

## THE ECONOMIC IMPACT OF PROJECT CONNECT ON SOUTH CAROLINA

Date: March 6, 2023 Prepared by: Joseph Von Nessen, Ph.D.

### **EXECUTIVE SUMMARY**

Project Connect represents the construction and subsequent operations of a new electric vehicle (EV) manufacturing facility in Blythewood, South Carolina that would expand the economic footprint of South Carolina's automotive cluster in the coming decade. The purpose of this analysis is to specifically estimate the temporary and permanent economic impacts that would arise from this facility. All estimates in this analysis derive from raw data projections provided by the South Carolina Department of Commerce.

The key findings of this analysis are as follows:

- If the project moves forward, there would be an investment of \$2 billion in the construction of a new manufacturing facility in Blythewood, South Carolina between January 2024 and December 2028. This would include approximately **and approximately for land acquisition and building facilities and another** for machinery and equipment. By 2029, this facility would also directly support approximately 4,000 permanent jobs.
- The investment towards construction would be expected to generate a cumulative economic impact of nearly \$3.5 billion in South Carolina by the year 2028, with an average of 3,635 temporary construction-related jobs supported (directly or indirectly) during the five-year construction phase. This level of job creation is also estimated to create a total of \$1.1 billion in labor income over the same time period.
- The temporary economic impacts resulting from all construction would be followed by more permanent impacts associated with the ongoing operations of the manufacturing facility including both pre-production operations scheduled to begin in 2024 as well as production-based operations scheduled to begin in 2026. In sum, the annual economic impact of the facility's operations on the state of South Carolina is estimated to rise from an initial dollar volume of formation in 2024 to nearly \$4.2 billion by 2029. This level of economic activity is also estimated to generate permanent jobs in the year 2024 that will then scale up to 9,834 by the year 2029.
- When combining the economic impacts associated with both construction and all ongoing operations, the cumulative economic impact of the new facility on the state of South Carolina by the year 2029 is projected to total approximately \$15.3 billion. This impact represents the sum total of all economic activity supported (directly or indirectly) by the facility in South Carolina between 2024 and 2029. The initial economic impact in 2024 is projected to be approximately \$37 million, which will then climb to the cumulative total of \$15.3 billion by 2029.

# **INTRODUCTION**

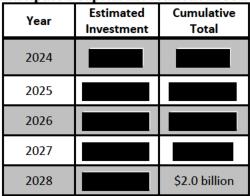
Project Connect represents the construction and subsequent operations of a new electric vehicle (EV) manufacturing facility in Blythewood, South Carolina that would expand the economic footprint of South Carolina's automotive cluster in the coming decade. This expansion is expected to generate an initial \$2 billion in capital investment and approximately 4,000 direct jobs by the year 2029.

The purpose of this analysis is to estimate both the temporary and permanent economic impacts to South Carolina that would likely result from the construction and subsequent ongoing operations of the planned facility. The construction of the manufacturing facility is projected to take place over a five-year period between 2024 and 2028. Limited manufacturing operations are expected to begin in 2026 and scale up over the following three years as facility construction is completed.

The economic impacts encompassing both sets of impacts are described in detail below, including a review of the primary results as well as the methodology and assumptions underlying these results. Note that all estimates in this analysis derive from raw data projections provided by the South Carolina Department of Commerce.

### **TEMPORARY ECONOMIC IMPACTS: CONSTRUCTION-RELATED ACTIVITIES**

If the development of the manufacturing facility moves forward, it is expected to generate approximately \$2 billion in capital investment for South Carolina between January 2024 and December 2028. As Table 1 denotes, this would consist of an investment schedule that would scale up steadily throughout the construction period from **Mathematical Restriction** by 2028. These dollars would be allocated to purchases related to the construction of all facilities (along with all equipment requirements) necessary for housing business activities associated with manufacturing operations and maintenance. The majority of all expenditures to be directed towards construction of facilities would be made in the latter years between 2027 and 2028.



#### Table 1 - Anticipated Capital Investment in South Carolina

In order to determine the total economic impact on South Carolina arising from purchases associated with this new construction activity, a detailed structural model (known as an input-output model) of the South Carolina economy was utilized. This model contains specific information on economic linkages between different industries throughout the state. It provides the means to assess how an initial round of new spending activity (known as the *direct effect*) can lead to successive rounds of spending (known as the *multiplier effect*) resulting from both inter-industry linkages between local firms as well as increases in household spending. In order to ensure that the uniqueness of local economic dynamics is considered, the input-output modeling software *IMPLAN* is combined with other customized regional forecasting models that were developed. This allows for the inclusion of additional local data, industry knowledge, and ongoing economic growth trends. The total economic impacts arising from all anticipated in-state purchasing associated with construction-related activities (including ancillary equipment and supplies) on South Carolina appear in Table 2.<sup>1</sup>

