

# Economic Impact of Baltimore Gas and Electric's Planned Investments & Activities – 2021 to 2023

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Prepared for:



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# Introduction

Baltimore Gas and Electric Company (BGE) serves electricity and natural gas customers across an economically and geographically diverse 2,300-square-mile area in Central Maryland. Residents of Baltimore City and all or part of ten Central Maryland counties receive utility service from BGE.

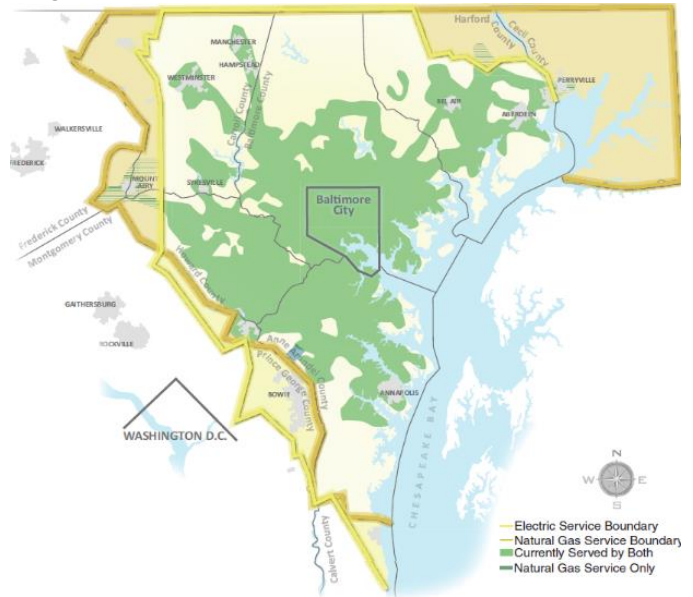
BGE engaged the Economic Alliance of Greater Baltimore (EAGB) to estimate the potential economic contributions of BGE’s planned investments and activities for the years 2021-2023, as part of its multi-year plan (MYP) initiative.

This economic impact study accounts for the potential direct economic contributions of BGE’s gas and electric distribution investments for the years 2021-2023, as well as the indirect and induced effects of those investments. The indirect effects include BGE’s expected spending on non-labor inputs, while the induced effects derive from increased economic activity from workers’ income (both BGE employees and those of BGE’s contractors/suppliers). The report finds evidence of significant economic impact from BGE’s proposed investments, with thousands of jobs created by each of the direct, indirect, and induced effects.

To analyze the potential impact of BGE’s proposed non-labor spending, labor spending, employment count, and revenue for 2021-2023, EAGB utilized the IMPLAN model to estimate the aggregate economic impacts within the following study areas:

- The State of Maryland
- BGE’s Service Area (the eleven jurisdictions where BGE provides electric and/or gas service)
- All other Maryland Jurisdictions with Direct BGE Impact (seven employee home counties)

Figure 1: BGE Service Area



Source: BGE, 2020

Figure 2: BGE 2021-2023 Estimated Data Inputs

BGE Background Data Summary <i>Estimates 2021-2023 for Gas &amp; Electric Distribution Services</i>			
Estimate	2021	2022	2023
Headcount Employment	2,990	2,990	2,990
Labor Spending	\$482,710,731	\$486,447,253	\$494,838,775
Non-Labor Spending	\$1,120,297,787	\$1,153,912,247	\$1,104,855,701
Revenue	\$1,807,607,253	\$1,843,759,398	\$1,880,634,586

Source: BGE, 2020. BGE’s 2021 to 2023 revenue figures were inflated from 2019 actual revenue, using the standard 2% per annum expected inflation rate.

This report summarizes the results of economic impact analyses for each of these geographies for each of the years 2021-2023. The discussions of economic impacts throughout this report are separated by activity and by geographic study area.

## Key Terms and Concepts

There are three key effects that together make up the aggregate economic impact of BGE activities, all of which are covered by this report. They include:

**Direct Effect:** Economic activities directly associated with BGE's gas and electric distribution business. These include directly employed workforce, wages paid, non-labor spending, and annual revenue. For the years 2021 through 2023, BGE's gas and electric distribution revenue figures were inflated from 2019 actual revenue, using the standard 2% per annum expected inflation rate.

