

# WEST TN REGIONAL ASSESSMENT

## FORECASTS FOR EMPLOYMENT

### EXECUTIVE SUMMARY

In late 2021, Governor Bill Lee announced that the Ford Motor Company and SK Innovation (Ford/SK) selected the 3,600 acre Megasite in Haywood County for a vehicle and battery manufacturing campus. This Ford Motor Company campus, known as BlueOval City (BOC), is expected to spur industrial, commercial, and residential development throughout West Tennessee.

The purpose of this analysis is to examine job growth within the 21-County West Tennessee Region related to the 5,760 jobs that will be directly employed by Ford/SK. With production to begin in 2025, these operations will have a significant effect on the overall number of jobs in demand in West Tennessee.

By 2030, the 5,760 jobs to be directly employed by Ford/SK are projected to generate 8,064 indirect jobs. Indirect jobs are jobs created by Ford/SK suppliers and other businesses that will provide services, support, and materials. These indirect jobs will be created primarily in production- and transportation-related industries.

Another 6,336 jobs are also projected to be generated by consumer spending and industries that meet the personal needs of Ford/SK employees. These are called induced jobs and they will be created across the full range of job classifications and industry sectors.

Ford/SK are projected to generate a total of 20,160 new jobs in West Tennessee by 2030. This report examines the types of occupational classifications these jobs will require. It was primarily developed to assist workforce development organizations and economic developers assisting in workforce and talent recruitment.

### 2030 PROJECTED JOBS GENERATED IN WEST TENNESSEE BY FORD/SK



## DEFINITIONS

### DIRECT EMPLOYMENT

Direct employment refers to jobs that are employed directly by Ford/SK to manufacture electric vehicles and batteries and to operate their facilities. Ford/SK estimated total direct employment of 5,760 when BOC was announced. This report contains the first breakdown of those jobs into occupations.

### INDIRECT EMPLOYMENT

Indirect employment includes the jobs in industries that supply and support the core activities of Ford/SK. Workers in such industries may produce steel, plastics, or other components, or provide financial or other business services. These workers are not directly employed by Ford/SK, but they may work for suppliers to Ford/SK that produce inputs along the value chain. Magna, a supplier of battery enclosures, truck frames, and seats, has already announced two new locations in West Tennessee to provide inputs to Ford/SK.

### INDUCED EMPLOYMENT

Induced employment is generated primarily through spending by workers in direct and indirect jobs. When people who are employed directly or indirectly spend their income on a variety of items in the broader economy (such as food, clothing, transportation, and entertainment), these expenditures give rise to induced employment. Examples of induced employment in West Tennessee can already be seen as construction workers build new housing and local restaurants operate more hours.

### OCCUPATIONS

Workers are classified into occupational categories based upon the work they perform and their skills, education, training, and credentials. Two examples of occupations are *accountants and auditors* and *janitors and cleaners*. Some occupations are found in just one or two industries, but many occupations are found in a large number of industries. Most occupation data use the Standard Occupational Classification (SOC) System.

### NAICS

North American Industry Classification System; a system used by the BLS to group establishments into categories on the basis of the activity in which the establishments are primarily engaged. NAICS groups establishments on the basis of the raw materials, capital equipment, and type of labor they utilize. In other words, establishments that do similar things in similar ways are classified together.

### INDUSTRY CLUSTER

Clusters are geographic concentrations of related industries that encompass an array of interconnected companies or institutions that manufacture products or deliver services to a particular industry. Clusters typically include companies in the same industry that share infrastructure, suppliers, service providers, distribution networks, research and training providers.

### MULTIPLIER EFFECT

The production of output by one industry requires input from other industries. For an automotive assembly plant to produce a vehicle, other establishments must supply metal, plastic, and thousands of parts ranging from seats to engines. Likewise, when an establishment such as an automotive assembly plant employs workers to produce vehicles, suppliers must employ workers to produce the inputs needed.

## METHODOLOGY

Ford/SK are projected to reach full employment by 2026 and maintain that number beyond 2030. This report focuses primarily on the benchmark year 2030, which is the furthest year employment projections are available from BLS data. However, job and occupation forecasts for benchmark years 2035, 2040 and 2045 are included where applicable in this report to reflect continuing job growth due to population increases.

To project Ford/SK-related job growth and the resulting demand for specific occupations in West Tennessee, the analysis was divided into two phases.

### **Phase 1: Determine total jobs supported by Ford/SK operations.**

To determine the number of both indirect and induced jobs, the vehicle manufacturing RIMS II Type II multipliers from the U.S. Bureau of Economic Analysis were applied to the 5,760 direct jobs reported by Ford/SK. The Type II multipliers project both indirect and induced jobs supported by direct jobs. Next, Type I multipliers were used to project only indirect jobs supported by direct jobs. Finally, the direct and indirect jobs were subtracted from the total jobs projected in the first step to determine the number of induced jobs supported.

