Refined Economic Impact Analysis for the Greenhouse Gas Emissions Reduction Act 2012 Plan – Appendices A through B

Prepared for
Maryland Department of the Environment

June 15, 2013

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Table of Contents

Table of Figures

Appendix A—Detailed Impacts

A.1 Energy

Figure 1: Regional Greenhouse Gas Initiative—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	6.1	1.9	8.0
2011	6.3	2.2	8.6
2012	6.4	2.3	8.7
2013	6.1	2.2	8.3
2014	6.4	2.0	8.4
2015	5.9	1.9	7.8
2016	6.1	1.7	7.8
2017	6.4	2.2	8.6
2018	6.6	2.3	8.9
2019	5.9	1.8	7.7
2020	6.2	1.9	8.0
Average	***6.2***	***2.0***	***8.3***

Source: RESI

Figure 2: Regional Greenhouse Gas Initiative—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$483,305	$157,564	$640,869
2011	$506,319	$165,067	$671,387
2012	$506,319	$165,067	$671,387
2013	$483,305	$157,564	$640,869
2014	$529,334	$172,570	$701,904
2015	$460,290	$150,061	$610,352
2016	$506,319	$165,067	$671,387
2017	$506,319	$165,067	$671,387
2018	$552,348	$180,073	$732,422
2019	$552,348	$180,073	$732,422
2020	$552,348	$180,073	$732,422
Average	***$512,596***	***$167,114***	***$679,710***

Source: RESI

Figure 3: Regional Greenhouse Gas Initiative—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$241,652	$78,782	$320,435
2011	$241,652	$78,782	$320,435
2012	$264,667	$86,285	$350,952
2013	$276,174	$90,037	$366,211
2014	$276,174	$90,037	$366,211
2015	$299,189	$97,540	$396,729
2016	$310,696	$101,291	$411,987
2017	$345,218	$112,546	$457,764
2018	$379,740	$123,801	$503,540
2019	$333,710	$108,794	$442,505
2020	$356,725	$116,297	$473,022
Average	***$302,327***	***$98,563***	***$400,890***

Source: RESI

Figure 4: Regional Greenhouse Initiative—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	228.6	69.8	298.4
2011	211.5	54.7	266.1
2012	192.7	37.7	230.4
2013	174.8	21.8	196.7
2014	158.9	8.9	167.8
2015	145.1	-2.0	143.0
2016	133.6	-10.5	123.1
2017	125.2	-16.9	108.3
2018	118.2	-21.5	96.7
2019	114.4	-24.3	90.1
2020	113.1	-25.4	87.7
Average	***156.0***	***8.4***	***164.4***

Source: RESI

Figure 5: Regional Greenhouse Initiative—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$19,808,280	$1,065,743	$20,874,023
2011	$16,333,143	$878,771	$17,211,914
2012	$12,973,844	$698,031	$13,671,875
2013	$9,904,140	$532,872	$10,437,012
2014	$7,558,423	$406,665	$7,965,088
2015	$5,502,300	$296,040	$5,798,340
2016	$3,938,488	$211,902	$4,150,391
2017	$2,780,109	$149,578	$2,929,688
2018	$1,853,406	$99,719	$1,953,125
2019	$1,332,136	$71,673	$1,403,809
2020	$1,042,541	$56,092	$1,098,633
Average	***$7,547,892***	***$406,099***	***$7,953,991***

Source: RESI

Figure 6: Regional Greenhouse Initiative—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$10,686,046	$574,941	$11,260,986
2011	$10,671,566	$574,161	$11,245,728
2012	$10,454,370	$562,476	$11,016,846
2013	$10,063,417	$541,441	$10,604,858
2014	$9,802,782	$527,418	$10,330,200
2015	$9,585,586	$515,733	$10,101,318
2016	$9,310,471	$500,931	$9,811,401
2017	$9,223,592	$496,256	$9,719,849
2018	$9,165,673	$493,140	$9,658,813
2019	$9,194,633	$494,698	$9,689,331
2020	$9,368,390	$504,047	$9,872,437
Average	***$9,775,139***	***$525,931***	***$10,301,070***

Source: RESI

Figure 7: GHG Reductions from Imported Power—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.1	0.0	0.1
2013	-0.2	-0.3	-0.5
2014	0.1	0.1	0.1
2015	-0.2	-0.1	-0.3
2016	0.0	0.0	0.0
2017	0.0	-0.1	0.0
2018	0.0	-0.1	-0.1
2019	-0.2	-0.3	-0.5
2020	-0.5	-0.5	-1.0
Average	***-0.1***	***-0.1***	***-0.2***

Source: RESI

Figure 8: GHG Reductions from Imported Power—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	-$11,813	-$18,704	-$30,518
2014	$23,627	$37,409	$61,035
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	-$23,627	-$37,409	-$61,035
2019	$0	$0	$0
2020	-$23,627	-$37,409	-$61,035
Average	***-$3,222***	***-$5,101***	***-$8,323***

Source: RESI

Figure 9: GHG Reductions from Imported Power—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$5,907	-$9,352	-$15,259
2012	$0	$0	$0
2013	$0	$0	$0
2014	$5,907	$9,352	$15,259
2015	$5,907	$9,352	$15,259
2016	$0	$0	$0
2017	$11,813	$18,704	$30,518
2018	$0	$0	$0
2019	$0	$0	$0
2020	-$5,907	-$9,352	-$15,259
Average	***$1,074***	***$1,700***	***$2,774***

Source: RESI

Figure 10: GHG Reductions from Imported Power—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	2.1	1.7	3.8
2011	3.7	3.2	6.9
2012	4.9	4.3	9.1
2013	5.9	5.4	11.3
2014	6.7	5.6	12.3
2015	6.5	5.7	12.2
2016	7.2	6.3	13.5
2017	8.1	6.9	15.0
2018	8.3	7.3	15.6
2019	8.2	7.1	15.3
2020	7.4	6.3	13.7
Average	***6.3***	***5.4***	***11.7***

Source: RESI

Figure 11: GHG Reductions from Imported Power—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$245,803	$211,961	$457,764
2011	$393,285	$339,137	$732,422
2012	$507,993	$438,052	$946,045
2013	$622,701	$536,967	$1,159,668
2014	$737,409	$635,882	$1,373,291
2015	$721,023	$621,751	$1,342,773
2016	$786,570	$678,274	$1,464,844
2017	$884,891	$763,058	$1,647,949
2018	$884,891	$763,058	$1,647,949
2019	$950,439	$819,581	$1,770,020
2020	$884,891	$763,058	$1,647,949
Average	***$692,718***	***$597,343***	***$1,290,061***

Source: RESI

Figure 12: GHG Reductions from Imported Power—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$57,354	$49,457	$106,812
2011	$98,321	$84,784	$183,105
2012	$147,482	$127,176	$274,658
2013	$188,449	$162,503	$350,952
2014	$213,029	$183,699	$396,729
2015	$229,416	$197,830	$427,246
2016	$262,190	$226,091	$488,281
2017	$294,964	$254,353	$549,316
2018	$327,738	$282,614	$610,352
2019	$335,931	$289,679	$625,610
2020	$319,544	$275,549	$595,093
Average	***$224,947***	***$193,976***	***$418,923***

Source: RESI

Figure 13: Federal New Source Performance Standard—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	12.9	5.2	18.2
2014	13.1	4.8	17.9
2015	12.5	4.7	17.2
2016	12.3	4.5	16.8
2017	12.1	4.3	16.4
2018	11.8	4.1	15.9
2019	11.5	4.1	15.6
2020	11.0	3.4	14.4
Average	***8.8***	***3.2***	***12.0***

Source: RESI

Figure 14: Federal New Source Performance Standard—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$1,031,574	$372,234	$1,403,809
2014	$1,054,000	$380,326	$1,434,326
2015	$1,031,574	$372,234	$1,403,809
2016	$986,723	$356,050	$1,342,773
2017	$986,723	$356,050	$1,342,773
2018	$986,723	$356,050	$1,342,773
2019	$986,723	$356,050	$1,342,773
2020	$941,872	$339,866	$1,281,738
Average	***$727,810***	***$262,624***	***$990,434***

Source: RESI

Figure 15: Federal New Source Performance Standard—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$515,787	$186,117	$701,904
2014	$538,213	$194,209	$732,422
2015	$594,277	$214,439	$808,716
2016	$627,915	$226,577	$854,492
2017	$650,340	$234,669	$885,010
2018	$683,979	$246,807	$930,786
2019	$706,404	$254,900	$961,304
2020	$661,553	$238,715	$900,269
Average	***$452,588***	***$163,312***	***$615,900***

Source: RESI

Figure 16: Federal New Source Performance Standard—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	4.0	3.4	7.4
2012	6.3	5.5	11.9
2013	8.5	7.7	16.2
2014	10.1	8.6	18.8
2015	11.0	9.6	20.6
2016	12.5	10.9	23.4
2017	13.3	11.4	24.7
2018	14.1	12.2	26.3
2019	14.1	12.2	26.3
2020	13.9	12.0	25.9
Average	***9.8***	***8.5***	***18.3***

Source: RESI

Figure 17: Federal New Source Performance Standard—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$441,510	$382,465	$823,975
2012	$703,145	$609,111	$1,312,256
2013	$932,076	$807,426	$1,739,502
2014	$1,111,950	$963,245	$2,075,195
2015	$1,210,064	$1,048,237	$2,258,301
2016	$1,373,586	$1,189,891	$2,563,477
2017	$1,471,699	$1,274,883	$2,746,582
2018	$1,537,108	$1,331,544	$2,868,652
2019	$1,569,812	$1,359,875	$2,929,688
2020	$1,569,812	$1,359,875	$2,929,688
Average	***$1,083,706***	***$938,777***	***$2,022,483***

Source: RESI

Figure 18: Federal New Source Performance Standard—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$98,113	$84,992	$183,105
2012	$188,050	$162,902	$350,952
2013	$261,635	$226,646	$488,281
2014	$310,692	$269,142	$579,834
2015	$367,925	$318,721	$686,646
2016	$425,158	$368,299	$793,457
2017	$490,566	$424,961	$915,527
2018	$539,623	$467,457	$1,007,080
2019	$547,799	$474,540	$1,022,339
2020	$555,975	$481,622	$1,037,598
Average	***$344,140***	***$298,117***	***$642,256***

Source: RESI

Figure 19: MACT—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	1.0	0.4	1.5
2013	0.8	0.4	1.3
2014	0.8	0.2	1.0
2015	0.8	0.3	1.0
2016	1.0	0.5	1.5
2017	0.8	0.2	1.0
2018	1.0	0.5	1.5
2019	0.5	0.1	0.6
2020	0.5	0.0	0.5
Average	***0.7***	***0.2***	***0.9***

Source: RESI

Figure 20: MACT—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$88,984	$33,086	$122,070
2013	$66,738	$24,815	$91,553
2014	$88,984	$33,086	$122,070
2015	$44,492	$16,543	$61,035
2016	$88,984	$33,086	$122,070
2017	$88,984	$33,086	$122,070
2018	$44,492	$16,543	$61,035
2019	$88,984	$33,086	$122,070
2020	$44,492	$16,543	$61,035
Average	***$58,649***	***$21,807***	***$80,455***

Source: RESI

Figure 21: MACT—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$44,492	$16,543	$61,035
2013	$33,369	$12,407	$45,776
2014	$33,369	$12,407	$45,776
2015	$33,369	$12,407	$45,776
2016	$55,615	$20,679	$76,294
2017	$44,492	$16,543	$61,035
2018	$44,492	$16,543	$61,035
2019	$44,492	$16,543	$61,035
2020	$33,369	$12,407	$45,776
Average	***$33,369***	***$12,407***	***$45,776***

Source: RESI

Figure 22: MACT—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	196.4	60.4	256.7
2013	180.3	46.7	227.0
2014	163.8	32.9	196.7
2015	148.0	20.1	168.1
2016	134.2	9.1	143.3
2017	123.2	0.2	123.4
2018	113.4	-7.1	106.3
2019	107.1	-12.5	94.6
2020	103.9	-15.4	88.6
Average	***115.5***	***12.2***	***127.7***

Source: RESI

Figure 23: MACT—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$16,420,106	$1,737,853	$18,157,959
2013	$13,384,456	$1,416,570	$14,801,025
2014	$10,817,952	$1,144,939	$11,962,891
2015	$8,444,626	$893,753	$9,338,379
2016	$6,402,461	$677,617	$7,080,078
2017	$4,912,233	$519,896	$5,432,129
2018	$3,532,392	$373,858	$3,906,250
2019	$2,649,294	$280,393	$2,929,688
2020	$2,042,164	$216,136	$2,258,301
Average	***$6,236,880***	***$660,092***	***$6,896,973***

Source: RESI

Figure 24: MACT—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$9,231,135	$976,995	$10,208,130
2013	$9,203,538	$974,074	$10,177,612
2014	$9,079,353	$960,931	$10,040,283
2015	$8,886,175	$940,485	$9,826,660
2016	$8,624,005	$912,738	$9,536,743
2017	$8,417,029	$890,832	$9,307,861
2018	$8,223,851	$870,387	$9,094,238
2019	$8,085,867	$855,783	$8,941,650
2020	$8,085,867	$855,783	$8,941,650
Average	***$7,076,075***	***$748,910***	***$7,824,984***

Source: RESI

Figure 25: Energy Efficiency in the Residential Sector—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	3,483.3	3,035.6	6,518.9
2011	1,854.8	1,657.3	3,512.2
2012	2,071.4	1,916.0	3,987.3
2013	1,889.8	1,752.0	3,641.8
2014	1,799.8	1,667.1	3,466.9
2015	1,561.6	1,445.4	3,007.0
2016	190.3	173.2	363.5
2017	32.2	27.8	60.0
2018	-38.7	-36.5	-75.2
2019	-52.4	-48.3	-100.7
2020	-37.6	-34.1	-71.7
Average	***1,159.5***	***1,050.5***	***2,210.0***

Source: RESI

Figure 26: Energy Efficiency in the Residential Sector—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$220,251,963	$199,547,842	$419,799,805
2011	$116,098,210	$105,184,749	$221,282,959
2012	$129,515,711	$117,340,978	$246,856,689
2013	$115,810,006	$104,923,636	$220,733,643
2014	$108,829,063	$98,598,915	$207,427,979
2015	$92,161,260	$83,497,919	$175,659,180
2016	$2,177,542	$1,972,849	$4,150,391
2017	-$8,421,964	-$7,630,282	-$16,052,246
2018	-$13,033,229	-$11,808,080	-$24,841,309
2019	-$13,609,637	-$12,330,304	-$25,939,941
2020	-$12,232,662	-$11,082,768	-$23,315,430
Average	***$67,049,660***	***$60,746,859***	***$127,796,520***

Source: RESI

Figure 27: Energy Efficiency in the Residential Sector—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$79,624,383	$72,139,533	$151,763,916
2011	$47,265,469	$42,822,421	$90,087,891
2012	$54,182,367	$49,089,117	$103,271,484
2013	$51,892,746	$47,014,725	$98,907,471
2014	$52,084,882	$47,188,800	$99,273,682
2015	$47,889,911	$43,388,165	$91,278,076
2016	$10,879,704	$9,856,990	$20,736,694
2017	$3,882,749	$3,517,763	$7,400,513
2018	-$424,300	-$384,415	-$808,716
2019	-$2,569,820	-$2,328,252	-$4,898,071
2020	-$3,258,307	-$2,952,020	-$6,210,327
Average	***$31,040,889***	***$28,122,984***	***$59,163,874***

Source: RESI

Figure 28: Energy Efficiency in the Residential Sector—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	66.3	67.9	134.2
2011	55.8	57.9	113.7
2012	48.3	50.6	98.9
2013	42.7	45.4	88.1
2014	40.3	42.8	83.1
2015	38.6	41.2	79.8
2016	37.4	40.1	77.5
2017	37.5	39.7	77.2
2018	36.7	39.0	75.7
2019	35.8	38.2	74.1
2020	37.3	39.3	76.6
Average	***43.3***	***45.6***	***89.0***

Source: RESI

Figure 29: Energy Efficiency in the Residential Sector—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$1,203,874	-$1,268,050	-$2,471,924
2011	-$1,768,654	-$1,862,938	-$3,631,592
2012	-$2,169,945	-$2,285,621	-$4,455,566
2013	-$2,452,335	-$2,583,065	-$5,035,400
2014	-$2,556,374	-$2,692,650	-$5,249,023
2015	-$2,615,824	-$2,755,270	-$5,371,094
2016	-$2,645,549	-$2,786,580	-$5,432,129
2017	-$2,645,549	-$2,786,580	-$5,432,129
2018	-$2,675,275	-$2,817,889	-$5,493,164
2019	-$2,645,549	-$2,786,580	-$5,432,129
2020	-$2,586,099	-$2,723,960	-$5,310,059
Average	***-$2,360,457***	***-$2,486,289***	***-$4,846,746***

Source: RESI

Figure 30: Energy Efficiency in the Residential Sector—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$601,937	$634,025	$1,235,962
2011	$468,173	$493,131	$961,304
2012	$364,135	$383,546	$747,681
2013	$274,959	$289,616	$564,575
2014	$222,940	$234,824	$457,764
2015	$215,508	$226,997	$442,505
2016	$185,783	$195,687	$381,470
2017	$215,508	$226,997	$442,505
2018	$193,214	$203,514	$396,729
2019	$200,646	$211,342	$411,987
2020	$260,096	$273,961	$534,058
Average	***$291,173***	***$306,695***	***$597,867***

Source: RESI

Figure 31: Energy Efficiency in the Commercial and Industrial Sectors—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	2,362.8	892.4	3,255.3
2011	1,666.3	652.0	2,318.3
2012	2,099.2	817.0	2,916.2
2013	2,107.1	822.5	2,929.6
2014	2,248.7	879.1	3,127.8
2015	2,277.2	896.2	3,173.4
2016	4,058.1	1,608.0	5,666.1
2017	4,097.4	1,658.4	5,755.8
2018	4,107.6	1,681.7	5,789.3
2019	4,106.2	1,682.4	5,788.6
2020	4,117.3	1,690.3	5,807.6
Average	***3,022.5***	***1,207.3***	***4,229.8***

Source: RESI

Figure 32: Energy Efficiency in the Commercial and Industrial Sectors—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$178,819,309	$71,424,832	$250,244,141
2011	$125,675,082	$50,197,720	$175,872,803
2012	$158,255,088	$63,210,976	$221,466,064
2013	$157,557,257	$62,932,245	$220,489,502
2014	$169,267,741	$67,609,701	$236,877,441
2015	$172,102,681	$68,742,045	$240,844,727
2016	$316,161,261	$126,282,587	$442,443,848
2017	$320,784,394	$128,129,180	$448,913,574
2018	$324,229,937	$129,505,415	$453,735,352
2019	$324,229,937	$129,505,415	$453,735,352
2020	$325,494,756	$130,010,615	$455,505,371
Average	***$233,870,677***	***$93,413,703***	***$327,284,379***

Source: RESI

Figure 33: Energy Efficiency in the Commercial and Industrial Sectors—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$82,256,882	$32,855,423	$115,112,305
2011	$61,921,637	$24,733,026	$86,654,663
2012	$79,901,701	$31,914,705	$111,816,406
2013	$82,344,111	$32,890,264	$115,234,375
2014	$91,110,619	$36,391,823	$127,502,441
2015	$95,515,680	$38,151,313	$133,666,992
2016	$175,013,947	$69,904,877	$244,918,823
2017	$185,176,117	$73,963,898	$259,140,015
2018	$193,833,589	$77,421,905	$271,255,493
2019	$198,663,891	$79,351,246	$278,015,137
2020	$203,156,181	$81,145,577	$284,301,758
Average	***$131,717,668***	***$52,611,278***	***$184,328,946***

Source: RESI

Figure 34: Energy Efficiency in the Commercial and Industrial Sectors—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	164.4	146.7	311.1
2011	399.4	356.4	755.8
2012	703.3	627.4	1,330.7
2013	1,080.7	963.3	2,043.9
2014	1,547.3	1,371.6	2,918.9
2015	2,069.8	1,825.0	3,894.8
2016	2,346.7	2,052.1	4,398.8
2017	2,533.1	2,197.0	4,730.0
2018	2,639.2	2,268.3	4,907.5
2019	2,663.4	2,270.1	4,933.5
2020	2,645.3	2,234.7	4,880.0
Average	***1,708.4***	***1,483.0***	***3,191.4***

Source: RESI

Figure 35: Energy Efficiency in the Commercial and Industrial Sectors—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$12,856,996	$11,160,338	$24,017,334
2011	$32,575,413	$28,276,638	$60,852,051
2012	$59,514,658	$51,660,879	$111,175,537
2013	$94,965,333	$82,433,349	$177,398,682
2014	$141,328,934	$122,678,634	$264,007,568
2015	$195,811,883	$169,971,808	$365,783,691
2016	$233,680,392	$202,843,046	$436,523,438
2017	$264,524,113	$229,616,512	$494,140,625
2018	$290,172,757	$251,880,465	$542,053,223
2019	$308,143,145	$267,479,413	$575,622,559
2020	$322,094,701	$279,589,869	$601,684,570
Average	***$177,788,030***	***$154,326,450***	***$332,114,480***

Source: RESI

Figure 36: Energy Efficiency in the Commercial and Industrial Sectors—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$3,201,996	$2,779,449	$5,981,445
2011	$8,168,358	$7,090,431	$15,258,789
2012	$15,054,284	$13,067,664	$28,121,948
2013	$23,908,785	$20,753,691	$44,662,476
2014	$35,989,786	$31,240,438	$67,230,225
2015	$50,529,464	$43,861,405	$94,390,869
2016	$60,388,672	$52,419,555	$112,808,228
2017	$68,181,286	$59,183,826	$127,365,112
2018	$74,234,039	$64,437,836	$138,671,875
2019	$76,913,261	$66,763,497	$143,676,758
2020	$77,958,811	$67,671,072	$145,629,883
Average	***$44,957,158***	***$39,024,442***	***$83,981,601***

Source: RESI

Figure 37: Energy Efficiency – Appliances and Other Products—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	-13.2	-12.2	-25.4
2012	-31.6	-29.3	-60.9
2013	-49.1	-45.4	-94.6
2014	-64.7	-60.2	-124.9
2015	-82.1	-76.2	-158.3
2016	-96.3	-89.2	-185.5
2017	-95.2	-88.3	-183.4
2018	-86.0	-79.7	-165.7
2019	-72.9	-67.4	-140.2
2020	-59.4	-55.0	-114.3
Average	***-59.1***	***-54.8***	***-113.9***

Source: RESI

Figure 38: Energy Efficiency – Appliances and Other Products—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$855,257	-$792,692	-$1,647,949
2012	-$2,011,438	-$1,864,294	-$3,875,732
2013	-$3,088,429	-$2,862,499	-$5,950,928
2014	-$4,054,553	-$3,757,947	-$7,812,500
2015	-$5,131,543	-$4,756,152	-$9,887,695
2016	-$5,986,801	-$5,548,844	-$11,535,645
2017	-$5,828,420	-$5,402,049	-$11,230,469
2018	-$5,226,572	-$4,844,229	-$10,070,801
2019	-$4,339,639	-$4,022,178	-$8,361,816
2020	-$3,484,381	-$3,229,486	-$6,713,867
Average	***-$3,637,003***	***-$3,370,943***	***-$7,007,946***

Source: RESI

Figure 39: Energy Efficiency – Appliances and Other Products—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$308,843	-$286,250	-$595,093
2012	-$760,229	-$704,615	-$1,464,844
2013	-$1,235,372	-$1,145,000	-$2,380,371
2014	-$1,750,110	-$1,622,083	-$3,372,192
2015	-$2,328,200	-$2,157,884	-$4,486,084
2016	-$2,898,372	-$2,686,345	-$5,584,717
2017	-$3,048,834	-$2,825,800	-$5,874,634
2018	-$2,961,724	-$2,745,063	-$5,706,787
2019	-$2,644,962	-$2,451,473	-$5,096,436
2020	-$2,256,929	-$2,091,826	-$4,348,755
Average	***-$1,835,779***	***-$1,701,485***	***-$3,537,265***

Source: RESI

Figure 40: Energy Efficiency – Appliances and Other Products—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	25.8	26.4	52.1
2011	22.2	22.8	45.0
2012	19.0	19.8	38.7
2013	17.0	18.0	35.0
2014	15.6	16.5	32.1
2015	14.5	15.4	29.8
2016	14.4	15.3	29.7
2017	14.3	15.2	29.5
2018	14.2	15.1	29.3
2019	14.3	15.3	29.5
2020	14.3	15.0	29.4
Average	***16.9***	***17.7***	***34.6***

Source: RESI

Figure 41: Energy Efficiency – Appliances and Other Products—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$461,593	-$484,452	-$946,045
2011	-$670,054	-$703,237	-$1,373,291
2012	-$848,735	-$890,767	-$1,739,502
2013	-$938,076	-$984,532	-$1,922,607
2014	-$1,012,526	-$1,062,669	-$2,075,195
2015	-$1,072,086	-$1,125,179	-$2,197,266
2016	-$1,042,306	-$1,093,924	-$2,136,230
2017	-$1,042,306	-$1,093,924	-$2,136,230
2018	-$1,042,306	-$1,093,924	-$2,136,230
2019	-$982,746	-$1,031,414	-$2,014,160
2020	-$1,012,526	-$1,062,669	-$2,075,195
Average	***-$920,478***	***-$966,063***	***-$1,886,541***

Source: RESI

Figure 42: Energy Efficiency – Appliances and Other Products—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$238,241	$250,040	$488,281
2011	$193,571	$203,157	$396,729
2012	$148,901	$156,275	$305,176
2013	$119,121	$125,020	$244,141
2014	$81,895	$85,951	$167,847
2015	$67,005	$70,324	$137,329
2016	$81,895	$85,951	$167,847
2017	$96,786	$101,579	$198,364
2018	$96,786	$101,579	$198,364
2019	$104,231	$109,392	$213,623
2020	$119,121	$125,020	$244,141
Average	***$122,505***	***$128,572***	***$251,076***

Source: RESI

Figure 43: Energy Efficiency in the Power Sector – General—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-606.5	-512.9	-1,119.4
2011	-780.2	-668.3	-1,448.5
2012	-1,090.6	-941.9	-2,032.4
2013	-1,340.2	-1,164.3	-2,504.6
2014	-1,668.9	-1,447.7	-3,116.7
2015	-1,813.4	-1,572.1	-3,385.5
2016	-1,909.2	-1,652.8	-3,562.0
2017	-1,979.0	-1,711.0	-3,690.0
2018	-2,020.8	-1,742.9	-3,763.7
2019	-2,023.2	-1,742.1	-3,765.3
2020	-2,014.9	-1,732.2	-3,747.1
Average	***-1,567.9***	***-1,353.5***	***-2,921.4***

