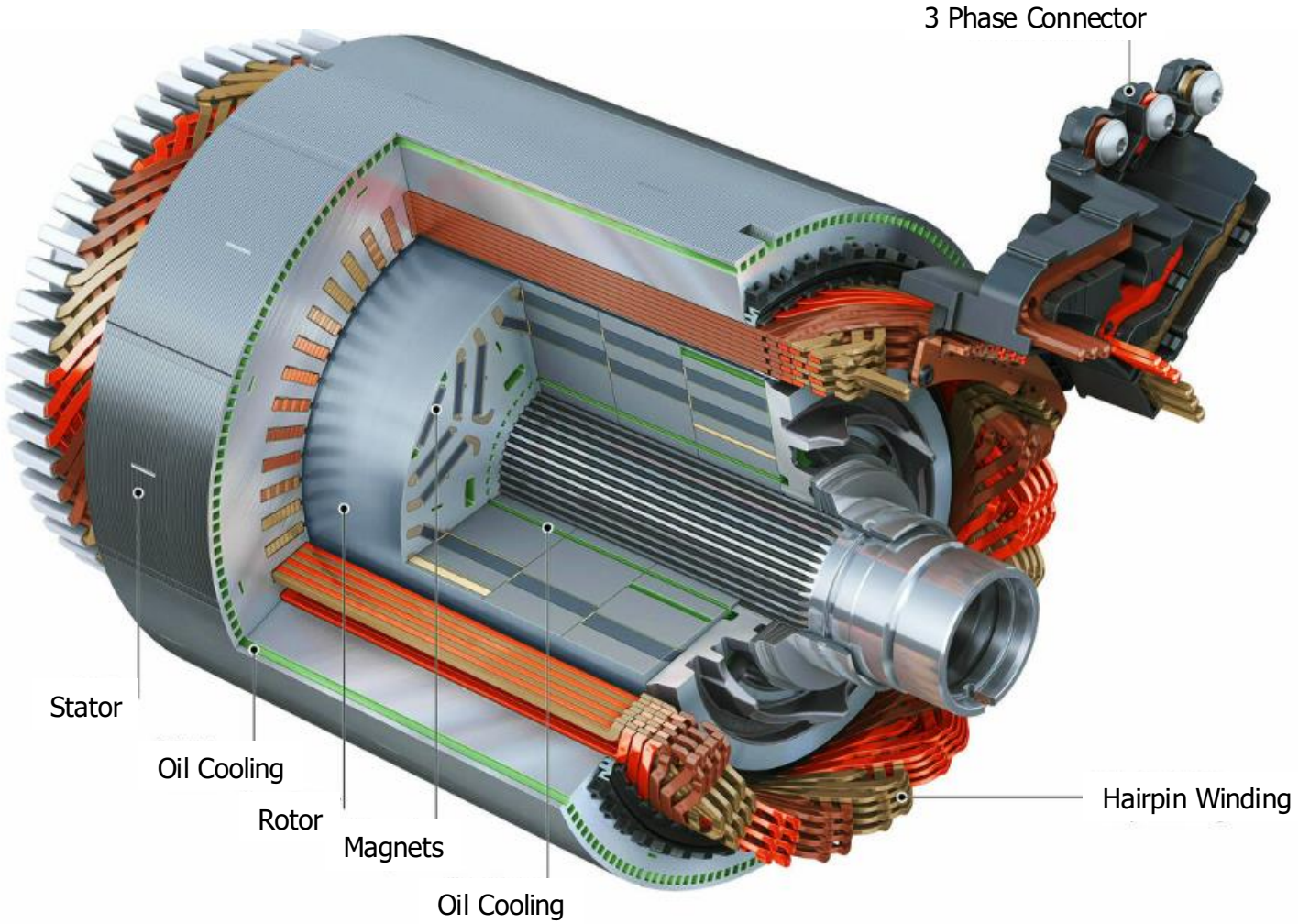
KEY OPPORTUNITY SECTORS: Light & Medium Vehicle, Off-Highway, Maritime, First/Last Mile

Source: DRP/GEM analysis of data from S&P Global Automotive
For background information and a glossary of terms, please visit https://gemdetroitregion.com/wp-content/uploads/2025/05/3-FMTS-Background-Methodology.pdf

E-Motor Structure & Components

Electric motors convert electrical energy, typically from a propulsion battery, into mechanical energy.

By alternating magnetic fields between a stator (typically coils of wire) and a rotor, electric motors create rotation to spin a drive shaft that can be used to propel a vehicle or for other mechanical purposes.