**Indirect Effect:** Second-order economic activities of industries that respond to BGE demand generated by the direct economic activities. These industries supply goods and services to BGE. For BGE's gas and electric distribution operations, the indirect impact includes the company's capital investments and operations and maintenance expenditures. Examples of industries that experience indirect impact from BGE's gas and electric investments include natural gas, construction, engineering, and legal services.

**Induced Effect:** Refers to the economic activities generated by spending from workers supported by the direct and indirect effects of BGE activities. As full- and part-time workers employed by BGE or a BGE-supported industry use their income on typical household consumption, they create additional economic activity. Workers that use their income to purchase retail, housing, banking, and food services support the employment and wages of workers in those industries.

The sum of direct, indirect, and induced effects represents the total economic impact.

The direct, indirect, and induced effects can be measured in several different ways. The following economic factors are used in this report and, as distinct measures, should not be combined to estimate total economic impact:

**Employment:** the number of jobs supported

**Labor Income:** the dollars paid as wages and benefits to workers (for direct effects), as well as proprietor's income (for indirect and induced effects)

**Output:** the market value of goods produced or services provided, frequently reflected as total revenue or sales in businesses

**Tax Generation:** the state and local taxes and fees generated, including sales, property, income, and several other tax and fee categories

This analysis was conducted based on BGE's commuter shed, or where BGE employees reside, because the location of residence determines wage expenditures on local industries. As a result of this distinction, the induced impacts that the 271 BGE employees residing outside the state of Maryland have on their communities are not included in this report. Note that BGE generates additional induced impacts on the states of Pennsylvania, Delaware, and Virginia; states immediately bordering the commuter shed.

## Total Economic Impacts, 2021-2023

The nation's oldest regulated utility, BGE provides customers with reliable gas and electric utility service across the Central Maryland region. The company is one of the 25 largest private employers in the state. For the years 2021 through 2023, BGE's gas and electric distribution operations are expected to generate \$15.3 billion in total economic output, \$2.8 billion in labor income, and 26,702 jobs within the BGE Service Area (see Figure 3 below).

The approximately \$5.1 billion per year of total output that BGE's gas and electric distribution services have on the Service Area is remarkable. This number can be compared to the total *direct* output of the legal services industry at \$6.0 billion, the full-service restaurant industry at \$5.5 billion, or the nursing and community care industry at \$4.0 billion. Each year, BGE's gas and electric distribution networks support just over 1.3% of the Service Area's total economic output of \$385 billion.

### Summary Table: Service Area and State of Maryland

Figure 3: BGE Total Economic Impact, 2021-2023

Total Economic Impact of BGE Planned Investments & Activities, 2021-2023				
Study Area & Impact	Direct	Indirect	Induced	Total
<b>BGE Service Area</b>				
Employment*	8,039	9,576	9,087	<b>26,702</b>
Labor Income	\$1,312,015,038	\$928,653,602	\$520,338,022	<b>\$2,761,006,663</b>
Output	\$10,223,072,801	\$3,581,575,016	\$1,524,131,207	<b>\$15,328,779,024</b>
<b>Maryland</b>				
Employment*	8,157	9,651	9,151	<b>26,958</b>
Labor Income	\$1,331,247,293	\$933,895,612	\$523,018,517	<b>\$2,788,161,422</b>
Output	\$10,242,305,056	\$3,609,318,776	\$1,533,261,038	<b>\$15,384,884,869</b>

Source: IMPLAN 2021, 2022, and 2023 coefficients based on EAGB analysis of BGE Data.

\*Total three-year employment in labor years. Divide by three for average yearly employment impact.

Figure 4 details the projected economic impacts for each year: 2021, 2022, and 2023. BGE's total economic impact for distribution-related services is expected to be highest in 2022 due to strong labor and non-labor spending. In each year, BGE directly accounts for 2,719 jobs across the State of Maryland. However, BGE's economic impacts increase job counts across the State of Maryland by almost 9,000 each year, with over 3,000 jobs created through both indirect and induced means.