Source: RESI

Figure 44: Energy Efficiency in the Power Sector – General—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$69,315,368	-$59,835,023	-$129,150,391
2011	-$85,858,024	-$74,115,120	-$159,973,145
2012	-$118,845,064	-$102,590,483	-$221,435,547
2013	-$144,658,159	-$124,873,091	-$269,531,250
2014	-$181,789,052	-$156,925,547	-$338,714,600
2015	-$196,841,232	-$169,919,022	-$366,760,254
2016	-$207,520,253	-$179,137,461	-$386,657,715
2017	-$216,004,507	-$186,461,313	-$402,465,820
2018	-$222,687,085	-$192,229,907	-$414,916,992
2019	-$225,831,828	-$194,944,540	-$420,776,367
2020	-$228,026,596	-$196,839,127	-$424,865,723
Average	***-$172,488,833***	***-$148,897,330***	***-$321,386,164***

Source: RESI

Figure 45: Energy Efficiency in the Power Sector – General—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$16,559,035	-$14,294,236	-$30,853,271
2011	-$21,898,546	-$18,903,456	-$40,802,002
2012	-$31,496,563	-$27,188,740	-$58,685,303
2013	-$39,776,080	-$34,335,858	-$74,111,938
2014	-$51,904,632	-$44,805,573	-$96,710,205
2015	-$59,013,060	-$50,941,774	-$109,954,834
2016	-$64,974,968	-$56,088,264	-$121,063,232
2017	-$70,191,637	-$60,591,444	-$130,783,081
2018	-$74,818,668	-$64,585,629	-$139,404,297
2019	-$77,046,194	-$66,508,494	-$143,554,688
2020	-$78,512,102	-$67,773,909	-$146,286,011
Average	***-$53,290,135***	***-$46,001,580***	***-$99,291,715***

Source: RESI

Figure 46: Energy Efficiency in the Power Sector – General—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	43.5	36.8	80.3
2011	76.8	65.6	142.3
2012	117.4	101.4	218.8
2013	182.0	158.2	340.2
2014	273.7	237.2	510.8
2015	387.5	335.7	723.2
2016	381.1	330.7	711.8
2017	387.6	335.7	723.4
2018	386.8	334.1	720.9
2019	378.9	326.8	705.7
2020	371.3	319.2	690.5
Average	***271.5***	***234.7***	***506.2***

Source: RESI

Figure 47: Energy Efficiency in the Power Sector – General—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$4,959,962	$4,286,864	$9,246,826
2011	$8,528,515	$7,371,143	$15,899,658
2012	$12,833,697	$11,092,085	$23,925,781
2013	$19,954,434	$17,246,494	$37,200,928
2014	$30,234,487	$26,131,480	$56,365,967
2015	$42,986,336	$37,152,824	$80,139,160
2016	$41,316,646	$35,709,721	$77,026,367
2017	$42,135,121	$36,417,125	$78,552,246
2018	$42,495,251	$36,728,382	$79,223,633
2019	$42,364,294	$36,615,198	$78,979,492
2020	$42,102,382	$36,388,829	$78,491,211
Average	***$29,991,920***	***$25,921,831***	***$55,913,752***

Source: RESI

Figure 48: Energy Efficiency in the Power Sector – General—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,178,605	$1,018,661	$2,197,266
2011	$2,128,036	$1,839,249	$3,967,285
2012	$3,380,304	$2,921,576	$6,301,880
2013	$5,385,569	$4,654,714	$10,040,283
2014	$8,454,852	$7,307,477	$15,762,329
2015	$12,539,045	$10,837,419	$23,376,465
2016	$12,940,098	$11,184,047	$24,124,146
2017	$13,807,683	$11,933,895	$25,741,577
2018	$14,454,278	$12,492,743	$26,947,021
2019	$14,601,604	$12,620,076	$27,221,680
2020	$14,658,897	$12,669,594	$27,328,491
Average	***$9,411,725***	***$8,134,496***	***$17,546,220***

Source: RESI

Figure 49: Maryland Renewable Energy Portfolio Standard Program—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	239.4	247.6	487.1
2011	3,563.5	3,685.7	7,249.2
2012	1,329.9	1,368.5	2,698.3
2013	3,160.6	3,280.4	6,441.0
2014	1,848.7	1,920.4	3,769.0
2015	5,333.8	5,553.6	10,887.4
2016	3,565.3	3,717.6	7,282.8
2017	19,821.4	20,641.3	40,462.6
2018	18,972.4	20,952.2	39,924.7
2019	8,713.6	9,055.9	17,769.5
2020	3,108.6	3,318.6	6,427.2
Average	***6,332.5***	***6,703.8***	***13,036.3***

Source: RESI

Figure 50: Maryland Renewable Energy Portfolio Standard Program—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$13,623,408	$14,422,246	$28,045,654
2011	$203,031,768	$214,936,982	$417,968,750
2012	$74,876,859	$79,267,428	$154,144,287
2013	$177,652,797	$188,069,859	$365,722,656
2014	$102,449,806	$108,457,176	$210,906,982
2015	$299,299,898	$316,850,005	$616,149,902
2016	$197,368,937	$208,942,098	$406,311,035
2017	$1,117,178,746	$1,182,686,977	$2,299,865,723
2018	$1,070,304,735	$1,133,064,405	$2,203,369,141
2019	$484,957,744	$513,394,307	$998,352,051
2020	$157,610,526	$166,852,365	$324,462,891
Average	***$354,395,929***	***$375,176,714***	***$729,572,643***

Source: RESI

Figure 51: Maryland Renewable Energy Portfolio Standard Program—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$5,292,227	$5,602,548	$10,894,775
2011	$81,191,953	$85,952,822	$167,144,775
2012	$35,837,420	$37,938,825	$73,776,245
2013	$81,006,651	$85,756,654	$166,763,306
2014	$54,360,214	$57,547,745	$111,907,959
2015	$148,345,422	$157,043,982	$305,389,404
2016	$111,485,135	$118,022,311	$229,507,446
2017	$584,583,547	$618,861,888	$1,203,445,435
2018	$626,313,572	$663,038,845	$1,289,352,417
2019	$331,527,633	$350,967,484	$682,495,117
2020	$153,304,106	$162,293,429	$315,597,534
Average	***$201,204,353***	***$213,002,412***	***$414,206,765***

Source: RESI

Figure 52: Maryland Renewable Energy Portfolio Standard Program—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-186.6	-159.9	-346.5
2011	-334.9	-290.7	-625.6
2012	-451.3	-394.6	-845.9
2013	-546.3	-479.4	-1,025.7
2014	-604.9	-529.6	-1,134.5
2015	-638.0	-555.0	-1,193.0
2016	-683.3	-592.5	-1,275.8
2017	-972.7	-847.3	-1,819.9
2018	-1,309.0	-1,142.1	-2,451.1
2019	-1,536.6	-1,341.2	-2,877.8
2020	-1,685.3	-1,469.3	-3,154.6
Average	***-813.5***	***-709.2***	***-1,522.8***

Source: RESI

Figure 53: Maryland Renewable Energy Portfolio Standard Program—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$20,037,125	-$17,468,978	-$37,506,104
2011	-$34,433,205	-$30,019,920	-$64,453,125
2012	-$45,796,815	-$39,927,062	-$85,723,877
2013	-$55,285,510	-$48,199,597	-$103,485,107
2014	-$62,149,326	-$54,183,682	-$116,333,008
2015	-$67,757,765	-$59,073,290	-$126,831,055
2016	-$73,333,596	-$63,934,470	-$137,268,066
2017	-$102,973,542	-$89,775,481	-$192,749,023
2018	-$137,471,962	-$119,852,257	-$257,324,219
2019	-$162,253,435	-$141,457,503	-$303,710,938
2020	-$180,317,824	-$157,206,590	-$337,524,414
Average	***-$85,619,100***	***-$74,645,348***	***-$160,264,449***

Source: RESI

Figure 54: Maryland Renewable Energy Portfolio Standard Program—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$2,527,058	-$2,203,166	-$4,730,225
2011	-$6,611,110	-$5,763,768	-$12,374,878
2012	-$10,010,411	-$8,727,382	-$18,737,793
2013	-$13,091,791	-$11,413,824	-$24,505,615
2014	-$15,651,457	-$13,645,418	-$29,296,875
2015	-$14,518,356	-$12,657,547	-$27,175,903
2016	-$16,727,494	-$14,583,541	-$31,311,035
2017	-$26,982,459	-$23,524,133	-$50,506,592
2018	-$39,740,027	-$34,646,570	-$74,386,597
2019	-$49,481,428	-$43,139,421	-$92,620,850
2020	-$56,744,682	-$49,471,748	-$106,216,431
Average	***-$22,916,934***	***-$19,979,683***	***-$42,896,618***

Source: RESI

Figure 55: Incentives and Grant Programs to Support Renewable Energy—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	176.1	65.3	241.4
2011	262.4	61.4	323.8
2012	68.5	-63.3	5.1
2013	-77.6	-176.6	-254.2
2014	-112.2	-207.7	-320.0
2015	-107.7	-202.1	-309.8
2016	-135.5	-198.0	-333.5
2017	-101.5	-165.9	-267.3
2018	-88.8	-140.8	-229.6
2019	-52.9	-107.2	-160.2
2020	-21.9	-78.5	-100.4
Average	***-17.4***	***-110.3***	***-127.7***

Source: RESI

Figure 56: Incentives and Grant Programs to Support Renewable Energy—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,532,324	$16,083,399	$18,615,723
2011	$3,632,431	$23,070,450	$26,702,881
2012	$631,005	$4,007,667	$4,638,672
2013	-$1,693,751	-$10,757,421	-$12,451,172
2014	-$2,208,518	-$14,026,833	-$16,235,352
2015	-$2,059,070	-$13,077,649	-$15,136,719
2016	-$2,366,270	-$15,028,750	-$17,395,020
2017	-$1,735,264	-$11,021,083	-$12,756,348
2018	-$1,436,367	-$9,122,715	-$10,559,082
2019	-$797,059	-$5,062,316	-$5,859,375
2020	-$257,384	-$1,634,706	-$1,892,090
Average	***-$523,448***	***-$3,324,542***	***-$3,847,989***

Source: RESI

Figure 57: Incentives and Grant Programs to Support Renewable Energy—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,181,059	$7,501,192	$8,682,251
2011	$1,922,075	$12,207,564	$14,129,639
2012	$763,848	$4,851,386	$5,615,234
2013	-$199,265	-$1,265,579	-$1,464,844
2014	-$514,767	-$3,269,412	-$3,784,180
2015	-$568,735	-$3,612,173	-$4,180,908
2016	-$898,767	-$5,708,288	-$6,607,056
2017	-$716,108	-$4,548,174	-$5,264,282
2018	-$689,124	-$4,376,794	-$5,065,918
2019	-$406,832	-$2,583,890	-$2,990,723
2020	-$136,995	-$870,086	-$1,007,080
Average	***-$23,965***	***-$152,205***	***-$176,170***

Source: RESI

Figure 58: Incentives and Grant Programs to Support Renewable Energy—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-54.2	30.5	-23.7
2011	-28.5	53.5	25.0
2012	-7.9	72.0	64.0
2013	7.6	85.7	93.3
2014	19.9	94.9	114.8
2015	27.5	100.1	127.6
2016	33.6	103.8	137.3
2017	37.2	105.3	142.4
2018	37.2	104.1	141.3
2019	34.0	100.4	134.4
2020	30.2	95.7	125.9
Average	***12.4***	***86.0***	***98.4***

Source: RESI

Figure 59: Incentives and Grant Programs to Support Renewable Energy—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$796,737	-$5,520,402	-$6,317,139
2011	-$254,032	-$1,760,128	-$2,014,160
2012	$215,542	$1,493,442	$1,708,984
2013	$615,835	$4,266,977	$4,882,813
2014	$954,544	$6,613,815	$7,568,359
2015	$1,216,274	$8,427,281	$9,643,555
2016	$1,447,212	$10,027,397	$11,474,609
2017	$1,639,661	$11,360,828	$13,000,488
2018	$1,778,224	$12,320,897	$14,099,121
2019	$1,862,901	$12,907,607	$14,770,508
2020	$1,916,787	$13,280,967	$15,197,754
Average	***$963,292***	***$6,674,426***	***$7,637,718***

Source: RESI

Figure 60: Incentives and Grant Programs to Support Renewable Energy—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$531,158	-$3,680,268	-$4,211,426
2011	-$444,556	-$3,080,224	-$3,524,780
2012	-$361,803	-$2,506,849	-$2,868,652
2013	-$292,522	-$2,026,814	-$2,319,336
2014	-$240,561	-$1,666,788	-$1,907,349
2015	-$196,297	-$1,360,099	-$1,556,396
2016	-$161,657	-$1,120,082	-$1,281,738
2017	-$138,563	-$960,070	-$1,098,633
2018	-$134,714	-$933,401	-$1,068,115
2019	-$153,959	-$1,066,744	-$1,220,703
2020	-$186,675	-$1,293,428	-$1,480,103
Average	***-$258,406***	***-$1,790,433***	***-$2,048,839***

Source: RESI

Figure 61: Offshore Wind Initiatives to Support Renewable Energy—Investment Phase, Employment Impacts[1]

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	751.8	1,416.1	2,167.9
2018	14.0	11.9	25.9
2019	-3.6	-4.1	-7.7
2020	-12.6	-12.6	-25.1
Average	***187.4***	***352.8***	***540.2***

Source: RESI

Figure 62: Offshore Wind Initiatives to Support Renewable Energy—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$30,574,595	$57,560,171	$88,134,766
2018	$402,297	$757,371	$1,159,668
2019	-$359,950	-$677,647	-$1,037,598
2020	-$783,421	-$1,474,880	-$2,258,301
Average	***$7,458,380***	***$14,041,254***	***$21,499,634***

Source: RESI

[1] Offshore Wind according to MEA data is scheduled for the first investment in 2017. This program is therefore defined as having a lifespan from 2017-2020. Averages are done over this period of time.

Figure 63: Offshore Wind Initiatives to Support Renewable Energy—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$19,490,246	$36,692,616	$56,182,861
2018	$1,042,797	$1,963,184	$3,005,981
2019	$381,124	$717,509	$1,098,633
2020	-$47,640	-$89,689	-$137,329
Average	***$5,216,631***	***$9,820,905***	***$15,037,537***

Source: RESI

Figure 64: Offshore Wind Initiatives to Support Renewable Energy—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	146.1	135.7	281.8
2019	150.8	140.3	291.2
2020	150.6	139.6	290.2
Average	***149.2***	***138.5***	***287.7***

Source: RESI

Figure 65: Offshore Wind Initiatives to Support Renewable Energy—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$8,639,369	$8,023,229	$16,662,598
2019	$8,987,476	$8,346,509	$17,333,984
2020	$8,987,476	$8,346,509	$17,333,984
Average	***$8,871,440***	***$8,238,749***	***$17,110,189***

Source: RESI

Figure 66: Offshore Wind Initiatives to Support Renewable Energy—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$19,652,191	$18,250,641	$37,902,832
2019	$20,546,192	$19,080,883	$39,627,075
2020	$21,210,759	$19,698,055	$40,908,813
Average	***$20,469,714***	***$19,009,860***	***$39,479,574***

Source: RESI

A.2 Transportation

Figure 67: Maryland Clean Cars Program—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	985.6	913.1	1,898.7
2013	915.4	839.9	1,755.3
2014	1,214.1	1,115.1	2,329.2
2015	1,206.7	1,105.5	2,312.2
2016	1,192.5	1,089.7	2,282.2
2017	1,174.9	1,070.8	2,245.8
2018	1,150.6	1,045.9	2,196.5
2019	1,109.0	1,006.0	2,115.0
2020	1,077.2	975.4	2,052.6
Average	***911.5***	***832.9***	***1,744.3***

Source: RESI

Figure 68: Maryland Clean Cars Program—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$55,222,000	$50,460,373	$105,682,373
2013	$51,857,333	$47,385,831	$99,243,164
2014	$69,749,070	$63,734,817	$133,483,887
2015	$70,131,781	$64,084,528	$134,216,309
2016	$69,972,318	$63,938,815	$133,911,133
2017	$69,621,499	$63,618,247	$133,239,746
2018	$69,238,788	$63,268,536	$132,507,324
2019	$67,739,837	$61,898,835	$129,638,672
2020	$66,591,704	$60,849,702	$127,441,406
Average	***$53,647,666***	***$49,021,789***	***$102,669,456***

Source: RESI

Figure 69: Maryland Clean Cars Program—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$19,558,124	$17,871,686	$37,429,810
2013	$20,036,513	$18,308,824	$38,345,337
2014	$27,969,792	$25,558,040	$53,527,832
2015	$29,915,239	$27,335,738	$57,250,977
2016	$31,342,432	$28,639,868	$59,982,300
2017	$32,402,860	$29,608,859	$62,011,719
2018	$33,255,987	$30,388,423	$63,644,409
2019	$33,064,631	$30,213,567	$63,278,198
2020	$32,889,222	$30,053,283	$62,942,505
Average	***$23,675,891***	***$21,634,390***	***$45,310,281***

Source: RESI

Figure 70: Maryland Clean Cars Program—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	-521.4	-485.7	-1,007.1
2013	-514.0	-478.6	-992.6
2014	-496.7	-461.5	-958.3
2015	-476.4	-441.2	-917.6
2016	-454.3	-419.6	-873.9
2017	-432.7	-398.5	-831.1
2018	-411.3	-377.5	-788.8
2019	-396.5	-363.4	-759.9
2020	-386.7	-354.1	-740.8
Average	***-371.8***	***-343.6***	***-715.5***

Source: RESI

Figure 71: Maryland Clean Cars Program—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$27,945,502	-$25,826,471	-$53,771,973
2013	-$28,008,942	-$25,885,101	-$53,894,043
2014	-$27,596,580	-$25,504,006	-$53,100,586
2015	-$26,962,176	-$24,917,707	-$51,879,883
2016	-$26,105,730	-$24,126,204	-$50,231,934
2017	-$25,249,284	-$23,334,700	-$48,583,984
2018	-$24,551,440	-$22,689,771	-$47,241,211
2019	-$24,012,196	-$22,191,417	-$46,203,613
2020	-$23,694,994	-$21,898,267	-$45,593,262
Average	***-$21,284,259***	***-$19,670,331***	***-$40,954,590***

Source: RESI

Figure 72: Maryland Clean Cars Program—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$10,221,837	-$9,446,743	-$19,668,579
2013	-$10,991,052	-$10,157,630	-$21,148,682
2014	-$11,593,735	-$10,714,614	-$22,308,350
2015	-$11,855,427	-$10,956,462	-$22,811,890
2016	-$11,942,658	-$11,037,079	-$22,979,736
2017	-$11,895,077	-$10,993,106	-$22,888,184
2018	-$11,791,987	-$10,897,833	-$22,689,819
2019	-$11,649,246	-$10,765,915	-$22,415,161
2020	-$11,585,805	-$10,707,285	-$22,293,091
Average	***-$9,411,529***	***-$8,697,879***	***-$18,109,408***

Source: RESI

Figure 73: Federal Medium- and Heavy-Duty GHG Standards—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	-1,037.2	-941.5	-1,978.8
2013	-1,445.4	-1,303.9	-2,749.3
2014	-1,808.9	-1,622.1	-3,431.1
2015	-2,114.9	-1,887.4	-4,002.3
2016	-2,397.1	-2,130.2	-4,527.4
2017	-1,385.2	-1,199.2	-2,584.4
2018	-1,055.9	-899.5	-1,955.4
2019	-824.2	-690.9	-1,515.0
2020	-663.9	-547.9	-1,211.9
Average	***-1,157.5***	***-1,020.2***	***-2,177.8***

Source: RESI

Figure 74: Federal Medium- and Heavy-Duty GHG Standards—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$78,654,457	-$69,325,280	-$147,979,736
2013	-$122,434,283	-$107,912,397	-$230,346,680
2014	-$161,915,608	-$142,710,856	-$304,626,465
2015	-$196,141,408	-$172,877,146	-$369,018,555
2016	-$228,031,419	-$200,984,694	-$429,016,113
2017	-$157,081,822	-$138,450,404	-$295,532,227
2018	-$127,689,809	-$112,544,566	-$240,234,375
2019	-$106,732,589	-$94,073,075	-$200,805,664
2020	-$91,290,427	-$80,462,503	-$171,752,930
Average	***-$115,451,984***	***-$101,758,266***	***-$217,210,249***

Source: RESI

Figure 75: Federal Medium- and Heavy-Duty GHG Standards—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$23,779,632	-$20,959,138	-$44,738,770
2013	-$35,409,915	-$31,209,958	-$66,619,873
2014	-$47,161,854	-$41,568,004	-$88,729,858
2015	-$57,972,990	-$51,096,834	-$109,069,824
2016	-$68,735,463	-$60,582,774	-$129,318,237
2017	-$43,601,398	-$38,429,852	-$82,031,250
2018	-$33,722,956	-$29,723,089	-$63,446,045
2019	-$25,766,674	-$22,710,498	-$48,477,173
2020	-$19,789,325	-$17,442,120	-$37,231,445
Average	***-$32,358,201***	***-$28,520,206***	***-$60,878,407***

Source: RESI

Figure 76: Federal Medium- and Heavy-Duty GHG Standards—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	155.1	141.4	296.6
2021	151.4	166.1	317.4
2022	168.9	154.1	323.1
2023	167.8	152.7	320.4
2024	164.2	149.4	313.6
2025	160.8	146.1	306.9
Average	***60.5***	***56.9***	***117.4***

Source: RESI

Figure 77: Federal Medium- and Heavy-Duty GHG Standards—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$14,473,649	$13,602,523	$28,076,172
2021	$15,260,261	$14,341,790	$29,602,051
2022	$15,511,976	$14,578,356	$30,090,332
2023	$15,480,512	$14,548,785	$30,029,297
2024	$15,354,654	$14,430,502	$29,785,156
2025	$15,228,796	$14,312,219	$29,541,016
Average	***$5,706,866***	***$5,363,386***	***$11,070,251***

Source: RESI

Figure 78: Federal Medium- and Heavy-Duty GHG Standards—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$5,168,037	$4,856,988	$10,025,024
2021	$5,993,979	$5,633,219	$11,627,197
2022	$6,481,678	$6,091,564	$12,573,242
2023	$6,796,322	$6,387,271	$13,183,594
2024	$6,985,109	$6,564,696	$13,549,805
2025	$7,095,235	$6,668,193	$13,763,428
Average	***$2,407,522***	***$2,262,621***	***$4,670,143***

Source: RESI

Figure 79: Clean Fuel Standard—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	-204.7	-186.0	-390.8
2013	-283.9	-256.1	-540.1
2014	-356.5	-319.8	-676.4
2015	-420.4	-375.1	-795.6
2016	-481.5	-428.1	-909.6
2017	-241.9	-208.1	-450.0
2018	-165.1	-138.4	-303.5
2019	-111.4	-90.2	-201.5
2020	-74.6	-58.0	-132.6
Average	***-212.7***	***-187.3***	***-400.0***

Source: RESI

Figure 80: Clean Fuel Standard—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$15,451,308	-$13,601,426	-$29,052,734
2013	-$23,939,790	-$21,073,638	-$45,013,428
2014	-$31,843,978	-$28,031,510	-$59,875,488
2015	-$39,017,800	-$34,346,458	-$73,364,258
2016	-$45,899,475	-$40,404,236	-$86,303,711
2017	-$28,630,365	-$25,202,642	-$53,833,008
2018	-$21,651,308	-$19,059,141	-$40,710,449
2019	-$16,619,895	-$14,630,105	-$31,250,000
2020	-$13,016,753	-$11,458,344	-$24,475,098
Average	***-$21,460,970***	***-$18,891,591***	***-$40,352,561***

Source: RESI

Figure 81: Clean Fuel Standard—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$4,698,691	-$4,136,148	-$8,834,839
2013	-$6,954,712	-$6,122,070	-$13,076,782
2014	-$9,300,000	-$8,186,573	-$17,486,572
2015	-$11,515,445	-$10,136,777	-$21,652,222
2016	-$13,820,157	-$12,165,561	-$25,985,718
2017	-$7,750,000	-$6,822,144	-$14,572,144
2018	-$5,339,790	-$4,700,493	-$10,040,283
2019	-$3,432,722	-$3,021,745	-$6,454,468
2020	-$2,020,681	-$1,778,758	-$3,799,438
Average	***-$5,893,836***	***-$5,188,206***	***-$11,082,042***

Source: RESI

Figure 82: Clean Fuel Standard—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	18.3	17.5	35.8
2021	15.4	15.9	31.3
2022	14.2	13.9	28.2
2023	13.0	12.6	25.6
2024	12.0	11.8	23.7
2025	11.4	11.3	22.7
Average	***5.3***	***5.2***	***10.5***

Source: RESI

Figure 83: Clean Fuel Standard—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	-$461,260	-$454,267	-$915,527
2021	-$584,263	-$575,405	-$1,159,668
2022	-$707,266	-$696,543	-$1,403,809
2023	-$768,767	-$757,112	-$1,525,879
2024	-$830,269	-$817,681	-$1,647,949
2025	-$799,518	-$787,396	-$1,586,914
Average	***-$259,459***	***-$255,525***	***-$514,984***

Source: RESI

Figure 84: Clean Fuel Standard—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$299,819	$295,274	$595,093
2021	$307,507	$302,845	$610,352
2022	$261,381	$257,418	$518,799
2023	$230,630	$227,134	$457,764
2024	$199,879	$196,849	$396,729
2025	$215,255	$211,991	$427,246
Average	***$94,654***	***$93,219***	***$187,874***

Source: RESI

Figure 85: Transportation Climate Initiative—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	0.0	0.0	0.0

Source: RESI

Figure 86: Transportation Climate Initiative—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 87: Transportation Climate Initiative—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 88: Transportation Climate Initiative—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.2	0.2	0.5
2014	0.5	0.1	0.6
2015	0.2	0.1	0.3
2016	0.7	0.3	0.9
2017	0.5	0.2	0.6
2018	0.2	0.0	0.2
2019	0.2	0.0	0.3
2020	0.2	0.0	0.2
Average	***0.2***	***0.1***	***0.3***