Source: Audi AG

DATA & FORECASTS

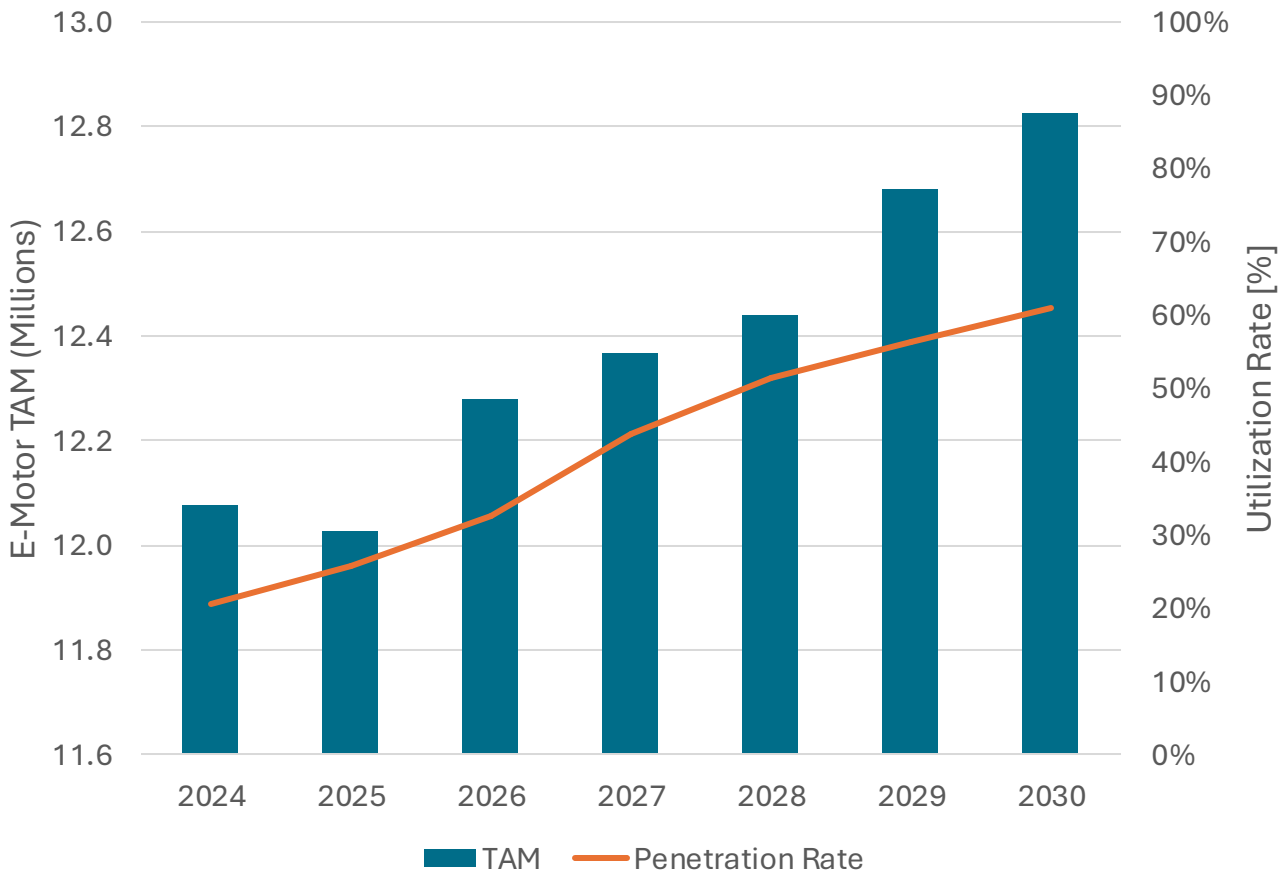
U.S. E-Motor TAM & Penetration Rate

The E-Motor technology penetration rate for all U.S. mobility sectors is projected to more than triple from 20.5% of the Total Addressable Market (TAM)* in 2024 to 61.0% by 2030.

The TAM of all mobility sectors combined is forecast to increase from 12.1 million units in 2024 to 12.8 million in 2030.

*Abbreviated as TAM, the Total Addressable Market is the total number of vehicles produced on which a given technology can potentially be deployed.

E-Motor TAM & Penetration Rate, All U.S. Mobility Sectors



Source: S&P Global Mobility LV/MHCV/Off-Highway Production Forecasts, S&P Global analysis with industry sources (GAMA, NMMA, FAA, AUVSI).