Figure 4: BGE Economic Impacts by Year, 2021-2023

Economic Impact of BGE Planned Investments & Activities, 2021				
Study Area & Impact	Direct	Indirect	Induced	Total
<b>BGE Service Area</b>				
Employment	2,680	3,204	3,045	<b>8,929</b>
Labor Income	\$432,599,140	\$312,691,246	\$174,365,512	<b>\$919,655,898</b>
Output	\$3,360,501,140	\$1,216,379,203	\$510,733,687	<b>\$5,087,614,029</b>
<b>Maryland</b>				
Employment	2,719	3,229	3,066	<b>9,015</b>
Labor Income	\$438,940,421	\$314,474,279	\$175,262,513	<b>\$928,677,213</b>
Output	\$3,366,842,421	\$1,225,850,905	\$513,788,742	<b>\$5,106,482,069</b>

Economic Impact of BGE Planned Investments & Activities, 2022				
Study Area & Impact	Direct	Indirect	Induced	Total
<b>BGE Service Area</b>				
Employment	2,680	3,295	3,057	<b>9,032</b>
Labor Income	\$435,947,762	\$317,618,694	\$175,066,581	<b>\$928,633,037</b>
Output	\$3,433,616,329	\$1,217,006,595	\$512,783,669	<b>\$5,163,406,594</b>
<b>Maryland</b>				
Employment	2,719	3,321	3,078	<b>9,118</b>
Labor Income	\$442,338,130	\$319,390,904	\$175,958,386	<b>\$937,687,420</b>
Output	\$3,440,006,697	\$1,226,369,484	\$515,821,096	<b>\$5,182,197,278</b>

Economic Impact of BGE Planned Investments & Activities, 2023				
Study Area & Impact	Direct	Indirect	Induced	Total
<b>BGE Service Area</b>				
Employment	2,680	3,077	2,985	<b>8,741</b>
Labor Income	\$443,468,136	\$298,343,661	\$170,905,929	<b>\$912,717,727</b>
Output	\$3,428,955,332	\$1,148,189,217	\$500,613,851	<b>\$5,077,758,401</b>
<b>Maryland</b>				
Employment	2,719	3,101	3,006	<b>8,825</b>
Labor Income	\$449,968,742	\$300,030,430	\$171,797,617	<b>\$921,796,789</b>
Output	\$3,435,455,938	\$1,157,098,386	\$503,651,199	<b>\$5,096,205,523</b>

Source: IMPLAN 2021, 2022, and 2023 coefficients based on EAGB analysis of BGE Data.

## Understanding the Process of Impact

The primary role and first responsibility of BGE is the distribution of electricity and natural gas to residents and businesses located in Central Maryland. In the years 2021 through 2023, these activities are expected to generate over \$5.5 billion in direct revenue, much of which will be distributed as salary and benefits totaling over \$1.3 billion to BGE's 2,719 Maryland-based gas and electric distribution employees. An additional \$3.4 billion will be paid out in the form of non-labor spending to BGE's network of suppliers across the state and around the world.