Source: RESI

Figure 89: Transportation Climate Initiative—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$22,386	$8,131	$30,518
2014	$44,772	$16,263	$61,035
2015	$0	$0	$0
2016	$44,772	$16,263	$61,035
2017	$44,772	$16,263	$61,035
2018	$0	$0	$0
2019	$44,772	$16,263	$61,035
2020	$0	$0	$0
Average	***$18,316***	***$6,653***	***$24,969***

Source: RESI

Figure 90: Transportation Climate Initiative—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$22,386	$8,131	$30,518
2014	$11,193	$4,066	$15,259
2015	$11,193	$4,066	$15,259
2016	$33,579	$12,197	$45,776
2017	$44,772	$16,263	$61,035
2018	$11,193	$4,066	$15,259
2019	$22,386	$8,131	$30,518
2020	$22,386	$8,131	$30,518
Average	***$16,281***	***$5,914***	***$22,195***

Source: RESI

Figure 91: Public Transportation Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	761.2	287.7	1,048.9
2011	1,414.1	544.0	1,958.1
2012	1,439.3	563.2	2,002.5
2013	1,446.2	568.9	2,015.1
2014	1,439.8	567.7	2,007.5
2015	1,433.1	567.0	2,000.1
2016	1,429.5	569.3	1,998.8
2017	799.9	323.0	1,122.9
2018	787.8	316.5	1,104.4
2019	792.6	322.7	1,115.3
2020	805.1	334.9	1,140.1
Average	***1,140.8***	***451.4***	***1,592.1***

Source: RESI

Figure 92: Public Transportation Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$57,769,773	$22,857,669	$80,627,441
2011	$107,536,617	$42,548,832	$150,085,449
2012	$109,285,891	$43,240,964	$152,526,855
2013	$108,979,768	$43,119,841	$152,099,609
2014	$108,914,170	$43,093,886	$152,008,057
2015	$108,673,645	$42,998,718	$151,672,363
2016	$108,542,450	$42,946,808	$151,489,258
2017	$57,113,795	$22,598,119	$79,711,914
2018	$56,282,890	$22,269,356	$78,552,246
2019	$56,676,477	$22,425,086	$79,101,563
2020	$57,813,505	$22,874,972	$80,688,477
Average	***$85,235,362***	***$33,724,932***	***$118,960,294***

Source: RESI

Figure 93: Public Transportation Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$26,545,232	$10,503,107	$37,048,340
2011	$51,319,325	$20,305,431	$71,624,756
2012	$54,697,610	$21,642,111	$76,339,722
2013	$56,599,946	$22,394,805	$78,994,751
2014	$58,633,477	$23,199,409	$81,832,886
2015	$60,295,287	$23,856,935	$84,152,222
2016	$61,804,036	$24,453,899	$86,257,935
2017	$34,974,546	$13,838,320	$48,812,866
2018	$33,881,250	$13,405,737	$47,286,987
2019	$33,651,658	$13,314,895	$46,966,553
2020	$34,187,373	$13,526,860	$47,714,233
Average	***$46,053,613***	***$18,221,955***	***$64,275,568***

Source: RESI

Figure 94: Public Transportation Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	459.1	293.5	752.6
2011	485.1	309.5	794.6
2012	489.1	313.5	802.6
2013	485.5	311.2	796.7
2014	480.7	307.8	788.6
2015	474.7	304.1	778.8
2016	470.5	301.7	772.2
2017	452.6	294.5	747.2
2018	449.2	293.3	742.6
2019	441.6	286.7	728.3
2020	438.4	283.7	722.2
Average	***466.1***	***300.0***	***766.0***

Source: RESI

Figure 95: Public Transportation Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$28,686,380	$18,463,278	$47,149,658
2011	$30,023,221	$19,323,703	$49,346,924
2012	$29,874,683	$19,228,100	$49,102,783
2013	$29,057,724	$18,702,285	$47,760,010
2014	$28,426,438	$18,295,974	$46,722,412
2015	$27,628,047	$17,782,109	$45,410,156
2016	$26,959,627	$17,351,897	$44,311,523
2017	$25,288,576	$16,276,366	$41,564,941
2018	$24,768,693	$15,941,756	$40,710,449
2019	$24,137,407	$15,535,445	$39,672,852
2020	$23,877,466	$15,368,140	$39,245,605
Average	***$27,157,115***	***$17,479,005***	***$44,636,119***

Source: RESI

Figure 96: Public Transportation Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$11,938,733	$7,684,070	$19,622,803
2011	$13,637,635	$8,777,526	$22,415,161
2012	$14,621,698	$9,410,894	$24,032,593
2013	$15,225,134	$9,799,280	$25,024,414
2014	$15,967,823	$10,277,294	$26,245,117
2015	$16,645,527	$10,713,482	$27,359,009
2016	$17,248,962	$11,101,868	$28,350,830
2017	$17,351,082	$11,167,595	$28,518,677
2018	$17,991,652	$11,579,881	$29,571,533
2019	$18,270,160	$11,759,137	$30,029,297
2020	$18,622,938	$11,986,193	$30,609,131
Average	***$16,138,304***	***$10,387,020***	***$26,525,324***

Source: RESI

Figure 97: Initiatives to Double Transit Ridership by 2020—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	6,178.2	2,348.3	8,526.5
2012	8,073.0	3,126.2	11,199.2
2013	8,143.2	3,186.7	11,329.9
2014	8,109.0	3,182.8	11,291.8
2015	8,302.4	3,257.0	11,559.3
2016	8,244.1	3,236.5	11,480.6
2017	8,195.0	3,225.9	11,420.9
2018	8,158.6	3,226.4	11,385.1
2019	8,146.5	3,223.6	11,370.1
2020	8,172.9	3,250.8	11,423.6
Average	***7,247.5***	***2,842.2***	***10,089.7***

Source: RESI

Figure 98: Initiatives to Double Transit Ridership by 2020—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$472,727,370	$185,384,202	$658,111,572
2012	$618,546,172	$242,568,329	$861,114,502
2013	$620,606,751	$243,376,403	$863,983,154
2014	$621,395,909	$243,685,879	$865,081,787
2015	$639,173,877	$250,657,666	$889,831,543
2016	$636,455,668	$249,591,696	$886,047,363
2017	$634,175,879	$248,697,656	$882,873,535
2018	$636,236,457	$249,505,730	$885,742,188
2019	$635,622,668	$249,265,028	$884,887,695
2020	$639,349,246	$250,726,438	$890,075,684
Average	***$559,480,909***	***$219,405,366***	***$778,886,275***

Source: RESI

Figure 99: Initiatives to Double Transit Ridership by 2020—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$221,479,295	$86,855,056	$308,334,351
2012	$305,195,772	$119,685,210	$424,880,981
2013	$321,252,938	$125,982,169	$447,235,107
2014	$336,685,355	$132,034,127	$468,719,482
2015	$358,891,375	$140,742,414	$499,633,789
2016	$369,534,043	$144,916,030	$514,450,073
2017	$378,861,449	$148,573,854	$527,435,303
2018	$389,712,367	$152,829,137	$542,541,504
2019	$396,551,733	$155,511,255	$552,062,988
2020	$404,695,402	$158,704,866	$563,400,269
Average	***$316,623,612***	***$124,166,738***	***$440,790,350***

Source: RESI

Figure 100: Initiatives to Double Transit Ridership by 2020—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	895.1	844.1	1,739.2
2012	909.2	858.6	1,767.8
2013	896.3	847.9	1,744.2
2014	879.2	831.2	1,710.4
2015	855.4	808.8	1,664.2
2016	832.4	787.0	1,619.4
2017	809.6	765.5	1,575.1
2018	785.2	742.8	1,528.0
2019	763.8	722.7	1,486.5
2020	952.9	903.0	1,856.0
2021	84.0	92.2	176.2
2022	75.1	69.2	144.3
2023	76.5	71.0	147.5
2024	87.5	81.8	169.3
2025	104.5	98.1	202.5
Average	***562.9***	***532.7***	***1,095.7***

Source: RESI

Figure 101: Initiatives to Double Transit Ridership by 2020—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$37,162,099	$35,408,701	$72,570,801
2012	$37,646,551	$35,870,295	$73,516,846
2013	$36,365,099	$34,649,305	$71,014,404
2014	$35,177,412	$33,517,656	$68,695,068
2015	$33,474,019	$31,894,633	$65,368,652
2016	$31,754,998	$30,256,720	$62,011,719
2017	$30,035,978	$28,618,807	$58,654,785
2018	$28,504,487	$27,159,576	$55,664,063
2019	$27,285,545	$25,998,147	$53,283,691
2020	$34,692,961	$33,056,063	$67,749,023
2021	$562,589	$536,044	$1,098,633
2022	-$625,098	-$595,605	-$1,220,703
2023	-$562,589	-$536,044	-$1,098,633
2024	$125,020	$119,121	$244,141
2025	$1,281,452	$1,220,990	$2,502,441
Average	***$20,805,033***	***$19,823,401***	***$40,628,433***

Source: RESI

Figure 102: Initiatives to Double Transit Ridership by 2020—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$14,799,204	$14,100,942	$28,900,146
2012	$16,768,264	$15,977,097	$32,745,361
2013	$17,768,422	$16,930,065	$34,698,486
2014	$18,862,344	$17,972,373	$36,834,717
2015	$19,628,090	$18,701,989	$38,330,078
2016	$20,229,747	$19,275,258	$39,505,005
2017	$20,698,571	$19,721,962	$40,420,532
2018	$21,151,767	$20,153,775	$41,305,542
2019	$21,151,767	$20,153,775	$41,305,542
2020	$25,800,936	$24,583,585	$50,384,521
2021	$4,391,316	$4,184,123	$8,575,439
2022	$2,422,256	$2,307,968	$4,730,225
2023	$1,484,609	$1,414,561	$2,899,170
2024	$1,218,942	$1,161,429	$2,380,371
2025	$1,468,981	$1,399,671	$2,868,652
Average	***$12,990,326***	***$12,377,411***	***$25,367,737***

Source: RESI

Figure 103: Intercity Transportation Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	372.0	141.2	513.3
2012	392.2	152.3	544.6
2013	395.4	155.1	550.5
2014	324.0	127.2	451.3
2015	306.7	119.1	425.8
2016	303.2	117.5	420.7
2017	0.9	-2.7	-1.9
2018	-5.6	-8.1	-13.7
2019	-5.2	-7.3	-12.5
2020	-2.2	-4.2	-6.4
Average	***189.2***	***71.8***	***261.0***

Source: RESI

Figure 104: Intercity Transportation Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$28,689,610	$10,891,689	$39,581,299
2012	$30,326,488	$11,513,111	$41,839,600
2013	$30,392,848	$11,538,304	$41,931,152
2014	$24,907,094	$9,455,699	$34,362,793
2015	$23,535,655	$8,935,048	$32,470,703
2016	$23,270,216	$8,834,277	$32,104,492
2017	-$1,725,358	-$655,013	-$2,380,371
2018	-$2,388,957	-$906,941	-$3,295,898
2019	-$2,344,718	-$890,146	-$3,234,863
2020	-$2,079,278	-$789,375	-$2,868,652
Average	***$13,871,236***	***$5,266,059***	***$19,137,296***

Source: RESI

Figure 105: Intercity Transportation Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$13,460,006	$5,109,940	$18,569,946
2012	$15,074,764	$5,722,965	$20,797,729
2013	$15,815,783	$6,004,285	$21,820,068
2014	$13,725,446	$5,210,712	$18,936,157
2015	$13,504,246	$5,126,736	$18,630,981
2016	$13,692,266	$5,198,115	$18,890,381
2017	$232,260	$88,175	$320,435
2018	-$873,739	-$331,705	-$1,205,444
2019	-$1,371,439	-$520,651	-$1,892,090
2020	-$1,559,458	-$592,031	-$2,151,489
Average	***$7,427,285***	***$2,819,685***	***$10,246,970***

Source: RESI

Figure 106: Intercity Transportation Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	152.5	145.3	297.8
2012	154.3	147.1	301.4
2013	154.1	147.2	301.3
2014	152.4	145.1	297.5
2015	267.9	255.0	522.9
2016	267.6	254.6	522.2
2017	199.2	188.9	388.0
2018	193.9	184.1	378.0
2019	188.6	178.9	367.5
2020	185.1	175.4	360.4
Average	***174.1***	***165.6***	***339.7***

Source: RESI

Figure 107: Intercity Transportation Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$5,960,009	$5,667,188	$11,627,197
2012	$6,022,581	$5,726,686	$11,749,268
2013	$5,928,723	$5,637,439	$11,566,162
2014	$5,803,578	$5,518,443	$11,322,021
2015	$10,449,570	$9,936,172	$20,385,742
2016	$10,355,711	$9,846,925	$20,202,637
2017	$7,571,245	$7,199,263	$14,770,508
2018	$7,258,384	$6,901,772	$14,160,156
2019	$6,976,809	$6,634,031	$13,610,840
2020	$6,789,092	$6,455,537	$13,244,629
Average	***$6,646,882***	***$6,320,314***	***$12,967,196***

Source: RESI

Figure 108: Intercity Transportation Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$2,205,673	$2,097,306	$4,302,979
2012	$2,510,713	$2,387,359	$4,898,071
2013	$2,714,072	$2,580,727	$5,294,800
2014	$2,870,503	$2,729,472	$5,599,976
2015	$5,224,785	$4,968,086	$10,192,871
2016	$5,647,148	$5,369,698	$11,016,846
2017	$4,739,850	$4,506,976	$9,246,826
2018	$4,778,957	$4,544,163	$9,323,120
2019	$4,724,207	$4,492,102	$9,216,309
2020	$4,700,742	$4,469,790	$9,170,532
Average	***$3,646,968***	***$3,467,789***	***$7,114,757***

Source: RESI

Figure 109: Bike and Pedestrian Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	2,050.8	761.0	2,811.8
2012	2,143.2	808.6	2,951.8
2013	2,136.8	803.5	2,940.3
2014	1,973.8	733.3	2,707.1
2015	1,835.4	667.9	2,503.3
2016	1,622.3	574.2	2,196.5
2017	1,066.2	343.4	1,409.6
2018	1,032.0	319.0	1,351.0
2019	1,017.8	308.4	1,326.2
2020	1,019.5	310.8	1,330.4
Average	***1,445.3***	***511.8***	***1,957.1***

Source: RESI

Figure 110: Bike and Pedestrian Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$161,136,001	$57,064,683	$218,200,684
2012	$168,730,803	$59,754,305	$228,485,107
2013	$167,581,441	$59,347,270	$226,928,711
2014	$155,772,313	$55,165,187	$210,937,500
2015	$145,450,594	$51,509,855	$196,960,449
2016	$128,593,290	$45,540,011	$174,133,301
2017	$82,393,457	$29,178,808	$111,572,266
2018	$80,455,318	$28,492,436	$108,947,754
2019	$79,734,150	$28,237,042	$107,971,191
2020	$80,545,464	$28,524,360	$109,069,824
Average	***$113,672,075***	***$40,255,814***	***$153,927,890***

Source: RESI

Figure 111: Bike and Pedestrian Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$76,725,527	$27,171,568	$103,897,095
2012	$85,999,298	$30,455,780	$116,455,078
2013	$90,371,379	$32,004,109	$122,375,488
2014	$89,300,896	$31,625,008	$120,925,903
2015	$87,869,828	$31,118,210	$118,988,037
2016	$81,908,922	$29,007,215	$110,916,138
2017	$58,628,714	$20,762,765	$79,391,479
2018	$57,828,668	$20,479,437	$78,308,105
2019	$57,490,621	$20,359,721	$77,850,342
2020	$58,223,057	$20,619,106	$78,842,163
Average	***$67,667,901***	***$23,963,902***	***$91,631,803***

Source: RESI

Figure 112: Bike and Pedestrian Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	-0.1	-0.1
2012	0.2	0.3	0.5
2013	-0.2	-0.1	-0.3
2014	0.0	-0.1	-0.1
2015	0.0	-0.1	-0.1
2016	0.2	0.2	0.5
2017	0.0	0.0	0.0
2018	0.0	-0.1	-0.1
2019	0.0	0.1	0.1
2020	0.0	0.0	0.0
2021	0.0	0.0	0.0
2022	0.0	0.0	0.0
2023	0.0	0.0	0.0
2024	0.0	0.0	0.0
2025	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 113: Bike and Pedestrian Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$20,158	$10,359	$30,518
2013	-$20,158	-$10,359	-$30,518
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	-$40,317	-$20,718	-$61,035
2019	$40,317	$20,718	$61,035
2020	$0	$0	$0
2021	$0	$0	$0
2022	$0	$0	$0
2023	$0	$0	$0
2024	$0	$0	$0
2025	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 114: Bike and Pedestrian Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$10,079	-$5,180	-$15,259
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$20,158	$10,359	$30,518
2018	-$10,079	-$5,180	-$15,259
2019	$0	$0	$0
2020	$0	$0	$0
2021	$0	$0	$0
2022	$0	$0	$0
2023	$0	$0	$0
2024	$0	$0	$0
2025	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 115: Pricing Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	1,912.3	727.0	2,639.2
2012	1,962.2	766.9	2,729.0
2013	1,979.5	781.2	2,760.7
2014	1,974.0	782.1	2,756.1
2015	54.2	32.1	86.3
2016	4.3	-11.0	-6.7
2017	-9.2	-21.7	-30.9
2018	-0.5	-11.6	-12.1
2019	20.1	9.3	29.4
2020	40.9	29.5	70.5
Average	***721.6***	***280.3***	***1,002.0***

Source: RESI

Figure 116: Pricing Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$146,687,985	$56,986,332	$203,674,316
2012	$150,556,292	$58,489,118	$209,045,410
2013	$150,929,936	$58,634,273	$209,564,209
2014	$151,149,726	$58,719,659	$209,869,385
2015	-$2,153,944	-$836,779	-$2,990,723
2016	-$7,165,161	-$2,783,570	-$9,948,730
2017	-$8,747,650	-$3,398,346	-$12,145,996
2018	-$8,132,238	-$3,159,266	-$11,291,504
2019	-$6,242,042	-$2,424,950	-$8,666,992
2020	-$4,263,930	-$1,656,480	-$5,920,410
Average	***$51,147,179***	***$19,869,999***	***$71,017,179***

Source: RESI

Figure 117: Pricing Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$68,706,419	$26,691,530	$95,397,949
2012	$74,574,817	$28,971,325	$103,546,143
2013	$77,904,639	$30,264,917	$108,169,556
2014	$81,179,513	$31,537,162	$112,716,675
2015	$4,472,731	$1,737,596	$6,210,327
2016	-$1,263,794	-$490,967	-$1,754,761
2017	-$4,593,615	-$1,784,558	-$6,378,174
2018	-$6,143,136	-$2,386,527	-$8,529,663
2019	-$6,286,000	-$2,442,027	-$8,728,027
2020	-$5,769,493	-$2,241,371	-$8,010,864
Average	***$25,707,462***	***$9,987,007***	***$35,694,469***

Source: RESI

Figure 118: Pricing Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	130.8	121.9	252.6
2011	137.8	129.4	267.1
2012	143.3	135.6	278.9
2013	144.7	137.9	282.6
2014	148.1	141.6	289.7
2015	150.2	144.0	294.2
2016	153.5	147.9	301.4
2017	157.7	152.1	309.8
2018	160.6	155.7	316.2
2019	153.7	149.7	303.3
2020	149.4	145.8	295.1
Average	***148.2***	***141.9***	***290.1***

Source: RESI

Figure 119: Pricing Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$8,228,911	$7,884,370	$16,113,281
2011	$8,104,230	$7,764,910	$15,869,141
2012	$7,870,455	$7,540,922	$15,411,377
2013	$7,356,148	$7,048,149	$14,404,297
2014	$6,982,106	$6,689,769	$13,671,875
2015	$6,483,384	$6,211,928	$12,695,313
2016	$6,047,003	$5,793,818	$11,840,820
2017	$5,672,961	$5,435,437	$11,108,398
2018	$5,236,580	$5,017,327	$10,253,906
2019	$4,519,667	$4,330,431	$8,850,098
2020	$4,145,626	$3,972,050	$8,117,676
Average	***$6,422,461***	***$6,153,556***	***$12,576,017***

Source: RESI

Figure 120: Pricing Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$3,646,904	$3,494,210	$7,141,113
2011	$4,067,700	$3,897,388	$7,965,088
2012	$4,465,119	$4,278,167	$8,743,286
2013	$4,722,273	$4,524,553	$9,246,826
2014	$5,096,314	$4,882,934	$9,979,248
2015	$5,478,148	$5,248,781	$10,726,929
2016	$5,891,152	$5,644,492	$11,535,645
2017	$6,327,534	$6,062,603	$12,390,137
2018	$6,756,123	$6,473,247	$13,229,370
2019	$6,802,878	$6,518,045	$13,320,923
2020	$6,896,388	$6,607,640	$13,504,028
Average	***$5,468,230***	***$5,239,278***	***$10,707,508***

Source: RESI

Figure 121: Transportation Technology Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	5.5	2.2	7.6
2012	84.1	31.8	115.9
2013	6.1	2.7	8.8
2014	4.7	1.3	6.0
2015	-1.8	-1.7	-3.5
2016	-2.3	-2.3	-4.7
2017	-2.0	-1.9	-4.0
2018	-2.2	-2.0	-4.2
2019	-1.8	-1.6	-3.4
2020	-1.6	-1.6	-3.3
Average	***8.1***	***2.4***	***10.5***

Source: RESI

Figure 122: Transportation Technology Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$445,487	$134,347	$579,834
2012	$6,916,766	$2,085,919	$9,002,686
2013	$445,487	$134,347	$579,834
2014	$375,147	$113,135	$488,281
2015	-$234,467	-$70,709	-$305,176
2016	-$281,360	-$84,851	-$366,211
2017	-$234,467	-$70,709	-$305,176
2018	-$281,360	-$84,851	-$366,211
2019	-$140,680	-$42,425	-$183,105
2020	-$140,680	-$42,425	-$183,105
Average	***$624,534***	***$188,343***	***$812,877***

Source: RESI

Figure 123: Transportation Technology Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$199,297	$60,103	$259,399
2012	$3,388,043	$1,021,747	$4,409,790
2013	$410,317	$123,741	$534,058
2014	$328,253	$98,993	$427,246
2015	$46,893	$14,142	$61,035
2016	-$23,447	-$7,071	-$30,518
2017	-$46,893	-$14,142	-$61,035
2018	-$82,063	-$24,748	-$106,812
2019	-$58,617	-$17,677	-$76,294
2020	-$70,340	-$21,213	-$91,553
Average	***$371,949***	***$112,170***	***$484,120***

Source: RESI

Figure 124: Transportation Technology Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-500.8	-470.8	-971.6
2011	-462.0	-433.0	-895.1
2012	-420.8	-393.1	-813.9
2013	-386.4	-359.5	-745.8
2014	-344.1	-318.2	-662.3
2015	-306.7	-281.2	-587.9
2016	-271.2	-246.0	-517.3
2017	-239.3	-215.0	-454.3
2018	-209.0	-184.5	-393.4
2019	-202.1	-177.2	-379.3
2020	-192.7	-168.2	-360.9
Average	***-321.4***	***-295.2***	***-616.5***

Source: RESI

Figure 125: Transportation Technology Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$20,727,686	-$19,036,718	-$39,764,404
2011	-$20,282,272	-$18,627,640	-$38,909,912
2012	-$19,693,688	-$18,087,074	-$37,780,762
2013	-$19,136,920	-$17,575,727	-$36,712,646
2014	-$18,261,998	-$16,772,181	-$35,034,180
2015	-$17,657,507	-$16,217,005	-$33,874,512
2016	-$17,053,016	-$15,661,828	-$32,714,844
2017	-$16,607,601	-$15,252,750	-$31,860,352
2018	-$16,257,633	-$14,931,332	-$31,188,965
2019	-$16,671,232	-$15,311,190	-$31,982,422
2020	-$16,703,047	-$15,340,410	-$32,043,457
Average	***-$18,095,691***	***-$16,619,441***	***-$34,715,132***

Source: RESI

Figure 126: Transportation Technology Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$7,802,709	-$7,166,163	-$14,968,872
2011	-$7,834,525	-$7,195,383	-$15,029,907
2012	-$7,540,233	-$6,925,099	-$14,465,332
2013	-$7,110,726	-$6,530,632	-$13,641,357
2014	-$6,482,373	-$5,953,540	-$12,435,913
2015	-$5,702,898	-$5,237,654	-$10,940,552
2016	-$4,875,699	-$4,477,939	-$9,353,638
2017	-$3,976,916	-$3,652,479	-$7,629,395
2018	-$3,101,995	-$2,848,933	-$5,950,928
2019	-$2,799,749	-$2,571,345	-$5,371,094
2020	-$2,433,873	-$2,235,317	-$4,669,189
Average	***-$5,423,790***	***-$4,981,317***	***-$10,405,107***

Source: RESI

Figure 127: Electric Vehicle Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	19.9	7.7	27.7
2011	20.4	8.0	28.3
2012	20.7	8.4	29.1
2013	20.6	8.6	29.3
2014	20.3	8.0	28.3
2015	20.2	8.2	28.4
2016	19.8	7.9	27.7
2017	20.6	8.4	29.0
2018	20.7	8.9	29.6
2019	20.4	8.6	29.0
2020	20.9	8.9	29.8
Average	***20.4***	***8.3***	***28.7***

Source: RESI

Figure 128: Electric Vehicle Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,495,837	$609,876	$2,105,713
2011	$1,517,515	$618,715	$2,136,230
2012	$1,560,873	$636,393	$2,197,266
2013	$1,560,873	$636,393	$2,197,266
2014	$1,560,873	$636,393	$2,197,266
2015	$1,517,515	$618,715	$2,136,230
2016	$1,474,158	$601,037	$2,075,195
2017	$1,560,873	$636,393	$2,197,266
2018	$1,604,231	$654,070	$2,258,301
2019	$1,647,588	$671,748	$2,319,336
2020	$1,604,231	$654,070	$2,258,301
Average	***$1,554,961***	***$633,982***	***$2,188,943***

Source: RESI

Figure 129: Electric Vehicle Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$682,882	$278,422	$961,304
2011	$726,240	$296,099	$1,022,339
2012	$791,276	$322,616	$1,113,892
2013	$812,955	$331,454	$1,144,409
2014	$812,955	$331,454	$1,144,409
2015	$856,312	$349,132	$1,205,444
2016	$856,312	$349,132	$1,205,444
2017	$910,509	$371,229	$1,281,738
2018	$943,027	$384,487	$1,327,515
2019	$975,546	$397,745	$1,373,291
2020	$997,224	$406,584	$1,403,809
Average	***$851,385***	***$347,123***	***$1,198,509***

