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Economic and Labor Market Impacts Analysis of a Proposed Data Center Development in the Columbus, GA-AL Metropolitan Area

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Executive Summary

The proposed data center development in Columbus, Georgia, represents an estimated $5.2 billion capital investment with the potential to generate economic, fiscal, and labor-market effects throughout the Columbus, GA–AL Metropolitan Statistical Area (MSA). This study evaluates the project across three distinct components: construction, initial machinery and equipment purchases, and recurring operations. Economic and fiscal impacts are estimated using the IMPLAN input-output modeling framework, while JobsEQ is used to evaluate the capacity of the regional labor market to meet anticipated workforce needs.

Approximately $1.3 billion, or 25% of the total investment, is assumed to be associated with construction. Because the final construction schedule is not yet known, the analysis evaluates both three-year and five-year construction scenarios, illustrating how the pace of development affects annual economic activity and workforce requirements. Under the three-year scenario, average annual construction expenditures of approximately $433.3 million are estimated to generate approximately $613.4 million in total annual economic output, support approximately 3,207 jobs, generate $171.7 million in labor income, and contribute approximately $273.1 million annually to regional GDP. Annual tax revenues are estimated at approximately $51.0 million, including federal and state taxes and approximately $7.4 million in combined local tax revenues. The more gradual five-year scenario reduces annual construction activity to approximately $260 million, generating approximately $368.1 million in annual economic output, supporting approximately 1,924 jobs, generating $103.1 million in labor income, and contributing approximately $163.9 million annually to regional GDP. Annual tax revenues under this scenario are approximately $30.6 million, including approximately $4.5 million in combined local tax revenues.

The labor-market analysis demonstrates an important difference between the two construction schedules. The three-year scenario would require approximately 2,344 direct construction workers annually, creating relatively tight conditions in several construction occupations and potentially requiring recruitment from related occupations or outside the Columbus MSA. Extending construction to five years reduces annual direct workforce requirements to approximately 1,406 workers and substantially improves the region's ability to meet projected labor demand. Under the five-year scenario, most occupational requirements can be supported by the existing and related regional workforce, although several specialized construction occupations may remain relatively constrained.

The remaining approximately $3.9 billion of initial capital investment is allocated to machinery and equipment. Because much of the specialized computing, storage, communications, cooling, and electrical equipment required by a hyperscale data center is manufactured outside the Columbus region, the entire $3.9 billion investment does not translate into regional economic activity. IMPLAN accounts for these regional purchasing relationships and associated economic leakage. The initial equipment investment is estimated to generate approximately $1.71 billion in economic output and $1.14 billion in regional GDP, while supporting approximately 16,139 jobs and $780 million in labor income. The equipment purchases are estimated to generate approximately $326.7 million in total tax revenue, of which approximately $95.2 million would accrue to local governments and special districts within the region. These effects are associated with the initial capital investment and should not be interpreted as recurring annual impacts or permanent employment.

Electricity demand represents a defining characteristic of the project's operational phase. The project has requested electric service of up to 600 MW, with service expected to begin at approximately 200 MW in 2029 and potentially increase to 600 MW by 2034. Because the higher level represents a longer-term potential buildout, this study evaluates both the initial 200-MW operating scenario and the potential 600-MW full-buildout scenario. Assuming a 90% load factor, a 200-MW facility would consume approximately 1.58 TWh of electricity annually, increasing to approximately 4.73 TWh at the potential 600-MW full buildout; each 100 MW of capacity corresponds to approximately 0.788 TWh annually. To better represent the energy-intensive nature of hyperscale data-center operations, the IMPLAN Industry 418 spending pattern was customized following IMPLAN guidance so that electricity represents 40% of the modeled spending pattern, with the remaining expenditure categories normalized accordingly. Electricity is therefore incorporated within the operational impact estimates rather than added separately, avoiding double counting.

For the initial 200-MW operating scenario, the analysis assumes 50 direct employees, average annual employee compensation of $80,000, and approximately $290 million in annual operating output. The resulting IMPLAN analysis estimates that ongoing operations would support approximately 583 jobs annually throughout the regional economy, generate approximately $439.2 million in total annual economic output, $31.6 million in labor income, and $110.4 million in regional GDP. Annual tax revenues are estimated at approximately $21.7 million. At the potential 600-MW full buildout, the analysis assumes 90 direct employees and approximately $870 million in annual operating output. This scenario is estimated to support approximately 1,685 jobs throughout the regional economy, generate approximately $1.32 billion in annual economic output, $89.8 million in labor income, and $326.7 million in regional GDP. Annual tax revenues are estimated at approximately $64.2 million. These operational impacts represent recurring annual estimates, in contrast with the temporary construction impacts and one-time initial equipment-purchase impacts.

The operational labor-market analysis indicates that the Columbus MSA is generally positioned to support the relatively modest direct workforce required once the facility is operational. Although certain specialized technology occupations may require targeted recruitment, the projected demand of 90 direct workers at the potential 600-MW full buildout is not expected to create broad regional labor-market constraints.

To provide context for the scale of these impacts, the Columbus, GA–AL MSA has an annual gross domestic product of approximately $16.5 billion. Relative to the size of the regional economy, the approximately $273.1 million in annual value added generated under the three-year construction scenario represents roughly 1.7% of MSA GDP, while the five-year scenario generates approximately $163.9 million annually, or about 1.0% of MSA GDP. The initial machinery and equipment investment generates an estimated $1.14 billion in regional value added, representing approximately 6.9% of annual MSA GDP; however, this is a one-time capital-investment impact rather than a recurring annual contribution. In addition to the GDP contributions generated during the construction and equipment-purchase phases, ongoing data center operations are projected to add approximately $110.4 million annually to regional GDP under the initial 200-MW scenario and approximately $326.7 million under the potential 600-MW full-buildout scenario, representing approximately 0.7% and 2.0%, respectively, of the MSA's current annual GDP.

The study also identifies potential effects extending beyond those captured by the quantitative economic-impact model. A hyperscale data center could contribute to additional investment in telecommunications and fiber infrastructure and create opportunities for technology-related businesses, electrical contractors, engineering firms, security providers, maintenance companies, and other specialized services. The temporary construction workforce could also affect demand for hotels, apartments, rental housing, restaurants, and retail establishments and potentially influence surrounding commercial and industrial development and property values. At the same time, the project's substantial electricity requirements and potential water demand raise broader infrastructure and environmental considerations involving utility capacity, cooling technologies, electricity-generation sources, backup generation, emissions, and land use. These potential business-ecosystem, housing, real-estate, infrastructure, and environmental effects are not quantified in this study and would require separate analysis as additional project-specific information becomes available.

Overall, the analysis indicates that the proposed data center represents a large, multi-phase regional investment whose economic effects differ substantially across development stages. Construction generates the greatest near-term pressure on the regional workforce, with the pace of construction materially affecting annual labor requirements. Initial equipment purchases generate substantial one-time regional activity despite significant leakage associated with specialized equipment produced outside the area. Once operational, the facility is expected to support a smaller direct workforce but generate recurring economic and fiscal activity through its substantial operating and supply-chain expenditures. The estimates should be interpreted as scenario-based measures of potential regional impacts rather than forecasts of actual outcomes, particularly because detailed project-specific construction costs, equipment procurement schedules, operating expenditures, and revenue projections are not yet available.

Sincerely, Fady Mansour

Introduction

The proposed data center development in Columbus, Georgia, represents a significant capital investment with the potential to generate economic activity throughout the Columbus, GA–AL Metropolitan Statistical Area (MSA). With an estimated total investment of approximately $5.2 billion, the project includes substantial expenditures associated with construction, machinery and equipment, and ongoing operations. Given the scale and specialized nature of the investment, its economic implications extend across multiple phases and involve different types of regional activity.