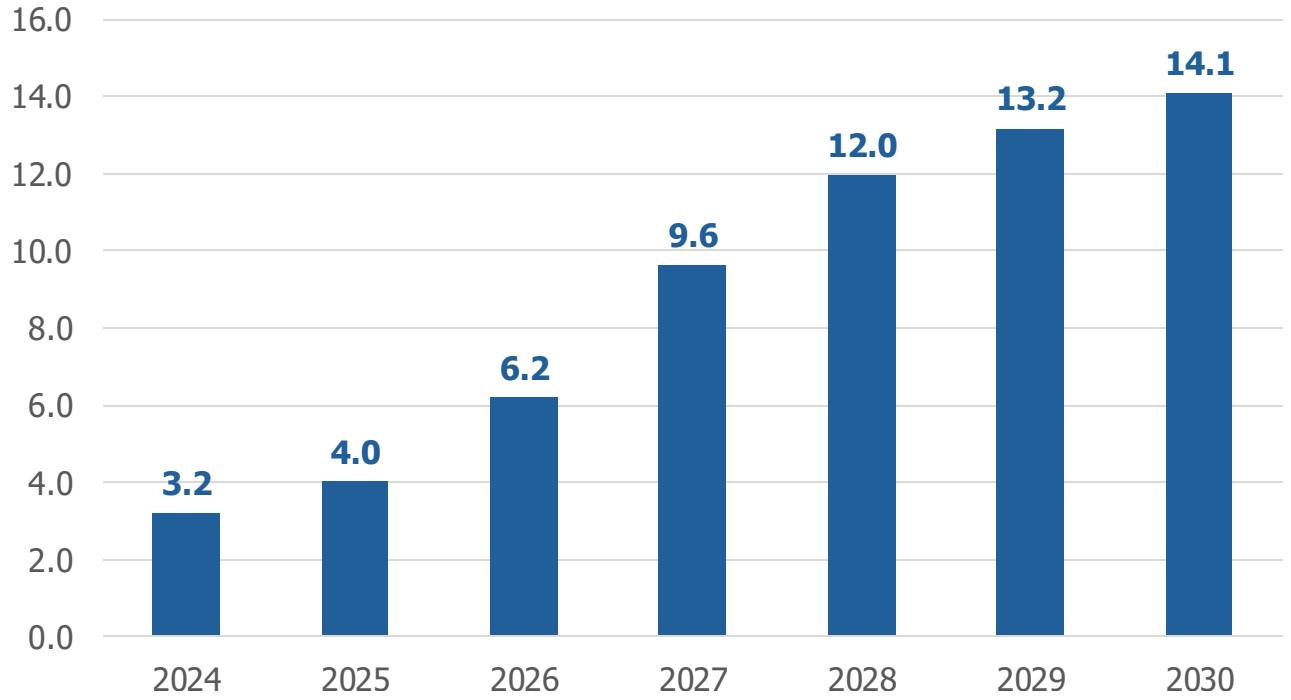
**Note: The technology penetration rate is calculated from the technology Total Addressable Market (TAM) of all the related mobility sectors.*

U.S. E-Motor Production

Total United States (U.S.) E-Motor production for all mobility sectors is forecast to grow significantly, from 3.2 million in 2024 to 14.1 million by 2030.

This growth represents a 341% increase from 2024 levels.