Source: RESI

Figure 130: Electric Vehicle Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-9.9	-9.7	-19.7
2011	-8.9	-8.5	-17.4
2012	-7.4	-7.2	-14.6
2013	-6.7	-6.4	-13.1
2014	-5.8	-5.7	-11.6
2015	-5.4	-5.4	-10.9
2016	-4.4	-4.3	-8.6
2017	-3.7	-3.7	-7.4
2018	-3.0	-2.9	-5.8
2019	-2.8	-2.6	-5.4
2020	-3.0	-2.9	-5.9
Average	***-5.5***	***-5.4***	***-10.9***

Source: RESI

Figure 131: Electric Vehicle Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$386,134	-$376,805	-$762,939
2011	-$355,244	-$346,661	-$701,904
2012	-$308,908	-$301,444	-$610,352
2013	-$293,462	-$286,372	-$579,834
2014	-$262,571	-$256,227	-$518,799
2015	-$278,017	-$271,300	-$549,316
2016	-$278,017	-$271,300	-$549,316
2017	-$216,235	-$211,011	-$427,246
2018	-$216,235	-$211,011	-$427,246
2019	-$185,345	-$180,866	-$366,211
2020	-$247,126	-$241,155	-$488,281
Average	***-$275,209***	***-$268,559***	***-$543,768***

Source: RESI

Figure 132: Electric Vehicle Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$146,731	-$143,186	-$289,917
2011	-$139,008	-$135,650	-$274,658
2012	-$115,840	-$113,041	-$228,882
2013	-$100,395	-$97,969	-$198,364
2014	-$100,395	-$97,969	-$198,364
2015	-$77,227	-$75,361	-$152,588
2016	-$61,782	-$60,289	-$122,070
2017	-$30,891	-$30,144	-$61,035
2018	-$7,723	-$7,536	-$15,259
2019	$15,445	$15,072	$30,518
2020	$7,723	$7,536	$15,259
Average	***-$68,802***	***-$67,140***	***-$135,942***

Source: RESI

Figure 133: Low-Emitting Vehicles Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	33.1	12.3	45.4
2011	8.9	3.7	12.6
2012	8.5	3.2	11.7
2013	8.0	3.0	11.0
2014	7.9	2.6	10.5
2015	7.0	2.1	9.1
2016	6.9	1.9	8.8
2017	7.2	2.2	9.4
2018	7.1	2.2	9.3
2019	7.1	2.1	9.3
2020	6.9	1.9	8.7
Average	***9.9***	***3.4***	***13.3***

Source: RESI

Figure 134: Low-Emitting Vehicles Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,615,204	$894,318	$3,509,521
2011	$682,227	$233,300	$915,527
2012	$636,745	$217,747	$854,492
2013	$614,004	$209,970	$823,975
2014	$636,745	$217,747	$854,492
2015	$545,782	$186,640	$732,422
2016	$500,300	$171,087	$671,387
2017	$591,264	$202,194	$793,457
2018	$591,264	$202,194	$793,457
2019	$636,745	$217,747	$854,492
2020	$545,782	$186,640	$732,422
Average	***$781,460***	***$267,235***	***$1,048,695***

Source: RESI

Figure 135: Low-Emitting Vehicles Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,228,009	$419,940	$1,647,949
2011	$386,595	$132,203	$518,799
2012	$386,595	$132,203	$518,799
2013	$386,595	$132,203	$518,799
2014	$375,225	$128,315	$503,540
2015	$386,595	$132,203	$518,799
2016	$397,966	$136,092	$534,058
2017	$409,336	$139,980	$549,316
2018	$443,448	$151,645	$595,093
2019	$432,077	$147,757	$579,834
2020	$432,077	$147,757	$579,834
Average	***$478,593***	***$163,664***	***$642,256***

Source: RESI

Figure 136: Low-Emitting Vehicles Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-5.7	-5.4	-11.1
2011	-4.9	-4.7	-9.6
2012	-4.2	-3.9	-8.0
2013	-3.9	-3.6	-7.5
2014	-3.7	-3.5	-7.1
2015	-3.4	-3.2	-6.6
2016	-2.8	-2.4	-5.2
2017	-1.9	-1.9	-3.7
2018	-2.0	-1.8	-3.9
2019	-2.2	-1.9	-4.1
2020	-2.2	-2.0	-4.3
Average	***-3.3***	***-3.1***	***-6.5***

Source: RESI

Figure 137: Low-Emitting Vehicles Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$237,357	-$220,407	-$457,764
2011	-$221,533	-$205,713	-$427,246
2012	-$189,886	-$176,325	-$366,211
2013	-$189,886	-$176,325	-$366,211
2014	-$174,062	-$161,631	-$335,693
2015	-$189,886	-$176,325	-$366,211
2016	-$189,886	-$176,325	-$366,211
2017	-$158,238	-$146,938	-$305,176
2018	-$189,886	-$176,325	-$366,211
2019	-$158,238	-$146,938	-$305,176
2020	-$189,886	-$176,325	-$366,211
Average	***-$189,886***	***-$176,325***	***-$366,211***

Source: RESI

Figure 138: Low-Emitting Vehicles Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$87,031	-$80,816	-$167,847
2011	-$87,031	-$80,816	-$167,847
2012	-$71,207	-$66,122	-$137,329
2013	-$63,295	-$58,775	-$122,070
2014	-$71,207	-$66,122	-$137,329
2015	-$55,383	-$51,428	-$106,812
2016	-$47,471	-$44,081	-$91,553
2017	-$15,824	-$14,694	-$30,518
2018	-$15,824	-$14,694	-$30,518
2019	-$15,824	-$14,694	-$30,518
2020	-$23,736	-$22,041	-$45,776
Average	***-$50,348***	***-$46,753***	***-$97,101***

Source: RESI

Figure 139: Airport Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 140: Airport Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 141: Airport Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 142: Airport Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 143: Airport Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 144: Airport Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 145: Port Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.5	0.3	0.7
2011	0.0	0.0	0.0
2012	0.0	-0.1	-0.1
2013	-0.2	-0.1	-0.4
2014	0.0	0.1	0.1
2015	-0.2	-0.1	-0.3
2016	0.2	0.1	0.4
2017	0.0	-0.2	-0.2
2018	0.0	0.0	0.0
2019	-0.2	-0.1	-0.3
2020	-0.3	-0.3	-0.5
Average	***0.0***	***0.0***	***-0.1***

Source: RESI

Figure 146: Port Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$13,488	$17,029	$30,518
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$13,488	$17,029	$30,518
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$2,452***	***$3,096***	***$5,549***

Source: RESI

Figure 147: Port Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$6,744	-$8,515	-$15,259
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$6,744	$8,515	$15,259
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 148: Port Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 149: Port Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 150: Port Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 151: Freight and Freight Rail Strategies—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.5	0.5	0.9
2011	0.0	0.0	0.0
2012	0.0	-0.1	-0.1
2013	-0.2	-0.1	-0.4
2014	0.0	0.1	0.1
2015	-0.2	-0.1	-0.3
2016	0.2	0.1	0.3
2017	0.0	-0.2	-0.2
2018	0.0	0.0	-0.1
2019	-0.2	-0.1	-0.3
2020	-0.3	-0.3	-0.6
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 152: Freight and Freight Rail Strategies—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$18,356	$12,161	$30,518
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$18,356	$12,161	$30,518
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$3,338***	***$2,211***	***$5,549***

Source: RESI

Figure 153: Freight and Freight Rail Strategies—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$9,178	-$6,081	-$15,259
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$9,178	$6,081	$15,259
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 154: Freight and Freight Rail Strategies—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	-1.2	-1.2	-2.4
2013	-2.6	-2.5	-5.1
2014	-3.4	-3.5	-6.9
2015	-4.0	-3.9	-7.9
2016	-4.4	-4.5	-8.9
2017	-4.5	-4.5	-9.0
2018	-4.5	-4.5	-9.0
2019	-5.0	-5.0	-10.0
2020	-5.2	-5.3	-10.4
Average	***-3.2***	***-3.2***	***-6.3***

Source: RESI

Figure 155: Freight and Freight Rail Strategies—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$45,804	-$45,749	-$91,553
2013	-$122,144	-$121,997	-$244,141
2014	-$167,948	-$167,745	-$335,693
2015	-$244,288	-$243,993	-$488,281
2016	-$274,824	-$274,492	-$549,316
2017	-$305,360	-$304,992	-$610,352
2018	-$335,896	-$335,491	-$671,387
2019	-$366,432	-$365,990	-$732,422
2020	-$427,504	-$426,988	-$854,492
Average	***-$208,200***	***-$207,949***	***-$416,149***

Source: RESI

Figure 156: Freight and Freight Rail Strategies—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$15,268	-$15,250	-$30,518
2013	-$30,536	-$30,499	-$61,035
2014	-$53,438	-$53,374	-$106,812
2015	-$53,438	-$53,374	-$106,812
2016	-$53,438	-$53,374	-$106,812
2017	-$53,438	-$53,374	-$106,812
2018	-$45,804	-$45,749	-$91,553
2019	-$45,804	-$45,749	-$91,553
2020	-$45,804	-$45,749	-$91,553
Average	***-$36,088***	***-$36,044***	***-$72,132***

Source: RESI

Figure 157: Renewable Fuels Standard—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 158: Renewable Fuels Standard—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 159: Renewable Fuels Standard—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 160: Renewable Fuels Standard—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	-16.1	-15.0	-31.1
2014	-14.7	-13.7	-28.4
2015	-13.4	-12.6	-26.1
2016	-11.9	-10.7	-22.7
2017	-9.9	-9.1	-19.0
2018	-8.7	-7.6	-16.3
2019	-8.0	-7.1	-15.0
2020	-7.5	-6.7	-14.2
Average	***-8.2***	***-7.5***	***-15.7***

Source: RESI

Figure 161: Renewable Fuels Standard—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	-$812,744	-$743,653	-$1,556,396
2014	-$780,872	-$714,490	-$1,495,361
2015	-$796,808	-$729,071	-$1,525,879
2016	-$764,936	-$699,908	-$1,464,844
2017	-$669,319	-$612,420	-$1,281,738
2018	-$669,319	-$612,420	-$1,281,738
2019	-$637,446	-$583,257	-$1,220,703
2020	-$637,446	-$583,257	-$1,220,703
Average	***-$524,444***	***-$479,861***	***-$1,004,306***

Source: RESI

Figure 162: Renewable Fuels Standard—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	-$211,154	-$193,204	-$404,358
2014	-$207,170	-$189,558	-$396,729
2015	-$199,202	-$182,268	-$381,470
2016	-$159,362	-$145,814	-$305,176
2017	-$127,489	-$116,651	-$244,141
2018	-$95,617	-$87,489	-$183,105
2019	-$71,713	-$65,616	-$137,329
2020	-$63,745	-$58,326	-$122,070
Average	***-$103,223***	***-$94,448***	***-$197,671***

Source: RESI

Figure 163: CAFÉ Standards: Model Years 2008-2011—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 164: CAFÉ Standards: Model Years 2008-2011—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 165: CAFÉ Standards: Model Years 2008-2011—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 166: CAFÉ Standards: Model Years 2008-2011—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-10.3	-9.9	-20.2
2011	-9.1	-8.6	-17.7
2012	-8.1	-7.5	-15.6
2013	-7.4	-6.8	-14.1
2014	-6.4	-6.0	-12.4
2015	-5.7	-5.3	-11.1
2016	-5.0	-4.6	-9.5
2017	-4.3	-4.0	-8.3
2018	-3.9	-3.4	-7.3
2019	-3.9	-3.3	-7.2
2020	-3.6	-3.2	-6.9
Average	***-6.2***	***-5.7***	***-11.9***

Source: RESI

Figure 167: CAFÉ Standards: Model Years 2008-2011—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$444,001	-$410,491	-$854,492
2011	-$396,430	-$366,510	-$762,939
2012	-$364,715	-$337,189	-$701,904
2013	-$364,715	-$337,189	-$701,904
2014	-$317,144	-$293,208	-$610,352
2015	-$348,858	-$322,529	-$671,387
2016	-$317,144	-$293,208	-$610,352
2017	-$317,144	-$293,208	-$610,352
2018	-$317,144	-$293,208	-$610,352
2019	-$285,429	-$263,887	-$549,316
2020	-$285,429	-$263,887	-$549,316
Average	***-$341,650***	***-$315,865***	***-$657,515***

Source: RESI

Figure 168: CAFÉ Standards: Model Years 2008-2011—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$142,715	-$131,944	-$274,658
2011	-$134,786	-$124,613	-$259,399
2012	-$118,929	-$109,953	-$228,882
2013	-$107,036	-$98,958	-$205,994
2014	-$95,143	-$87,962	-$183,105
2015	-$87,214	-$80,632	-$167,847
2016	-$55,500	-$51,311	-$106,812
2017	-$47,572	-$43,981	-$91,553
2018	-$31,714	-$29,321	-$61,035
2019	-$23,786	-$21,991	-$45,776
2020	-$23,786	-$21,991	-$45,776
Average	***-$78,926***	***-$72,969***	***-$151,894***

Source: RESI

Figure 169: Promoting Hybrid and Electric Vehicles—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	2.0	0.7	2.7
2014	2.7	0.9	3.6
2015	2.2	0.7	2.8
2016	2.1	0.6	2.7
2017	2.4	1.0	3.4
2018	2.3	1.0	3.3
2019	2.3	1.0	3.3
2020	2.1	0.6	2.7
Average	***1.6***	***0.6***	***2.2***

Source: RESI

Figure 170: Promoting Hybrid and Electric Vehicles—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$156,756	$56,867	$213,623
2014	$223,937	$81,239	$305,176
2015	$179,150	$64,991	$244,141
2016	$134,362	$48,743	$183,105
2017	$223,937	$81,239	$305,176
2018	$179,150	$64,991	$244,141
2019	$223,937	$81,239	$305,176
2020	$179,150	$64,991	$244,141
Average	***$136,398***	***$49,482***	***$185,880***

Source: RESI

Figure 171: Promoting Hybrid and Electric Vehicles—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$89,575	$32,495	$122,070
2014	$100,772	$36,557	$137,329
2015	$111,969	$40,619	$152,588
2016	$111,969	$40,619	$152,588
2017	$156,756	$56,867	$213,623
2018	$111,969	$40,619	$152,588
2019	$123,165	$44,681	$167,847
2020	$134,362	$48,743	$183,105
Average	***$85,503***	***$31,018***	***$116,522***

Source: RESI

Figure 172: Promoting Hybrid and Electric Vehicles—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	50.8	49.5	100.3
2014	45.1	43.9	89.0
2015	40.7	39.5	80.2
2016	36.9	36.2	73.1
2017	34.7	33.8	68.5
2018	31.8	31.3	63.1
2019	29.8	29.5	59.2
2020	28.9	28.3	57.2
Average	***27.2***	***26.5***	***53.7***

Source: RESI

Figure 173: Promoting Hybrid and Electric Vehicles—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	-$1,003,083	-$980,560	-$1,983,643
2014	-$1,280,859	-$1,252,100	-$2,532,959
2015	-$1,543,204	-$1,508,554	-$3,051,758
2016	-$1,728,388	-$1,689,580	-$3,417,969
2017	-$1,820,981	-$1,780,094	-$3,601,074
2018	-$1,944,437	-$1,900,778	-$3,845,215
2019	-$2,006,165	-$1,961,120	-$3,967,285
2020	-$2,037,029	-$1,991,291	-$4,028,320
Average	***-$1,214,922***	***-$1,187,643***	***-$2,402,566***

Source: RESI

Figure 174: Promoting Hybrid and Electric Vehicles—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$671,294	$656,221	$1,327,515
2014	$632,714	$618,507	$1,251,221
2015	$601,850	$588,336	$1,190,186
2016	$555,553	$543,079	$1,098,633
2017	$532,405	$520,451	$1,052,856
2018	$486,109	$475,194	$961,304
2019	$447,529	$437,481	$885,010
2020	$439,813	$429,938	$869,751
Average	***$397,024***	***$388,110***	***$785,134***

Source: RESI

Figure 175: PAYD Insurance in Maryland—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 176: PAYD Insurance in Maryland—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 177: PAYD Insurance in Maryland—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 178: PAYD Insurance in Maryland—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-0.2	-0.2	-0.5
2011	0.0	-0.1	-0.1
2012	-0.2	-0.3	-0.5
2013	-0.5	-0.3	-0.7
2014	0.2	0.1	0.3
2015	0.0	-0.1	-0.1
2016	0.2	0.3	0.6
2017	0.0	-0.2	-0.2
2018	0.0	0.0	0.0
2019	0.0	0.1	0.1
2020	0.3	0.3	0.6
2021	0.0	0.2	0.2
2022	0.0	0.2	0.2
2023	-0.1	-0.1	-0.2
2024	-0.4	-0.2	-0.6
2025	0.0	0.1	0.1
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 179: PAYD Insurance in Maryland—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$27,271	-$3,247	-$30,518
2011	-$27,271	-$3,247	-$30,518
2012	-$54,542	-$6,493	-$61,035
2013	-$54,542	-$6,493	-$61,035
2014	$0	$0	$0
2015	-$54,542	-$6,493	-$61,035
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$54,542	$6,493	$61,035
2020	$54,542	$6,493	$61,035
2021	$0	$0	$0
2022	$0	$0	$0
2023	$0	$0	$0
2024	-$54,542	-$6,493	-$61,035
2025	$0	$0	$0
Average	***-$10,227***	***-$1,217***	***-$11,444***

Source: RESI

Figure 180: PAYD Insurance in Maryland—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$13,636	-$1,623	-$15,259
2011	-$13,636	-$1,623	-$15,259
2012	-$13,636	-$1,623	-$15,259
2013	$0	$0	$0
2014	$13,636	$1,623	$15,259
2015	$0	$0	$0
2016	$13,636	$1,623	$15,259
2017	$13,636	$1,623	$15,259
2018	$0	$0	$0
2019	$13,636	$1,623	$15,259
2020	$13,636	$1,623	$15,259
2021	$27,271	$3,247	$30,518
2022	$54,542	$6,493	$61,035
2023	$27,271	$3,247	$30,518
2024	$27,271	$3,247	$30,518
2025	$0	$0	$0
Average	***$10,227***	***$1,217***	***$11,444***

Source: RESI

A.3 Agriculture and Forestry

Figure 181: Managing Forests to Capture Carbon—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	96.1	291.7	387.8
2011	95.3	288.0	383.4
2012	93.4	284.1	377.5
2013	91.1	280.3	371.4
2014	88.3	274.4	362.7
2015	84.7	268.7	353.4
2016	82.4	263.9	346.3
2017	80.0	259.4	339.5
2018	77.8	254.1	331.9
2019	76.0	252.1	328.1
2020	74.9	249.4	324.3
Average	***85.5***	***269.6***	***355.1***

Source: RESI

Figure 182: Managing Forests to Capture Carbon—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$536,144	$1,691,639	$2,227,783
2011	$543,488	$1,714,812	$2,258,301
2012	$514,111	$1,622,120	$2,136,230
2013	$470,044	$1,483,081	$1,953,125
2014	$418,633	$1,320,869	$1,739,502
2015	$352,533	$1,112,311	$1,464,844
2016	$293,778	$926,926	$1,220,703
2017	$264,400	$834,233	$1,098,633
2018	$235,022	$741,540	$976,563
2019	$220,333	$695,194	$915,527
2020	$176,267	$556,155	$732,422
Average	***$365,887***	***$1,154,444***	***$1,520,330***

Source: RESI

Figure 183: Managing Forests to Capture Carbon—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$389,255	$1,228,176	$1,617,432
2011	$455,355	$1,436,735	$1,892,090
2012	$495,750	$1,564,187	$2,059,937
2013	$525,127	$1,656,879	$2,182,007
2014	$536,144	$1,691,639	$2,227,783
2015	$543,488	$1,714,812	$2,258,301
2016	$554,505	$1,749,572	$2,304,077
2017	$547,161	$1,726,399	$2,273,560
2018	$558,177	$1,761,159	$2,319,336
2019	$543,488	$1,714,812	$2,258,301
2020	$532,472	$1,680,053	$2,212,524
Average	***$516,448***	***$1,629,493***	***$2,145,941***

Source: RESI

Figure 184: Managing Forests to Capture Carbon—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	24.2	23.6	47.8
2013	24.7	24.0	48.7
2014	24.6	23.9	48.5
2015	24.2	23.4	47.6
2016	23.8	23.2	47.0
2017	23.9	23.0	46.9
2018	23.3	22.8	46.1
2019	22.9	22.2	45.0
2020	22.3	21.6	43.9
Average	***19.4***	***18.9***	***38.3***

Source: RESI

Figure 185: Managing Forests to Capture Carbon—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$712,505	$691,304	$1,403,809
2013	$712,505	$691,304	$1,403,809
2014	$743,484	$721,360	$1,464,844
2015	$681,527	$661,247	$1,342,773
2016	$650,548	$631,190	$1,281,738
2017	$650,548	$631,190	$1,281,738
2018	$619,570	$601,134	$1,220,703
2019	$650,548	$631,190	$1,281,738
2020	$588,591	$571,077	$1,159,668
Average	***$546,348***	***$530,090***	***$1,076,438***

Source: RESI

Figure 186: Managing Forests to Capture Carbon—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$178,126	$172,826	$350,952
2013	$216,849	$210,397	$427,246
2014	$232,339	$225,425	$457,764
2015	$263,317	$255,482	$518,799
2016	$271,062	$262,996	$534,058
2017	$286,551	$278,024	$564,575
2018	$286,551	$278,024	$564,575
2019	$294,296	$285,538	$579,834
2020	$271,062	$262,996	$534,058
Average	***$209,105***	***$202,883***	***$411,987***

Source: RESI

Figure 187: Creating Ecosystem Markets to Encourage GHG Emissions Reductions—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	1.2	0.4	1.6
2011	1.5	0.6	2.1
2012	1.2	0.5	1.7
2013	1.2	0.6	1.8
2014	1.2	0.4	1.6
2015	1.2	0.4	1.6
2016	1.1	0.4	1.6
2017	1.2	0.3	1.5
2018	1.1	0.5	1.6
2019	0.9	0.4	1.3
2020	0.6	0.0	0.6
Average	***1.1***	***0.4***	***1.5***

Source: RESI

Figure 188: Creating Ecosystem Markets to Encourage GHG Emissions Reductions—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$88,819	$33,252	$122,070
2011	$88,819	$33,252	$122,070
2012	$88,819	$33,252	$122,070
2013	$88,819	$33,252	$122,070
2014	$133,228	$49,877	$183,105
2015	$88,819	$33,252	$122,070
2016	$88,819	$33,252	$122,070
2017	$88,819	$33,252	$122,070
2018	$88,819	$33,252	$122,070
2019	$88,819	$33,252	$122,070
2020	$44,409	$16,626	$61,035
Average	***$88,819***	***$33,252***	***$122,070***

Source: RESI

Figure 189: Creating Ecosystem Markets to Encourage GHG Emissions Reductions—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$44,409	$16,626	$61,035
2011	$33,307	$12,469	$45,776
2012	$55,512	$20,782	$76,294
2013	$66,614	$24,939	$91,553
2014	$55,512	$20,782	$76,294
2015	$55,512	$20,782	$76,294
2016	$55,512	$20,782	$76,294
2017	$88,819	$33,252	$122,070
2018	$66,614	$24,939	$91,553
2019	$55,512	$20,782	$76,294
2020	$55,512	$20,782	$76,294
Average	***$57,530***	***$21,538***	***$79,068***

Source: RESI

Figure 190: Creating Ecosystem Markets to Encourage GHG Emissions Reductions—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	534.1	-113.5	420.6
2014	175.1	-459.7	-284.6
2015	-99.4	-722.7	-822.1
2016	-312.5	-925.3	-1,237.8
2017	-442.5	-1,047.4	-1,489.9
2018	-491.2	-1,090.0	-1,581.2
2019	-547.8	-1,143.8	-1,691.6
2020	-581.1	-1,177.0	-1,758.1
Average	***-160.5***	***-607.2***	***-767.7***

Source: RESI

Figure 191: Creating Ecosystem Markets to Encourage GHG Emissions Reductions—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$17,899,855	$67,732,469	$85,632,324
2014	$14,359,434	$54,335,634	$68,695,068
2015	$11,673,818	$44,173,350	$55,847,168
2016	$9,683,528	$36,642,156	$46,325,684
2017	$8,726,658	$33,021,389	$41,748,047
2018	$8,803,207	$33,311,051	$42,114,258
2019	$8,548,042	$32,345,513	$40,893,555
2020	$8,535,284	$32,297,236	$40,832,520
Average	$8,020,893	$30,350,800	$38,371,693

Source: RESI

Figure 192: Creating Ecosystem Markets to Encourage GHG Emissions Reductions—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$10,436,266	$39,490,492	$49,926,758
2014	$10,251,271	$38,790,477	$49,041,748
2015	$9,833,438	$37,209,409	$47,042,847
2016	$9,300,780	$35,193,849	$44,494,629
2017	$8,905,273	$33,697,266	$42,602,539
2018	$8,790,449	$33,262,774	$42,053,223
2019	$8,611,833	$32,586,897	$41,198,730
2020	$8,557,611	$32,381,720	$40,939,331
Average	***$6,789,720***	***$25,692,080***	***$32,481,800***

Source: RESI

Figure 193: Increasing Urban Trees to Capture Carbon—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	1.8	3.7	5.5
2011	1.8	3.8	5.6
2012	1.5	3.7	5.3
2013	1.8	3.8	5.7
2014	1.8	3.6	5.4
2015	1.5	3.1	4.7
2016	1.5	3.4	4.9
2017	1.3	3.1	4.4
2018	1.7	3.4	5.1
2019	1.6	3.3	4.8
2020	1.0	2.8	3.8
Average	***1.6***	***3.4***	***5.0***

Source: RESI

Figure 194: Increasing Urban Trees to Capture Carbon—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$28,874	$62,679	$91,553
2011	$28,874	$62,679	$91,553
2012	$28,874	$62,679	$91,553
2013	$38,498	$83,572	$122,070
2014	$48,123	$104,465	$152,588
2015	$19,249	$41,786	$61,035
2016	$38,498	$83,572	$122,070
2017	$19,249	$41,786	$61,035
2018	$19,249	$41,786	$61,035
2019	$38,498	$83,572	$122,070
2020	$19,249	$41,786	$61,035
Average	***$29,749***	***$64,578***	***$94,327***