This report evaluates the potential economic, fiscal, and labor market impacts associated with the development and operation of the data center. The analysis separately examines the construction phase, initial machinery and equipment purchases, and recurring operational activity. Construction impacts are evaluated under both three-year and five-year development scenarios to reflect alternative construction timelines and illustrate how the pace of development affects annual employment, labor demand, economic activity, and fiscal impacts. The analysis also examines the capacity of the regional labor market to support anticipated workforce needs.

The equipment-purchase analysis evaluates the regional effects associated with the approximately $3.9 billion in machinery and equipment investment, accounting for the specialized nature of data center equipment and the extent to which expenditures may occur outside the regional economy. The operational analysis estimates recurring annual impacts under both the initial 200-MW operating scenario and the potential 600-MW full-buildout scenario, including effects associated with employment, payroll, supply-chain activity, and the energy-intensive operating structure of a hyperscale data center. Electricity demand is considered separately to provide context regarding the scale of the project's expected power requirements.

Economic and fiscal impacts are estimated using the IMPLAN input-output modeling framework, while labor market conditions are evaluated using JobsEQ. The analysis reports direct, indirect, and induced effects on employment, labor income, value added, economic output, and tax revenues. Where project-specific information is unavailable, assumptions and external industry benchmarks are used and identified throughout the report.

The estimates presented in this report are intended to provide a framework for understanding the potential regional economic implications of the proposed investment rather than a forecast of actual outcomes. Broader potential effects—including those related to the business ecosystem, housing and real estate, infrastructure, and environmental resources—are discussed qualitatively and remain outside the quantitative scope of the analysis.

Construction Phase: Economic Impacts and Labor Market Capacity

The construction phase represents one of the largest short-term economic impacts associated with the proposed data center project. This section estimates the economic, fiscal, and labor market impacts generated during the construction of the facility. Based on project information, approximately 25% of the total $5.2 billion capital investment, or $1.3 billion, is assumed to represent construction-related expenditures, while the remaining investment consists of machinery and equipment and is analyzed separately. In the absence of a detailed project cost breakdown, the construction expenditures are modeled using the Commercial and Institutional Building Construction industry (NAICS 236220) as a proxy. This approach provides a reasonable representation of the overall construction activity while recognizing that data center projects involve substantial investments in specialized electrical, mechanical, cooling, and other construction systems. As more detailed project cost information becomes available, the construction expenditures may be disaggregated across additional construction industries to further refine the impact estimates.

Because the project-specific construction schedule has not yet been finalized, the analysis considers both a three-year and a five-year construction scenario. The three-year scenario represents a relatively concentrated construction schedule consistent with the timeline of many large data center projects, while the five-year scenario reflects a more gradual buildout in which construction expenditures and labor demand are distributed over a longer period. Evaluating both scenarios provides a range of potential economic and labor market impacts and highlights how the pace of construction may influence annual employment requirements, labor market conditions, and the potential need for additional workers from outside the region. These factors may, in turn, increase demand for temporary and permanent housing, hotels, and other local services. While the present analysis identifies these potential effects, quantifying their magnitude requires a separate assessment of regional housing and labor market dynamics and is therefore beyond the scope of this study.

The economic impact estimates are based on the IMPLAN input-output modeling framework (IMPLAN Group LLC, 2024). A detailed description of the modeling methodology, multiplier structure, impact measures, and labor market analysis is provided in Appendix A.

Alternative Construction Scenarios

As discussed above, the project-specific construction schedule has not yet been finalized. Therefore, the construction impacts are evaluated under two alternative scenarios: (1) a three-year construction period and (2) a five-year construction period. The results presented below reflect the estimated annual economic impacts associated with each scenario.

Three-Year Construction Scenario

Table 1. Estimated Annual Economic Impacts of the Construction Phase under the Three-Year Construction Scenario ($ Millions)

Impact	Employment	Labor Income	Value Added (GDP)	Output
Direct	2,343.6	$124.1	$177.9	$433.3
Indirect	408.2	$26.8	$50.6	$103.7
Induced	455.2	$20.8	$44.6	$76.4
Total	3,206.9	$171.7	$273.1	$613.4

Note: Estimates are based on average annual construction expenditures of approximately $433.3 million, assuming the $1.3 billion construction investment is distributed evenly over a three-year construction period. Employment represents annual jobs supported during the construction phase.

Under the three-year construction scenario, average annual construction activity of approximately $433.3 million in direct output generates an estimated $613.4 million in total economic output for the region. This total reflects three effects: the direct impact ($433.3 million—construction expenditures directly associated with the project), the indirect impact ($103.7 million—economic activity generated through purchases from local suppliers and subcontractors), and the induced impact ($76.4 million—additional economic activity generated when workers supported by the direct and indirect effects spend their earnings on household goods and services).

The construction activity supports approximately 3,207 jobs annually, including 2,344 direct jobs, 408 indirect jobs, and 455 induced jobs. In addition, the project generates approximately $171.7 million in annual labor income and contributes approximately $273.1 million to regional gross domestic product (GDP), as measured by value added—the net economic contribution to the regional economy after excluding the value of intermediate goods and services purchased from other businesses.

Tax Impacts under the Three-Year Construction Scenario

Table 2. Estimated Annual Tax Impacts of the Construction Phase under the Three-Year Construction Scenario ($ Millions)

Impact	Local	State	Federal	Total
Direct	$1.9	$3.8	$24.3	$29.9
Indirect	$3.1	$2.5	$6.0	$11.6
Induced	$2.5	$2.0	$4.9	$9.5
Total	$7.4	$8.3	$35.2	$51.0

Note: Estimates represent average annual tax revenues generated under the three-year construction scenario. Tax impacts include direct, indirect, and induced effects estimated by the IMPLAN model.

In addition to generating employment and economic activity, the construction phase also produces significant tax revenues at the federal, state, and local levels. Under the three-year construction scenario, the project is estimated to generate approximately $51.0 million in annual tax revenues, including $35.2 million in federal taxes, $8.3 million in state taxes, and approximately $7.4 million in combined local taxes. The local tax impacts consist of approximately $3.3 million in sub-county general taxes, $3.4 million in sub-county special district taxes, and $0.8 million in county taxes. These tax revenues are generated through the combined direct, indirect, and induced economic activity associated with the construction phase.

Construction Labor Market Analysis under the Three-Year Construction Scenario

The IMPLAN analysis estimates that the three-year construction scenario requires approximately 2,344 direct construction workers annually. To evaluate whether the regional labor market can support this level of employment, the annual workforce requirement was analyzed using the JobsEQ What-If model for Commercial and Institutional Building Construction (NAICS 236220). JobsEQ translates the industry-level employment demand into occupation-specific workforce requirements and compares them with the existing regional labor supply.

Table 3 presents the occupations with the largest projected labor demand, along with measures of regional labor availability. Employment and unemployment represent workers currently employed or unemployed in the target occupation and residing in the Columbus MSA. JobsEQ also reports Extended Employment and Extended Unemployment, which represent workers employed or unemployed in related occupations with similar skill requirements who may reasonably transition into the target occupation. According to JobsEQ, related occupations are limited to those with comparable wage levels, reflecting occupations whose workers are more likely to move into the target occupation. Finally, Potential Candidates per Opening provides an overall indicator of labor availability by comparing the projected hiring demand with the estimated pool of potential workers.