E-Motor Production, All U.S. Mobility Sectors

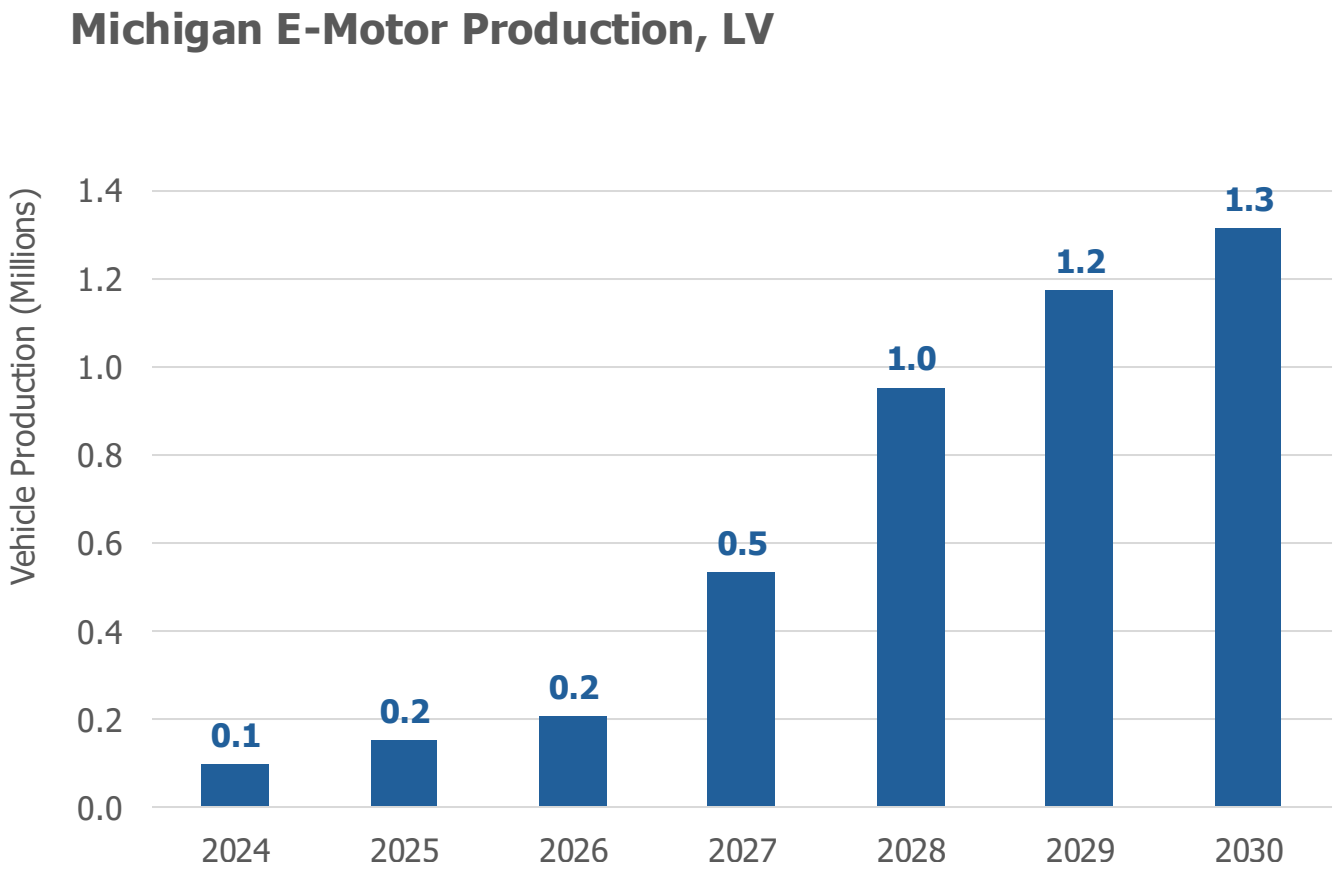


Source: S&P Global Mobility LV/MHCV/Off-Highway Production Forecasts, S&P Global analysis with industry sources (GAMA, NMMA, FAA, AUVSI).

Michigan E-Motor Production Outlook

Light Vehicles are the mobility sector of greatest significance to Michigan and the Detroit Region.

Michigan E-Motor production for Light Vehicle applications is forecast to increase from just under 100,000 units in 2024 to over 1.3 million units in 2030 – an increase of more than 1,200%.



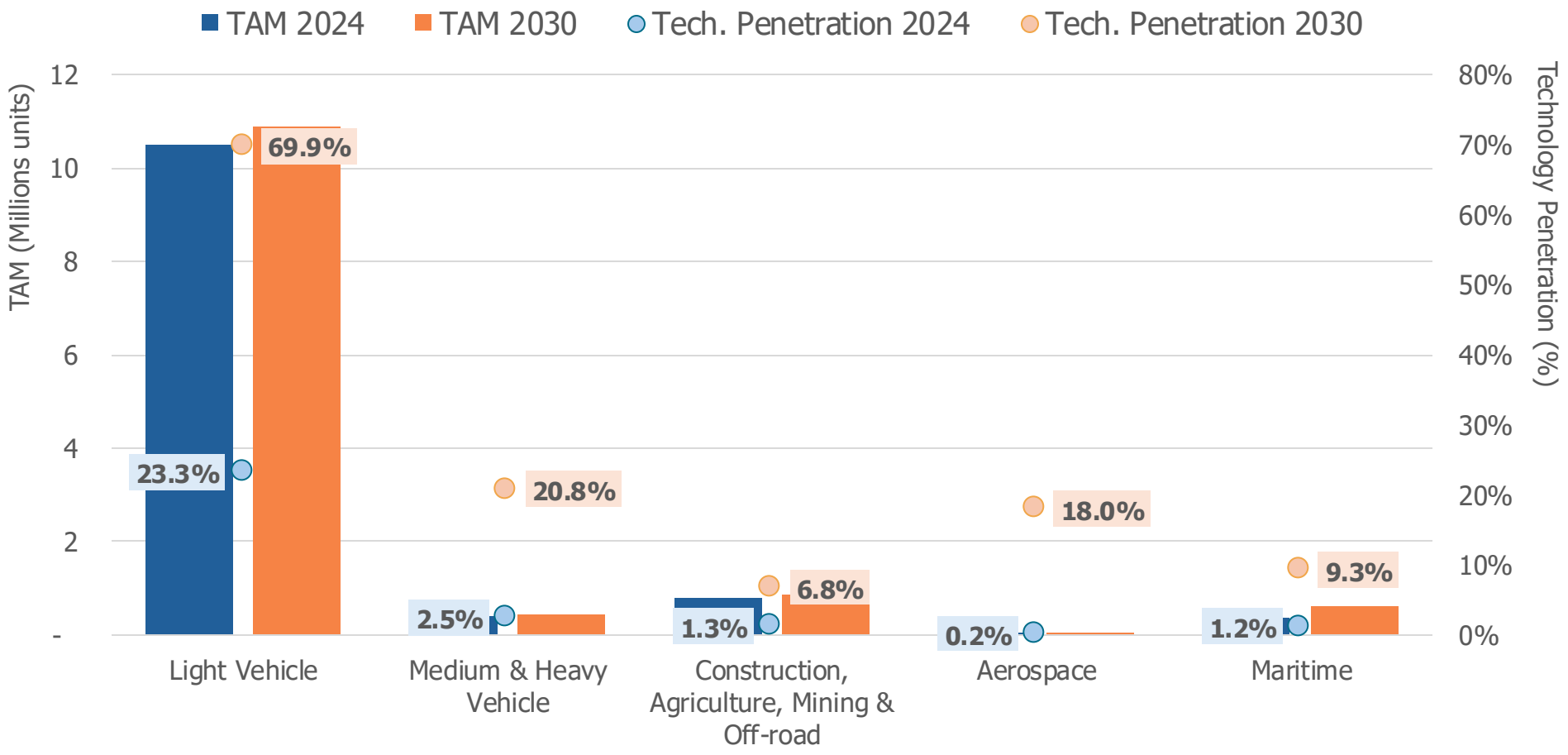
Source: S&P Global Mobility Software Vehicle Domain Forecast, July 2024