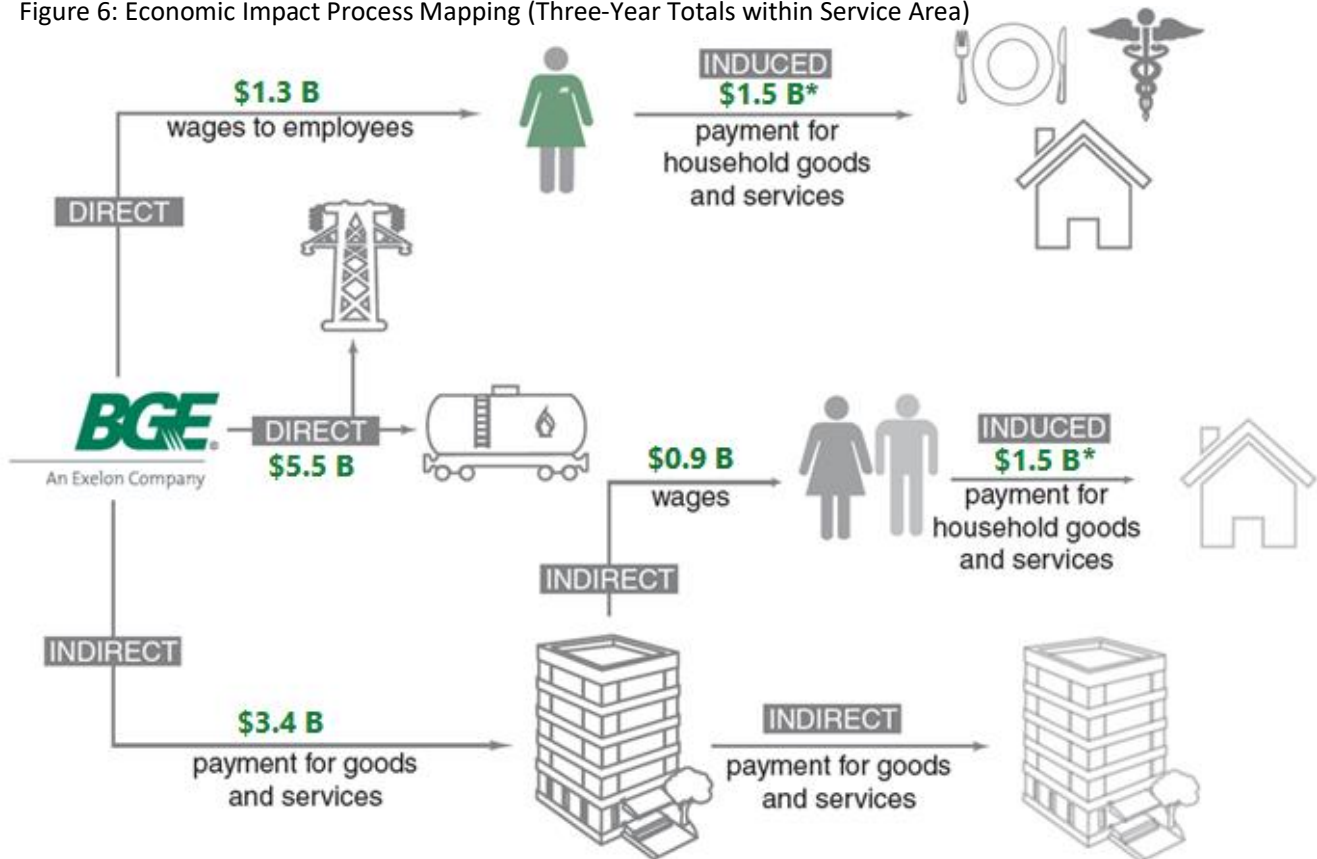
The economic activity created by BGE's demand for goods and services from local suppliers and BGE employees' demand for household goods generates economic activity throughout the regional economy. The expected 2021-2023 household spending increase related to BGE's distribution services totals over \$1.5 billion, derived from the \$1.3 billion in direct salaries and benefits and the nearly \$1 billion distributed by BGE's suppliers to their respective workforces.

Figure 5: Key Impact Indicators, 2021-2023

<b>BGE 2021-2023 Distribution Investments/Activities</b>	
<b>Total Service Area Economic Impacts</b>	
Employment:	26,702
Labor Income:	\$2.76 billion
Output:	\$15.33 billion
State & Local Taxes:	\$887.40 million

Source: IMPLAN, 2020

Figure 6: Economic Impact Process Mapping (Three-Year Totals within Service Area)



\*Induced impact is the total resulting from spending of both direct and indirect employees.