Table 3. Occupational Labor Demand and Regional Labor Availability under the Three-Year Construction Scenario

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
11-9021	Construction Managers	321	361	6	$104,800	$126,300	7,796	186	1
47-2061	Construction Laborers	292	881	68	$36,800	$53,300	38	1	3
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	267	592	19	$71,100	$88,400	4,517	138	2
47-2031	Carpenters	263	409	20	$46,800	$65,800	2,472	138	2
13-1082	Project Management Specialists	182	575	18	$101,700	$111,700	1,723	68	3
11-1021	General and Operations Managers	78	2,341	43	$111,800	$137,500	11,263	263	31
17-2051	Civil Engineers	66	235	4	$93,400	$111,500	598	13	4

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
43-9061	Office Clerks, General	53	1,653	67	$39,500	$47,900	5,717	238	32
13-1051	Cost Estimators	51	163	2	$70,200	$86,400	1,436	39	3
47-2051	Cement Masons and Concrete Finishers	47	86	9	$45,100	$61,500	2,540	138	2
47-2073	Operating Engineers and Other Construction Equipment Operators	36	353	23	$46,900	$68,700	3,031	168	10
13-2011	Accountants and Auditors	35	1,040	20	$86,500	$96,000	1,455	26	30
47-2111	Electricians	35	529	15	$55,400	$73,200	2,389	97	16
11-9199	Managers, All Other	33	1,060	19	$125,600	$150,800	5,963	166	33
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	32	1,403	40	$40,600	$50,700	6,002	260	45
47-2221	Structural Iron and Steel Workers	31	39	4	$53,400	$72,000	2,755	150	1
43-3031	Bookkeeping, Accounting, and Auditing Clerks	28	1,079	23	$44,900	$55,200	6,794	256	39
47-2152	Plumbers, Pipefitters, and Steamfitters	26	287	9	$54,000	$73,400	4,150	201	11
47-2081	Drywall and Ceiling Tile Installers	18	41	2	$48,200	$63,800	3,233	165	2
51-4121	Welders, Cutters, Solderers, and Brazers	18	325	14	$43,300	$58,200	3,304	153	19
19-5011	Occupational Health and Safety Specialists	17	89	3	$87,100	$96,500	2,024	66	5
53-3032	Heavy and Tractor-Trailer Truck Drivers	16	1,550	62	$52,800	$61,300	6,950	528	101
47-2141	Painters, Construction and Maintenance	16	182	14	$41,900	$56,000	2,969	241	12
43-1011	First-Line Supervisors of Office and Administrative Support Workers	13	1,055	17	$62,700	$75,400	12,093	394	82

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
49-9071	Maintenance and Repair Workers, General	13	1,161	44	$46,800	$55,500	153	13	93
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	13	842	35	$75,900	$83,200	3,890	148	67
11-3031	Financial Managers	12	572	11	$159,200	$188,200	8,612	175	49
49-9044	Millwrights	12	46	2	$64,600	$72,500	4,099	166	4
13-1071	Human Resources Specialists	10	653	23	$73,400	$83,300	1,761	40	68
13-1199	Business Operations Specialists, All Other	9	1,480	54	$83,100	$94,800	2,937	65	171
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	9	2,285	211	$37,300	$43,300	3,054	247	277
13-1161	Market Research Analysts and Marketing Specialists	9	551	20	$79,000	$89,800	5,975	289	63
43-5061	Production, Planning, and Expediting Clerks	9	316	24	$51,400	$63,400	3,242	222	38
47-2021	Brickmasons and Blockmasons	8	25	1	$52,000	$68,300	1,620	110	3
43-6011	Executive Secretaries and Executive Administrative Assistants	8	329	12	$67,100	$80,600	8,181	251	43
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	8	1,698	96	$31,400	$39,800	3,656	294	224
47-2211	Sheet Metal Workers	8	88	3	$46,800	$68,700	2,955	121	11
47-3012	Helpers–Carpenters	7	10	0	$33,400	$45,600	1,047	79	1
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	7	121	2	$59,600	$71,200	3,421	127	18
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	6	507	4	$74,800	$87,400	4,060	82	85

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
47-2131	Insulation Workers, Floor, Ceiling, and Wall	6	25	0	$41,600	$57,000	3,562	185	4
17-2141	Mechanical Engineers	6	148	2	$111,900	$115,600	971	17	25
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	6	297	6	$74,100	$84,300	7,628	271	50
11-3012	Administrative Services Managers	5	265	3	$117,300	$131,000	14,981	404	53
17-3011	Architectural and Civil Drafters	5	83	5	$64,200	$73,300	382	9	17
47-4011	Construction and Building Inspectors	5	132	2	$65,000	$80,600	2,400	77	27
43-4171	Receptionists and Information Clerks	5	692	35	$33,000	$40,600	2,813	259	145
17-1011	Architects, Except Landscape and Naval	4	58	1	$103,700	$108,900	987	19	15
47-2011	Boilermakers	4	5	2	$60,800	$83,400	3,761	132	2
53-7021	Crane and Tower Operators	4	27	1	$62,900	$74,800	5,809	362	7

Note: The color scale in the Potential Candidates per Opening column follows the JobsEQ What-If report. Red indicates relatively few potential candidates per opening (tighter labor market conditions), yellow indicates moderate labor availability, and green indicates relatively more potential candidates per opening (greater labor availability). The color coding is intended as a visual indicator and should be interpreted in conjunction with the underlying employment and unemployment measures.

The results indicate that the project would generate substantial demand across a wide range of construction and supporting occupations. The largest annual demand is projected for construction managers (321), construction laborers (292), first-line supervisors of construction trades (267), and carpenters (263). For many skilled construction occupations, the number of unemployed workers residing in the Columbus MSA is considerably smaller than the projected annual demand, suggesting that employers will need to recruit workers from the existing workforce, related occupations, neighboring labor markets, or a combination thereof. While JobsEQ identifies additional workers employed in related occupations who possess transferable skills, many of these individuals are already employed. Consequently, recruiting workers from these occupations may increase competition for labor and place upward pressure on wages. Quantifying these labor market adjustments is beyond the scope of the present study.

Five-Year Construction Scenario

Table 4. Estimated Annual Economic Impacts of the Construction Phase under the Five-Year Construction Scenario ($ Millions)

Impact	Employment	Labor Income	Value Added (GDP)	Output
Direct	1,406.3	$74.5	$106.8	$260.0
Indirect	244.9	$16.1	$30.4	$62.2
Induced	273.1	$12.5	$26.8	$45.8
Total	1,924.3	$103.1	$163.9	$368.1

Note: Estimates are based on average annual construction expenditures of approximately $260.0 million, assuming the $1.3 billion construction investment is distributed evenly over a five-year construction period. Employment represents annual jobs supported during the construction phase.

Under the five-year construction scenario, average annual construction activity of approximately $260.0 million in direct output generates an estimated $368.1 million in total economic output for the region. This total reflects three effects: the direct impact ($260.0 million—construction expenditures directly associated with the project), the indirect impact ($62.2 million—economic activity generated through purchases from local suppliers and subcontractors), and the induced impact ($45.8 million—additional economic activity generated when workers supported by the direct and indirect effects spend their earnings on household goods and services).

The construction activity supports approximately 1,924 jobs annually, including 1,406 direct jobs, 245 indirect jobs, and 273 induced jobs. In addition, the project generates approximately $103.1 million in annual labor income and contributes approximately $163.9 million to regional gross domestic product (GDP), as measured by value added. These estimates reflect the annual economic impacts associated with the construction phase under the five-year construction scenario.

Tax Impacts under the Five-Year Construction Scenario

Table 5. Estimated Annual Tax Impacts of the Construction Phase under the Five-Year Construction Scenario ($ Millions)

Impact	Local	State	Federal	Total
Direct	$1.1	$2.3	$14.6	$18.0
Indirect	$1.9	$1.5	$3.6	$7.0
Induced	$1.5	$1.2	$3.0	$5.7
Total	$4.5	$5.0	$21.1	$30.6

Note: Local taxes combine IMPLAN's sub-county general, sub-county special district, and county tax categories. Property-tax components associated with the modeled economic activity are included within IMPLAN's estimated tax impacts but are not reported as a separate tax category. Totals may differ slightly due to rounding.

In addition to generating employment and economic activity, the construction phase also produces significant tax revenues at the federal, state, and local levels. Under the five-year construction scenario, the project is estimated to generate approximately $30.6 million in annual tax revenues, including $21.1 million in federal taxes, $5.0 million in state taxes, and approximately $4.5 million in combined local taxes. Local tax revenues include approximately $2.0 million in sub-county general taxes, $2.0 million in sub-county special district taxes, and $0.5 million in county taxes. These revenues result from the direct construction activity as well as the indirect and induced economic effects generated throughout the regional economy.