E-Motor Total Addressable Market (TAM)

The U.S. E-motor technology penetration rate for Light Vehicles is projected to nearly triple from 23.3% in 2024 to nearly 70% of the total TAM in 2030.

Strong growth is forecast for the Medium and Heavy-Duty sector, where the E-motor technology penetration rate is forecast to increase from 2.5% in 2024 to 20.8% in 2030.

E-Motor Technology Penetration and U.S. Mobility Sectors TAM



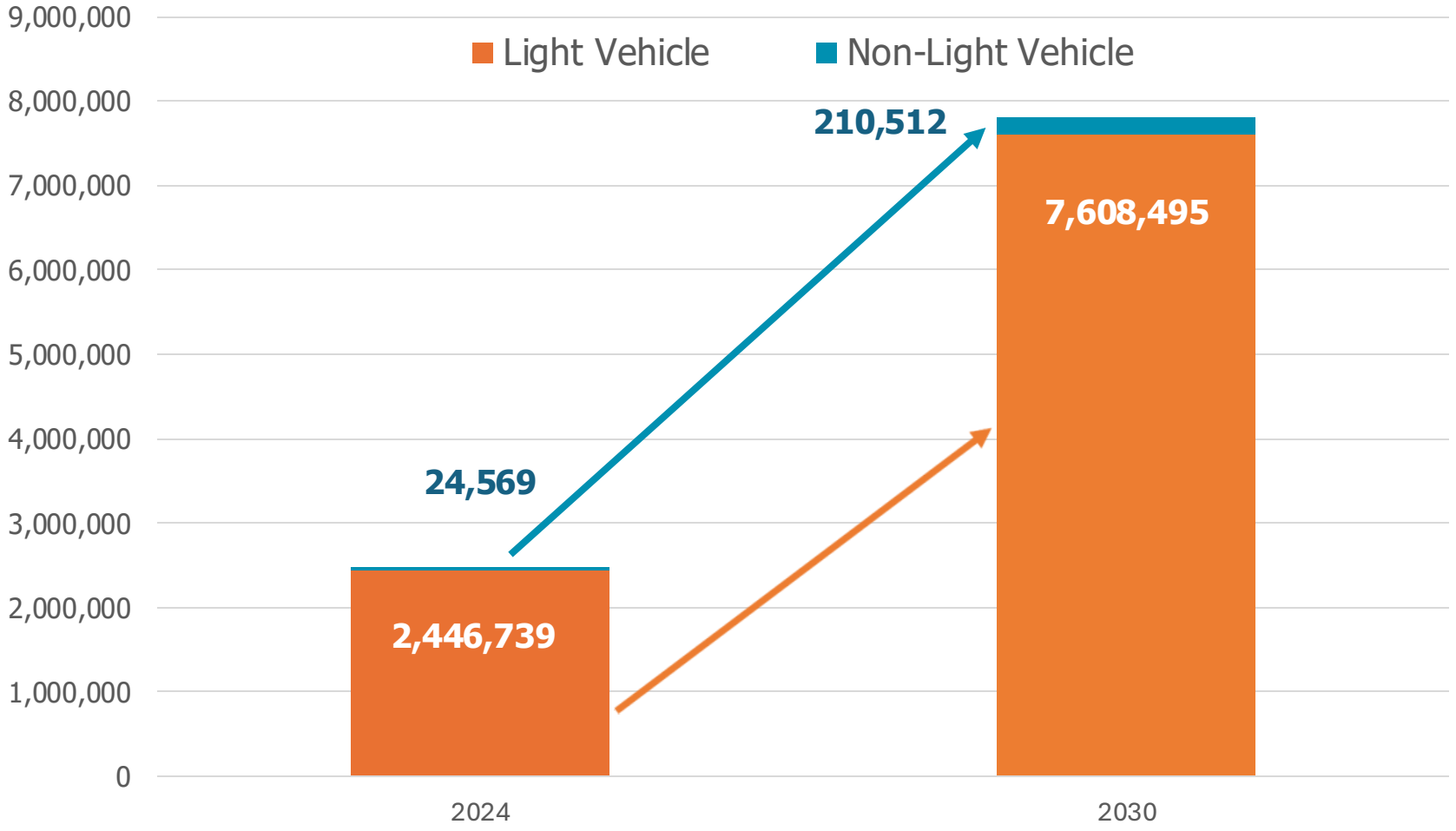
Source: S&P Global Mobility LV/MHCV/Off-Highway Production Forecasts, S&P Global analysis with industry sources (GAMA, NMMA, FAA, AUVSI).