Source: RESI

Figure 195: Increasing Urban Trees to Capture Carbon—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$19,249	$41,786	$61,035
2011	$14,437	$31,340	$45,776
2012	$14,437	$31,340	$45,776
2013	$24,061	$52,233	$76,294
2014	$24,061	$52,233	$76,294
2015	$14,437	$31,340	$45,776
2016	$14,437	$31,340	$45,776
2017	$19,249	$41,786	$61,035
2018	$19,249	$41,786	$61,035
2019	$19,249	$41,786	$61,035
2020	$19,249	$41,786	$61,035
Average	***$18,374***	***$39,887***	***$58,261***

Source: RESI

Figure 196: Increasing Urban Trees to Capture Carbon—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	121.0	113.2	234.2
2011	151.8	140.4	292.2
2012	175.0	161.0	336.0
2013	189.8	173.9	363.7
2014	199.9	181.3	381.2
2015	205.2	185.3	390.5
2016	209.3	187.6	396.9
2017	210.0	186.9	396.9
2018	208.9	185.1	394.1
2019	203.9	179.3	383.2
2020	198.2	173.3	371.5
Average	***188.4***	***169.8***	***358.2***

Source: RESI

Figure 197: Increasing Urban Trees to Capture Carbon—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$5,474,632	$4,931,862	$10,406,494
2011	$8,203,921	$7,390,561	$15,594,482
2012	$10,451,571	$9,415,373	$19,866,943
2013	$12,169,417	$10,962,907	$23,132,324
2014	$13,694,608	$12,336,886	$26,031,494
2015	$14,866,597	$13,392,681	$28,259,277
2016	$15,926,203	$14,347,234	$30,273,438
2017	$16,728,935	$15,070,381	$31,799,316
2018	$17,467,449	$15,735,676	$33,203,125
2019	$17,884,869	$16,111,713	$33,996,582
2020	$18,173,853	$16,372,046	$34,545,898
Average	***$13,731,096***	***$12,369,756***	***$26,100,852***

Source: RESI

Figure 198: Increasing Urban Trees to Capture Carbon—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,006,830	$1,807,867	$3,814,697
2011	$2,785,480	$2,509,320	$5,294,800
2012	$3,451,748	$3,109,532	$6,561,279
2013	$3,933,387	$3,543,420	$7,476,807
2014	$4,390,944	$3,955,614	$8,346,558
2015	$4,800,337	$4,324,418	$9,124,756
2016	$5,105,376	$4,599,214	$9,704,590
2017	$5,370,277	$4,837,853	$10,208,130
2018	$5,587,015	$5,033,102	$10,620,117
2019	$5,595,042	$5,040,334	$10,635,376
2020	$5,570,960	$5,018,639	$10,589,600
Average	***$4,417,945***	***$3,979,938***	***$8,397,883***

Source: RESI

Figure 199: Creating and Protecting Wetlands and Waterway Borders to Capture Carbon—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.5	1.6	2.1
2011	0.6	1.6	2.1
2012	0.5	1.6	2.2
2013	3.8	14.4	18.2
2014	4.0	14.3	18.3
2015	3.7	14.4	18.1
2016	3.9	14.8	18.7
2017	4.0	14.8	18.9
2018	3.9	15.0	18.9
2019	4.0	14.9	18.9
2020	3.5	14.3	17.7
Average	***3.0***	***11.1***	***14.0***

Source: RESI

Figure 200: Creating and Protecting Wetlands and Waterway Borders to Capture Carbon—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$12,868	$48,167	$61,035
2011	$12,868	$48,167	$61,035
2012	$6,434	$24,084	$30,518
2013	$83,643	$313,086	$396,729
2014	$96,511	$361,253	$457,764
2015	$77,209	$289,002	$366,211
2016	$77,209	$289,002	$366,211
2017	$90,077	$337,169	$427,246
2018	$77,209	$289,002	$366,211
2019	$90,077	$337,169	$427,246
2020	$77,209	$289,002	$366,211
Average	***$63,756***	***$238,646***	***$302,401***

Source: RESI

Figure 201: Creating and Protecting Wetlands and Waterway Borders to Capture Carbon—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$3,217	$12,042	$15,259
2011	$3,217	$12,042	$15,259
2012	$3,217	$12,042	$15,259
2013	$38,604	$144,501	$183,105
2014	$38,604	$144,501	$183,105
2015	$45,038	$168,585	$213,623
2016	$45,038	$168,585	$213,623
2017	$54,689	$204,710	$259,399
2018	$51,472	$192,668	$244,141
2019	$54,689	$204,710	$259,399
2020	$48,255	$180,626	$228,882
Average	***$35,095***	***$131,365***	***$166,460***

Source: RESI

Figure 202: Creating and Protecting Wetlands and Waterway Borders to Capture Carbon—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	58.2	94.7	152.9
2011	57.9	93.9	151.8
2012	57.0	92.8	149.8
2013	76.1	124.7	200.9
2014	19.7	32.5	52.2
2015	17.3	30.3	47.6
2016	16.0	29.1	45.1
2017	16.0	28.9	44.9
2018	15.7	28.6	44.3
2019	16.0	28.7	44.7
2020	16.1	28.4	44.4
Average	***33.3***	***55.7***	***89.0***

Source: RESI

Figure 203: Creating and Protecting Wetlands and Waterway Borders to Capture Carbon—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,540,927	$2,578,946	$4,119,873
2011	$1,552,341	$2,598,049	$4,150,391
2012	$1,540,927	$2,578,946	$4,119,873
2013	$2,043,155	$3,419,491	$5,462,646
2014	$513,642	$859,649	$1,373,291
2015	$410,914	$687,719	$1,098,633
2016	$342,428	$573,099	$915,527
2017	$365,257	$611,306	$976,563
2018	$365,257	$611,306	$976,563
2019	$410,914	$687,719	$1,098,633
2020	$410,914	$687,719	$1,098,633
Average	***$863,334***	***$1,444,904***	***$2,308,239***

Source: RESI

Figure 204: Creating and Protecting Wetlands and Waterway Borders to Capture Carbon—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$610,664	$1,022,027	$1,632,690
2011	$662,028	$1,107,992	$1,770,020
2012	$719,099	$1,203,508	$1,922,607
2013	$970,213	$1,623,781	$2,593,994
2014	$365,257	$611,306	$976,563
2015	$308,185	$515,789	$823,975
2016	$262,528	$439,376	$701,904
2017	$268,235	$448,928	$717,163
2018	$256,821	$429,824	$686,646
2019	$262,528	$439,376	$701,904
2020	$256,821	$429,824	$686,646
Average	***$449,307***	***$751,976***	***$1,201,283***

Source: RESI

Figure 205: Geological Opportunities to Store Carbon—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.2	0.1	0.4
2011	0.3	0.1	0.4
2012	0.0	0.0	0.0
2013	0.0	0.1	0.1
2014	0.3	0.1	0.4
2015	0.0	0.0	0.0
2016	0.2	0.3	0.5
2017	0.1	0.0	0.0
2018	0.2	0.3	0.5
2019	0.3	0.2	0.5
2020	0.3	0.2	0.5
Average	***0.2***	***0.1***	***0.3***

Source: RESI

Figure 206: Geological Opportunities to Store Carbon—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$17,386	$13,131	$30,518
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$34,772	$26,263	$61,035
2015	$0	$0	$0
2016	$0	$0	$0
2017	$34,772	$26,263	$61,035
2018	$0	$0	$0
2019	$34,772	$26,263	$61,035
2020	$34,772	$26,263	$61,035
Average	***$14,225***	***$10,744***	***$24,969***

Source: RESI

Figure 207: Geological Opportunities to Store Carbon—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	-$8,693	-$6,566	-$15,259
2012	$0	$0	$0
2013	$8,693	$6,566	$15,259
2014	$0	$0	$0
2015	$0	$0	$0
2016	$8,693	$6,566	$15,259
2017	$8,693	$6,566	$15,259
2018	$0	$0	$0
2019	$17,386	$13,131	$30,518
2020	$8,693	$6,566	$15,259
Average	***$3,951***	***$2,984***	***$6,936***

Source: RESI

Figure 208: Geological Opportunities to Store Carbon—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	73.7	64.9	138.6
2011	103.2	90.3	193.4
2012	121.0	105.5	226.6
2013	130.1	113.0	243.0
2014	134.9	115.5	250.4
2015	135.8	115.1	251.0
2016	134.9	113.3	248.2
2017	133.7	110.9	244.6
2018	129.8	106.2	236.0
2019	124.8	101.0	225.7
2020	120.8	96.5	217.2
Average	***122.1***	***102.9***	***225.0***

Source: RESI

Figure 209: Geological Opportunities to Store Carbon—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$6,639,031	$5,598,518	$12,237,549
2011	$10,049,605	$8,474,565	$18,524,170
2012	$12,549,590	$10,582,735	$23,132,324
2013	$14,321,102	$12,076,603	$26,397,705
2014	$15,695,265	$13,235,399	$28,930,664
2015	$16,721,749	$14,101,005	$30,822,754
2016	$17,516,446	$14,771,152	$32,287,598
2017	$18,244,918	$15,385,453	$33,630,371
2018	$18,774,716	$15,832,218	$34,606,934
2019	$19,138,952	$16,139,368	$35,278,320
2020	$19,470,076	$16,418,596	$35,888,672
Average	***$15,374,677***	***$12,965,056***	***$28,339,733***

Source: RESI

Figure 210: Geological Opportunities to Store Carbon—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,498,335	$1,263,506	$2,761,841
2011	$2,218,529	$1,870,826	$4,089,355
2012	$2,756,605	$2,324,572	$5,081,177
2013	$3,071,173	$2,589,838	$5,661,011
2014	$3,294,681	$2,778,317	$6,072,998
2015	$3,460,243	$2,917,931	$6,378,174
2016	$3,518,190	$2,966,796	$6,484,985
2017	$3,584,414	$3,022,641	$6,607,056
2018	$3,551,302	$2,994,718	$6,546,021
2019	$3,443,687	$2,903,969	$6,347,656
2020	$3,302,959	$2,785,298	$6,088,257
Average	***$3,063,647***	***$2,583,492***	***$5,647,139***

Source: RESI

Figure 211: Planting Forests in Maryland—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	96.0	94.4	190.3
2012	95.9	94.4	190.3
2013	50.3	49.5	99.8
2014	54.4	53.4	107.8
2015	52.1	51.2	103.4
2016	50.8	49.9	100.7
2017	49.1	48.1	97.2
2018	48.0	47.3	95.4
2019	47.1	46.6	93.7
2020	46.4	45.5	91.9
Average	***53.6***	***52.8***	***106.4***

Source: RESI

Figure 212: Planting Forests in Maryland—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$1,138,546	$1,119,755	$2,258,301
2012	$1,200,089	$1,180,282	$2,380,371
2013	$600,044	$590,141	$1,190,186
2014	$600,044	$590,141	$1,190,186
2015	$461,573	$453,955	$915,527
2016	$400,030	$393,427	$793,457
2017	$338,487	$332,900	$671,387
2018	$307,715	$302,636	$610,352
2019	$307,715	$302,636	$610,352
2020	$246,172	$242,109	$488,281
Average	***$509,129***	***$500,726***	***$1,009,854***

Source: RESI

Figure 213: Planting Forests in Maryland—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$823,138	$809,553	$1,632,690
2012	$1,000,074	$983,569	$1,983,643
2013	$692,359	$680,932	$1,373,291
2014	$715,438	$703,630	$1,419,067
2015	$715,438	$703,630	$1,419,067
2016	$715,438	$703,630	$1,419,067
2017	$700,052	$688,498	$1,388,550
2018	$715,438	$703,630	$1,419,067
2019	$692,359	$680,932	$1,373,291
2020	$684,666	$673,366	$1,358,032
Average	***$677,673***	***$666,488***	***$1,344,161***

Source: RESI

Figure 214: Planting Forests in Maryland—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.5	0.3	0.8
2012	0.5	0.4	0.9
2013	0.0	0.2	0.3
2014	0.2	0.1	0.3
2015	0.0	0.0	0.0
2016	0.5	0.3	0.7
2017	0.2	0.2	0.5
2018	0.2	0.2	0.4
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.2***	***0.2***	***0.4***

Source: RESI

Figure 215: Planting Forests in Maryland—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	-$16,613	-$13,904	-$30,518
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***-$1,510***	***-$1,264***	***-$2,774***

Source: RESI

Figure 216: Planting Forests in Maryland—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$8,307	$6,952	$15,259
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$8,307	$6,952	$15,259
2017	$16,613	$13,904	$30,518
2018	$0	$0	$0
2019	$8,307	$6,952	$15,259
2020	$0	$0	$0
Average	***$3,776***	***$3,160***	***$6,936***

Source: RESI

Figure 217: Expanded Use of Forests and Feedstocks for Energy Production—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	13.4	24.7	38.1
2014	20.2	36.8	57.0
2015	19.7	36.6	56.3
2016	12.8	24.3	37.1
2017	12.5	23.7	36.1
2018	12.3	23.7	36.0
2019	12.4	23.8	36.2
2020	12.4	23.5	35.8
Average	***10.5***	***19.7***	***30.3***

Source: RESI

Figure 218: Expanded Use of Forests and Feedstocks for Energy Production—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$594,315	$1,114,669	$1,708,984
2014	$870,247	$1,632,194	$2,502,441
2015	$827,796	$1,552,575	$2,380,371
2016	$509,413	$955,431	$1,464,844
2017	$488,187	$915,621	$1,403,809
2018	$466,962	$875,812	$1,342,773
2019	$488,187	$915,621	$1,403,809
2020	$466,962	$875,812	$1,342,773
Average	***$428,370***	***$803,430***	***$1,231,800***

Source: RESI

Figure 219: Expanded Use of Forests and Feedstocks for Energy Production—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$302,464	$567,287	$869,751
2014	$472,268	$885,764	$1,358,032
2015	$504,107	$945,478	$1,449,585
2016	$355,528	$666,811	$1,022,339
2017	$360,834	$676,763	$1,037,598
2018	$366,141	$686,716	$1,052,856
2019	$382,060	$716,573	$1,098,633
2020	$382,060	$716,573	$1,098,633
Average	***$284,133***	***$532,906***	***$817,039***

Source: RESI

Figure 220: Expanded Use of Forests and Feedstocks for Energy Production—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	2.9	2.5	5.3
2014	4.8	4.1	8.9
2015	5.9	5.2	11.1
2016	6.9	6.1	13.0
2017	8.2	7.1	15.2
2018	8.6	7.6	16.2
2019	8.7	7.5	16.3
2020	8.4	7.1	15.6
Average	***4.9***	***4.3***	***9.2***

Source: RESI

Figure 221: Expanded Use of Forests and Feedstocks for Energy Production—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$310,231	$269,603	$579,834
2014	$522,494	$454,069	$976,563
2015	$620,462	$539,206	$1,159,668
2016	$751,085	$652,724	$1,403,809
2017	$881,708	$766,241	$1,647,949
2018	$947,020	$822,999	$1,770,020
2019	$1,012,332	$879,758	$1,892,090
2020	$1,012,332	$879,758	$1,892,090
Average	***$550,697***	***$478,578***	***$1,029,275***

Source: RESI

Figure 222: Expanded Use of Forests and Feedstocks for Energy Production—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$81,640	$70,948	$152,588
2014	$138,787	$120,612	$259,399
2015	$204,099	$177,371	$381,470
2016	$253,083	$219,939	$473,022
2017	$302,067	$262,508	$564,575
2018	$326,559	$283,793	$610,352
2019	$359,215	$312,172	$671,387
2020	$351,051	$305,077	$656,128
Average	***$183,318***	***$159,311***	***$342,629***

Source: RESI

Figure 223: Conservation of Agricultural Land for GHG Benefits—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	108.7	40.1	148.8
2011	110.2	41.3	151.6
2012	109.9	41.0	150.9
2013	81.9	29.7	111.6
2014	79.6	27.8	107.4
2015	76.5	25.6	102.1
2016	75.0	24.4	99.4
2017	74.1	23.8	97.9
2018	73.2	23.8	97.0
2019	72.8	23.3	96.1
2020	72.0	22.6	94.6
Average	***84.9***	***29.4***	***114.3***

Source: RESI

Figure 224: Conservation of Agricultural Land for GHG Benefits—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$8,523,880	$2,950,729	$11,474,609
2011	$8,637,230	$2,989,968	$11,627,197
2012	$8,614,560	$2,982,120	$11,596,680
2013	$6,347,570	$2,197,352	$8,544,922
2014	$6,234,221	$2,158,113	$8,392,334
2015	$5,984,852	$2,071,789	$8,056,641
2016	$5,939,512	$2,056,093	$7,995,605
2017	$5,939,512	$2,056,093	$7,995,605
2018	$5,939,512	$2,056,093	$7,995,605
2019	$5,984,852	$2,071,789	$8,056,641
2020	$5,939,512	$2,056,093	$7,995,605
Average	***$6,735,019***	***$2,331,476***	***$9,066,495***

Source: RESI

Figure 225: Conservation of Agricultural Land for GHG Benefits—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$3,989,901	$1,381,192	$5,371,094
2011	$4,329,950	$1,498,908	$5,828,857
2012	$4,590,654	$1,589,156	$6,179,810
2013	$3,706,528	$1,283,096	$4,989,624
2014	$3,774,537	$1,306,639	$5,081,177
2015	$3,831,212	$1,326,259	$5,157,471
2016	$3,921,892	$1,357,649	$5,279,541
2017	$4,001,236	$1,385,116	$5,386,353
2018	$4,137,256	$1,432,202	$5,569,458
2019	$4,216,600	$1,459,669	$5,676,270
2020	$4,273,275	$1,479,288	$5,752,563
Average	***$4,070,276***	***$1,409,016***	***$5,479,292***

Source: RESI

Figure 226: Conservation of Agricultural Land for GHG Benefits—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	316.4	255.1	571.5
2011	320.1	259.3	579.4
2012	311.5	252.4	563.9
2013	223.2	179.1	402.3
2014	204.5	160.9	365.4
2015	188.6	145.9	334.5
2016	177.7	135.8	313.5
2017	170.8	128.8	299.6
2018	164.8	123.2	288.0
2019	162.7	121.7	284.3
2020	162.1	121.2	283.3
Average	***218.4***	***171.2***	***389.6***

Source: RESI

Figure 227: Conservation of Agricultural Land for GHG Benefits—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$75,151,950	$58,911,771	$134,063,721
2011	$75,254,593	$58,992,233	$134,246,826
2012	$74,450,554	$58,361,946	$132,812,500
2013	$55,324,700	$43,369,148	$98,693,848
2014	$53,904,802	$42,256,087	$96,160,889
2015	$52,621,761	$41,250,309	$93,872,070
2016	$51,732,187	$40,552,970	$92,285,156
2017	$51,116,327	$40,070,196	$91,186,523
2018	$50,637,325	$39,694,706	$90,332,031
2019	$50,397,825	$39,506,961	$89,904,785
2020	$50,226,753	$39,372,857	$89,599,609
Average	***$58,256,252***	***$45,667,199***	***$103,923,451***

Source: RESI

Figure 228: Conservation of Agricultural Land for GHG Benefits—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$13,146,887	$10,305,872	$23,452,759
2011	$15,028,679	$11,781,013	$26,809,692
2012	$16,149,201	$12,659,393	$28,808,594
2013	$13,352,173	$10,466,797	$23,818,970
2014	$13,163,994	$10,319,282	$23,483,276
2015	$12,984,368	$10,178,474	$23,162,842
2016	$12,787,635	$10,024,254	$22,811,890
2017	$12,693,546	$9,950,497	$22,644,043
2018	$12,616,563	$9,890,151	$22,506,714
2019	$12,505,367	$9,802,983	$22,308,350
2020	$12,436,938	$9,749,342	$22,186,279
Average	***$13,351,396***	***$10,466,187***	***$23,817,583***

Source: RESI

Figure 229: Buy Local for GHG Benefits—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	44.9	16.5	61.4
2011	45.4	17.0	62.4
2012	45.3	16.9	62.3
2013	15.9	5.6	21.5
2014	15.0	4.5	19.5
2015	13.8	3.8	17.6
2016	13.4	3.2	16.6
2017	13.7	3.5	17.2
2018	13.2	3.4	16.6
2019	13.2	3.6	16.8
2020	13.2	3.2	16.4
Average	***22.5***	***7.4***	***29.9***

Source: RESI

Figure 230: Buy Local for GHG Benefits—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$3,558,850	$1,171,374	$4,730,225
2011	$3,604,771	$1,186,489	$4,791,260
2012	$3,627,731	$1,194,046	$4,821,777
2013	$1,216,897	$400,534	$1,617,432
2014	$1,148,016	$377,863	$1,525,879
2015	$1,056,175	$347,634	$1,403,809
2016	$1,010,254	$332,519	$1,342,773
2017	$1,056,175	$347,634	$1,403,809
2018	$1,010,254	$332,519	$1,342,773
2019	$1,102,096	$362,748	$1,464,844
2020	$1,056,175	$347,634	$1,403,809
Average	***$1,767,945***	***$581,909***	***$2,349,854***

Source: RESI

Figure 231: Buy Local for GHG Benefits—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,653,143	$544,122	$2,197,266
2011	$1,790,905	$589,466	$2,380,371
2012	$1,917,187	$631,031	$2,548,218
2013	$838,052	$275,840	$1,113,892
2014	$769,171	$253,168	$1,022,339
2015	$757,691	$249,389	$1,007,080
2016	$757,691	$249,389	$1,007,080
2017	$769,171	$253,168	$1,022,339
2018	$803,611	$264,504	$1,068,115
2019	$792,131	$260,725	$1,052,856
2020	$803,611	$264,504	$1,068,115
Average	***$1,059,306***	***$348,664***	***$1,407,970***

Source: RESI

Figure 232: Buy Local for GHG Benefits—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	17.0	13.6	30.5
2011	17.2	13.8	30.9
2012	17.0	13.8	30.8
2013	15.7	12.9	28.7
2014	15.2	12.0	27.2
2015	13.5	10.6	24.1
2016	13.4	10.3	23.7
2017	12.8	9.7	22.4
2018	12.2	9.3	21.5
2019	11.4	8.6	20.1
2020	11.1	8.3	19.4
Average	14.2	11.2	25.4

Source: RESI

Figure 233: Buy Local for GHG Benefits—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$3,999,562	$3,141,552	$7,141,113
2011	$3,999,562	$3,141,552	$7,141,113
2012	$3,999,562	$3,141,552	$7,141,113
2013	$3,914,101	$3,074,424	$6,988,525
2014	$3,845,732	$3,020,723	$6,866,455
2015	$3,726,087	$2,926,745	$6,652,832
2016	$3,691,903	$2,899,894	$6,591,797
2017	$3,691,903	$2,899,894	$6,591,797
2018	$3,589,350	$2,819,341	$6,408,691
2019	$3,589,350	$2,819,341	$6,408,691
2020	$3,555,166	$2,792,490	$6,347,656
Average	***$3,782,025***	***$2,970,682***	***$6,752,708***

Source: RESI

Figure 234: Buy Local for GHG Benefits—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$692,232	$543,730	$1,235,962
2011	$786,239	$617,570	$1,403,809
2012	$871,699	$684,697	$1,556,396
2013	$897,338	$704,835	$1,602,173
2014	$922,976	$724,973	$1,647,949
2015	$931,522	$731,686	$1,663,208
2016	$931,522	$731,686	$1,663,208
2017	$922,976	$724,973	$1,647,949
2018	$940,068	$738,399	$1,678,467
2019	$922,976	$724,973	$1,647,949
2020	$897,338	$704,835	$1,602,173
Average	***$883,353***	***$693,851***	***$1,577,204***

Source: RESI

Figure 235: Nutrient Trading for GHG Benefits—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	4.6	1.8	6.4
2011	4.8	1.9	6.7
2012	4.9	2.1	7.0
2013	8.7	3.6	12.3
2014	8.7	3.4	12.0
2015	8.1	3.0	11.1
2016	7.9	2.9	10.8
2017	8.0	2.9	10.9
2018	7.8	2.8	10.7
2019	7.6	2.6	10.2
2020	7.1	2.1	9.2
Average	***7.1***	***2.6***	***9.7***

Source: RESI

Figure 236: Nutrient Trading for GHG Benefits—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$356,213	$132,068	$488,281
2011	$356,213	$132,068	$488,281
2012	$378,476	$140,323	$518,799
2013	$667,899	$247,628	$915,527
2014	$712,426	$264,137	$976,563
2015	$623,373	$231,120	$854,492
2016	$623,373	$231,120	$854,492
2017	$623,373	$231,120	$854,492
2018	$623,373	$231,120	$854,492
2019	$623,373	$231,120	$854,492
2020	$578,846	$214,611	$793,457
Average	***$560,630***	***$207,858***	***$768,488***

Source: RESI

Figure 237: Nutrient Trading for GHG Benefits—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$178,106	$66,034	$244,141
2011	$166,975	$61,907	$228,882
2012	$200,370	$74,288	$274,658
2013	$367,345	$136,196	$503,540
2014	$367,345	$136,196	$503,540
2015	$378,476	$140,323	$518,799
2016	$411,871	$152,704	$564,575
2017	$423,003	$156,831	$579,834
2018	$434,134	$160,958	$595,093
2019	$423,003	$156,831	$579,834
2020	$400,739	$148,577	$549,316
Average	***$341,033***	***$126,440***	***$467,474***

Source: RESI

Figure 238: Nutrient Trading for GHG Benefits—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	62.0	33.4	95.5
2011	63.0	34.0	97.0
2012	62.3	33.4	95.7
2013	60.9	32.5	93.3
2014	59.6	31.2	90.7
2015	57.3	29.2	86.5
2016	55.8	28.3	84.1
2017	55.1	27.5	82.6
2018	53.5	26.7	80.2
2019	52.2	25.5	77.7
2020	51.3	24.5	75.8
Average	***57.5***	***29.6***	***87.2***

Source: RESI

Figure 239: Nutrient Trading for GHG Benefits—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$4,451,328	$2,293,056	$6,744,385
2011	$4,491,612	$2,313,808	$6,805,420
2012	$4,451,328	$2,293,056	$6,744,385
2013	$4,330,478	$2,230,802	$6,561,279
2014	$4,270,052	$2,199,674	$6,469,727
2015	$4,108,918	$2,116,668	$6,225,586
2016	$3,988,068	$2,054,413	$6,042,480
2017	$3,947,784	$2,033,661	$5,981,445
2018	$3,867,217	$1,992,158	$5,859,375
2019	$3,867,217	$1,992,158	$5,859,375
2020	$3,826,934	$1,971,406	$5,798,340
Average	***$4,145,540***	***$2,135,533***	***$6,281,072***