Construction Labor Market Analysis under the Five-Year Construction Scenario

The IMPLAN analysis estimates that the five-year construction scenario requires approximately 1,406 direct construction workers annually. To evaluate whether the regional labor market can support this level of employment, the annual workforce requirement was analyzed using the JobsEQ What-If model for Commercial and Institutional Building Construction (NAICS 236220). JobsEQ translates the industry-level employment demand into occupation-specific workforce requirements and compares them with the existing regional labor supply.

Table 6 presents the occupations with the largest projected labor demand, along with measures of regional labor availability. Employment and unemployment represent workers currently employed or unemployed in the target occupation and residing in the Columbus MSA. JobsEQ also reports Extended Employment and Extended Unemployment, which represent workers employed or unemployed in related occupations with similar skill requirements who may reasonably transition into the target occupation. According to JobsEQ, related occupations are limited to those with comparable wage levels, reflecting occupations whose workers are more likely to move into the target occupation. Finally, Potential Candidates per Opening provides an overall indicator of labor availability by comparing the projected hiring demand with the estimated pool of potential workers.

Table 6. Occupational Labor Demand and Regional Labor Availability under the Five-Year Construction Scenario

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
11-9021	Construction Managers	193	361	6	$104,800	$126,300	7,796	186	2
47-2061	Construction Laborers	175	881	68	$36,800	$53,300	38	1	5
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	160	592	19	$71,100	$88,400	4,517	138	4
47-2031	Carpenters	158	409	20	$46,800	$65,800	2,472	138	3
13-1082	Project Management Specialists	109	575	18	$101,700	$111,700	1,723	68	5
11-1021	General and Operations Managers	47	2,341	43	$111,800	$137,500	11,263	263	51
17-2051	Civil Engineers	40	235	4	$93,400	$111,500	598	13	6
43-9061	Office Clerks, General	32	1,653	67	$39,500	$47,900	5,717	238	54
13-1051	Cost Estimators	31	163	2	$70,200	$86,400	1,436	39	5

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
47-2051	Cement Masons and Concrete Finishers	28	86	9	$45,100	$61,500	2,540	138	3
47-2073	Operating Engineers and Other Construction Equipment Operators	22	353	23	$46,900	$68,700	3,031	168	17
13-2011	Accountants and Auditors	21	1,040	20	$86,500	$96,000	1,455	26	50
47-2111	Electricians	21	529	15	$55,400	$73,200	2,389	97	26
11-9199	Managers, All Other	20	1,060	19	$125,600	$150,800	5,963	166	54
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	19	1,403	40	$40,600	$50,700	6,002	260	76
47-2221	Structural Iron and Steel Workers	19	39	4	$53,400	$72,000	2,755	150	2
43-3031	Bookkeeping, Accounting, and Auditing Clerks	17	1,079	23	$44,900	$55,200	6,794	256	65
47-2152	Plumbers, Pipefitters, and Steamfitters	16	287	9	$54,000	$73,400	4,150	201	18
47-2081	Drywall and Ceiling Tile Installers	11	41	2	$48,200	$63,800	3,233	165	4
51-4121	Welders, Cutters, Solderers, and Brazers	11	325	14	$43,300	$58,200	3,304	153	31
19-5011	Occupational Health and Safety Specialists	10	89	3	$87,100	$96,500	2,024	66	9
47-2141	Painters, Construction and Maintenance	10	182	14	$41,900	$56,000	2,969	241	20
53-3032	Heavy and Tractor-Trailer Truck Drivers	9	1,550	62	$52,800	$61,300	6,950	528	179
43-1011	First-Line Supervisors of Office and Administrative Support Workers	8	1,055	17	$62,700	$75,400	12,093	394	134
49-9071	Maintenance and Repair Workers, General	8	1,161	44	$46,800	$55,500	153	13	151
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	8	842	35	$75,900	$83,200	3,890	148	110

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
11-3031	Financial Managers	7	572	11	$159,200	$188,200	8,612	175	83
49-9044	Millwrights	7	46	2	$64,600	$72,500	4,099	166	7
13-1071	Human Resources Specialists	6	653	23	$73,400	$83,300	1,761	40	113
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	6	2,285	211	$37,300	$43,300	3,054	247	416
13-1161	Market Research Analysts and Marketing Specialists	6	551	20	$79,000	$89,800	5,975	289	95
47-2021	Brickmasons and Blockmasons	5	25	1	$52,000	$68,300	1,620	110	5
13-1199	Business Operations Specialists, All Other	5	1,480	54	$83,100	$94,800	2,937	65	307
43-6011	Executive Secretaries and Executive Administrative Assistants	5	329	12	$67,100	$80,600	8,181	251	68
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	5	1,698	96	$31,400	$39,800	3,656	294	359
43-5061	Production, Planning, and Expediting Clerks	5	316	24	$51,400	$63,400	3,242	222	68
47-2211	Sheet Metal Workers	5	88	3	$46,800	$68,700	2,955	121	18
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	4	507	4	$74,800	$87,400	4,060	82	128
47-3012	Helpers–Carpenters	4	10	0	$33,400	$45,600	1,047	79	3
47-2131	Insulation Workers, Floor, Ceiling, and Wall	4	25	0	$41,600	$57,000	3,562	185	6
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	4	121	2	$59,600	$71,200	3,421	127	31
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	4	297	6	$74,100	$84,300	7,628	271	76

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
11-3012	Administrative Services Managers	3	265	3	$117,300	$131,000	14,981	404	89
17-3011	Architectural and Civil Drafters	3	83	5	$64,200	$73,300	382	9	29
47-4011	Construction and Building Inspectors	3	132	2	$65,000	$80,600	2,400	77	45
11-2021	Marketing Managers	3	177	5	$162,700	$177,100	10,699	411	61
17-2141	Mechanical Engineers	3	148	2	$111,900	$115,600	971	17	50
43-3051	Payroll and Timekeeping Clerks	3	163	1	$56,100	$61,400	4,633	145	55
43-4171	Receptionists and Information Clerks	3	692	35	$33,000	$40,600	2,813	259	242
17-1011	Architects, Except Landscape and Naval	2	58	1	$103,700	$108,900	987	19	30

Note: The color scale in the Potential Candidates per Opening column follows the JobsEQ What-If report. Red indicates relatively few potential candidates per opening (tighter labor market conditions), yellow indicates moderate labor availability, and green indicates relatively more potential candidates per opening (greater labor availability). The color coding is intended as a visual indicator and should be interpreted together with the employment and unemployment measures.

The five-year construction scenario substantially reduces annual labor demand and, consequently, eases pressure on the regional labor market. As shown in Table 6, the combined pool of unemployed workers and workers employed in related occupations appears to be sufficient to meet the projected demand for the majority of occupations. Only a limited number of specialized construction occupations—such as construction managers, carpenters, structural iron and steel workers, cement masons, and helpers-carpenters—continue to exhibit relatively tight labor market conditions, as reflected by the low number of potential candidates per opening. Nevertheless, the presence of workers in the same or related occupations does not establish their availability to accept new positions. Overall, extending the construction period from three to five years substantially improves the region's ability to supply the required workforce, reducing the need to recruit workers from outside the Columbus MSA and lessening potential upward pressure on wages and housing demand.

Electricity Demand and Consumption

The proposed hyperscale data center development in Columbus, known as Project Ruby, has requested electric service of up to 600 MW. The requested service is expected to be phased, beginning with approximately 200 MW in 2029 and potentially increasing to 600 MW by 2034 (Hunter, 2026). Because the 600 MW level represents a longer-term potential buildout, the present analysis uses 200 MW as the primary near-term capacity scenario while also presenting the 600 MW full-buildout scenario

Large data centers generally operate with relatively high and stable electricity loads. EPRI reports that data centers are commonly modeled as high-load-factor customers, with planning assumptions generally ranging from 70% to 90% of operational capacity, including assumptions of approximately 85%–90% for some large hyperscale facilities (Electric Power Research Institute [EPRI], 2026b). Actual utilization can vary by facility and stage of development; EPRI's observed large hyperscale facility had an annual average utilization of approximately 75% of nameplate capacity (EPRI, 2026a). For purposes of this analysis, a 90% load factor is used as a planning assumption to represent a relatively mature, highly utilized facility.