**Note: The technology penetration rate is calculated from the technology TAM from all the related mobility sectors' TAM.*

E-Motor Unit Projected Growth by Mobility Sector

U.S. E-motor demand for light vehicles is forecast to nearly triple between 2024 and 2030.

Over the same time-period, E-motor demand for non-light vehicle mobility sectors is forecast to increase by 757% to over 210,000 units.



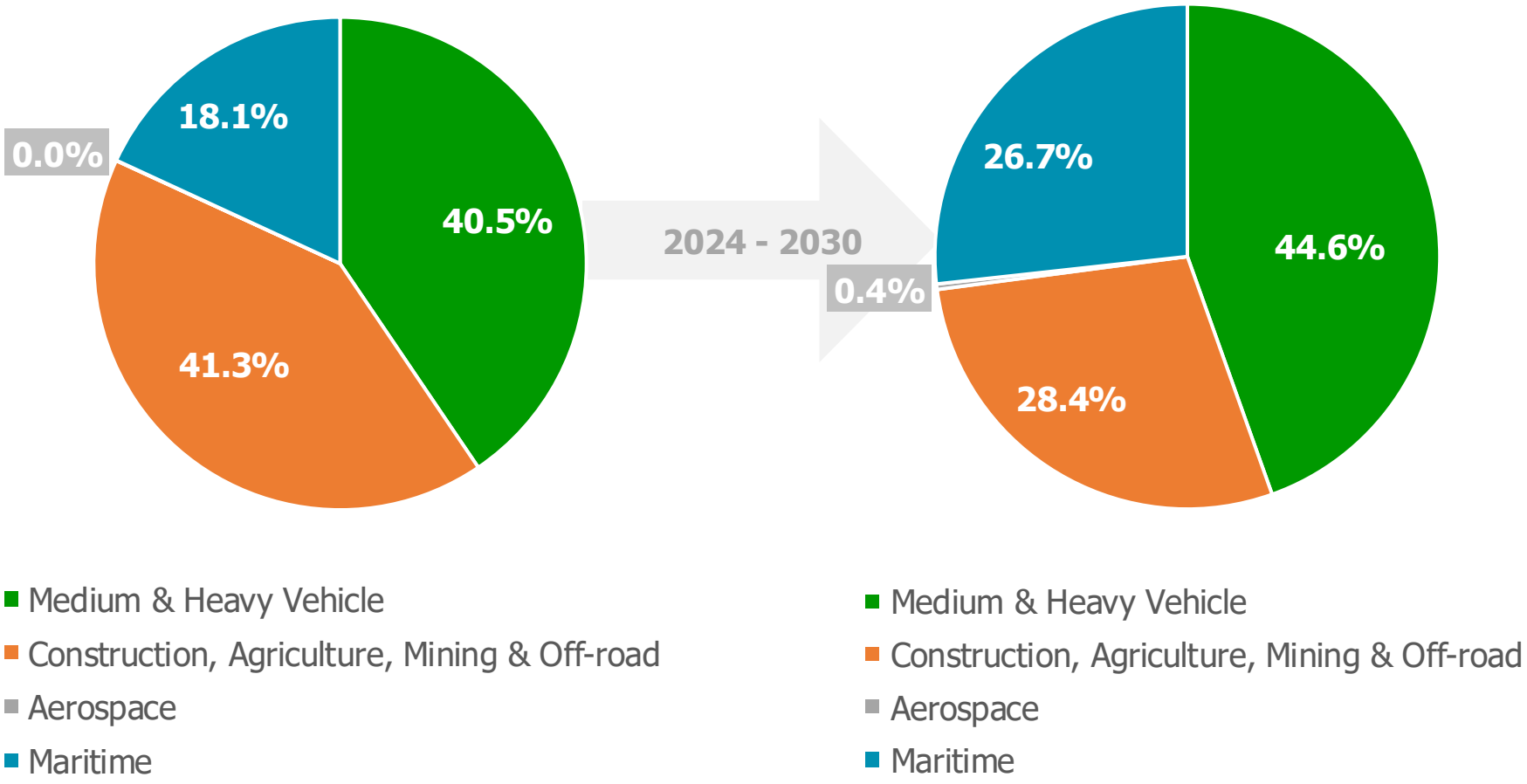
Source: DRP/GEM analysis of data from S&P Global Mobility

E-Motor Projected Growth (U.S.) – Non-LV Sectors

Construction, Agriculture, Mining, and Off-road applications dominated U.S. E-motor demand in the non-light vehicle mobility sectors in 2024, with a share of 41.3%.

By 2030, Maritime applications are expected to increase from 18.1% in 2024 to 26.7% in 2030.