**Table 1** on page 4 provides the employment multiplier data for projecting direct and induced jobs, and data for planning study benchmark years between 2023 and 2045.

### **Phase 2: Determine the job types/occupations supported by Ford/SK operations.**

According to the U.S. Bureau of Labor Statistics, there are several industries associated with the electric vehicle manufacturing process. For the purpose of this study, a cluster of seven industries was determined to best represent the most common processes and occupations that comprise the EV manufacturing cluster. These seven industries are listed in the chart at the top of page 5.

# WEST TN PLANNING FORD/SK JOB IMPACT PROJECTIONS

**TABLE 1**

## 21-County West TN Region - Direct, Indirect & Induced Employment

Data Compiled: September 2023

| Annual Impact of Operations  | 2024         | 2025          | 2026          | 2030          | 2035          | 2040          | 2045          |
|--|--------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Impact Projections - Total Jobs: Direct, Indirect, & Induced - Using Type II Multipliers |              |               |               |               |               |               |               |
| Employment - Direct <sup>1</sup>   | 2,690        | 4,130         | 5,760         | 5,760         | 5,760         | 5,760         | 5,760         |
| Type II Direct Effect Employment Multiplier <sup>2</sup>                                 | 3.2238       | 3.4064        | 3.4064        | 3.5000        | 3.6500        | 3.7500        | 3.9000        |
| Indirect/Induced Employment <sup>3</sup>   | 5,982        | 9,938         | 13,861        | 14,400        | 15,264        | 15,840        | 16,704        |
| <b>Direct/Indirect/Induced Employment<sup>4</sup></b>                                    | <b>8,672</b> | <b>14,068</b> | <b>19,621</b> | <b>20,160</b> | <b>21,024</b> | <b>21,600</b> | <b>22,464</b> |
| Impact Projections - Total Jobs: Direct & Indirect ONLY - Using Type I Multipliers       |              |               |               |               |               |               |               |
| Employment - Direct <sup>1</sup>   | 2,690        | 4,130         | 5,760         | 5,760         | 5,760         | 5,760         | 5,760         |
| Type I Direct Effect Employment Multiplier <sup>5</sup>                                  | 2.2591       | 2.3652        | 2.3652        | 2.4000        | 2.5000        | 2.6000        | 2.7000        |
| <b>Direct &amp; Indirect Employment</b>  | <b>6,077</b> | <b>9,768</b>  | <b>13,624</b> | <b>13,824</b> | <b>14,400</b> | <b>14,976</b> | <b>15,552</b> |
| Indirect Employment <sup>6</sup>   | 3,387        | 5,638         | 7,864         | 8,064         | 8,640         | 9,216         | 9,792         |
| Induced Employment <sup>7</sup>  | 2,595        | 4,300         | 5,997         | 6,336         | 6,624         | 6,624         | 6,912         |

**Notes:**

1. Direct employment projection from Ford Motor Company.
2. U.S. BEA RIMS II Direct Effect Type II Employment Multiplier for motor vehicle manufacturing. Type II multipliers project the total jobs supported (direct, indirect and induced) by the ongoing operations of a specific entity. The 8-County Impact Zone multipliers are used in 2024 with the 21-County West TN Region multipliers utilized for 2025 and 2026. For 2030, 2035, 2040 and 2045, the multipliers were increased to bring the level in line with the State of Tennessee multiplier for motor vehicle manufacturing.
3. Total jobs less direct jobs.
4. Total jobs (direct, indirect/induced) based upon direct employment projections and RIMS II data.
5. U.S. BEA RIMS II Direct Effect Type I Employment Multiplier for motor vehicle manufacturing. Type I multipliers project the total indirect jobs supported by the new direct jobs created by a specific entity. The 8-County Impact Zone multipliers are used in 2024 with the 21-County West TN Region multipliers utilized for 2025 and 2026. For 2030, 2035, 2040 and 2045, the multipliers were increased to bring the level in line with the State of Tennessee multiplier for motor vehicle manufacturing.
6. Indirect jobs include the employment in upstream industries that supply and support the core activities of Ford/SK operations. Workers in such positions may produce steel, plastics or other materials, or they may provide financial and other services. These industries are not directly involved in Ford/SK activities but produce intermediate inputs along the value chain of their operations.
7. Induced employment encompasses jobs beyond Ford/SK operations and its upstream industries, such as jobs in the consumer goods industry. When people who are employed directly or indirectly spend their incomes on a variety of items in the broader economy (such as food, clothing, transportation and entertainment), the expenditures give rise to induced employment. These jobs or portions of jobs can be found among all industry sectors such as food and beverage, protective services, personal services, health and education, and services to offices and dwellings.