Annual electricity consumption is calculated as:

Annual Electricity Consumption = Capacity (MW) × 8,760 Hours × Load Factor

Using a 90% load factor, each 100 MW of capacity would consume approximately 788,400 MWh (0.788 TWh) annually. At the initial 200 MW level, the data center project would therefore consume approximately 1,576,800 MWh, or 1.58 TWh, annually. At the potential 600 MW full buildout, annual electricity consumption would increase to approximately 4,730,400 MWh, or 4.73 TWh.

Table 7. Estimated Annual Electricity Consumption

Scenario	Capacity	Load Factor	Estimated Annual Consumption
Per-100-MW benchmark	100 MW	90%	788,400 MWh (0.788 TWh)
Near-term Data Center scenario	200 MW	90%	1,576,800 MWh (1.577 TWh)
Full-buildout Data Center Scenario	600 MW	90%	4,730,400 MWh (4.730 TWh)

Note: Annual electricity consumption is estimated based on 8,760 hours per year and an assumed 90% load factor. Actual consumption will depend on facility utilization, operating conditions, and the timing of capacity deployment.

The project's electricity requirement is substantial relative to the existing regional system. For context, the data center project's eventual request for up to 600 MW has been reported to exceed the approximately 550 MW required by all residential and commercial users in Columbus combined. This comparison illustrates the scale of the project's potential electricity demand, with the analysis distinguishing between the initial 200-MW phase and the potential longer-term 600-MW full buildout (Hunter, 2026).

Treatment of Electricity in the Economic Impact Analysis

Electricity consumption is incorporated directly into the operational economic impact analysis rather than modeled as a separate additional impact. The operational analysis uses IMPLAN Industry 418, Data Processing, Hosting, and Related Services. However, the standard Industry 418 spending pattern allocates a relatively small share of intermediate expenditures to electricity and may not adequately represent the energy-intensive operating structure of a hyperscale data center.

Following IMPLAN's guidance for modeling data-center operations, the Industry 418 spending pattern was therefore customized by increasing Commodity 3042, Electricity Transmission and Distribution, to 40% of the modeled spending pattern. The spending pattern was subsequently normalized, proportionally adjusting the remaining intermediate-input categories while maintaining the overall level of intermediate expenditures. This approach incorporates the data center's unusually high electricity intensity within the operational model rather than adding electricity expenditures separately, thereby avoiding double counting.

Because detailed project-specific operating expenditures are not yet available, the 40% electricity allocation should be interpreted as a modeling assumption based on IMPLAN's data-center guidance rather than a project-specific expenditure estimate. The physical electricity-consumption estimates presented above provide an independent indication of the scale of the project's expected power requirements.

Operational Phase: Economic and Labor Market Impacts

The operational economic impact analysis considers two stages of the data center's development. The first represents the initial 200-MW phase, modeled with 50 direct employees, while the second represents the potential 600-MW full buildout, modeled with 90 direct employees. Presenting the two scenarios separately illustrates how the recurring economic and fiscal impacts may change as the facility expands toward its full planned capacity.

Initial 200-MW Operating Scenario

The operational phase is modeled based on the initial 200-MW capacity scenario, with 50 direct employees and average annual employee compensation of $80,000, resulting in approximately $4 million in annual direct payroll. Annual operating output is estimated at approximately $290 million, based on a benchmark of approximately $1.44 million in annual colocation revenue per MW. This benchmark is derived from Core Scientific's high-density data center operations, which reported approximately 243 MW of billable capacity associated with $350 million in average annualized colocation revenue in the first quarter of 2026 (Core Scientific, 2026). Applying this benchmark to the project's initial 200-MW scenario results in estimated annual operating output of approximately $290 million. Because the operating cost structure of a hyperscale data center differs substantially from the average establishment in the broader data-processing industry, the IMPLAN Industry 418 spending pattern was customized following IMPLAN guidance for data-center analysis. Specifically, electricity was increased to 40% of the modeled spending pattern, and the remaining spending categories were normalized accordingly (IMPLAN Group LLC, 2025).

Table 8: Estimated Annual Economic Impacts of the Operational Phase under the 200-MW Operating Scenario ($ Millions)

Impact	Employment	Labor Income	Value Added (GDP)	Output
Direct	50.0	$4.0	$43.4	$290.0
Indirect	450.1	$23.8	$58.8	$135.3
Induced	83.4	$3.8	$8.2	$13.9
Total	583.5	$31.6	$110.4	$439.2

Note: Estimates represent annual impacts associated with the 200-MW operating scenario. Direct operations assume 50 employees, $4.0 million in annual employee compensation, and approximately $290 million in annual operating output. The Industry 418 spending pattern was customized to allocate 40% of the modeled spending pattern to electricity and subsequently normalized. Indirect and induced impacts reflect economic activity occurring within the Columbus, GA-AL MSA.

The operational phase is estimated to support approximately 583 jobs annually throughout the Columbus regional economy. In addition to the 50 jobs directly employed by the data center, its purchases from regional suppliers are estimated to support approximately 450 indirect jobs, while employee and supply-chain household spending supports an additional 83 induced jobs.

Total annual economic output is estimated at approximately $439.2 million, including the assumed $290 million in direct data-center output and approximately $149.2 million generated through indirect and induced activity. The operation is also estimated to support approximately $31.6 million in annual labor income and $110.4 million in regional GDP, as measured by value added. Unlike the temporary construction impacts, these operational impacts represent recurring annual economic activity associated with continued facility operations.

The relatively large indirect impact reflects the substantial intermediate-input requirements of hyperscale data-center operations, particularly electricity. Because only the portion of supplier activity captured within the Columbus MSA contributes to the regional indirect impact, expenditures sourced outside the region represent economic leakage and are not counted as regional economic activity.

Operational Tax Impacts

Table 9: Estimated Annual Tax Impacts of the Operational Phase under the 200-MW Operating Scenario ($ Millions)

Impact	Local	State	Federal	Total
Direct	$1.9	$1.6	$2.8	$6.2
Indirect	$4.4	$3.3	$6.1	$13.7
Induced	$0.5	$0.4	$0.9	$1.7
Total	$6.7	$5.3	$9.8	$21.7

Note: Local taxes combine sub-county general, sub-county special district, and county tax revenues reported by IMPLAN. Estimates represent recurring annual tax impacts associated with direct, indirect, and induced economic activity under the 200-MW operating scenario. Property-tax components associated with the modeled economic activity are included within IMPLAN's estimated tax impacts but are not reported as a separate tax category. Totals may differ slightly due to rounding.

The operational phase is estimated to generate approximately $21.7 million in annual tax revenue, including approximately $9.8 million in federal taxes, $5.3 million in state taxes, and $6.7 million in combined local taxes. Approximately $6.2 million is associated with direct data-center operations, while the majority of the estimated tax impact is generated through supply-chain and household-spending effects. These fiscal impacts are recurring annual estimates and therefore differ fundamentally from the one-time impacts associated with construction and initial equipment purchases.

600-MW Full-Buildout Operating Scenario

Table 10. Estimated Annual Economic Impacts of the Operational Phase under the 600-MW Full-Buildout Scenario ($ Millions)

Impact	Employment	Labor Income	Value Added (GDP)	Output
Direct	90.0	$7.2	$126.0	$870.0
Indirect	1,357.9	$71.7	$177.4	$408.0
Induced	237.4	$10.9	$23.3	$39.8
Total	1,685.3	$89.8	$326.7	$1,317.9

Note: Estimates represent annual impacts associated with the 600-MW full-buildout operating scenario. Direct operations assume 90 employees, $7.2 million in annual employee compensation, and approximately $870 million in annual operating output. The Industry 418 spending pattern was customized to allocate 40% of the modeled spending pattern to electricity and subsequently normalized. Indirect and induced impacts reflect economic activity occurring within the Columbus, GA-AL MSA. Dollar values are reported in millions.