U.S. Non-LV Sector E-Motor Share Forecast



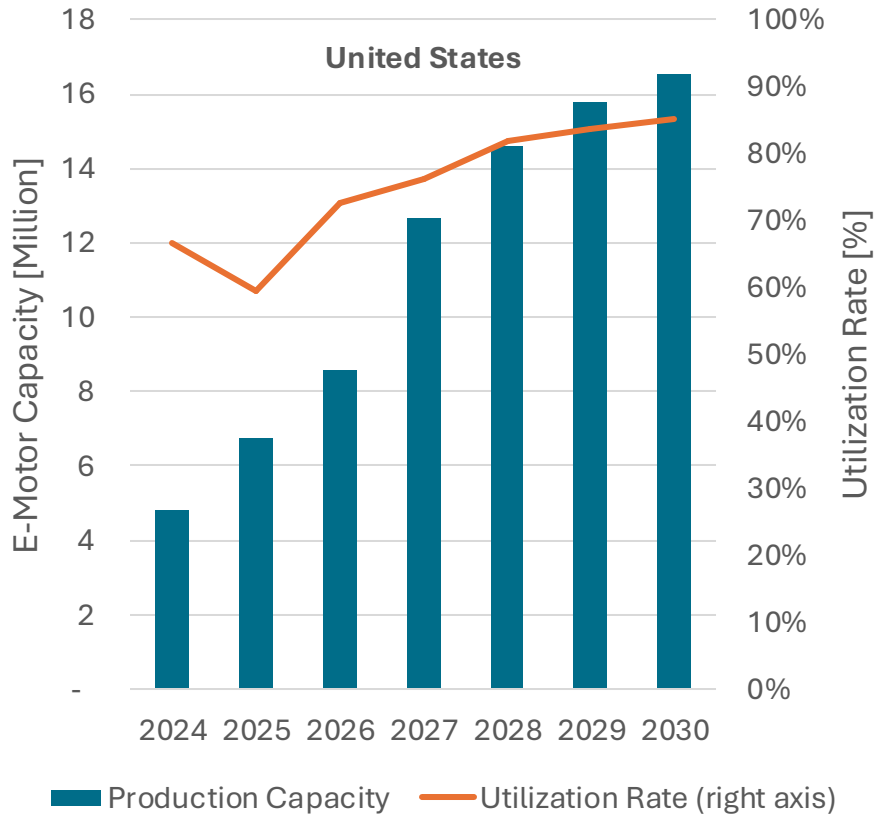
Source: DRP/GEM analysis of data from S&P Global Mobility

E-Motor Production Capacity & Utilization

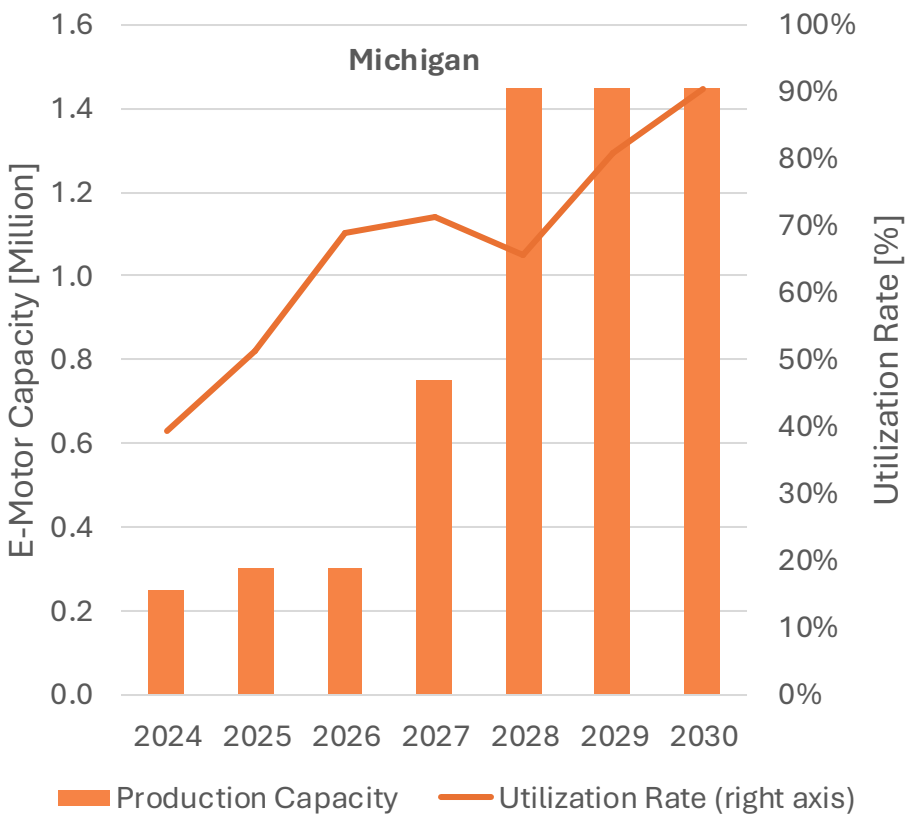
U.S. E-Motor production capacity for light vehicles is forecast to grow more than threefold from 4.8 million in 2024 to 16.5 million in 2030. The U.S. capacity utilization rate is expected to reach 84% in 2030.