## INDUSTRIES IN THE EV MANUFACTURING CLUSTER

| NAICS Code | Description  |
|------------|--|
| 325        | Chemical Manufacturing                                     |
| 326        | Plastics & Rubber Products Manufacturing                   |
| 331        | Primary Metal Manufacturing                                |
| 332        | Fabricated Metal Product Manufacturing                     |
| 334        | Computer & Electronic Product Manufacturing                |
| 335        | Electrical Equipment, Appliance, & Component Manufacturing |
| 336        | Transportation Equipment Manufacturing                     |

Using this cluster of seven industries, current staffing patterns were determined for the 21-County West Tennessee Region.

The Department of Labor’s Standard Occupation Classification (SOC) system groups similar skills together into four levels: major groups, minor groups, broad occupations, and detailed occupations. For example:

- » 51-0000: Production Occupations (major group)
- » 51-4000: Metal Workers and Plastic Workers (minor group)
- » 51-4020: Forming Machine Setters, Operators and Tenders (broad occupation)
- » 51-4021: Extruding and Drawing Machine Setters, Operators and Tenders (detailed occupation)

For this analysis the broad occupation SOC level, which includes 448 occupations, provided the best categorization so the groupings were neither too narrow to be useful, nor too broad to provide planning information for training and workforce development organizations.

Staffing patterns in the EV manufacturing cluster were determined based on 2022 National Industry-Specific Occupational Employment and Wage Estimates from the Bureau of Labor Statistics.

The 5,760 direct jobs and 8,064 projected indirect jobs supported by Ford/SK operations were then distributed through the list of occupations using the percentage of each occupation among the total employment in the EV manufacturing cluster in the 21-County West Tennessee Region.

The induced jobs generated by Ford/SK operations were distributed among all occupations in all industry sectors. The 6,336 induced jobs were distributed by applying the percentage of the total occupations to the number of induced jobs projected.

For clarity and useability, this report focuses on the top 100 jobs by volume. However, **Appendix F** shows the distribution of jobs among all 448 broad level occupation groups. This is provided because a number of the induced jobs fall outside the top 100 jobs related to the EV manufacturing cluster.

## WEST TENNESSEE OCCUPATION GROWTH TREND

The manufacturing sector, and the production occupations prevalent in manufacturing, has a strong historical presence in West Tennessee. In 2023, 9.8% of West Tennessee jobs are in manufacturing.

Most of the occupations projected to experience increased demand as a result of Ford/SK operations are in occupational categories where West Tennessee already has a strong concentration of workers. Occupations related to the EV manufacturing cluster were already projected to grow before the BOC project was announced.

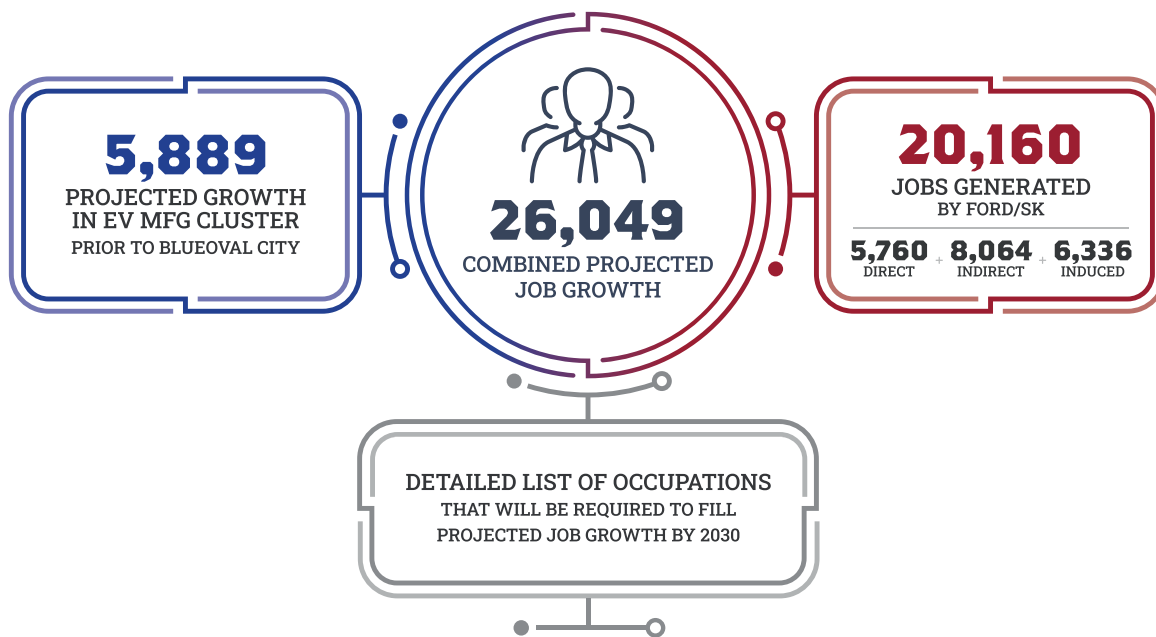
Data from the Bureau of Labor Statistics (BLS) indicates that employment in industries related to the electric EV manufacturing cluster was already projected to grow by 5,889 jobs between 2023 and 2030. The table below shows the distribution of jobs by major occupation group for both the jobs to be generated because of Ford/SK and the jobs that were already projected to be created by existing West Tennessee economic trends.