Under the potential 600-MW full-buildout scenario, the data center is estimated to support approximately 1,685 jobs annually throughout the Columbus regional economy. This includes 90 direct jobs, approximately 1,358 indirect jobs supported through purchases from regional suppliers, and approximately 237 induced jobs supported through employee and supply-chain household spending.

Total annual economic output is estimated at approximately $1.32 billion, including $870 million in direct data-center output and approximately $447.9 million generated through indirect and induced activity. The full-buildout operation is also estimated to support approximately $89.8 million in annual labor income and $326.7 million in regional GDP, as measured by value added. The substantial increase in indirect activity relative to the 200-MW scenario reflects the larger operating scale and associated intermediate-input requirements, particularly electricity. Direct employment, however, is not assumed to increase proportionally with capacity, reflecting the capital- and energy-intensive nature of hyperscale data-center operations.

Operational Tax Impacts

Table 11. Estimated Annual Tax Impacts of the Operational Phase under the 600-MW Full-Buildout Scenario ($ Millions)

Impact	Local	State	Federal	Total
Direct	$5.8	$4.7	$7.4	$17.8
Indirect	$13.2	$9.9	$18.3	$41.5
Induced	$1.3	$1.1	$2.6	$4.9
Total	$20.2	$15.7	$28.4	$64.2

Note: Local taxes combine sub-county general, sub-county special district, and county tax revenues reported by IMPLAN. Estimates represent recurring annual tax impacts associated with direct, indirect, and induced economic activity under the 600-MW full-buildout operating scenario. Property-tax components associated with the modeled economic activity are included within IMPLAN's estimated tax impacts but are not reported as a separate tax category. Totals may differ slightly due to rounding. Dollar values are reported in millions.

Under the 600-MW full-buildout scenario, the operational phase is estimated to generate approximately $64.2 million in annual tax revenue, including approximately $28.4 million in federal taxes, $15.7 million in state taxes, and $20.2 million in combined local taxes. Approximately $17.8 million is associated with direct data-center operations, while the remaining fiscal impact is generated through supply-chain and household-spending effects. As with the 200-MW scenario, these estimates represent recurring annual fiscal impacts associated with continued operations rather than one-time impacts associated with construction or initial equipment purchases.

Operational Labor Market Analysis

The labor market analysis is based on the estimated 90 direct employees associated with the potential 600-MW full-buildout scenario, providing an assessment of workforce availability at the data center's anticipated full operating capacity. To evaluate whether the regional labor market can supply the required workforce, the employment estimates were analyzed using the JobsEQ What-If model for Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services (NAICS 518210). These occupational requirements reflect the broader industry staffing pattern rather than a project-specific staffing plan; actual facility requirements may differ. Table 12 presents the occupations with the largest projected labor demand, together with measures of regional labor availability. Employment and unemployment represent workers currently employed or unemployed in the target occupation and residing in the Columbus MSA. Extended employment and extended unemployment represent workers employed or unemployed in related occupations with similar skill requirements who may reasonably transition into the target occupation.

Table 12. Occupational Labor Demand and Regional Labor Availability for the Operational Phase

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
15-1252	Software Developers	14	1,010	32	$122,400	$151,000	2,116	67	74
41-3091	Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	6	842	35	$75,900	$83,200	3,890	148	146
11-3021	Computer and Information Systems Managers	5	400	11	$167,000	$193,000	6,475	197	82
15-1232	Computer User Support Specialists	5	514	15	$58,400	$69,900	191	10	106
43-4051	Customer Service Representatives	5	2,207	100	$38,800	$47,900	16,262	1,044	461
11-9199	Managers, All Other	4	1,060	19	$125,600	$150,800	5,963	166	270
15-1299	Computer Occupations, All Other	3	391	13	$102,300	$123,900	4,726	161	135
15-1211	Computer Systems Analysts	3	296	7	$106,400	$117,500	4,993	154	101
11-1021	General and Operations Managers	3	2,341	43	$111,800	$137,500	11,263	263	795
13-1161	Market Research Analysts and Marketing Specialists	3	551	20	$79,000	$89,800	5,975	289	190

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
15-1241	Computer Network Architects	2	147	3	$126,100	$142,700	4,548	145	75
15-1231	Computer Network Support Specialists	2	111	3	$76,800	$85,500	671	23	57
15-2051	Data Scientists	2	172	8	$93,100	$128,500	4,076	134	90
11-2021	Marketing Managers	2	177	5	$162,700	$177,100	10,699	411	91
43-9061	Office Clerks, General	2	1,653	67	$39,500	$47,900	5,717	238	860
13-1082	Project Management Specialists	2	575	18	$101,700	$111,700	1,723	68	297
11-2022	Sales Managers	2	364	12	$150,600	$165,600	15,874	584	188
15-1253	Software Quality Assurance Analysts and Testers	2	125	8	$103,700	$114,600	1,515	42	67
13-2011	Accountants and Auditors	1	1,040	20	$86,500	$96,000	1,455	26	1,060
11-3012	Administrative Services Managers	1	265	3	$117,300	$131,000	14,981	404	267
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1	1,079	23	$44,900	$55,200	6,794	256	1,102
13-1199	Business Operations Specialists, All Other	1	1,480	54	$83,100	$94,800	2,937	65	1,535
11-1011	Chief Executives	1	127	1	$250,100	$286,300	8,329	192	128
15-1251	Computer Programmers	1	45	1	$89,900	$109,300	961	32	46
43-9021	Data Entry Keyers	1	110	6	$41,300	$44,800	5,860	311	116
15-1242	Database Administrators	1	47	1	$116,400	$113,200	1,912	63	48
15-1243	Database Architects	1	36	1	$131,300	$146,500	2,603	84	36

SOC	Title	New Employer Demand	Empl. (Place of Residence)	Unempl.	Regional Avg. Wage	National Avg. Wage	Empl. Extended	Unempl. Extended	Potential Candidates per Opening
13-2051	Financial and Investment Analysts	1	246	4	$97,800	$117,500	3,188	84	250
11-3031	Financial Managers	1	572	11	$159,200	$188,200	8,612	175	583
43-1011	First-Line Supervisors of Office and Administrative Support Workers	1	1,055	17	$62,700	$75,400	12,093	394	1,072
13-1071	Human Resources Specialists	1	653	23	$73,400	$83,300	1,761	40	676
15-1212	Information Security Analysts	1	141	3	$112,600	$134,100	5,539	154	144
23-1011	Lawyers	1	404	3	$132,600	$187,600	54	3	407
13-1111	Management Analysts	1	767	27	$92,700	$115,400	4,866	137	794
15-1244	Network and Computer Systems Administrators	1	225	5	$93,000	$106,900	1,010	38	230
43-9071	Office Machine Operators, Except Computer	1	21	0	$36,800	$44,400	2,207	182	21
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1	119	2	$105,400	$120,900	13,296	535	121
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1	1,403	40	$40,600	$50,700	6,002	260	1,443
13-1151	Training and Development Specialists	1	340	13	$62,800	$76,600	2,374	52	353
15-1255	Web and Digital Interface Designers	1	53	3	$100,500	$117,700	993	33	56
15-1254	Web Developers	1	32	3	$78,800	$104,300	1,335	40	35

Note: The color scale in the Potential Candidates per Opening column follows the JobsEQ What-If report. Red indicates relatively few potential candidates per opening (tighter labor market conditions), yellow indicates moderate labor availability, and green indicates relatively more potential candidates per opening (greater labor availability).

The labor market analysis indicates that the Columbus MSA is generally well positioned to support the workforce required for the operational phase of the proposed data center. The largest projected demand is for software developers (14 positions), followed by sales representatives, computer and information systems managers, and computer user support specialists. For most occupations, the number of potential candidates per opening is relatively high, suggesting that the regional labor market has sufficient capacity to meet the projected workforce demand. Although a few specialized occupations, such as network and computer systems administrators and software developers, may require targeted recruitment, the overall analysis suggests that staffing the facility is unlikely to create significant labor market constraints or substantial upward pressure on regional wages.