Michigan E-Motor production capacity for light vehicles is forecast to grow by 480% from 250,000 in 2024 to 1.5 million in 2030. The capacity utilization rate is expected to reach 91% in 2030.

U.S. LV E-Motor Capacity & Utilization Rate



Michigan LV E-Motor Capacity & Utilization Rate

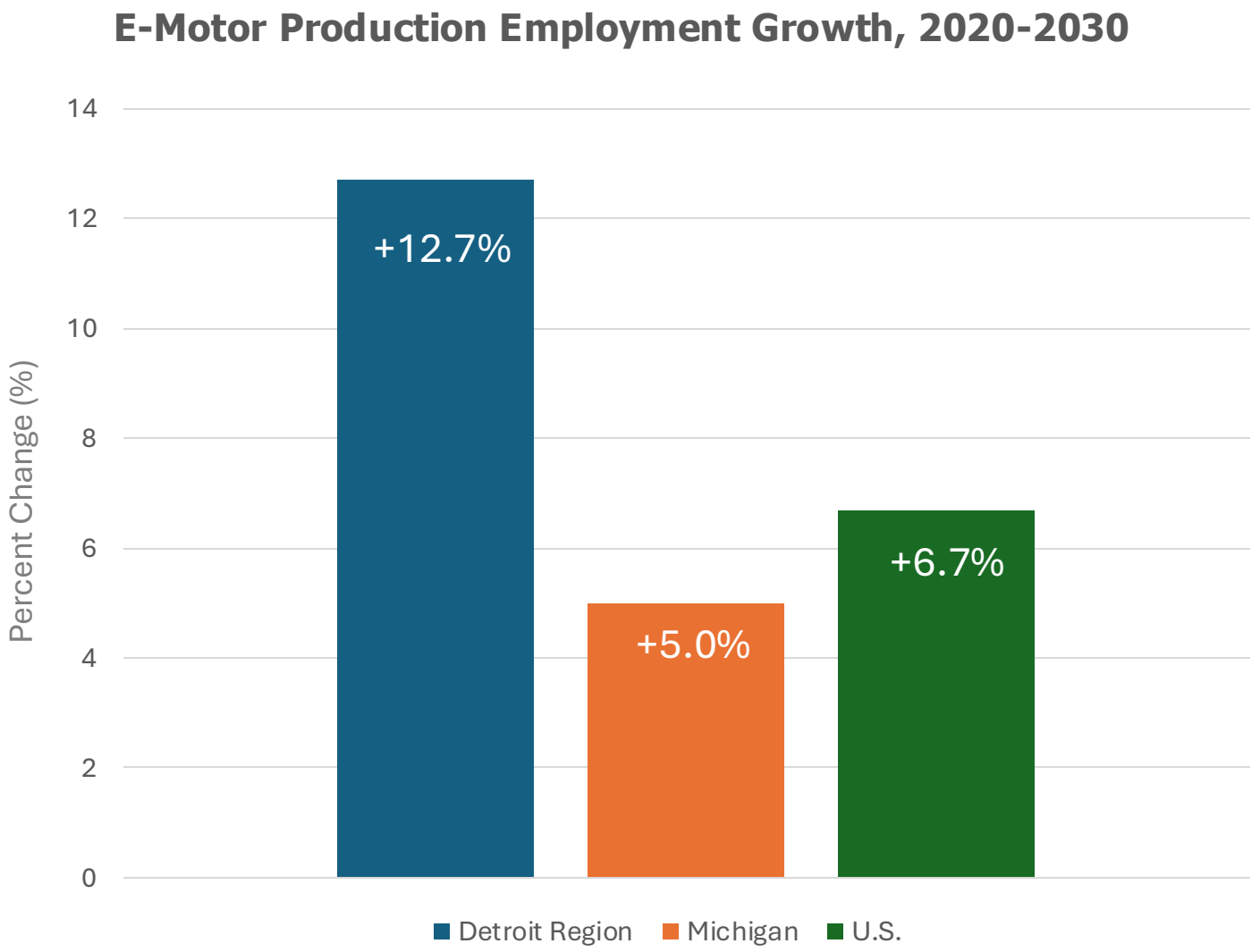


Note: Capacity includes LV sector only
Source: S&P Global Mobility based on E-Motor Forecast

E-MOTOR EMPLOYMENT ANALYSIS

E-Motor Production Employment Growth

E-Motor production is included in NAICS 335312. Between 2020 and 2030, employment in included jobs is forecast to increase by 6.7% nationally, 5.0% in Michigan overall, and 12.7% in the Detroit Region – nearly double the growth expected nationwide.



Source: Lightcast data and forecast for NAICS 335312

This summary presentation will be updated as additional analysis continues.
New and updated federal policy changes will be monitored and updates applied as needed.