Source: RESI

Figure 240: Nutrient Trading for GHG Benefits—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,953,750	$1,006,455	$2,960,205
2011	$2,124,955	$1,094,649	$3,219,604
2012	$2,245,806	$1,156,904	$3,402,710
2013	$2,326,373	$1,198,407	$3,524,780
2014	$2,386,798	$1,229,535	$3,616,333
2015	$2,457,294	$1,265,850	$3,723,145
2016	$2,497,578	$1,286,602	$3,784,180
2017	$2,588,216	$1,333,293	$3,921,509
2018	$2,628,499	$1,354,045	$3,982,544
2019	$2,648,641	$1,364,420	$4,013,062
2020	$2,668,783	$1,374,796	$4,043,579
Average	***$2,411,518***	***$1,242,269***	***$3,653,786***

Source: RESI

A.4 Recycling

Figure 241: Recycling and Source Reduction—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 242: Recycling and Source Reduction—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 243: Recycling and Source Reduction—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 244: Recycling and Source Reduction—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-46.8	-11.8	-58.6
2011	-40.7	-6.3	-47.0
2012	-35.1	-0.9	-36.0
2013	-30.0	3.8	-26.2
2014	-24.6	8.2	-16.4
2015	-21.5	10.8	-10.7
2016	-17.9	13.7	-4.2
2017	-14.9	15.7	0.8
2018	-13.3	17.2	3.9
2019	-12.8	17.3	4.5
2020	-12.8	17.2	4.4
Average	***-24.6***	***7.7***	***-16.9***

Source: RESI

Figure 245: Recycling and Source Reduction—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$6,497,957	$2,042,391	-$4,455,566
2011	-$5,073,747	$1,594,743	-$3,479,004
2012	-$3,605,031	$1,133,107	-$2,471,924
2013	-$2,447,860	$769,394	-$1,678,467
2014	-$1,246,184	$391,691	-$854,492
2015	-$534,079	$167,868	-$366,211
2016	$178,026	-$55,956	$122,070
2017	$801,118	-$251,802	$549,316
2018	$1,157,170	-$363,713	$793,457
2019	$1,335,197	-$419,669	$915,527
2020	$1,335,197	-$419,669	$915,527
Average	***-$1,327,105***	***$417,126***	***-$909,979***

Source: RESI

Figure 246: Recycling and Source Reduction—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$3,560,524	$1,119,118	-$2,441,406
2011	-$3,382,498	$1,063,162	-$2,319,336
2012	-$3,182,219	$1,000,212	-$2,182,007
2013	-$2,937,433	$923,272	-$2,014,160
2014	-$2,759,406	$867,317	-$1,892,090
2015	-$2,559,127	$804,366	-$1,754,761
2016	-$2,403,354	$755,405	-$1,647,949
2017	-$2,180,821	$685,460	-$1,495,361
2018	-$2,091,808	$657,482	-$1,434,326
2019	-$2,091,808	$657,482	-$1,434,326
2020	-$2,136,315	$671,471	-$1,464,844
Average	-$2,662,301	$836,795	-$1,825,506

Source: RESI

A.5 Buildings

Figure 247: Building Codes—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	14.1	5.4	19.5
2011	16.5	6.6	23.1
2012	15.6	6.1	21.7
2013	15.3	6.1	21.4
2014	14.9	5.6	20.5
2015	14.0	4.9	18.9
2016	14.2	5.1	19.3
2017	14.0	4.9	18.8
2018	14.0	5.2	19.2
2019	13.7	4.6	18.3
2020	13.8	4.8	18.6
Average	***14.6***	***5.4***	***19.9***

Source: RESI

Figure 248: Building Codes—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,092,207	$403,154	$1,495,361
2011	$1,270,526	$468,976	$1,739,502
2012	$1,203,657	$444,293	$1,647,949
2013	$1,181,367	$436,065	$1,617,432
2014	$1,203,657	$444,293	$1,647,949
2015	$1,114,497	$411,382	$1,525,879
2016	$1,114,497	$411,382	$1,525,879
2017	$1,114,497	$411,382	$1,525,879
2018	$1,114,497	$411,382	$1,525,879
2019	$1,159,077	$427,837	$1,586,914
2020	$1,114,497	$411,382	$1,525,879
Average	***$1,152,998***	***$425,593***	***$1,578,591***

Source: RESI

Figure 249: Building Codes—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$490,379	$181,008	$671,387
2011	$612,973	$226,260	$839,233
2012	$635,263	$234,488	$869,751
2013	$668,698	$246,829	$915,527
2014	$668,698	$246,829	$915,527
2015	$679,843	$250,943	$930,786
2016	$713,278	$263,284	$976,563
2017	$713,278	$263,284	$976,563
2018	$769,003	$283,854	$1,052,856
2019	$780,148	$287,967	$1,068,115
2020	$780,148	$287,967	$1,068,115
Average	***$682,883***	***$252,065***	***$934,948***

Source: RESI

Figure 250: Building Codes—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	52.8	46.4	99.3
2012	54.5	48.1	102.7
2013	54.9	48.5	103.4
2014	54.8	48.3	103.1
2015	54.4	47.8	102.1
2016	53.8	47.1	100.9
2017	53.3	46.5	99.7
2018	52.9	45.9	98.8
2019	52.1	45.2	97.3
2020	51.8	44.8	96.6
Average	***48.7***	***42.6***	***91.3***

Source: RESI

Figure 251: Building Codes—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$5,677,864	$4,971,550	$10,649,414
2012	$5,879,947	$5,148,495	$11,028,442
2013	$5,978,548	$5,234,831	$11,213,379
2014	$6,090,817	$5,333,133	$11,423,950
2015	$6,176,727	$5,408,356	$11,585,083
2016	$6,253,851	$5,475,886	$11,729,736
2017	$6,332,927	$5,545,125	$11,878,052
2018	$6,460,815	$5,657,105	$12,117,920
2019	$6,514,509	$5,704,119	$12,218,628
2020	$6,591,633	$5,771,649	$12,363,281
Average	***$5,632,512***	***$4,931,841***	***$10,564,353***

Source: RESI

Figure 252: Building Codes—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$1,778,970	$1,557,670	$3,336,639
2012	$1,945,176	$1,703,201	$3,648,376
2013	$2,055,492	$1,799,794	$3,855,286
2014	$2,185,821	$1,913,910	$4,099,731
2015	$2,297,602	$2,011,785	$4,309,387
2016	$2,398,400	$2,100,044	$4,498,444
2017	$2,493,096	$2,182,960	$4,676,056
2018	$2,600,483	$2,276,989	$4,877,472
2019	$2,658,814	$2,328,064	$4,986,877
2020	$2,721,782	$2,383,199	$5,104,980
Average	***$2,103,240***	***$1,841,601***	***$3,944,841***

Source: RESI

Figure 253: BeSMART—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	2.2	0.8	3.0
2012	1.0	0.4	1.3
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	-0.1	-0.1	-0.1
2016	-0.1	-0.1	-0.1
2017	-0.1	0.0	-0.1
2018	-0.1	-0.1	-0.1
2019	0.0	0.0	-0.1
2020	0.0	0.0	-0.1
Average	***0.3***	***0.1***	***0.3***

Source: RESI

Figure 254: BeSMART—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$179,261	$56,030	$235,291
2012	$77,424	$24,200	$101,624
2013	-$2,093	-$654	-$2,747
2014	-$2,790	-$872	-$3,662
2015	-$6,975	-$2,180	-$9,155
2016	-$6,975	-$2,180	-$9,155
2017	-$6,975	-$2,180	-$9,155
2018	-$6,975	-$2,180	-$9,155
2019	-$4,185	-$1,308	-$5,493
2020	-$4,185	-$1,308	-$5,493
Average	***$19,594***	***$6,124***	***$25,718***

Source: RESI

Figure 255: BeSMART—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$84,748	$26,489	$111,237
2012	$42,200	$13,190	$55,389
2013	$4,883	$1,526	$6,409
2014	$1,744	$545	$2,289
2015	-$349	-$109	-$458
2016	-$1,046	-$327	-$1,373
2017	-$1,395	-$436	-$1,831
2018	-$2,441	-$763	-$3,204
2019	-$2,093	-$654	-$2,747
2020	-$2,441	-$763	-$3,204
Average	***$11,255***	***$3,518***	***$14,773***

Source: RESI

Figure 256: BeSMART—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.1	0.1
2014	0.2	0.1	0.3
2015	0.0	0.1	0.1
2016	0.0	-0.1	-0.1
2017	0.0	0.0	0.0
2018	0.0	0.1	0.1
2019	-0.2	-0.2	-0.4
2020	-0.2	-0.2	-0.5
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 257: BeSMART—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$15,679	$14,839	$30,518
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$1,425***	***$1,349***	***$2,774***

Source: RESI

Figure 258: Main Street—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$7,839	$7,419	$15,259
2018	-$7,839	-$7,419	-$15,259
2019	$7,839	$7,419	$15,259
2020	$7,839	$7,419	$15,259
Average	***$1,425***	***$1,349***	***$2,774***

Source: RESI

Figure 259: Weatherization and Energy Efficiency for Low-Income Houses—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	24.2	9.1	33.3
2013	24.4	9.3	33.7
2014	24.2	9.2	33.4
2015	-0.4	-0.4	-0.8
2016	-1.0	-1.0	-2.1
2017	-1.4	-1.3	-2.7
2018	-1.4	-1.3	-2.7
2019	-1.2	-1.2	-2.4
2020	-1.0	-1.0	-2.0
Average	***6.0***	***1.9***	***8.0***

Source: RESI

Figure 260: Weatherization and Energy Efficiency for Low-Income Houses—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$1,966,457	$629,978	$2,596,436
2013	$1,981,018	$634,643	$2,615,662
2014	$1,981,712	$634,865	$2,616,577
2015	-$72,113	-$23,102	-$95,215
2016	-$137,291	-$43,983	-$181,274
2017	-$165,027	-$52,868	-$217,896
2018	-$169,187	-$54,201	-$223,389
2019	-$151,159	-$48,426	-$199,585
2020	-$131,744	-$42,206	-$173,950
Average	***$463,879***	***$148,609***	***$612,488***

Source: RESI

Figure 261: Weatherization and Energy Efficiency for Low-Income Houses—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$956,880	$306,548	$1,263,428
2013	$1,036,620	$332,094	$1,368,713
2014	$1,106,999	$354,640	$1,461,639
2015	$92,568	$29,655	$122,223
2016	$23,575	$7,553	$31,128
2017	-$21,148	-$6,775	-$27,924
2018	-$49,231	-$15,772	-$65,002
2019	-$61,018	-$19,548	-$80,566
2020	-$64,485	-$20,659	-$85,144
Average	***$274,614***	***$87,976***	***$362,590***

Source: RESI

Figure 262: Weatherization and Energy Efficiency for Low-Income Houses—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.8	0.8	1.6
2013	0.2	0.4	0.6
2014	0.7	0.7	1.5
2015	-0.5	-0.5	-0.9
2016	-0.3	-0.2	-0.5
2017	0.3	0.0	0.3
2018	0.3	0.3	0.6
2019	0.1	0.0	0.1
2020	0.4	0.0	0.4
Average	***0.2***	***0.1***	***0.3***

Source: RESI

Figure 263: Weatherization and Energy Efficiency for Low-Income Houses—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	-$51,756	-$39,797	-$91,553
2013	-$69,008	-$53,063	-$122,070
2014	-$34,504	-$26,531	-$61,035
2015	-$34,504	-$26,531	-$61,035
2016	-$34,504	-$26,531	-$61,035
2017	$0	$0	$0
2018	$0	$0	$0
2019	$34,504	$26,531	$61,035
2020	$34,504	$26,531	$61,035
Average	***-$14,115***	***-$10,854***	***-$24,969***

Source: RESI

Figure 264: Weatherization and Energy Efficiency for Low-Income Houses—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$17,252	$13,266	$30,518
2013	$8,626	$6,633	$15,259
2014	$8,626	$6,633	$15,259
2015	-$8,626	-$6,633	-$15,259
2016	-$8,626	-$6,633	-$15,259
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$1,568***	***$1,206***	***$2,774***

Source: RESI

A.6 Land Use

Figure 265: Reducing GHG Emissions from the Transportation Sector through Land Use and Location Efficiency—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 266: Reducing GHG Emissions from the Transportation Sector through Land Use and Location Efficiency—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 267: Reducing GHG Emissions from the Transportation Sector through Land Use and Location Efficiency—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 268: Reducing GHG Emissions from the Transportation Sector through Land Use and Location Efficiency—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	40.5	37.6	78.2
2011	118.9	110.7	229.6
2012	-1.1	-1.2	-2.3
2013	-3.6	-3.3	-6.9
2014	-4.0	-3.8	-7.8
2015	-4.9	-4.7	-9.6
2016	-4.6	-4.1	-8.8
2017	-3.8	-3.6	-7.3
2018	-3.3	-3.1	-6.3
2019	-2.4	-2.1	-4.6
2020	-2.0	-1.9	-3.8
Average	***11.8***	***11.0***	***22.8***

Source: RESI

Figure 269: Reducing GHG Emissions from the Transportation Sector through Land Use and Location Efficiency—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,387,047	$2,221,107	$4,608,154
2011	$6,971,442	$6,486,810	$13,458,252
2012	-$189,699	-$176,512	-$366,211
2013	-$363,590	-$338,314	-$701,904
2014	-$379,398	-$353,024	-$732,422
2015	-$442,631	-$411,861	-$854,492
2016	-$411,015	-$382,442	-$793,457
2017	-$347,782	-$323,605	-$671,387
2018	-$316,165	-$294,186	-$610,352
2019	-$221,316	-$205,930	-$427,246
2020	-$221,316	-$205,930	-$427,246
Average	***$587,780***	***$546,919***	***$1,134,699***

Source: RESI

Figure 270: Reducing GHG Emissions from the Transportation Sector through Land Use and Location Efficiency—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$932,687	$867,850	$1,800,537
2011	$2,805,966	$2,610,904	$5,416,870
2012	$158,083	$147,093	$305,176
2013	$31,617	$29,419	$61,035
2014	-$31,617	-$29,419	-$61,035
2015	-$94,850	-$88,256	-$183,105
2016	-$118,562	-$110,320	-$228,882
2017	-$110,658	-$102,965	-$213,623
2018	-$102,754	-$95,611	-$198,364
2019	-$86,945	-$80,901	-$167,847
2020	-$79,041	-$73,547	-$152,588
Average	***$300,357***	***$279,477***	***$579,834***

Source: RESI

Figure 271: Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 272: Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 273: Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 274: Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	34.5	33.4	67.9
2011	31.7	30.7	62.4
2012	28.6	28.1	56.7
2013	26.4	25.9	52.3
2014	24.5	23.7	48.2
2015	22.3	21.8	44.1
2016	21.1	20.8	41.9
2017	20.5	19.9	40.4
2018	19.0	18.8	37.8
2019	18.1	18.0	36.0
2020	17.2	16.9	34.0
Average	***24.0***	***23.4***	***47.4***

Source: RESI

Figure 275: Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$570,994	-$558,156	-$1,129,150
2011	-$709,885	-$693,924	-$1,403,809
2012	-$864,208	-$844,777	-$1,708,984
2013	-$987,666	-$965,459	-$1,953,125
2014	-$1,064,827	-$1,040,886	-$2,105,713
2015	-$1,172,853	-$1,146,483	-$2,319,336
2016	-$1,234,582	-$1,206,824	-$2,441,406
2017	-$1,265,447	-$1,236,994	-$2,502,441
2018	-$1,327,176	-$1,297,336	-$2,624,512
2019	-$1,327,176	-$1,297,336	-$2,624,512
2020	-$1,358,041	-$1,327,506	-$2,685,547
Average	***-$1,080,260***	***-$1,055,971***	***-$2,136,230***

Source: RESI

Figure 276: Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$432,104	$422,388	$854,492
2011	$416,672	$407,303	$823,975
2012	$408,955	$399,760	$808,716
2013	$378,091	$369,590	$747,681
2014	$347,226	$339,419	$686,646
2015	$331,794	$324,334	$656,128
2016	$308,646	$301,706	$610,352
2017	$300,929	$294,163	$595,093
2018	$293,213	$286,621	$579,834
2019	$270,065	$263,993	$534,058
2020	$254,633	$248,907	$503,540
Average	***$340,212***	***$332,562***	***$672,774***

Source: RESI

Figure 277: Land Use Planning GHG Benefits—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	118.7	43.8	162.5
2011	275.4	102.9	378.3
2012	0.8	0.4	1.2
2013	-3.8	-3.7	-7.5
2014	-6.3	-6.2	-12.5
2015	-7.3	-7.1	-14.4
2016	-7.4	-6.9	-14.2
2017	-6.1	-6.1	-12.3
2018	-5.4	-5.2	-10.6
2019	-4.2	-3.8	-8.0
2020	-2.8	-2.8	-5.7
Average	***32.0***	***9.6***	***41.5***

Source: RESI

Figure 278: Land Use Planning GHG Benefits —Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$9,649,523	$2,893,202	$12,542,725
2011	$22,468,596	$6,736,726	$29,205,322
2012	-$117,391	-$35,197	-$152,588
2013	-$563,476	-$168,946	-$732,422
2014	-$774,779	-$232,301	-$1,007,080
2015	-$892,170	-$267,498	-$1,159,668
2016	-$892,170	-$267,498	-$1,159,668
2017	-$798,257	-$239,340	-$1,037,598
2018	-$751,301	-$225,261	-$976,563
2019	-$563,476	-$168,946	-$732,422
2020	-$422,607	-$126,710	-$549,316
Average	***$2,394,772***	***$718,021***	***$3,112,793***

Source: RESI

Figure 279: Land Use Planning GHG Benefits —Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$4,496,067	$1,348,049	$5,844,116
2011	$10,917,343	$3,273,331	$14,190,674
2012	$716,084	$214,702	$930,786
2013	$316,955	$95,032	$411,987
2014	$23,478	$7,039	$30,518
2015	-$152,608	-$45,756	-$198,364
2016	-$258,260	-$77,434	-$335,693
2017	-$293,477	-$87,993	-$381,470
2018	-$328,694	-$98,552	-$427,246
2019	-$293,477	-$87,993	-$381,470
2020	-$258,260	-$77,434	-$335,693
Average	***$1,353,196***	***$405,727***	***$1,758,922***

Source: RESI

Figure 280: Land Use Planning GHG Benefits —Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	255.2	237.0	492.2
2011	252.3	234.7	487.1
2012	244.8	228.2	473.0
2013	237.2	221.7	458.8
2014	229.6	214.6	444.1
2015	-24.2	-22.7	-46.9
2016	-29.8	-27.7	-57.5
2017	-29.9	-27.9	-57.8
2018	-27.2	-24.9	-52.1
2019	-22.5	-20.4	-42.9
2020	-17.0	-15.4	-32.4
Average	***97.1***	***90.7***	***187.8***

Source: RESI

Figure 281: Land Use Planning GHG Benefits —Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$14,977,974	$13,983,208	$28,961,182
2011	$14,662,316	$13,688,514	$28,350,830
2012	$14,031,000	$13,099,127	$27,130,127
2013	$13,304,986	$12,421,332	$25,726,318
2014	$12,673,670	$11,831,945	$24,505,615
2015	-$2,588,396	-$2,416,487	-$5,004,883
2016	-$2,967,186	-$2,770,119	-$5,737,305
2017	-$2,967,186	-$2,770,119	-$5,737,305
2018	-$2,809,357	-$2,622,772	-$5,432,129
2019	-$2,399,001	-$2,239,671	-$4,638,672
2020	-$2,020,211	-$1,886,039	-$3,906,250
Average	***$4,899,874***	***$4,574,447***	***$9,474,321***

Source: RESI

Figure 282: Land Use Planning GHG Benefits —Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$5,823,891	$5,437,095	$11,260,986
2011	$6,179,006	$5,768,626	$11,947,632
2012	$6,392,075	$5,967,544	$12,359,619
2013	$6,510,447	$6,078,054	$12,588,501
2014	$6,668,276	$6,225,401	$12,893,677
2015	$118,372	$110,510	$228,882
2016	-$426,138	-$397,836	-$823,975
2017	-$749,688	-$699,897	-$1,449,585
2018	-$907,517	-$847,244	-$1,754,761
2019	-$899,625	-$839,877	-$1,739,502
2020	-$812,819	-$758,836	-$1,571,655
Average	***$2,536,025***	***$2,367,595***	***$4,903,620***

Source: RESI

Figure 283: GHG Benefits from Priority Funding Areas and Other Growth Boundaries—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	12,067.7	2,026.7	14,094.4
2011	10,209.2	303.6	10,512.8
2012	8,842.8	-975.8	7,867.0
2013	7,705.1	-2,017.5	5,687.6
2014	6,879.4	-2,671.5	4,208.0
2015	6,232.2	-3,161.7	3,070.5
2016	5,736.2	-3,513.5	2,222.7
2017	5,380.1	-3,738.8	1,641.3
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***7,881.6***	***-1,718.6***	***6,163.0***

Source: RESI

Figure 284: GHG Benefits from Priority Funding Areas and Other Growth Boundaries—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$601,829,438	$605,445,953	$1,207,275,391
2011	$474,252,551	$477,102,430	$951,354,980
2012	$377,725,559	$379,995,388	$757,720,947
2013	$297,993,808	$299,784,513	$597,778,320
2014	$244,002,587	$245,468,848	$489,471,436
2015	$202,912,059	$204,131,398	$407,043,457
2016	$172,972,718	$174,012,146	$346,984,863
2017	$153,134,862	$154,055,080	$307,189,941
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$315,602,948***	***$317,499,469***	***$633,102,417***

Source: RESI

Figure 285: GHG Benefits from Priority Funding Areas and Other Growth Boundaries—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$342,484,460	$344,542,518	$687,026,978
2011	$337,433,717	$339,461,424	$676,895,142
2012	$331,546,255	$333,538,584	$665,084,839
2013	$322,829,161	$324,769,106	$647,598,267
2014	$320,273,363	$322,197,950	$642,471,313
2015	$318,463,007	$320,376,715	$638,839,722
2016	$317,960,975	$319,871,667	$637,832,642
2017	$319,299,726	$321,218,462	$640,518,188
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$326,286,333***	***$328,247,053***	***$654,533,386***

Source: RESI

Figure 286: GHG Benefits from Priority Funding Areas and Other Growth Boundaries—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	1,479.6	1,363.6	2,843.1
2018	1,864.3	1,719.2	3,583.4
2019	2,033.2	1,874.2	3,907.4
2020	2,090.0	1,924.2	4,014.3
Average	***1,866.8***	***1,720.3***	***3,587.1***

Source: RESI

Figure 287: GHG Benefits from Priority Funding Areas and Other Growth Boundaries—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$97,324,072	$89,687,646	$187,011,719
2018	$121,432,744	$111,904,658	$233,337,402
2019	$132,677,105	$122,266,742	$254,943,848
2020	$136,996,973	$126,247,656	$263,244,629
Average	***$122,107,724***	***$112,526,676***	***$234,634,399***

Source: RESI

Figure 288: GHG Benefits from Priority Funding Areas and Other Growth Boundaries—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$46,224,170	$42,597,241	$88,821,411
2018	$63,344,821	$58,374,539	$121,719,360
2019	$73,564,801	$67,792,620	$141,357,422
2020	$79,734,906	$73,478,595	$153,213,501
Average	***$65,717,175***	***$60,560,749***	***$126,277,924***

Source: RESI

A.7 Innovative Initiatives

Figure 289: Leadership-by-Example-Local Government—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	123.3	45.3	168.6
2011	125.5	47.0	172.5
2012	124.3	46.1	170.4
2013	122.6	44.7	167.2
2014	120.0	42.4	162.4
2015	116.9	40.3	157.2
2016	114.6	38.9	153.6
2017	113.1	37.9	151.0
2018	111.2	37.1	148.4
2019	109.8	35.9	145.7
2020	109.2	35.3	144.5
Average	***117.3***	***41.0***	***158.3***

Source: RESI

Figure 290: Leadership-by-Example-Local Government—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$9,656,407	$3,374,599	$13,031,006
2011	$9,814,709	$3,429,920	$13,244,629
2012	$9,746,865	$3,406,211	$13,153,076
2013	$9,565,949	$3,342,986	$12,908,936
2014	$9,430,262	$3,295,568	$12,725,830
2015	$9,271,960	$3,240,247	$12,512,207
2016	$9,136,273	$3,192,829	$12,329,102
2017	$9,091,044	$3,177,023	$12,268,066
2018	$9,045,815	$3,161,216	$12,207,031
2019	$9,045,815	$3,161,216	$12,207,031
2020	$9,045,815	$3,161,216	$12,207,031
Average	***$9,350,083***	***$3,267,548***	***$12,617,631***

Source: RESI

Figure 291: Leadership-by-Example-Local Government—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$4,500,293	$1,572,705	$6,072,998
2011	$4,918,662	$1,718,911	$6,637,573
2012	$5,178,729	$1,809,796	$6,988,525
2013	$5,348,338	$1,869,069	$7,217,407
2014	$5,551,869	$1,940,197	$7,492,065
2015	$5,721,478	$1,999,469	$7,720,947
2016	$5,879,780	$2,054,791	$7,934,570
2017	$6,038,081	$2,110,112	$8,148,193
2018	$6,207,690	$2,169,385	$8,377,075
2019	$6,332,070	$2,212,851	$8,544,922
2020	$6,433,836	$2,248,415	$8,682,251
Average	***$5,646,439***	***$1,973,246***	***$7,619,684***

Source: RESI

Figure 292: Leadership-by-Example-Local Government—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2020	1,484.9	352.5	1,837.4
2021	289.1	1,417.1	1,706.1
2022	1,372.2	247.9	1,620.1
2023	1,340.2	218.3	1,558.5
2024	1,317.2	197.8	1,514.9
2025	1,300.6	183.6	1,484.2
Average	***1,184.0***	***436.2***	***1,620.2***

Source: RESI

Figure 293: Leadership-by-Example-Local Government—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2020	$79,885,067	$29,428,898	$109,313,965
2021	$73,685,165	$27,144,913	$100,830,078
2022	$69,358,615	$25,551,053	$94,909,668
2023	$66,325,569	$24,433,708	$90,759,277
2024	$64,095,389	$23,612,131	$87,707,520
2025	$62,534,262	$23,037,027	$85,571,289
Average	***$69,314,011***	***$25,534,621***	***$94,848,633***