Economic and Fiscal Impacts of Equipment Purchases

Based on the available project information, approximately 75% of the total capital investment, or $3.9 billion, is allocated to machinery and equipment purchases. These expenditures are modeled separately from the construction and operational phases to estimate their economic and fiscal impacts on the regional economy. Because a detailed project-specific equipment schedule was unavailable, the expenditure was allocated across representative computing, storage, communications, cooling, and electrical equipment categories using industry benchmarks (CBRE, 2024; Turner & Townsend, 2025). Detailed allocation assumptions and the IMPLAN modeling methodology are provided in Appendix B.

Given the highly specialized nature of data center equipment, a substantial share of the manufacturing activity is expected to occur outside the Columbus MSA. Therefore, only the portion of the equipment investment that generates economic activity within the Columbus MSA is reflected in the regional impact estimates; expenditures occurring outside the region are treated as economic leakage. IMPLAN captures only the portion of production, distribution, transportation, wholesale activity, and related supply-chain effects attributable to the Columbus regional economy; expenditures that cannot be supplied within the region represent leakage from the regional economy. Detailed equipment allocations and modeling assumptions are provided in Appendix B.

The equipment purchase is treated as a one-time capital investment. Although certain data center equipment may be replaced on an approximately four-year cycle, replacement schedules vary substantially by equipment type. Therefore, future replacement expenditures are not modeled. Such expenditures could generate recurring regional economic impacts over the facility's operating life and could be evaluated through a separate life-cycle analysis.

Table 13. Estimated Economic Impact of Data Center Equipment Purchases on the Columbus MSA ($ Millions)

Impact	Employment	Labor Income	Value Added (GDP)	Output
Direct	12,702.0	$614.3	$817.1	$1,127.3
Indirect	1,394.0	$72.1	$120.1	$238.0
Induced	2,043.0	$93.6	$200.2	$342.9
Total	16,139.0	$780.0	$1,137.4	$1,708.4

Note: Employment represents jobs associated with the one-time equipment investment and should not be interpreted as permanent annual employment. Value added represents the contribution to regional GDP. Totals may differ slightly due to rounding.

The initial $3.9 billion equipment investment is estimated to generate approximately $1.71 billion in economic output and $1.14 billion in value added within the Columbus MSA, while supporting approximately 16,139 jobs and $780.0 million in labor income. The difference between the total equipment expenditure and the regional output impact reflects the specialized nature of data center equipment and the substantial share of purchases expected to be supplied from outside the region.

Direct effects account for the majority of the estimated impact, while indirect effects reflect activity generated through regional suppliers and induced effects capture additional economic activity resulting from household spending. These impacts are associated with the initial equipment investment and should not be interpreted as recurring annual impacts or permanent employment.

Table 14. Estimated Fiscal Impact of Data Center Equipment Purchases ($ Millions)

Impact	Local	State	Federal	Total
Direct	$80.6	$58.6	$122.3	$261.4
Indirect	$3.5	$3.8	$15.5	$22.8
Induced	$11.2	$9.1	$22.2	$42.4
Total	$95.2	$71.4	$160.0	$326.7

Note: Local taxes combine IMPLAN's sub-county general, sub-county special district, and county tax categories. Property-tax components associated with the modeled economic activity are included within IMPLAN's estimated tax impacts but are not reported as a separate tax category. Tax impacts reflect IMPLAN's modeled tax relationships and have not been adjusted for project-specific exemptions, abatements, or incentives. Totals may differ slightly due to rounding.

The equipment investment is estimated to generate approximately $326.7 million in total tax revenue, including $95.2 million in local taxes, $71.4 million in state taxes, and $160.0 million in federal taxes. Combined state and local tax impacts total approximately $166.7 million, highlighting the potential fiscal contribution of the initial equipment investment to Georgia and the Columbus regional economy.

Limitations

Because a detailed project equipment schedule and construction cost breakdown were unavailable, equipment expenditures were allocated across representative data-center equipment categories using industry benchmarks. The resulting allocation should therefore be interpreted as a reasonable scenario based on available information rather than an audited project procurement budget.

Certain electrical, cooling, or other infrastructure components may also be reflected in construction expenditures. Accordingly, some overlap between the construction and equipment-purchase estimates is possible, and the magnitude of any such overlap cannot be determined from the available project information. The analysis retains the estimated equipment allocation because the available project information does not permit individual components to be definitively assigned between construction contracts and owner-purchased equipment.

In addition, the geographic origin of individual equipment purchases is unknown. Rather than manually assuming that particular purchases are local or nonlocal, the analysis retains IMPLAN's default commodity margins and SAM-based regional purchasing relationships. Consequently, estimated regional impacts depend on IMPLAN's representation of the Columbus MSA's ability to supply each commodity and associated margin activity. Specialized equipment produced outside the region therefore generates substantial leakage from the local economy.

The operational analysis also relies on assumptions because detailed project-specific operating expenditures and revenue projections are not available. Annual operating output is estimated using a revenue-per-MW benchmark from comparable hyperscale data center operations rather than Project Ruby-specific revenue projections. In addition, the IMPLAN Industry 418 spending pattern was customized following IMPLAN guidance by allocating 40% of the modeled spending pattern to electricity and normalizing the remaining expenditure categories. Actual operating revenues and expenditure patterns may differ from these assumptions as the facility becomes operational.

Broader Community and Environmental Considerations

Business Ecosystem and Economic Development

A hyperscale data center of this magnitude may influence the regional economy beyond the direct, indirect, and induced effects captured by the IMPLAN model. The project could strengthen Columbus's ability to attract technology-related businesses, including AI and cloud-computing firms, while encouraging additional investment in fiber and telecommunications infrastructure. It may also create opportunities for electrical contractors, engineering firms, security providers, maintenance companies, and other specialized service providers. Over time, the presence of major digital infrastructure could contribute to the development of a broader technology and innovation ecosystem. These potential catalytic effects are not quantified in the present analysis and would require additional research to determine their magnitude.

Housing and Real Estate

The large temporary construction workforce could increase demand for hotels, apartments, rental housing, restaurants, and retail establishments, particularly if a portion of the workforce comes from outside the Columbus region. The project could also influence commercial and industrial development and property values in areas surrounding the facility and supporting infrastructure. The magnitude and geographic distribution of these effects would require a separate real-estate and housing analysis.

Environmental and Infrastructure Considerations

The project's substantial electricity requirements and potential water demand may have implications for regional utility infrastructure and environmental resources. Other considerations may include cooling technology, electricity generation sources, backup generation, emissions, and land use. The magnitude of these effects depends heavily on project-specific technologies and operating practices that are not currently available and would require a separate environmental assessment.

These considerations suggest that the regional implications of the data center Project may extend beyond the employment, labor income, output, GDP, and fiscal effects quantified in this report. Potential effects on the business ecosystem, housing and real estate, infrastructure, and environmental resources are outside the quantitative scope of the present analysis. These areas may warrant further analysis as additional project-specific information becomes available.

APPENDIX A

Methodology

This appendix describes the IMPLAN economic impact modeling framework used to estimate the regional economic impacts reported in this study. IMPLAN is an input–output modeling system that estimates how changes in economic activity affect employment, labor income, value added, output, and tax revenues within a regional economy. The model captures the interdependence among industries by tracing how expenditures circulate through business supply chains and household spending. The analysis uses IMPLAN 2024 data, with monetary values reported in 2026 dollars.

Input–Output and Social Accounting Matrix Framework

The IMPLAN model is based on an Input–Output (I–O) framework combined with a Social Accounting Matrix (SAM), which captures inter-industry relationships and household income flows within the regional economy. Direct expenditures, such as employee compensation and operational purchases—generate additional economic activity through supplier transactions and household spending.