It is important to include the growth predicted for West Tennessee before the BOC announcement so that workforce development organizations can plan for the total number of jobs projected and so training providers can see the total capacity needed to prepare for each occupation type.

The illustration on the next page depicts how the prior projected job growth, plus the Ford/SK related job growth by 2030, drives the demand for specific occupations.

## DISTRIBUTION OF PROJECTED NEW JOBS BY MAJOR SOC GROUP

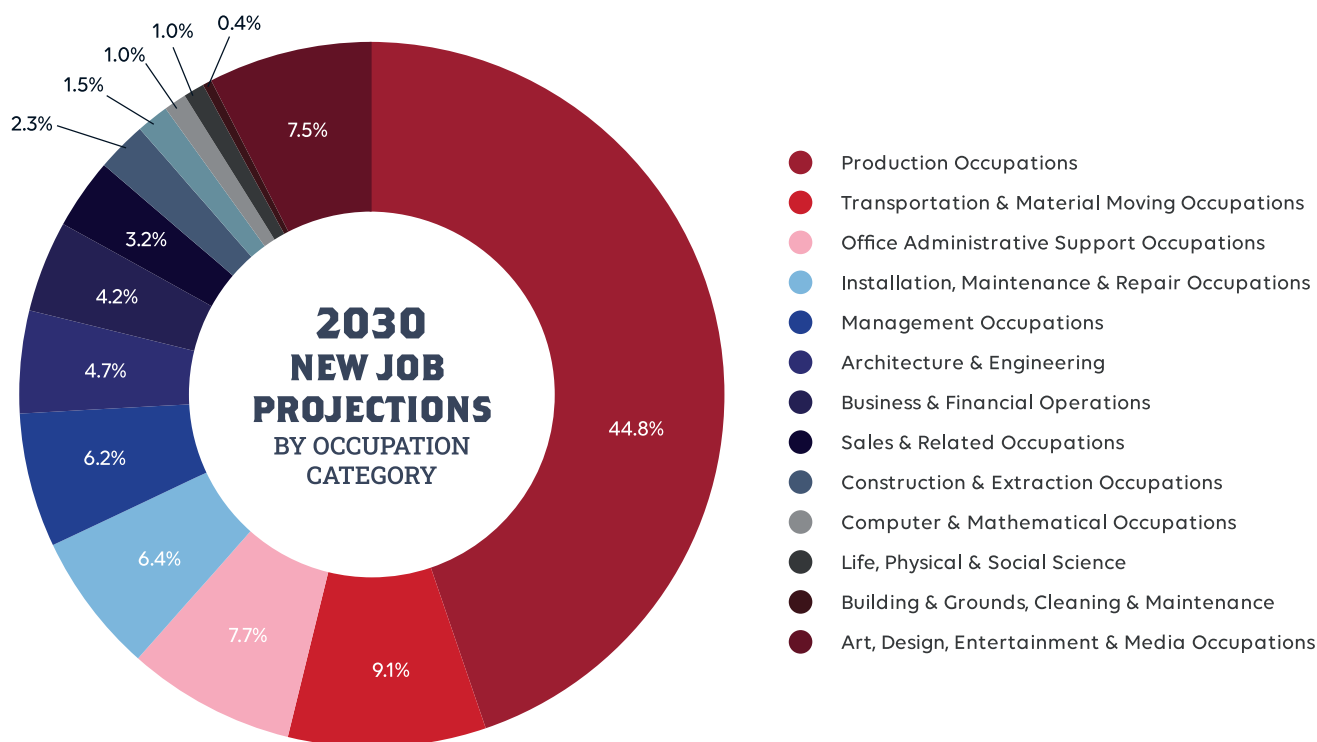
### PRE-BOC & FORD/SK GENERATED JOBS



| SOC*          | Occupation Category                            | 2023-2030<br>Projected Growth<br>in EV MFG Cluster<br>Before Ford/SK | 2030 New Jobs<br>Supported** By<br>Ford/SK<br>Operations | Total<br>New<br>Jobs |
|---------------|--|--|--|----------------------|
| 51            | Production Occupations                         | 3,037  | 8,623  | 11,660               |
| 53            | Transportation & Material Moving Occupations   | 483  | 1,878  | 2,361                |
| 43            | Office Administrative Support Occupations      | 317  | 1,693  | 2,010                |
| 49            | Installation, Maintenance & Repair Occupations | 437  | 1,241  | 1,678                |
| 11            | Management Occupations                         | 453  | 1,151  | 1,604                |
| 17            | Architecture & Engineering                     | 423  | 802  | 1,225                |
| 13            | Business & Financial Operations                | 273  | 819  | 1,092                |
| 41            | Sales & Related Occupations                    | 114  | 732  | 846                  |
| 47            | Construction & Extraction Occupations          | 126  | 472  | 598                  |
| 15            | Computer & Mathematical Occupations            | 104  | 282  | 386                  |
| 19            | Life, Physical & Social Science                | 22   | 250  | 272                  |
| 37            | Building & Grounds, Cleaning & Maintenance     | 66   | 185  | 251                  |
| 27            | Art, Design, Entertainment & Media Occupations | 11   | 97   | 108                  |
| Other         | All Other SOC Categories                       | 23   | 1,935  | 1,958                |
| <b>Totals</b> |  | <b>5,889</b>   | <b>20,160</b>  | <b>26,049</b>        |