Source: RESI

Figure 294: Leadership-by-Example-Local Government—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2020	$75,413,555	$27,781,635	$103,195,190
2021	$78,613,864	$28,960,599	$107,574,463
2022	$81,535,401	$30,036,865	$111,572,266
2023	$84,256,221	$31,039,189	$115,295,410
2024	$86,865,532	$32,000,435	$118,865,967
2025	$89,541,749	$32,986,327	$122,528,076
Average	***$82,704,387***	***$30,467,508***	***$113,171,895***

Source: RESI

Figure 295: Leadership-by-Example-Federal Government—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	77.3	28.6	105.9
2011	78.5	29.4	108.0
2012	77.9	28.8	106.8
2013	77.0	28.2	105.2
2014	75.4	27.0	102.5
2015	73.0	25.2	98.2
2016	72.0	24.6	96.6
2017	70.6	23.5	94.1
2018	69.1	22.8	91.9
2019	68.1	22.2	90.3
2020	67.3	21.2	88.5
Average	***73.3***	***25.6***	***98.9***

Source: RESI

Figure 296: Leadership-by-Example-Federal Government—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$6,061,465	$2,117,246	$8,178,711
2011	$6,151,935	$2,148,846	$8,300,781
2012	$6,106,700	$2,133,046	$8,239,746
2013	$6,016,230	$2,101,445	$8,117,676
2014	$5,970,996	$2,085,645	$8,056,641
2015	$5,790,056	$2,022,444	$7,812,500
2016	$5,744,822	$2,006,643	$7,751,465
2017	$5,699,587	$1,990,843	$7,690,430
2018	$5,654,352	$1,975,043	$7,629,395
2019	$5,654,352	$1,975,043	$7,629,395
2020	$5,563,882	$1,943,442	$7,507,324
Average	***$5,855,852***	***$2,045,426***	***$7,901,278***

Source: RESI

Figure 297: Leadership-by-Example-Federal Government—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,827,176	$987,521	$3,814,697
2011	$3,064,659	$1,070,473	$4,135,132
2012	$3,256,907	$1,137,625	$4,394,531
2013	$3,369,994	$1,177,125	$4,547,119
2014	$3,517,007	$1,228,476	$4,745,483
2015	$3,584,859	$1,252,177	$4,837,036
2016	$3,697,946	$1,291,678	$4,989,624
2017	$3,811,033	$1,331,179	$5,142,212
2018	$3,912,812	$1,366,729	$5,279,541
2019	$3,969,355	$1,386,480	$5,355,835
2020	$4,014,590	$1,402,280	$5,416,870
Average	***$3,547,849***	***$1,239,249***	***$4,787,098***

Source: RESI

Figure 298: Leadership-by-Example-Federal Government—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2020	977.8	280.6	1,258.4
2021	283.9	936.7	1,220.6
2022	939.1	246.1	1,185.2
2023	920.0	229.0	1,149.1
2024	903.0	214.4	1,117.4
2025	888.8	202.3	1,091.1
Average	***818.8***	***351.5***	***1,170.3***

Source: RESI

Figure 299: Leadership-by-Example-Federal Government—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2020	$64,437,579	$27,664,472	$92,102,051
2021	$62,814,896	$26,967,819	$89,782,715
2022	$61,192,214	$26,271,165	$87,463,379
2023	$59,569,531	$25,574,512	$85,144,043
2024	$58,117,657	$24,951,190	$83,068,848
2025	$56,921,996	$24,437,867	$81,359,863
Average	***$60,508,979***	***$25,977,837***	***$86,486,816***

Source: RESI

Figure 300: Leadership-by-Example-Federal Government—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2020	$48,114,673	$20,656,689	$68,771,362
2021	$51,285,310	$22,017,913	$73,303,223
2022	$53,762,036	$23,081,226	$76,843,262
2023	$55,704,985	$23,915,377	$79,620,361
2024	$57,413,071	$24,648,696	$82,061,768
2025	$58,971,701	$25,317,850	$84,289,551
Average	***$54,208,629***	***$23,272,958***	***$77,481,588***

Source: RESI

Figure 301: Leadership-by-Example-Maryland Colleges and Universities—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	74.4	27.5	101.9
2011	75.7	28.6	104.3
2012	75.0	27.8	102.9
2013	74.4	27.5	101.9
2014	72.9	26.2	99.1
2015	70.5	24.6	95.0
2016	69.2	23.8	93.0
2017	68.1	22.8	91.0
2018	67.1	22.4	89.4
2019	65.4	21.1	86.5
2020	65.2	20.6	85.8
Average	***70.7***	***24.8***	***95.5***

Source: RESI

Figure 302: Leadership-by-Example-Maryland Colleges and Universities—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$5,806,837	$2,036,180	$7,843,018
2011	$5,942,405	$2,083,718	$8,026,123
2012	$5,874,621	$2,059,949	$7,934,570
2013	$5,806,837	$2,036,180	$7,843,018
2014	$5,761,648	$2,020,335	$7,781,982
2015	$5,603,485	$1,964,874	$7,568,359
2016	$5,513,106	$1,933,183	$7,446,289
2017	$5,467,917	$1,917,337	$7,385,254
2018	$5,467,917	$1,917,337	$7,385,254
2019	$5,422,727	$1,901,491	$7,324,219
2020	$5,377,538	$1,885,646	$7,263,184
Average	***$5,640,458***	***$1,977,839***	***$7,618,297***

Source: RESI

Figure 303: Leadership-by-Example-Maryland Colleges and Universities—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,722,661	$954,707	$3,677,368
2011	$2,937,311	$1,029,974	$3,967,285
2012	$3,129,366	$1,097,319	$4,226,685
2013	$3,264,934	$1,144,856	$4,409,790
2014	$3,377,907	$1,184,471	$4,562,378
2015	$3,468,286	$1,216,162	$4,684,448
2016	$3,547,367	$1,243,892	$4,791,260
2017	$3,660,341	$1,283,507	$4,943,848
2018	$3,773,314	$1,323,121	$5,096,436
2019	$3,818,504	$1,338,967	$5,157,471
2020	$3,886,288	$1,362,735	$5,249,023
Average	***$3,416,934***	***$1,198,156***	***$4,615,090***

Source: RESI

Figure 304: Leadership-by-Example-Maryland Colleges and Universities—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2020	78.0	18.1	96.0
2021	14.4	74.4	88.8
2022	71.6	12.2	83.9
2023	69.7	10.6	80.3
2024	68.7	9.6	78.4
2025	68.4	9.3	77.7
Average	***61.8***	***22.4***	***84.2***

Source: RESI

Figure 305: Leadership-by-Example-Maryland Colleges and Universities—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2020	$78.0	$18.1	$96.0
2021	$14.4	$74.4	$88.8
2022	$71.6	$12.2	$83.9
2023	$69.7	$10.6	$80.3
2024	$68.7	$9.6	$78.4
2025	$68.4	$9.3	$77.7
Average	**$61.8**	**$22.4**	**$84.2**

Source: RESI

Figure 306: Leadership-by-Example-Maryland Colleges and Universities—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2020	$3,955,194	$1,431,158	$5,386,353
2021	$4,168,080	$1,508,189	$5,676,270
2022	$4,302,535	$1,556,840	$5,859,375
2023	$4,459,398	$1,613,600	$6,072,998
2024	$4,571,443	$1,654,143	$6,225,586
2025	$4,750,715	$1,719,011	$6,469,727
Average	***$4,367,894***	***$1,580,490***	***$5,948,385***

Source: RESI

Figure 307: State of Maryland Initiative to Lead by Example—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	16.5	8.2	24.7
2011	20.3	11.3	31.6
2012	15.7	9.6	25.3
2013	0.2	0.0	0.2
2014	-0.8	-0.9	-1.7
2015	-1.4	-1.4	-2.7
2016	-1.5	-1.5	-3.0
2017	-1.4	-1.4	-2.8
2018	-1.2	-1.2	-2.3
2019	-0.9	-0.9	-1.8
2020	-0.6	-0.6	-1.3
Average	***4.1***	***1.9***	***6.0***

Source: RESI

Figure 308: State of Maryland Initiative to Lead by Example—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$1,213,538	$571,741	$1,785,278
2011	$1,508,520	$710,718	$2,219,238
2012	$1,181,177	$556,494	$1,737,671
2013	$8,713	$4,105	$12,817
2014	-$75,302	-$35,477	-$110,779
2015	-$121,976	-$57,467	-$179,443
2016	-$131,933	-$62,158	-$194,092
2017	-$121,976	-$57,467	-$179,443
2018	-$103,306	-$48,671	-$151,978
2019	-$77,169	-$36,357	-$113,525
2020	-$56,009	-$26,388	-$82,397
Average	***$293,116***	***$138,097***	***$431,213***

Source: RESI

Figure 309: State of Maryland Initiative to Lead by Example—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$536,135	$252,592	$788,727
2011	$688,916	$324,573	$1,013,489
2012	$568,807	$267,985	$836,792
2013	$55,387	$26,095	$81,482
2014	-$3,734	-$1,759	-$5,493
2015	-$43,252	-$20,377	-$63,629
2016	-$65,967	-$31,079	-$97,046
2017	-$74,679	-$35,184	-$109,863
2018	-$75,613	-$35,624	-$111,237
2019	-$67,834	-$31,959	-$99,792
2020	-$57,876	-$27,268	-$85,144
Average	***$132,754***	***$62,545***	***$195,299***

Source: RESI

Figure 310: State of Maryland Initiative to Lead by Example—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	90.5	66.3	156.8
2011	168.5	138.3	306.8
2012	211.4	177.8	389.2
2013	237.2	201.4	438.7
2014	248.5	210.1	458.6
2015	249.9	210.1	460.0
2016	245.0	204.1	449.1
2017	235.1	193.2	428.4
2018	220.2	178.0	398.2
2019	199.0	156.8	355.8
2020	177.0	134.6	311.7
Average	***207.5***	***170.1***	***377.6***

Source: RESI

Figure 311: State of Maryland Initiative to Lead by Example—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$5,316,565	$4,357,508	$9,674,072
2011	$10,716,987	$8,783,746	$19,500,732
2012	$14,373,173	$11,780,391	$26,153,564
2013	$17,174,013	$14,075,987	$31,250,000
2014	$19,371,079	$15,876,723	$35,247,803
2015	$20,997,915	$17,210,093	$38,208,008
2016	$22,205,463	$18,199,811	$40,405,273
2017	$23,178,209	$18,997,084	$42,175,293
2018	$23,916,155	$19,601,911	$43,518,066
2019	$24,318,671	$19,931,817	$44,250,488
2020	$24,419,300	$20,014,294	$44,433,594
Average	***$18,726,139***	***$15,348,124***	***$34,074,263***

Source: RESI

Figure 312: State of Maryland Initiative to Lead by Example—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,171,909	$1,780,117	$3,952,026
2011	$4,209,646	$3,450,266	$7,659,912
2012	$5,610,066	$4,598,064	$10,208,130
2013	$6,582,813	$5,395,337	$11,978,149
2014	$7,303,987	$5,986,418	$13,290,405
2015	$7,740,046	$6,343,816	$14,083,862
2016	$7,916,147	$6,488,150	$14,404,297
2017	$7,924,533	$6,495,023	$14,419,556
2018	$7,706,503	$6,316,324	$14,022,827
2019	$7,119,501	$5,835,211	$12,954,712
2020	$6,389,941	$5,237,257	$11,627,197
Average	***$6,425,008***	***$5,265,999***	***$11,691,007***

Source: RESI

Figure 313: State of Maryland Carbon and Footprint Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 314: State of Maryland Carbon and Footprint Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 315: State of Maryland Carbon and Footprint Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 316: State of Maryland Carbon and Footprint Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	780.5	365.4	1,146.0
2011	583.3	168.6	752.0
2012	561.6	146.3	708.0
2013	549.1	134.3	683.4
2014	541.8	130.1	671.9
2015	540.3	131.7	672.0
2016	542.8	137.4	680.2
2017	548.5	145.7	694.2
2018	555.8	155.7	711.6
2019	565.1	165.5	730.6
2020	576.5	176.4	753.0
Average	***576.9***	***168.8***	***745.7***

Source: RESI

Figure 317: State of Maryland Carbon and Footprint Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$74,979,560	$21,944,268	$96,923,828
2011	$36,710,710	$10,744,124	$47,454,834
2012	$34,444,326	$10,080,821	$44,525,146
2013	$32,862,578	$9,617,891	$42,480,469
2014	$32,343,198	$9,465,884	$41,809,082
2015	$32,343,198	$9,465,884	$41,809,082
2016	$32,673,713	$9,562,616	$42,236,328
2017	$33,287,525	$9,742,260	$43,029,785
2018	$34,326,285	$10,046,274	$44,372,559
2019	$35,128,963	$10,281,194	$45,410,156
2020	$36,167,722	$10,585,207	$46,752,930
Average	***$37,751,616***	***$11,048,766***	***$48,800,382***

Source: RESI

Figure 318: State of Maryland Carbon and Footprint Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$29,923,360	$8,757,670	$38,681,030
2011	$22,864,516	$6,691,758	$29,556,274
2012	$22,829,104	$6,681,394	$29,510,498
2013	$22,687,455	$6,639,938	$29,327,393
2014	$22,958,949	$6,719,396	$29,678,345
2015	$23,395,700	$6,847,220	$30,242,920
2016	$23,867,864	$6,985,408	$30,853,271
2017	$24,517,089	$7,175,416	$31,692,505
2018	$25,402,395	$7,434,519	$32,836,914
2019	$26,193,269	$7,665,984	$33,859,253
2020	$27,161,204	$7,949,270	$35,110,474
Average	***$24,709,173***	***$7,231,634***	***$31,940,807***

Source: RESI

Figure 319: GHG Early Voluntary Reduction—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.5	0.3	0.8
2011	0.5	0.3	0.7
2012	0.2	0.1	0.4
2013	0.2	0.0	0.3
2014	0.5	0.2	0.6
2015	0.2	0.1	0.3
2016	0.7	0.3	1.0
2017	0.5	0.0	0.4
2018	0.2	-0.2	0.0
2019	0.5	0.2	0.7
2020	-0.1	-0.2	-0.3
Average	0.4	0.1	0.4

Source: RESI

Figure 320: GHG Early Voluntary Reduction—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$48,375	$12,661	$61,035
2011	$24,187	$6,330	$30,518
2012	$24,187	$6,330	$30,518
2013	$24,187	$6,330	$30,518
2014	$48,375	$12,661	$61,035
2015	$0	$0	$0
2016	$48,375	$12,661	$61,035
2017	$0	$0	$0
2018	$0	$0	$0
2019	$48,375	$12,661	$61,035
2020	$0	$0	$0
Average	***$24,187***	***$6,330***	***$30,518***

Source: RESI

Figure 321: GHG Early Voluntary Reduction—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$12,094	$3,165	$15,259
2011	$12,094	$3,165	$15,259
2012	$0	$0	$0
2013	$12,094	$3,165	$15,259
2014	$12,094	$3,165	$15,259
2015	$12,094	$3,165	$15,259
2016	$24,187	$6,330	$30,518
2017	$24,187	$6,330	$30,518
2018	$12,094	$3,165	$15,259
2019	$24,187	$6,330	$30,518
2020	$24,187	$6,330	$30,518
Average	***$15,392***	***$4,028***	***$19,420***

Source: RESI

Figure 322: GHG Early Voluntary Reduction—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	1.2	0.8	2.0
2012	1.4	1.3	2.7
2013	1.7	1.7	3.4
2014	2.7	2.1	4.9
2015	2.3	1.9	4.2
2016	3.0	2.4	5.4
2017	2.9	2.4	5.2
2018	2.8	2.5	5.3
2019	2.8	2.6	5.4
2020	2.3	1.9	4.3
Average	***2.1***	***1.8***	***3.9***

Source: RESI

Figure 323: GHG Early Voluntary Reduction—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$99,292	$83,814	$183,105
2012	$165,486	$139,690	$305,176
2013	$198,583	$167,628	$366,211
2014	$281,326	$237,473	$518,799
2015	$264,777	$223,504	$488,281
2016	$297,875	$251,442	$549,316
2017	$297,875	$251,442	$549,316
2018	$330,972	$279,380	$610,352
2019	$364,069	$307,318	$671,387
2020	$297,875	$251,442	$549,316
Average	***$236,194***	***$199,376***	***$435,569***

Source: RESI

Figure 324: GHG Early Voluntary Reduction—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$24,823	$20,953	$45,776
2012	$41,371	$34,922	$76,294
2013	$66,194	$55,876	$122,070
2014	$74,469	$62,860	$137,329
2015	$82,743	$69,845	$152,588
2016	$99,292	$83,814	$183,105
2017	$115,840	$97,783	$213,623
2018	$99,292	$83,814	$183,105
2019	$124,114	$104,767	$228,882
2020	$124,114	$104,767	$228,882
Average	***$77,477***	***$65,400***	***$142,878***

Source: RESI

Figure 325: Job Creation and Economic Development Initiatives—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 326: Job Creation and Economic Development Initiatives—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 327: Job Creation and Economic Development Initiatives—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 328: Job Creation and Economic Development Initiatives—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 329: Job Creation and Economic Development Initiatives—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 330: Job Creation and Economic Development Initiatives—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 331: Public Health Initiatives Related to Climate Changes—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	26.5	10.0	36.5
2011	27.3	10.7	37.9
2012	0.8	0.7	1.4
2013	-0.1	0.1	0.0
2014	0.1	-0.3	-0.2
2015	-0.4	-0.6	-1.0
2016	-0.2	-0.4	-0.6
2017	0.1	-0.2	-0.1
2018	0.3	0.0	0.3
2019	0.3	0.3	0.6
2020	0.4	0.2	0.6
Average	***5.0***	***1.9***	***6.8***

Source: RESI

Figure 332: Public Health Initiatives Related to Climate Changes—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$2,042,627	$764,990	$2,807,617
2011	$2,064,830	$773,305	$2,838,135
2012	$44,405	$16,630	$61,035
2013	-$44,405	-$16,630	-$61,035
2014	-$22,202	-$8,315	-$30,518
2015	-$88,810	-$33,260	-$122,070
2016	-$88,810	-$33,260	-$122,070
2017	-$44,405	-$16,630	-$61,035
2018	-$44,405	-$16,630	-$61,035
2019	$44,405	$16,630	$61,035
2020	$0	$0	$0
Average	***$351,203***	***$131,530***	***$482,733***

Source: RESI

Figure 333: Public Health Initiatives Related to Climate Changes—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$932,504	$349,235	$1,281,738
2011	$999,111	$374,180	$1,373,291
2012	$66,607	$24,945	$91,553
2013	$55,506	$20,788	$76,294
2014	-$11,101	-$4,158	-$15,259
2015	-$11,101	-$4,158	-$15,259
2016	-$44,405	-$16,630	-$61,035
2017	-$11,101	-$4,158	-$15,259
2018	-$22,202	-$8,315	-$30,518
2019	-$22,202	-$8,315	-$30,518
2020	$0	$0	$0
Average	***$175,601***	***$65,765***	***$241,366***

Source: RESI

Figure 334: Public Health Initiatives Related to Climate Changes—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-5.0	-4.3	-9.3
2011	25.6	23.9	49.5
2012	25.9	24.4	50.3
2013	25.6	24.1	49.8
2014	25.1	23.4	48.5
2015	23.9	22.1	46.0
2016	23.0	21.4	44.4
2017	22.7	20.9	43.6
2018	22.1	20.4	42.5
2019	21.3	20.0	41.3
2020	20.8	19.2	40.0
Average	***21.0***	***19.6***	***40.6***

Source: RESI

Figure 335: Public Health Initiatives Related to Climate Changes—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$505,055	-$471,508	-$976,563
2011	$1,167,940	$1,090,361	$2,258,301
2012	$1,215,288	$1,134,565	$2,349,854
2013	$1,199,506	$1,119,830	$2,319,336
2014	$1,183,723	$1,105,096	$2,288,818
2015	$1,104,808	$1,031,423	$2,136,230
2016	$1,073,242	$1,001,954	$2,075,195
2017	$1,041,676	$972,484	$2,014,160
2018	$1,010,110	$943,015	$1,953,125
2019	$1,041,676	$972,484	$2,014,160
2020	$978,544	$913,546	$1,892,090
Average	***$955,587***	***$892,114***	***$1,847,701***

Source: RESI

Figure 336: Public Health Initiatives Related to Climate Changes—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	-$149,938	-$139,979	-$289,917
2011	$449,815	$419,936	$869,751
2012	$528,729	$493,609	$1,022,339
2013	$552,404	$515,711	$1,068,115
2014	$568,187	$530,446	$1,098,633
2015	$583,970	$545,181	$1,129,150
2016	$591,861	$552,548	$1,144,409
2017	$607,644	$567,283	$1,174,927
2018	$615,536	$574,650	$1,190,186
2019	$615,536	$574,650	$1,190,186
2020	$615,536	$574,650	$1,190,186
Average	***$507,207***	***$473,517***	***$980,724***

Source: RESI

Figure 337: Title V Permits for GHG Sources—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	1.0	0.4	1.5
2013	0.8	0.4	1.3
2014	0.8	0.2	1.0
2015	0.8	0.3	1.0
2016	1.0	0.5	1.5
2017	0.8	0.2	1.0
2018	1.0	0.5	1.5
2019	0.5	0.1	0.6
2020	0.5	0.0	0.5
Average	***0.7***	***0.2***	***0.9***

Source: RESI

Figure 338: Title V Permits for GHG Sources—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$88,984	$33,086	$122,070
2013	$66,738	$24,815	$91,553
2014	$88,984	$33,086	$122,070
2015	$44,492	$16,543	$61,035
2016	$88,984	$33,086	$122,070
2017	$88,984	$33,086	$122,070
2018	$44,492	$16,543	$61,035
2019	$88,984	$33,086	$122,070
2020	$44,492	$16,543	$61,035
Average	***$58,649***	***$21,807***	***$80,455***

Source: RESI

Figure 339: Title V Permits for GHG Sources—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$44,492	$16,543	$61,035
2013	$33,369	$12,407	$45,776
2014	$33,369	$12,407	$45,776
2015	$33,369	$12,407	$45,776
2016	$55,615	$20,679	$76,294
2017	$44,492	$16,543	$61,035
2018	$44,492	$16,543	$61,035
2019	$44,492	$16,543	$61,035
2020	$33,369	$12,407	$45,776
Average	***$33,369***	***$12,407***	***$45,776***

Source: RESI

Figure 340: Title V Permits for GHG Sources—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	6.2	2.0	8.2
2012	5.5	1.6	7.1
2013	4.9	1.3	6.2
2014	4.7	0.7	5.4
2015	3.6	-0.2	3.4
2016	3.4	-0.2	3.2
2017	3.3	-0.3	3.0
2018	3.2	-0.3	2.9
2019	2.7	-0.5	2.1
2020	2.7	-0.7	2.0
Average	***3.7***	***0.3***	***4.0***

Source: RESI

Figure 341: Title V Permits for GHG Sources—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$507,891	$41,425	$549,316
2012	$423,243	$34,521	$457,764
2013	$310,378	$25,315	$335,693
2014	$310,378	$25,315	$335,693
2015	$112,865	$9,206	$122,070
2016	$112,865	$9,206	$122,070
2017	$112,865	$9,206	$122,070
2018	$112,865	$9,206	$122,070
2019	$112,865	$9,206	$122,070
2020	$56,432	$4,603	$61,035
Average	***$197,513***	***$16,110***	***$213,623***

Source: RESI

Figure 342: Title V Permits for GHG Sources—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$268,054	$21,863	$289,917
2012	$282,162	$23,014	$305,176
2013	$282,162	$23,014	$305,176
2014	$268,054	$21,863	$289,917
2015	$239,838	$19,562	$259,399
2016	$225,729	$18,411	$244,141
2017	$253,946	$20,713	$274,658
2018	$253,946	$20,713	$274,658
2019	$211,621	$17,260	$228,882
2020	$239,838	$19,562	$259,399
Average	***$229,577***	***$18,725***	***$248,302***

Source: RESI

Figure 343: Outreach and Public Education—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.0	0.0	0.0
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	0.0	0.0
2017	0.0	0.0	0.0
2018	0.0	0.0	0.0
2019	0.0	0.0	0.0
2020	0.0	0.0	0.0
Average	***0.0***	***0.0***	***0.0***

Source: RESI

Figure 344: Outreach and Public Education—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 345: Outreach and Public Education—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$0	$0	$0
2020	$0	$0	$0
Average	***$0***	***$0***	***$0***

Source: RESI

Figure 346: Outreach and Public Education—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	0.1	0.0	0.1
2013	0.0	0.0	0.0
2014	0.0	0.0	0.0
2015	0.0	0.0	0.0
2016	0.0	-0.1	-0.1
2017	0.3	0.1	0.4
2018	0.3	0.1	0.4
2019	0.0	0.2	0.3
2020	0.1	0.0	0.1
Average	***0.1***	***0.0***	***0.1***

Source: RESI

Figure 347: Outreach and Public Education—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$23,703	$6,815	$30,518
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$47,406	$13,629	$61,035
2020	$47,406	$13,629	$61,035
Average	***$10,774***	***$3,098***	***$13,872***

Source: RESI

Figure 348: Outreach and Public Education—Operation Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$0	$0	$0
2013	$0	$0	$0
2014	$0	$0	$0
2015	$0	$0	$0
2016	$0	$0	$0
2017	$11,851	$3,407	$15,259
2018	$0	$0	$0
2019	$23,703	$6,815	$30,518
2020	$11,851	$3,407	$15,259
Average	***$4,310***	***$1,239***	***$5,549***

Source: RESI

Figure 349: Prevention of Significant Deterioration Program—Investment Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	1.0	0.4	1.5
2013	0.8	0.4	1.3
2014	0.8	0.2	1.0
2015	0.8	0.3	1.0
2016	1.0	0.5	1.5
2017	0.8	0.2	1.0
2018	1.0	0.5	1.5
2019	0.5	0.1	0.6
2020	0.5	0.0	0.5
Average	***0.7***	***0.2***	***0.9***

Source: RESI

Figure 350: Prevention of Significant Deterioration Program—Investment Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$88,984	$33,086	$122,070
2013	$66,738	$24,815	$91,553
2014	$88,984	$33,086	$122,070
2015	$44,492	$16,543	$61,035
2016	$88,984	$33,086	$122,070
2017	$88,984	$33,086	$122,070
2018	$44,492	$16,543	$61,035
2019	$88,984	$33,086	$122,070
2020	$44,492	$16,543	$61,035
Average	***$58,649***	***$21,807***	***$80,455***

Source: RESI

Figure 351: Prevention of Significant Deterioration Program—Investment Phase, Wage Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$44,492	$16,543	$61,035
2013	$33,369	$12,407	$45,776
2014	$33,369	$12,407	$45,776
2015	$33,369	$12,407	$45,776
2016	$55,615	$20,679	$76,294
2017	$44,492	$16,543	$61,035
2018	$44,492	$16,543	$61,035
2019	$44,492	$16,543	$61,035
2020	$33,369	$12,407	$45,776
Average	***$33,369***	***$12,407***	***$45,776***

Source: RESI

Figure 352: Prevention of Significant Deterioration Program—Operation Phase, Employment Impacts

Fiscal Year	Direct	Spinoff	Total
2010	0.0	0.0	0.0
2011	0.0	0.0	0.0
2012	2.0	0.7	2.7
2013	1.7	0.7	2.4
2014	1.7	0.4	2.1
2015	0.9	-0.3	0.6
2016	0.8	-0.4	0.5
2017	0.9	-0.5	0.4
2018	0.8	-0.3	0.5
2019	0.5	-0.5	0.0
2020	0.5	-0.6	-0.1
Average	***0.9***	***-0.1***	***0.8***

Source: RESI

Figure 353: Prevention of Significant Deterioration Program—Operation Phase, Output Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$196,503	-$13,398	$183,105
2013	$163,753	-$11,165	$152,588
2014	$163,753	-$11,165	$152,588
2015	$0	$0	$0
2016	$0	$0	$0
2017	$0	$0	$0
2018	$0	$0	$0
2019	$65,501	-$4,466	$61,035
2020	$0	$0	$0
Average	***$53,592***	***-$3,654***	***$49,938***

Source: RESI

Figure 354: Prevention of Significant Deterioration Program—Operation Phase, Wages Impacts

Fiscal Year	Direct	Spinoff	Total
2010	$0	$0	$0
2011	$0	$0	$0
2012	$114,627	-$7,815	$106,812
2013	$114,627	-$7,815	$106,812
2014	$81,876	-$5,582	$76,294
2015	$81,876	-$5,582	$76,294
2016	$81,876	-$5,582	$76,294
2017	$65,501	-$4,466	$61,035
2018	$81,876	-$5,582	$76,294
2019	$81,876	-$5,582	$76,294
2020	$65,501	-$4,466	$61,035
Average	***$69,967***	***-$4,770***	***$65,197***

Source: RESI

Appendix B—Methodology

B.1 General Overview

Several Maryland state agencies have several strategies and subprograms in place to aid The State in meeting its greenhouse gas emissions reduction goals. In some cases, state government agencies associated with these subject areas are developing enhancements to their strategies and subprograms to bridge the gap between achieved emissions reductions and emissions reduction targets.