- **Direct effects** represent the initial economic activity being analyzed.
- **Indirect effects** arise from business-to-business purchases throughout the regional supply chain.
- **Induced effects** result from household spending generated by labor income associated with the direct and indirect effects.

Multiplier Structure

IMPLAN produces several types of multipliers to describe how initial spending generates additional economic activity:
Type I multipliers capture direct and indirect effects resulting from inter-industry transactions

$$\textbf{\textit{Type I}} = \frac{Direct + Indirect}{Direct}$$

SAM (Type SAM) multipliers incorporate direct, indirect, and induced effects, accounting for household spending, taxes, savings, and leakages outside the region.

$$\textbf{\textit{SAM}} = \frac{Direct + Indirect + Induced}{Direct}$$

A multiplier greater than one indicates that each dollar of direct spending or each direct job supports additional economic activity elsewhere in the regional economy.

Because SAM multipliers capture both supply-chain and household spending effects, they provide the most comprehensive measure of total economic impact and are emphasized in this analysis.

Definitions of Impact Measures

- Output: The total value of production generated by economic activity, measured as gross sales or receipts, net of inventory changes.
- Value Added: The contribution to regional Gross Domestic Product (GDP), equal to output minus the cost of intermediate inputs.
- Employment: The total number of full-time, part-time, and seasonal jobs supported.
- Labor Income: The sum of wages, salaries, benefits, and proprietor income earned by workers.

Value added is the preferred indicator of long-term economic contribution because it reflects income and production retained within the region, net of spending that leaks outside the local economy. It measures the contribution to regional GDP and equals output less intermediate inputs.

Value Added Components

Value added consists of the following components:

- **Employee Compensation** (EC): Wages, salaries, and employer-paid benefits, including health insurance, retirement contributions, and payroll taxes.
- **Proprietor Income** (PI): Income earned by self-employed individuals and unincorporated business owners.
- **Other Property Income** (OPI): Corporate profits, depreciation, and other returns to capital.
- **Taxes on Production and Imports** (TOPI): Sales taxes, property taxes, excise taxes, and other production-related taxes net of subsidies.

Labor income is defined as the sum of employee compensation and proprietor income.

Appendix B

Machinery and Equipment Purchase Methodology

The proposed data center represents an estimated total capital investment of approximately $5.2 billion. Based on the available project information and industry benchmarks, approximately 75% of the total investment, or $3.9 billion, was allocated to machinery and equipment, with the remaining 25% treated as construction-related investment. The equipment purchase was modeled separately from the construction and operational phases to estimate the economic and fiscal activity associated with the initial capital-equipment acquisition.

The 75% equipment assumption is broadly consistent with industry evidence regarding the capital-intensive nature of data centers. CBRE reports that mechanical and electrical infrastructure can account for approximately 65% to 75% of overall data-center investment costs. Current Turner & Townsend benchmarking similarly demonstrates the importance of electrical and mechanical systems in data-center development; for U.S. facilities, these categories constitute the majority of benchmark construction costs. Turner & Townsend's 2025 cost methodology draws on more than 300 live or recent projects across more than 20 countries.

Allocation of Equipment Expenditures

A detailed project-specific equipment schedule was not available. Therefore, the $3.9 billion machinery and equipment expenditure was allocated across representative data-center equipment categories using industry cost benchmarks and the typical composition of modern data-center infrastructure. Industry sources identify servers and computing equipment, storage systems, communications equipment, electrical distribution systems, backup generation, switchgear and transformers, and cooling systems as major components of data-center capital infrastructure. Industry benchmarks also indicate that electrical systems are among the largest components of data-center development costs, while cooling and mechanical systems represent another substantial component.

Equipment Category	IMPLAN Code	Assumed Share	Expenditure
Electronic computers /servers	3287	55%	$2.145 billion
Computer storage devices	3288	8%	$312 million
Communications equipment	3292	7%	$273 million
Air conditioning, refrigeration, and warm-air heating equipment	3264	10%	$390 million
Power, distribution, and specialty transformers	3314	7%	$273 million
Switchgear and switchboard apparatus	3316	7%	$273 million
Motors and generators	3315	6%	$234 million
Total		100%	$3.900 billion

These allocations should be interpreted as analytical assumptions rather than a project-specific procurement schedule. Their purpose is to distribute the known aggregate machinery and equipment investment across representative commodities so that the regional economic effects can be estimated.

The relatively large allocation to electronic computers reflects the computing-intensive nature of the proposed facility, while the remaining expenditures represent storage, communications, cooling, and power-support infrastructure. Electrical infrastructure is particularly important for data centers; industry descriptions specifically identify generators, power distribution equipment, switchgear, transformers, and related systems as major electrical components. Cooling infrastructure likewise represents a significant capital requirement, particularly for high-density facilities.

Semiconductors were not modeled as a separate equipment purchase.

Semiconductor devices are embodied within servers, storage devices, communications equipment, and other electronic systems purchased by the facility. Adding a separate semiconductor expenditure would therefore risk counting components of the same purchased hardware twice. The analysis instead models the finished or near-finished equipment categories purchased by the data center.

IMPLAN Modeling Approach

Machinery and equipment expenditures were modeled using IMPLAN Commodity Output Events for the Columbus, GA–AL MSA. Expenditures were entered at purchaser prices, and IMPLAN's default commodity margins and Social Accounting Matrix (SAM)-based regional purchasing relationships were retained. No manual adjustments were made to IMPLAN's default margins or regional purchasing assumptions.

This treatment is particularly important for equipment purchases. The purchaser's expenditure on a commodity does not necessarily represent an equivalent amount of local manufacturing output. IMPLAN's commodity-margin structure distributes applicable purchaser expenditures among commodity producers and relevant wholesale, retail, and transportation activities. The SAM and regional trade relationships then determine the portion of demand that can be satisfied within the study region versus the portion that leaks outside the regional economy. IMPLAN's regional purchasing framework is specifically designed to estimate the proportion of local commodity demand purchased from local producers.

Accordingly, the $3.9 billion should not be interpreted as $3.9 billion of Columbus MSA output. A substantial portion of specialized data-center equipment is expected to be manufactured outside the region. Only economic activity captured by IMPLAN as occurring within the Columbus, GA–AL MSA contributes to the estimated regional impacts.

For commodities for which the IMPLAN model identifies no corresponding production within the Columbus MSA, no local production impact is generated. This occurred, for example, for the modeled transformer commodity. Such treatment was retained rather than substituting another commodity or reallocating the expenditure. Economically, this represents regional leakage: the equipment remains part of the project's capital investment, but its production occurs outside the study area.

This distinction is essential when interpreting the results. The resulting employment, labor income, value added, and output estimates represent economic activity attributable to the equipment purchases within the Columbus MSA, rather than the national economic activity associated with manufacturing all equipment purchased for the project.

Interpretation of Economic Impacts

IMPLAN reports impacts as direct, indirect, and induced effects. For the equipment-purchase analysis, direct effects represent regional economic activity associated with the commodities and margin sectors captured locally by the model. Indirect effects represent activity generated through purchases from regional suppliers, while induced effects represent activity supported by household spending associated with labor income generated through the direct and indirect effects.

Value added represents the contribution to regional gross domestic product (GDP) and includes labor income, other property income, and taxes on production and imports net of subsidies. Output is a broader measure representing the value of production or sales generated by the modeled economic activity. Because output includes the value of intermediate inputs, it should not be added to value added or interpreted as an additional measure of economic benefit. Value added is the measure most comparable to regional GDP.
Tax impacts were estimated using IMPLAN's fiscal accounts associated with the modeled economic activity. IMPLAN's tax estimates are derived from its Social Accounting Matrix and the economic activity generated by the analysis.

Treatment of Initial and Replacement Equipment

The initial equipment purchase is treated as a one-time capital investment. Although data-center equipment is expected to be replaced periodically, replacement expenditures are not included in the present analysis to avoid counting future investment during the initial investment period. A separate life-cycle analysis could evaluate the long-term economic impacts associated with future equipment replacement.

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