Source: BGE, 2020; IMPLAN, 2020

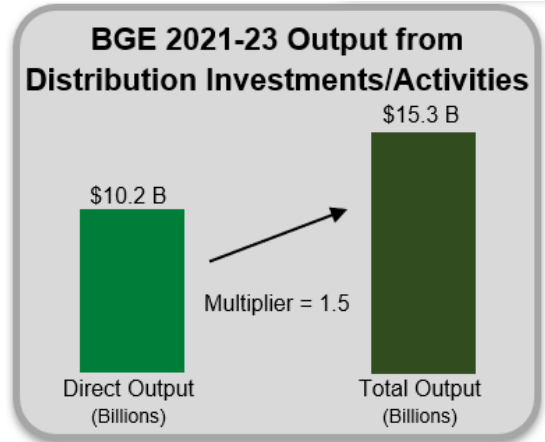


## BGE’s Economic Multiplier

For every direct job that BGE creates within its eleven-jurisdiction Service Area, there is a corresponding increase of 2.26 non-BGE jobs across the region. Furthermore, for every dollar of direct revenue for BGE’s gas and electric distribution network, indirect and induced effects lead to an additional \$0.50 of output for Maryland businesses.

BGE’s economic impacts were distributed through nearly every industry in the service area, with Professional, Scientific, and Technical Services, Food Service, Real Estate Services, and Hospitals seeing the largest employment benefit. Real Estate Services, Wholesale Trade Businesses, and Banking and Credit Intermediation saw the largest impact in output.

Figure 7: Projected Output Multiplier



Source: IMPLAN, 2020

## County-by-County Economic Impacts

As the effects of BGE’s general operations are followed through the State of Maryland, the company’s economic impacts grow. Analyzing the whole of the state allows the model to include employees that reside outside of the service area, increasing the net impacts of BGE general operation activities. Additionally, a portion of what is considered leakage – wages and spending that result from BGE outlays to firms located outside the study area – is captured.

Economic contributions to counties across the State of Maryland varied based on the level of BGE employment and activity within each county, as well as the size and structure of the local economy. BGE supported the greatest number of jobs and output in Baltimore County due to nearly 1,000 of its employees residing therein and significant planned non-labor spending. This is followed by Baltimore City, Anne Arundel County, Howard County, and Harford County, each of which see over \$1 billion in projected economic impact across the three-year span.

Among non-Service Area counties, Queen Anne’s County saw the largest economic impact from BGE’s planned 2021-2023 activities. While BGE reports no expected non-labor spending in its non-Service Area counties, Queen Anne’s and other counties see significant impact from wages of BGE employees residing in their jurisdiction. The economic impacts of BGE’s distribution network in Service Area and non-Service Area jurisdictions are detailed in figures 8 and 9, respectively.

Figure 8: Economic Impact in BGE Service Area, by County

Total Economic Impact of BGE Planned Investments & Activities, 2021-2023				
Study Area & Impact	Direct	Indirect	Induced	Total
<b>Anne Arundel County</b>				
Employment*	1,153	1,376	770	3,299
Labor Income	\$188,100,833	\$133,102,148	\$38,850,632	\$360,053,614
Output	\$1,883,657,239	\$577,834,341	\$120,583,440	\$2,582,075,020
<b>Baltimore County</b>				
Employment*	2,949	1,753	1,302	6,004
Labor Income	\$481,275,448	\$110,476,880	\$66,915,146	\$658,667,475
Output	\$2,875,889,182	\$297,796,518	\$202,868,845	\$3,376,554,545
<b>Baltimore City</b>				
Employment*	1,147	2,183	534	3,864
Labor Income	\$187,162,674	\$192,015,252	\$32,232,652	\$411,410,578
Output	\$2,453,543,869	\$626,249,291	\$91,520,666	\$3,171,313,826
<b>Calvert County</b>				
Employment*	20	18	14	52
Labor Income	\$3,283,556	\$2,802,459	\$534,358	\$6,620,372
Output	\$40,691,175	\$13,783,573	\$2,003,617	\$56,478,365
<b>Carroll County</b>				
Employment*	673	139	294	1,106
Labor Income	\$109,764,576	\$7,269,260	\$11,610,715	\$128,644,551
Output	\$451,726,026	\$19,864,260	\$39,800,106	\$511,390,392
<b>Cecil County</b>				
Employment*	72	5	25	103
Labor Income	\$11,726,985	\$195,600	\$970,445	\$12,893,029
Output	\$15,306,717	\$579,137	\$3,462,299	\$19,348,152
<b>Frederick County</b>				
Employment*	66	23	34	123
Labor Income	\$10,788,826	\$1,290,439	\$1,440,146	\$13,519,411
Output	\$24,677,042	\$3,848,043	\$4,753,851	\$33,278,937
<b>Harford County</b>				
Employment*	1,411	760	763	2,934
Labor Income	\$230,317,978	\$47,833,236	\$32,184,996	\$310,336,210
Output	\$945,946,997	\$215,917,963	\$109,304,790	\$1,271,169,750
<b>Howard County</b>				
Employment*	414	850	232	1,495
Labor Income	\$67,547,431	\$68,721,355	\$12,665,321	\$148,934,107
Output	\$1,029,593,244	\$334,273,403	\$39,399,725	\$1,403,266,372
<b>Montgomery County</b>				
Employment*	66	35	43	144
Labor Income	\$10,788,826	\$8,642,939	\$2,780,323	\$22,212,088
Output	\$82,646,185	\$27,432,635	\$7,519,763	\$117,598,583
<b>Prince George's County</b>				
Employment*	69	286	61	416
Labor Income	\$11,257,905	\$23,917,620	\$2,584,086	\$37,759,611
Output	\$443,798,113	\$165,670,414	\$8,941,899	\$618,410,427