\*SOC = STANDARD OCCUPATION CLASSIFICATION  
 \*\*INCLUDES DIRECT, INDIRECT & INDUCED JOBS

## DISTRIBUTION OF ALL PROJECTED NEW JOBS BY MAJOR SOC GROUP



Production jobs will continue to be the leading occupation in West Tennessee in benchmark year 2030. While the growth numbers are not nearly as large, there are also growth projections for occupations that have not seen significant growth in West Tennessee in recent years, such as within the business and financial operations group.

**Table 2** beginning on page 8 shows the top 100 occupations by growth volume at the broad occupation SOC group level.



**WEST TN PLANNING**

**SUMMARY OF JOB GROWTH BY OCCUPATION TYPE**

**21-County West TN Region | Top 100 EV MFG Cluster Occupations**

Data Compiled: September 2023

**TABLE 2**

| SOC     | Occupation Description   | BLS Projected Change Before Ford/SK | 2030 Direct Jobs Ford/Sk | 2030 Indirect Jobs | 2030 Induced Jobs | New Jobs Generated by Ford/SK Operations | Total Change in Jobs (2023-2030) |
|---------|--|-------------------------------------|--------------------------|--------------------|-------------------|--|----------------------------------|
| 51-2090 | Miscellaneous Assemblers & Fabricators   | 471                                 | 586                      | 820                | 78                | 1,484                                    | 1,955                            |
| 51-4120 | Welding, Soldering, & Brazing Workers  | 288                                 | 285                      | 398                | 30                | 713                                      | 1,001                            |
| 53-7060 | Laborers & Material Movers   | 314                                 | 270                      | 377                | 445               | 1,092                                    | 1,406                            |
| 51-9190 | Miscellaneous Production Workers   | 257                                 | 264                      | 369                | 63                | 696                                      | 953                              |
| 51-1010 | First-Line Supervisors of Production & Operating Workers                         | 303                                 | 257                      | 360                | 34                | 651                                      | 954                              |
| 51-9060 | Inspectors, Testers, Sorters, Samplers, & Weighers                               | 217                                 | 240                      | 335                | 37                | 612                                      | 829                              |
| 51-4030 | Machine Tool Cutting Setters, Operators, & Tenders, Metal & Plastic              | 205                                 | 228                      | 319                | 16                | 563                                      | 768                              |
| 51-9010 | Chemical Processing Machine Setters, Operators, & Tenders                        | 111                                 | 196                      | 275                | 12                | 483                                      | 594                              |
| 51-4040 | Machinists   | 191                                 | 194                      | 271                | 23                | 488                                      | 679                              |
| 49-9040 | Industrial Machinery Installation, Repair, & Maintenance Workers                 | 284                                 | 183                      | 256                | 34                | 473                                      | 757                              |
| 51-4020 | Forming Machine Setters, Operators, & Tenders, Metal & Plastic                   | 65                                  | 149                      | 209                | 10                | 368                                      | 433                              |
| 51-2020 | Electrical, Electronics, & Electromechanical Assemblers                          | 49                                  | 146                      | 205                | 11                | 362                                      | 411                              |
| 51-4080 | Multiple Machine Tool Setters, Operators, & Tenders, Metal & Plastic             | 140                                 | 115                      | 160                | 10                | 285                                      | 425                              |
| 49-9070 | Maintenance & Repair Workers, General  | 112                                 | 100                      | 140                | 73                | 313                                      | 425                              |
| 17-2110 | Industrial Engineers, Including Health & Safety                                  | 155                                 | 98                       | 137                | 15                | 250                                      | 405                              |
| 43-5070 | Shipping, Receiving, & Inventory Clerks  | 77                                  | 98                       | 137                | 43                | 278                                      | 355                              |
| 17-3020 | Engineering Technologists & Technicians, Except Drafters                         | 100                                 | 92                       | 129                | 18                | 239                                      | 339                              |
| 11-1020 | General & Operations Managers  | 110                                 | 89                       | 124                | 106               | 319                                      | 429                              |
| 51-9040 | Extruding, Forming, Pressing, & Compacting Machine Setters, Operators, & Tenders | 84                                  | 87                       | 122                | 6                 | 215                                      | 299                              |
| 41-4010 | Sales Representatives, Wholesale & Manufacturing                                 | 102                                 | 85                       | 119                | 53                | 257                                      | 359                              |
| 51-4110 | Tool & Die Makers  | 65                                  | 81                       | 113                | 6                 | 200                                      | 265                              |
| 51-9160 | Computer Numerically Controlled Tool Operators & Programmers                     | 97                                  | 78                       | 109                | 7                 | 194                                      | 291                              |
| 11-3050 | Industrial Production Managers   | 91                                  | 71                       | 99                 | 9                 | 179                                      | 270                              |
| 51-4070 | Molders & Molding Machine Setters, Operators, & Tenders, Metal & Plastic         | 79                                  | 70                       | 98                 | 6                 | 174                                      | 253                              |
| 51-9120 | Painting Workers   | 76                                  | 69                       | 96                 | 9                 | 174                                      | 250                              |
| 53-7050 | Industrial Truck & Tractor Operators   | 86                                  | 68                       | 95                 | 49                | 212                                      | 298                              |

