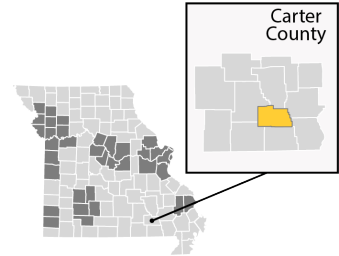


Carter County, Missouri

Broadband Expansion Economic Benefit Analysis

Carter County is in the southeastern Ozarks region of Missouri. It has an extremely low percentage of locations (15.6%) with fixed broadband service. Carter County’s 2022 population totaled 5,268, ranking it 107th in Missouri for population.



Two 10-year expansion scenarios estimate the benefits to Carter County if it increased broadband adoption by 10 (minimum) and 30 (maximum) percentage points. Exhibit C1 shows the number and percent of households assumed to have fixed broadband by year 10. Exhibit C2 shows the total benefit model inputs for each scenario.

Exhibit C1. 10-Year Fixed Broadband Household Adoption Scenarios

Characteristic	Base Value	Minimum Scenario	Maximum Scenario
Households without Fixed Broadband Service	1,625	1,432	1,047
Households with Fixed Broadband Service	300	493	878
Percent of Households with Fixed Broadband Service	15.6%	25.6%	45.6%

Source: FCC 2024 serviceable location data used as proxy for household base adoption levels.

Exhibit C2. 10-Year Economic Benefit Direct Model Inputs

Basic Assumptions	Minimum Scenario	Maximum Scenario
Percent of Households that Adopted Broadband by Year 10	25.6%	45.6%
Broadband Installation Investment to Serve Remaining Households	\$24,955,069	\$24,955,069
Telemedicine Benefits		
Patient Savings from Reduced Use of Emergency Departments	\$860,469	\$2,581,407
Patient Savings from Initial Health Consultation via Internet	\$346,286	\$1,038,858
Patient Transportation Savings due to Telemedicine	\$22,920	\$68,760
Missed Work Income Savings to Patient	\$21,701	\$65,104
Education Productivity Benefits		
K12 Teacher Productivity Savings	\$548,875	\$548,875
Income and Employment Benefits		
Household Income Increases	\$222,339	\$1,336,108
Farm Income Changes	\$34,343	\$103,028
Annual Average Direct Employment Increases by Year 10	45	90

Notes: See appendix section for additional methodology details. Dollar values represent 10-year benefit in nominal figures.

ECONOMIC BENEFITS OF EXPANDING BROADBAND IN MISSOURI

Carter County 10-Year Broadband Expansion Benefit Results

Benefits arise from both fixed broadband infrastructure construction and broadband adoption. Construction investment benefits start in year one and household adoption benefits begin in year two. The temporary construction activity, and associated jobs, conclude in year five. In each scenario, new jobs, labor income and GDP include the total impact of direct inputs (from Exhibit C2) and indirect purchases, such as new local spending in the county spurred by those inputs.

Minimum Scenario: 10 Percentage Point Gain in Fixed Broadband Adoption over 10 Years

In the minimum scenario, the annual average increase of 67 jobs is realized in year 10. On average, annual employment is 2.3% higher than 2022 county employment. Annually, this scenario adds 2.7% and 2.0% to county labor income and GDP, respectively, on average compared with 2022 levels.

Exhibit C3. Minimum Scenario – Total Economic Benefits by Year

Characteristic	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-Year Total*	Avg. Annual Change**
New Annual Average Employment	12	58	80	90	99	38	45	52	60	67	67	2.3%
New Labor Income <i>(in millions)</i>	\$0.6	\$2.6	\$3.6	\$3.9	\$4.3	\$1.3	\$1.5	\$1.7	\$2.0	\$2.2	\$23.7	2.7%
New GDP <i>(in millions)</i>	\$0.8	\$3.5	\$4.8	\$5.3	\$5.8	\$1.9	\$2.2	\$2.6	\$2.9	\$3.3	\$32.9	2.0%

Notes: All income and GDP figures in 2024 dollars. *Total employment is for year 10 as jobs are not cumulative, and other figures are cumulative totals. **Average annual change compared to 2022 county employment, income and GDP totals.

Maximum Scenario: 30 Percentage Point Gain in Fixed Broadband Adoption over 10 Years

In the maximum scenario, the annual average increase of 136 jobs is seen in year 10. On average, annual employment is 3.6% higher than 2022 county employment. This scenario adds an annual average of 4.0% and 3.1% to labor income and GDP, respectively, compared with 2022 levels.

Exhibit C4. Maximum Scenario – Total Economic Benefits by Year

Characteristic	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10-Year Total*	Avg. Annual Change**
New Annual Average Employment	12	66	95	113	130	76	91	106	121	136	136	3.6%
New Labor Income <i>(in millions)</i>	\$0.6	\$2.9	\$4.1	\$4.7	\$5.3	\$2.5	\$3.0	\$3.5	\$4.0	\$4.5	\$35.1	4.0%
New GDP <i>(in millions)</i>	\$0.8	\$3.9	\$5.5	\$6.4	\$7.3	\$3.7	\$4.4	\$5.1	\$5.9	\$6.6	\$49.5	3.1%

Notes: All income and GDP figures in 2024 dollars. *Total employment is for year 10 as jobs are not cumulative, and other figures are cumulative totals. **Average annual change compared to 2022 county employment, income and GDP totals.

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