Source: IMPLAN, 2020

\*Total three-year employment in labor years. Divide by three for average yearly employment impact.

Figure 9: Economic Impact in BGE Employee Home Counties (Non-Service Area)

Total Economic Impact of BGE Planned Investments & Activities, 2021-2023				
Study Area & Impact	Direct	Indirect	Induced	Total
<b>Caroline County</b>				
Employment*	9	-	2	11
Labor Income	\$1,407,238	-	\$78,486	\$1,485,724
Output	\$1,407,238	-	\$319,362	\$1,726,601
<b>Charles County</b>				
Employment*	3	-	1	4
Labor Income	\$469,079	-	\$37,250	\$506,329
Output	\$469,079	-	\$143,460	\$612,539
<b>Queen Anne's County</b>				
Employment*	80	-	26	106
Labor Income	\$13,134,223	-	\$958,395	\$14,092,618
Output	\$13,134,223	-	\$3,462,045	\$16,596,267
<b>St. Mary's County</b>				
Employment*	6	-	2	8
Labor Income	\$938,159	-	\$85,688	\$1,023,847
Output	\$938,159	-	\$308,732	\$1,246,891
<b>Talbot County</b>				
Employment*	11	-	5	17
Labor Income	\$1,876,318	-	\$236,096	\$2,112,414
Output	\$1,876,318	-	\$740,802	\$2,617,119
<b>Washington County</b>				
Employment*	3	-	1	4
Labor Income	\$469,079	-	\$52,368	\$521,447
Output	\$469,079	-	\$165,020	\$634,100
<b>Worcester County</b>				
Employment*	6	-	2	8
Labor Income	\$938,159	-	\$94,247	\$1,032,405
Output	\$938,159	-	\$317,371	\$1,255,530

Source: IMPLAN, 2020

\*Total three-year employment in labor years. Divide by three for average yearly employment impact.

## Conclusion

The Economic Alliance of Greater Baltimore (EAGB) analyzed the economic impact of BGE's planned distribution investments and activities in the gas and electric distribution sector for the years 2021 through 2023. EAGB determined that BGE's economic impact will exceed \$15.3 billion in output and create nearly 27,000 jobs across the three-year period, directly affecting eighteen jurisdictions in the State of Maryland. These investments will spur the creation of 2.31 non-BGE jobs for every BGE job created, and have a total economic multiplier of at least 1.5 times the initial output across the State of Maryland. BGE's planned investments and business activities will infuse billions of dollars and thousands of jobs into the Maryland economy. All the while, BGE will continue to provide the critical gas and electric distribution services which power the Central Maryland economy and positively impact many other industries.

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