**WEST TN PLANNING**

**SUMMARY OF JOB GROWTH BY OCCUPATION TYPE**

**21-County West TN Region | Top 100 EV MFG Cluster Occupations**

Data Compiled: September 2023

**TABLE 2**

| SOC     | Occupation Description  | BLS Projected Change Before Ford/SK | 2030 Direct Jobs Ford/Sk | 2030 Indirect Jobs | 2030 Induced Jobs | New Jobs Generated by Ford/SK Operations | Total Change in Jobs (2023-2030) |
|---------|---|-------------------------------------|--------------------------|--------------------|-------------------|--|----------------------------------|
| 51-9020 | Crushing, Grinding, Polishing, Mixing, & Blending Workers         | 61                                  | 65                       | 90                 | 8                 | 163                                      | 224                              |
| 51-4190 | Miscellaneous Metal Workers & Plastic Workers                     | 31                                  | 62                       | 87                 | 6                 | 155                                      | 186                              |
| 51-9110 | Packaging & Filling Machine Operators & Tenders                   | 63                                  | 60                       | 85                 | 18                | 163                                      | 226                              |
| 43-5060 | Production, Planning, & Expediting Clerks                         | 71                                  | 58                       | 81                 | 18                | 157                                      | 228                              |
| 43-3030 | Bookkeeping, Accounting, & Auditing Clerks                        | 32                                  | 51                       | 71                 | 75                | 197                                      | 229                              |
| 43-9060 | Office Clerks, General  | 47                                  | 50                       | 69                 | 94                | 213                                      | 260                              |
| 43-4050 | Customer Service Representatives                                  | 32                                  | 48                       | 67                 | 95                | 210                                      | 242                              |
| 11-9190 | Miscellaneous Managers  | 50                                  | 44                       | 62                 | 49                | 155                                      | 205                              |
| 51-2040 | Structural Metal Fabricators & Fitters                            | 16                                  | 43                       | 60                 | 3                 | 106                                      | 122                              |
| 53-3030 | Driver/Sales Workers & Truck Drivers                              | 53                                  | 43                       | 60                 | 257               | 360                                      | 413                              |
| 13-1020 | Buyers & Purchasing Agents  | 33                                  | 43                       | 60                 | 18                | 121                                      | 154                              |
| 13-1080 | Logisticians & Project Management Specialists                     | 80                                  | 42                       | 59                 | 32                | 133                                      | 213                              |
| 43-1010 | First-Line Supervisors of Office & Administrative Support Workers | 24                                  | 40                       | 56                 | 82                | 178                                      | 202                              |
| 47-2210 | Sheet Metal Workers   | 43                                  | 39                       | 54                 | 7                 | 100                                      | 143                              |
| 13-2010 | Accountants & Auditors  | 43                                  | 36                       | 50                 | 47                | 133                                      | 176                              |
| 17-2140 | Mechanical Engineers  | 58                                  | 31                       | 44                 | 6                 | 81                                       | 139                              |
| 51-4050 | Metal Furnace Operators, Tenders, Pourers, & Casters              | 16                                  | 30                       | 42                 | 2                 | 74                                       | 90                               |
| 43-6010 | Secretaries & Administrative Assistants                           | 23                                  | 30                       | 42                 | 109               | 181                                      | 204                              |
| 11-2020 | Marketing & Sales Managers  | 39                                  | 30                       | 42                 | 28                | 100                                      | 139                              |
| 13-1070 | Human Resources Workers   | 35                                  | 30                       | 42                 | 38                | 110                                      | 145                              |
| 15-1250 | Software & Web Developers, Programmers, & Testers                 | 49                                  | 26                       | 37                 | 37                | 100                                      | 149                              |
| 11-3030 | Financial Managers  | 37                                  | 26                       | 37                 | 32                | 95                                       | 132                              |
| 19-2030 | Chemists & Materials Scientists                                   | 30                                  | 25                       | 35                 | 3                 | 63                                       | 93                               |
| 49-1010 | First-Line Supervisors of Mechanics, Installers, & Repairers      | 35                                  | 25                       | 35                 | 20                | 80                                       | 115                              |
| 11-9040 | Architectural & Engineering Managers                              | 37                                  | 24                       | 34                 | 4                 | 62                                       | 99                               |
| 17-3010 | Drafters  | 20                                  | 23                       | 32                 | 6                 | 61                                       | 81                               |