Year	Description	Total Employment	Total Labor Income	Total Economic Impact		
2024	Direct Effect	31	\$1,862,859	\$5,000,000		
	Multiplier Effect	22	\$1,254,302	\$4,164,625		
	Total Impact	53	\$3,117,161	\$9,164,625		
2025	Direct Effect	1,068	\$64,454,929	\$173,000,000		
	Multiplier Effect	775	\$43,398,793	\$144,096,025		
	Total Impact	1,843	\$107,853,722	\$317,096,025		
2026	Direct Effect	1,981	\$125,145,268	\$363,000,000		
	Multiplier Effect	1,581	\$91,228,914	\$285,207,302		
	Total Impact	3,562	\$216,374,182	\$648,207,302		
2027	Direct Effect	3,091	\$206,425,463	\$650,000,000		
	Multiplier Effect	2,755	\$163,649,161	\$480,712,850		
	Total Impact	5,846	\$370,074,624	\$1,130,712,850		
2028	Direct Effect	3,501	\$243,501,719	\$809,000,000		
	Multiplier Effect	3,371	\$203,901,782	\$575,521,117		
	Total Impact	6,872	\$447,403,501	\$1,384,521,117		
Cumulative Totals		3,635 <sup>2</sup>	\$1,144,823,189	\$3,489,701,919		

Table 2 – Economic Impact of Construction-Related Activities South Carolina

<sup>&</sup>lt;sup>1</sup> In this analysis, all construction activity and associated equipment material purchases were modeled using North American Industrial Classification System (NAICS) codes 236210 and 333500. <sup>2</sup> This estimate represents the average number of temporary jobs supported per year across the full five-year construction period.

The initial \$2 billion capital investment is expected to take place between January 2024 and December 2028. All of the construction-related activities associated with this initial investment would generate an *average* annual economic impact of approximately \$698 million for the state of South Carolina during this five-year period. This total impact is also estimated to create an average of approximately 3,635 temporary jobs each year throughout the construction period that would pay \$229 million in labor income each year.

In sum, all construction-related activities associated with the projected investments in the new manufacturing facility are estimated to generate a total economic impact of nearly \$3.5 billion between 2024 and 2028 across South Carolina. This level of economic activity will also support an average of 3,635 temporary constructionrelated jobs each year during the projected five-year investment period.

# PERMANENT ECONOMIC IMPACTS: ONGOING OPERATIONS

The temporary economic impacts that result from all construction would be followed by more permanent impacts associated with the ongoing operations at the new facility. Specifically, it is anticipated that limited production at the facility will begin by 2026 and will scale up through the year 2029 as construction is completed. The number of permanent jobs associated with all facility operations will, in turn, increase over time as the facility scales up to full capacity. The number of direct, full-time permanent employees is projected to increase from an initial volume of **m** in January of 2024 to 4,000 by 2029 as summarized in Table 3. Note that despite the fact that facility production is not expected to begin until 2026, pre-production operations will require the hiring of full-time, permanent positions beginning in 2024.

Year	Total Direct Full-Time Employment		
2024			
2025			
2026			
2027			
2028			
2029	4,000		

Table 3 - Anticipated Direct, On-Site Permanent Employment

As with all construction-related activities, the total economic impacts on South Carolina arising from all ongoing operations at the facility in South Carolina can also be estimated. These impacts are broken down by year between 2024 and 2029 and are displayed in Table 4.

Year	Description	Total Employment	Total Labor Income	Total Economic Impact
2024	Direct Effect			
	Multiplier Effect			
	Total Impact			
2025	Direct Effect			
	Multiplier Effect			
	Total Impact			
	Direct Effect			
2026	Multiplier Effect			
	Total Impact	3,945	211,676,679	1,671,783,823
2027	Direct Effect			
	Multiplier Effect			
	Total Impact			
2028	Direct Effect			
	Multiplier Effect			
	Total Impact			
2029	Direct Effect	4,000		\$3,062,215,150
	Multiplier Effect	5,834	\$288,681,464	\$1,107,875,757
	Total Impact	9,834		\$4,170,090,907

 Table 4 - Economic Impact of Manufacturing Facility Operations

 South Carolina

Note how the total impact of the new manufacturing facility in Blythewood is expected to increase from 2024 to 2029 beginning in its pre-production phase from 2024 to 2026 and continuing through its initial production period from 2026 through 2029. The total economic impact of the facility on the state of South Carolina is estimated to rise from approximately for the state of South Carolina is estimated to rise from approximately for the dollar value representing all final goods and services produced in South Carolina that can be attributed (directly or indirectly) to the ongoing operations of the facility. This level of economic activity is also estimated to generate for permanent jobs in the year 2024 that will then scale up to 9,834 by the year 2029, which will in turn generate approximately annually in labor income for South Carolinians,

respectively.

When combining the economic impacts associated with both construction and all ongoing operations, the cumulative economic impact of the new manufacturing

facility on the state of South Carolina by the year 2029 is projected to total over \$15.3 billion. This impact represents the sum total of all economic activity supported (directly or indirectly) by the facility in South Carolina between 2024 and 2029. The facility's total economic impact in 2024 is projected to be approximately \$37 million, which will then climb to a cumulative impact of \$15.3 billion by 2029. Figure 1 summarizes these estimates.

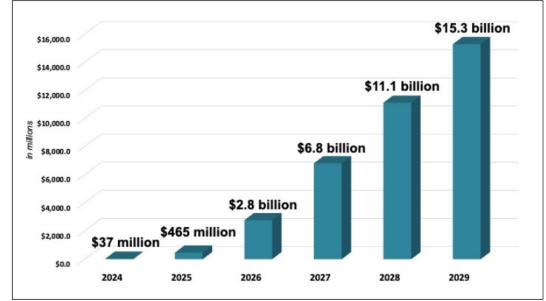


Figure 1 - Projected Cumulative Economic Impact of Project Connect on South Carolina