**WEST TN PLANNING**

**SUMMARY OF JOB GROWTH BY OCCUPATION TYPE**

**21-County West TN Region | Top 100 EV MFG Cluster Occupations**

Data Compiled: September 2023

**TABLE 2**

| SOC     | Occupation Description   | BLS Projected Change Before Ford/SK | 2030 Direct Jobs Ford/Sk | 2030 Indirect Jobs | 2030 Induced Jobs | New Jobs Generated by Ford/SK Operations | Total Change in Jobs (2023-2030) |
|---------|--|-------------------------------------|--------------------------|--------------------|-------------------|--|----------------------------------|
| 47-2110 | Electricians   | 30                                  | 22                       | 31                 | 26                | 79                                       | 109                              |
| 17-2070 | Electrical & Electronics Engineers                                 | 34                                  | 21                       | 29                 | 6                 | 56                                       | 90                               |
| 53-1040 | First-Line Supervisors of Transportation & Material Moving Workers | 24                                  | 18                       | 26                 | 42                | 86                                       | 110                              |
| 19-4030 | Chemical Technicians   | 23                                  | 18                       | 26                 | 2                 | 46                                       | 69                               |
| 37-2010 | Building Cleaning Workers  | 22                                  | 17                       | 24                 | 131               | 172                                      | 194                              |
| 51-9030 | Cutting Workers  | 15                                  | 16                       | 23                 | 3                 | 42                                       | 57                               |
| 49-3010 | Aircraft Mechanics & Service Technicians                           | -6                                  | 15                       | 21                 | 26                | 62                                       | 56                               |
| 49-9090 | Miscellaneous Installation, Maintenance, & Repair Workers          | 17                                  | 15                       | 21                 | 15                | 51                                       | 68                               |
| 13-1160 | Market Research Analysts & Marketing Specialists                   | 26                                  | 14                       | 20                 | 20                | 54                                       | 80                               |
| 51-6030 | Sewing Machine Operators   | 16                                  | 14                       | 19                 | 7                 | 40                                       | 56                               |
| 17-2190 | Miscellaneous Engineers  | 16                                  | 14                       | 19                 | 7                 | 40                                       | 56                               |
| 13-1190 | Miscellaneous Business Operations Specialists                      | 22                                  | 13                       | 19                 | 30                | 62                                       | 84                               |
| 11-3010 | Administrative Services & Facilities Managers                      | 14                                  | 12                       | 17                 | 17                | 46                                       | 60                               |
| 13-1050 | Cost Estimators  | 11                                  | 12                       | 17                 | 6                 | 35                                       | 46                               |
| 11-3020 | Computer & Information Systems Managers                            | 21                                  | 12                       | 17                 | 15                | 44                                       | 65                               |
| 51-2050 | Fiberglass Laminators & Fabricators                                | 20                                  | 12                       | 16                 | 1                 | 29                                       | 49                               |
| 11-1010 | Chief Executives   | 11                                  | 11                       | 15                 | 11                | 37                                       | 48                               |
| 15-1230 | Computer Support Specialists                                       | 15                                  | 10                       | 15                 | 22                | 47                                       | 62                               |
| 19-5010 | Occupational Health & Safety Specialists & Technicians             | 13                                  | 10                       | 15                 | 5                 | 30                                       | 43                               |
| 17-2130 | Materials Engineers  | 10                                  | 10                       | 14                 | 1                 | 25                                       | 35                               |
| 15-1210 | Computer & Information Analysts                                    | 16                                  | 10                       | 14                 | 19                | 43                                       | 59                               |
| 15-1290 | Miscellaneous Computer Occupations                                 | 11                                  | 10                       | 14                 | 24                | 48                                       | 59                               |
| 11-3070 | Transportation, Storage, & Distribution Managers                   | 14                                  | 10                       | 14                 | 10                | 34                                       | 48                               |
| 27-1020 | Designers  | 8                                   | 9                        | 13                 | 20                | 42                                       | 50                               |
| 51-2030 | Engine & Other Machine Assemblers                                  | 47                                  | 9                        | 13                 | 1                 | 23                                       | 70                               |
| 51-6090 | Miscellaneous Textile, Apparel, & Furnishings Workers              | 16                                  | 9                        | 13                 | 2                 | 24                                       | 40                               |

**WEST TN PLANNING**

**SUMMARY OF JOB GROWTH BY OCCUPATION TYPE**

**21-County West TN Region | Top 100 EV MFG Cluster Occupations**

Data Compiled: September 2023

**TABLE 2**

| SOC     | Occupation Description   | BLS Projected Change Before Ford/SK | 2030 Direct Jobs Ford/Sk | 2030 Indirect Jobs | 2030 Induced Jobs | New Jobs Generated by Ford/SK Operations | Total Change in Jobs (2023-2030) |
|---------|--|-------------------------------------|--------------------------|--------------------|-------------------|--|----------------------------------|
| 15-1240 | Database & Network Administrators & Architects                                     | 13                                  | 9                        | 12                 | 15                | 36                                       | 49                               |
| 13-1150 | Training & Development Specialists   | 15                                  | 9                        | 12                 | 13                | 34                                       | 49                               |
| 49-2090 | Miscellaneous Electrical & Electronic Equipment Mechanics, Installers, & Repairers | 9                                   | 8                        | 11                 | 10                | 29                                       | 38                               |
| 53-7010 | Conveyor Operators & Tenders   | 5                                   | 8                        | 11                 | 11                | 30                                       | 35                               |
| 11-3120 | Human Resources Managers   | 13                                  | 8                        | 11                 | 6                 | 25                                       | 38                               |
| 51-9050 | Furnace, Kiln, Oven, Drier, & Kettle Operators & Tenders                           | 11                                  | 7                        | 10                 | 1                 | 18                                       | 29                               |
| 41-1010 | First-Line Supervisors of Sales Workers  | 6                                   | 7                        | 10                 | 70                | 87                                       | 93                               |
| 51-8090 | Miscellaneous Plant & System Operators   | 17                                  | 7                        | 10                 | 1                 | 18                                       | 35                               |
| 51-5110 | Printing Workers   | 5                                   | 7                        | 10                 | 9                 | 26                                       | 31                               |
| 47-1010 | First-Line Supervisors of Construction Trades & Extraction Workers                 | 9                                   | 7                        | 10                 | 25                | 42                                       | 51                               |
| 17-2040 | Chemical Engineers   | 15                                  | 7                        | 10                 | 1                 | 18                                       | 33                               |
| 13-1040 | Compliance Officers  | 7                                   | 7                        | 10                 | 16                | 33                                       | 40                               |
| 11-3060 | Purchasing Managers  | 10                                  | 7                        | 10                 | 2                 | 19                                       | 29                               |
| 47-2150 | Pipelayers, Plumbers, Pipefitters, & Steamfitters                                  | 14                                  | 7                        | 10                 | 18                | 35                                       | 49                               |
| 53-7020 | Crane & Tower Operators  | 6                                   | 6                        | 8                  | 3                 | 17                                       | 23                               |
| 13-1110 | Management Analysts  | 12                                  | 5                        | 7                  | 18                | 30                                       | 42                               |
| 49-3020 | Automotive Technicians & Repairers   | 4                                   | 5                        | 6                  | 44                | 55                                       | 59                               |
| 47-2140 | Painters & Paperhangers  | 7                                   | 5                        | 6                  | 13                | 24                                       | 31                               |
| 43-4170 | Receptionists & Information Clerks   | 2                                   | 5                        | 6                  | 32                | 43                                       | 45                               |
| 47-2220 | Structural Iron & Steel Workers  | 8                                   | 5                        | 6                  | 2                 | 13                                       | 21                               |
| 43-3060 | Procurement Clerks   | 3                                   | 5                        | 6                  | 3                 | 14                                       | 17                               |
| 53-7190 | Miscellaneous Material Moving Workers  | 5                                   | 4                        | 6                  | 3                 | 13                                       | 18                               |
| -       | All Other Occupations  | 40                                  | 49                       | 76                 | 3,254             | 3,379                                    | 3,419                            |
| -       | <b>Total</b>   | <b>5,889</b>                        | <b>5,760</b>             | <b>8,064</b>       | <b>6,336</b>      | <b>20,160</b>                            | <b>26,049</b>                    |

## CONTENT OF APPENDICES

The appendices to this report provide the background data from which the employment forecasts were generated.

**Appendix A** details the 2023 employment in the 21-County West Tennessee Region, showing the number of jobs for each of the top 100 occupations in the electric vehicle manufacturing cluster. This table also identifies the industries that were combined to make the EV manufacturing cluster and the top 100 occupations.

**Appendix B** shows the 2030 growth and occupational change projected for the EV manufacturing cluster before BOC was announced. The ranking columns on the far right of the table show that there was very little predicted change in the types of jobs between 2023 and 2030.

**Appendix C** shows the distribution of jobs by occupation type for Ford/SK direct employees. This distribution is based on the percentage of the total of all occupations within the EV manufacturing cluster.

**Appendix D** shows the number of projected indirect jobs by benchmark year. The tables also show the projected distribution of those jobs by occupation.

**Appendix E** shows the 2023 and 2030 distribution of *all* occupations among *all* industry sectors prior to the announcement of Ford/SK.

**Appendix F** shows the number of projected induced jobs by benchmark year. This table also shows the projected distribution of those jobs by occupation.