Greenhouse gas emission reductions are calculated for each strategy/subprogram, but data is supplied by each state agency that is responsible the given strategy. As such, RESI, in coordination with MDE, developed a methodology to analyze the reported data. MDE assisted in the development and finalization of all assumptions used in the economic modeling for the task order. Through this coordinated effort, RESI and MDE determined two phases to be modeled for each strategy and subprogram: an investment phase and an operation phase.

Investment Phase

The investment phase refers to the entire period during which a strategy and its subprograms are being developed, invested in, and enacted. In other words, it is the period during which the implementing entity or entities, whether it be state government agency or agencies, a business entity or entities required to comply, and/or some other individual or group(s), will invest funds and effort into the appropriate sector(s) of the economy to achieve the requirements outlined for the strategy and subprograms.

In all cases, the investment values were discussed with state agencies and data was provided that could best describe that period of time. Some strategies are categorized as “funded,” “awaiting funding,” or “potentially funded.” Those that are funded are currently being implemented and data could be established for those policies from previous years. Strategies listed as “awaiting funding” have approved funding but may have not started their investment phases yet. Yearly totals of investment are then calculated based on the data provided by agencies. Unless other data on spending and implementation of the plans was provided, the total amount of funding was split across the years the agency expects it will take for the policy to go from start to finish for investment. Some agencies provided specific data on what level of investment would take place in each year. Certain programs required a larger initial investment that decreases in future years. Finally, strategies listed as “potential funding” are those that if they had the adequate funding this is how they may effect Maryland’s economy. The programs that are listed at “potential funding” are not evaluated in this report.

In addition, it should be noted that “investment” is not necessarily modeled as a positive inflow of capital for all industry sectors identified in Section B.3. In some cases, “investment” is the outflow of capital for those industries for which strategy compliance is mandated. This causes an inflow of capital for all industry sectors experiencing a positive change due to other industries’ mandated compliance. In some cases, investment originates in the private sector. This may lead to increases or decreases in employment, output, or wages during the investment

phase. Interactions among agencies and their ability to impact Maryland's economy will determine the level of change to these economic indicators.
In other words, some industry sectors are more responsive to variations in the economy, which determines the degree to which employment, output, and wages are impacted. If a more sensitive sector experiences a negative change (or an outflow of capital), the associated negative impacts outweigh the positive change experienced by a less sensitive, benefitting sector (one experiencing an inflow of capital).

Operation Phase
The operation phase refers to the period during which a strategy and its subprograms have already been implemented and the "end user" cost savings (or other monetary benefits) are being realized. In other words, it is the period during which the goals of the strategy and subprograms have been achieved and individuals and/or business entities are realizing cost savings, increased income, etc.

In most cases, this phase is modeled based on the level of savings, increased earnings, or some other measure as calculated from data included in the strategy write-ups supplied by MDE, the implementing agencies, and external research. Therefore, the economic impacts represented are the total actual annual economic impacts unless otherwise specified.

An example of the steps undertaken by RESI and their results for one strategy with all of its subprograms for both phases can be found in Section B.2.

Exclusions and Limitations
Due to lack of data provided by certain agencies, some strategies have been modeled using all external data and assumptions. While impacts resulting from such inputs will not be as accurate as they could be, they will serve as a general frame of reference for potential impacts. Overall, many agencies were very helpful in providing accurate cost/funding data for both the investment and operation phases. For more detailed information regarding the steps undertaken and sources used to model specific strategies, please refer to Appendix C.

B.2 REMI PI+ Model

Overview
To achieve the most concise analysis of program interaction and other factors, RESI will use the Regional Economic Models, Inc. (REMI) PI+ model to analyze data for the 2012 report. The REMI model is a dynamic modeling tool used by various government agencies and state departments in economic policy analysis. REMI will help RESI to build from its base model in the previous report to create a sophisticated model that is calibrated to the specific demographic features of Maryland.

The REMI model features the ability to capture price effects, wage changes, and behavioral effects through time. The model will also allow RESI to capture the effects occurring between industries and minimize the potential for double counting in employment, output, and wages. The ability to capture effects across time will give MDE a detailed representation of the GGRA programs and their effects on Maryland in the longer term.

The model details the impacts based on two categories: direct and spinoff effects. The spinoff effects are defined as intermediate effects plus induced effects.
REMI defines the intermediate effects as the purchase of intermediate goods associated with production. For example, a company may be hired to manufacture blue recycling bins that will be used in office buildings associated with the *Recycling and Source Reduction* policy. The purchase of the bins would be considered a direct effect, but the purchase of the materials to produce the bins is considered an intermediate effect.

REMI defines the induced effects as the economic effects that occur from the spending of wages. For example, an employee hired under the *Voluntary Stationary Source Reductions* policy earns a wage, and with this new wage may go out to dinner once a week. The spending of the employee's wage on dinner is considered an induced effect.

Using the REMI model, RESI will create a dynamic impact analysis detailing the levels of employment, output, and wages associated with each policy for each year from 2008 to 2025.

Reading the Results
REMI uses a regional control based on historical Bureau of Economic Analysis data to forecast values for employment, wages, and output. When economic values are decreased or increased based on parameters from the user in the regional simulation, the forecast is then altered to reflect the changes made by the user.

REMI reports cumulative and non-cumulative results based on the different economic factors being reviewed. In REMI, the results that would be reported as non-cumulative would be population and employment. All other results are viewed as cumulative.

For example, for a policy that increases government spending in 2010 and 2011, the results report an increase of 100 jobs in 2010 and 120 jobs in 2011. These new jobs are the difference from the baseline for that year, not the subsequent year. Therefore, the 100 jobs in 2010 are 100 new jobs for 2010, and the 120 jobs in 2011 are 120 new jobs in 2011. The difference, 20 jobs, would be the estimated increase between the years in the simulation. The 100 jobs would be considered retained employment.

Wages and output are cumulative and build from one year to the next in the REMI model. If the previously mentioned policy notes that the wages in 2010 were $250,000 and then grew to $500,000 in 2011, this would be an increase of $500,000 from the previous year. The model has taken into account the change in the wages from the previous year, and the new number reported would be the increase on an annual basis. When reading this result you would say, "Wages in 2011 increased by $500,000."

Figure 355: Sampling of REMI PI+ Users

Academic Institutions	**State Government**
Arizona State University	Connecticut Department of Economic and Community Development
Ball State University	District of Columbia
Costal Rivers Water Planning and Policy Center	Empire State Development Corporation
Florida State University	Florida Agency for Workforce Innovation
Georgia State University	Florida Legislature
Massachusetts Institute of Technology	Hawaii Department of Business, Economic Development & Tourism
Michigan Small Business & Technology Development Center	Illinois Department of Commerce and Economic Opprotunity
Michigan Technological University	Illinois Department of Revenue
Pennsylvania State University	Indiana Department of Transportation
Southwestern Oklahoma State University	Iowa Department of Revenue
University of Southren Maine	
University New Hampshire	**Private Consulting Firms**
University of Arkansas at Little Rock	Alliance Transportation Group
University of California, Davis	Bechtel SAIC Company, LLC.
University of Connecticut	Cambridge Systematics, Inc.
University of Nevada, Las Vegas	CSA Planning
University of Pittsburgh	Economic & Policy Resources
University of South Dakota	Economic Development Research Group
University of Westren Florida	Economic Research Associates
University South Florida	ERG
York College of Pennsylvania	Ernst & Young
	HR&A Advisors, Inc.
Federal Government	ICF International
U.S. Army Corps of Engineers	Kavet, Rockler & Associates, Inc.
U.S. Environmental Protection Agency	NERA Economic Consulting
	Northern Economics
State Government	REMI-Northwest
Arizona Department of Commerce	RKG Associates, Inc.
Arizona Department of Planning	Stratus Consulting
Arizona Joint Legislative Budget Committee	Wilbur Smith Assoicates

Source: REMI

B.3 REMI PI+ Industry Sectors

RESI determined the industry sectors which would be affected by strategy implementation for both the investment phase and the operation phase for each strategy and subprogram. A complete list of these sectors can be found in Figures 356 and 357.

Figure 356: REMI PI+ Industry Codes—Investment Phase

Strategy	Subprogram	Code	Description
Energy			
3.1.1	Regional Greenhouse Gas Initiative	63	State Government Spending
3.1.2	Greenhouse Gas Reductions from Imported Power	-	*No Investment Costs Specified*
3.1.3	Greenhouse Gas New Source Performance Standard	63	State Government Spending
3.1.4	Maximum Achievable Control Technology (MACT)	63	State Government Spending
3.1.5	EmPOWER Maryland Empowering Finance Initiative	98 63	Investment Spending (Residential) State Government Spending
	EmPOWER Maryland Residential Incentives	98	Investment Spending (Residential)
	MEA Home Performance Rebate Program	63 98	State Government Spending Investment Spending (Residential)
	DHCD Weatherization	98	Investment Spending (Residential)
	Clean Energy Communities Grant	63 98	State Government Spending Investment Spending (Residential)
	Maryland Home Energy Loan Subprogram	98	Investment Spending (Residential)
	Energy Workforce Training	98	Investment Spending (Residential)
	State Energy Efficiency Appliance Rebate Program	98 63	Investment Spending (Residential) State Government Spending
3.1.6	Maryland Save Energy Now	63	State Government Spending
	Jane E. Lawton Conservation Loan Program	63	State Government Spending
	Energy Efficiency and Conservation Block Grant Program	63	State GovernmentSpending
	State Agencies Loan Program	63	State Government Spending
3.1.7	Energy Efficiency Appliances and Other Products	45	Residential Capital
3.1.8	Energy Efficiency in the Power Sector – General	X7809	Production costs, Electrical power distribution, transmission, and generation
3.1.9	Maryland Renewable Energy Portfolio Standard	EQP 13	Producer's Durable Equipment Investment, Electric distribution, transmission, and generation
3.1.10	Commercial Clean Energy Grant Program	63	State Government Spending
	Residential Clean Energy Grants Program	63	State Government Spending
	Clean Energy Incentive Tax Credit Program	63	State Government Spending
	Generating Clean Horizons Program	63	State Government Spending
	Project Sunburst	63	State Government Spending
	Biomass Programs	63	State Government Spending

Strategy	Subprogram	Code	Description
	Land-based Wind Programs	63	State Government Spending
3.1.11	Offshore Wind Initiatives to Support Renewable Energy	X7809	Production costs, Electrical power distribution, transmission, and generation
Transportation			
3.2.1	Maryland Clean Cars Program	63 601	State Government Spending Consumer Spending, autos
3.2.2	National Fuel Efficiency and Emissions Standards for Medium- and Heavy-Duty Trucks	X6653 X7653 X7851	Intermediate Demand, Motor vehicle parts manufacturing Value added (with no effect on sales or employment), Motor vehicle parts manufacturing Production costs, Motor vehicle manufacturing
3.2.3	Clean Fuel Standard	X6653 X7653 X7851	Intermediate Demand, Motor vehicle parts manufacturing Value added (with no effect on sales or employment), Motor vehicle parts manufacturing Production costs, Motor vehicle manufacturing
3.2.4	Transportation and Climate Initiative	63	State Government Spending
3.2.5	Charm City Circulator and Hampden Neighborhood Shuttle	-	*No Investment Spending Specified*
	Locally Operated Transit Systems	63 68	State Government Spending Government Spending including Non-Pecuniary (Amenity) Aspects
	Smart Card Implementation	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Transit-Oriented Development	-	*No Investment Spending Specified*
	Maryland Commuter Tax Credit	-	*No Investment Spending Specified*
	Guaranteed Ride Home	-	*No Investment Spending Specified*
	College Pass	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Ride Share	-	*No Investment Spending Specified*
	Commuter Connections – Washington, D.C. Region	-	*No Investment Spending Specified*
	Baltimore Collegetown Network	-	*No Investment Spending Specified*
	Hunt Valley Shuttle	-	*No Investment Specified*
	Kent Street Transit Plaza	-	*No Investment Specified*
	University of Maryland College Park Carpool Program and Shuttle Bus Service	-	*No Investment Specified*
	PlanMaryland	-	*No Investment Specified*
3.2.6	MARC East Baltimore Station	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Expanded Transit (Purple Line, Corridor Cities Transitway, Red Line)	68	Government Spending including Non-Pecuniary (Amenity) Aspects

Strategy	Subprogram	Code	Description
	MARC Growth and Investment Plan	68	Government Spending including Non-Pecuniary (Amenity) Aspects
3.2.7	MARC Station Parking Enhancements	63	State Government Spending
		68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Refurbishing MARC and Other Rail Vehicles	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Update on Maryland High Speed Rail	68	Government Spending including Non-Pecuniary (Amenity) Aspects
3.2.8	Bicycle/Pedestrian Enhancements	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Bike Racks on Buses, MARC, Subway, Light Rail	-	*No Investment Specified*
	Construction of Bike Lanes and Bike Paths	-	*No Investment Specified*
	East Coast Greenway	-	*No Investment Specified*
	Bike Stations	-	*No Investment Specified*
	Bike Rentals	-	*No Investment Specified*
	Bike Racks	-	*No Investment Specified*
3.2.9	Electronic Toll Collection	-	*No Investment Specified*
	High Occupancy Toll Lanes	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	VMT Fees	-	*No Investment Specified*
	Congestion Pricing and Managed Lanes	-	*No Investment Specified*
	Parking Impact Fees	-	*No Investment Specified*
	Employer Commute Incentives	-	*No Investment Specified*
3.2.10	Traffic Flow Improvements	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Truck Stop Electrification	-	*No Investment Specified*
	Timing of Highway Construction Schedules	-	*No Investment Specified*
	Electronic Toll Collection	-	*No Investment Specified*
	Traffic Signal Synchronization	-	*No Investment Specified*
	Variable Message Signs	63	State Government Spending
	Telework Partnership With Employers	-	*No Investment Specified*
	Smart Card Implementation	-	*No Investment Specified*
	Light-Emitting Diode Traffic Signals	63	State Government Spending
	Vehicle Technologies	-	*No Investment Specified*
	Transportation Fuels	-	*No Investment Specified*
	Other Areas	-	*No Investment Specified*
3.2.11	Vehicle-to-Grid (V2G)	-	*No Investment Specified*
	Electric Vehicles	-	*No Investment Specified*
	Maryland Electric Vehicles Initiative	68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Maryland Transit Administration Support for Howard County Electric Bus Project	-	*No Investment Specified*
	Clean and Efficient Strategies	-	*No Investment Specified*

Strategy	Subprogram	Code	Description
	Baltimore City Electric Vehicles Infrastructure	68	Government Spending including Non-Pecuniary (Amenity) Aspects
3.2.12	Howard Transit Paratransit Fleet Replacement Vehicles	63	State Government Spending
	Clean and Efficient Strategies	-	*No Investment Specified*
3.2.13	*Evaluating GHG Emissions Impacts of Major Projects*	*OMITTED*	*OMITTED*
3.2.14	Compressed Natural Gas Buses	-	*No Investment Specified*
	Air Emissions Reductions	-	*No Investment Specified*
	BWI Energy Audit	-	*No Investment Specified*
	BWI Utility Master Plan	-	*No Investment Specified*
	BWI Energy Efficiency	-	*No Investment Specified*
	Enhanced Access to BWI by Other Travel Modes	-	*No Investment Specified*
	BWI's Periodic Air Quality Assessments	-	*No Investment Specified*
3.2.15	Port of Baltimore Initiatives	63	State Government Spending
3.2.16	Auxiliary Power Units for Existing Locomotives	-	*No Investment Specified*
	Technology Advances for Non-highway Vehicles	-	*No Investment Specified*
3.2.17	Renewable Fuels Standard	-	*No Investment Specified*
3.2.18	Café Standards: Model Years 2008-2011	-	*No Investment Specified*
3.2.19	Promoting Hybrid and Electric Vehicles	63	State Government Spending
3.2.20	Pay-As-You-Drive Insurance	-	*No Investment Specified*
Agriculture			
3.3.1	Managing Forests to Capture Carbon	X6403	Exogenous Final Demand (Support activities for agriculture and forestry)
3.3.2	Wetland Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Stream and Waterway Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Forest Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Critical Area Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Species and Habitat Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Nutrient Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Carbon Markets: RGGI and Maryland CO2	X6532	Exogenous Final Demand (Other professional, scientific, and

Strategy	Subprogram	Code	Description
	Budget Trading Program Offsets		technical services
	Carbon Markets: GGRA of 2009 - Offsets and Early Reductions	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Carbon Markets: GGRA of 2009 - Nutrient Trading with Carbon Co-benefits	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
	Biomass Markets	X6532	Exogenous Final Demand (Other professional, scientific, and technical services
3.3.3	Increasing Urban Trees to Capture Carbon	X6412 X6526 X3203	Exogenous Final Demand (Construction) Exogenous Final Demand (Architecural, engineering, and related services) Exogenous Final Demand (Support activities for agriculture)
3.3.4	Creating and Protecting Wetlands and Waterway Borders to Capture Carbon	63	State Government Spending
3.3.5	Geological Opportunities to Store Carbon	X6530	Exogenous Final Demand (Scientific and professional services)
3.3.6	Planting Forests in Maryland	X3203	Industry Sales, Support activities for agriculture
3.3.7	Expanded Use of Forests and Feedstocks for Energy Production	63	State Government Spending
3.3.8	Conservation of Agricultural Land for GHG Benefits	63	State Government Spending
3.3.9	Buy Local for GHG Benefits	63	State Government Spending
3.3.10	Nutrient Trading for GHG Benefits	63	State Government Spending
Recycling			
3.4.1	Recycling and Source Reduction	-	*No Investment Specified*
Buildings			
3.5.1	Green Buildings	47	Non-residential Capital Investment
3.5.2	Building and Trade Codes in Maryland	63	State Government Spending
3.5.3	BeSMART	63	State Government Spending
3.5.4	Energy Efficiency for Affordable Housing	63	State Government Spending
Land Use			
3.6.1	Maryland Sustainable Growth Commission	-	*No Investment Costs Specified*
	PlanMaryland	-	*No Investment Costs Specified*
3.6.2	Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations	-	*No Investment Costs Specified*
3.6.3	Funding Mechanisms for Smart Growth	63	State Government Spending
3.6.4	GHG Benefits from Priority Funding Areas and	63	State Government Spending

Strategy	Subprogram	Code	Description
	Other Growth Boundaries		
Innovative Initiatives			
3.7.1	Leadership-by-Example - Local Government	63	State Government Spending
3.7.2	Leadership-by-Example - Federal Government	94	Federal Government Spending
3.7.3	Leadership-by-Example – Maryland Colleges and Universities	63	State Government Spending
3.7.4	Greenhouse Gas Early Voluntary Reductions	63	State Government Spending
3.7.5	High Performance Buildings	99 68	Investment Spending, Non-residential Government Spending including Non-Pecuniary (Amenity) Aspects
	Green Maryland Act of 2010	-	*No Investment Costs Specified*
3.7.6	Maryland Environmental Footprint	-	*No Investment Costs Specified*
3.7.7	Job Creation and Economic Development Initiatives	-	*No Investment Costs Specified*
3.7.8	Public Health Initiatives Related to Climate Change	68	Government Spending including Non-Pecuniary (Amenity) Aspects
3.7.9	Title V Permits for GHG Sources	63	State Government Spending
3.7.10	Outreach and Public Education	63	State GovernmentSpending
3.7.11	GHG Prevention of Significant Deterioration Permitting Program	63	State Government Spending
Not Quantified			
3.8.1	*Greenhouse Gas Emissions Inventory Development*	*OMITTED*	*OMITTED*
3.8.2	*Program Analysis, Goals, and Overall Implementation*	*OMITTED*	*OMITTED*

Source: REMI PI+

Figure 357: REMI PI+ Industry Codes—Operation Phase

Strategy	Subprogram	Code	Description
Energy			
3.1.1	Regional Greenhouse Gas Initiative	X7809	Production costs, Electric power distribution, generation and transmission
3.1.2	Greenhouse Gas Reductions from Imported Power	X7809	Production costs, Electric power distribution, generation and transmission
3.1.3	Greenhouse Gas New Source Performance Standard	X7809	Production costs, Electric power distribution, generation and transmission
3.1.4	Maximum Achievable Control Technology (MACT)	X7809	Production costs, Electric power distribution, generation and transmission
3.1.5	EmPOWER Maryland Empowering Finance Initiative	640 78	Consumer spending (electricity) Consumption reallocation
	EmPOWER Maryland Residential Incentives	640 78	Consumer spending (electricity) Consumption reallocation
	MEA Home Performance Rebate Program	640 78	Consumer spending (electricity) Consumption reallocation
	DHCD Weatherization	640 78	Consumer spending (electricity) Consumption reallocation
	Clean Energy Communities Grant	640 78	Consumer spending (electricity) Consumption reallocation
	Maryland Home Energy Loan Program	640 78	Consumer spending (electricity) Consumption reallocation
	Energy Workforce Training	78	Consumption reallocation
	State Energy Efficiency Appliance Rebate Program	640 78	Consumer spending (electricity) Consumption reallocation
3.1.6	Maryland Save Energy Now	80 82	Electricity (Industrial Sector) Fuel Costs, All Industrial Sectors Electricity (Commercial Sector) Fuel Costs, All Commercial Sectors
	Jane E. Lawton Conservation Loan Program	80 82	Electricity (Industrial Sector) Fuel Costs, All Industrial Sectors Electricity (Commercial Sector) Fuel Costs, All Commercial Sectors
	Energy Efficiency and Conservation Block Grant Program	80 82	Electricity (Industrial Sector) Fuel Costs, All Industrial Sectors Electricity (Commercial Sector) Fuel Costs, All

Strategy	Subprogram	Code	Description
			Commercial Sectors
	State Agencies Loan Program	80	Electricity (Industrial Sector) Fuel Costs, All Industrial Sectors
		82	Electricity (Commercial Sector) Fuel Costs, All Commercial Sectors
3.1.7	Energy Efficiency Appliances and Other Products	640	Consumer spending (electricity)
		78	Consumption reallocation
3.1.8	Energy Efficiency in the Power Sector – General	X7809	Production costs, Electric power distribution, generation and transmission
3.1.9	Maryland Renewable Energy Portfolio Standard	EQP 13	Producer's Durable Equipment Investment, Electric distribution, transmission, and generation
3.1.10	Commercial Clean Energy Grant Program	82	Electricity (Commercial Sector) Fuel Costs, All Commercial Sectors
	Residential Clean Energy Grants Program	640	Consumer spending (electricity)
		78	Consumption reallocation
	Clean Energy Incentive Tax Credit Program	-	*No additional costs/benefits associated with program*
	Generating Clean Horizons Program	640	Consumer spending (electricity)
		78	Consumption reallocation
	Project Sunburst	640	Consumer spending (electricity)
		78	Consumption reallocation
	Biomass Programs	640	Consumer spending (electricity)
		78	Consumption reallocation
	Land-based Wind Programs	640	Consumer spending (electricity)
		78	Consumption reallocation
3.1.11	Offshore Wind Initiatives to Support Renewable Energy	X7809	Production costs, Electric power distribution, generation and transmission
3.1.12	BeSMART	82	Electricity (Commercial Sector) Fuel Costs, All Commercial Sectors
		640	Consumer spending (electricity)
		78	Consumption reallocation
3.1.13	Energy Efficiency for Affordable Housing	640	Consumer spending (electricity)
		642	Consumer spending (fuel and oil)
		78	Consumption reallocation
Transportation			
3.2.1	Maryland Clean Cars Program	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.2	National Fuel Efficiency and Emissions Standards for Medium-	623	Consumer spending (gas)

Strategy	Subprogram	Code	Description
	and Heavy-Duty Trucks	78	Consumption reallocation
3.2.3	Clean Fuel Standard	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.4	Transportation and Climate Initiative	-	*No additional benefits or costs have been associated with this program*
3.2.5	Charm City Circulator and Hampden Neighborhood Shuttle	623	Consumer spending (gas)
		78	Consumption reallocation
		651	Consumer spending (intercity bus)
		603	Consumer spending (other motor vehicles)
		648	Consumer spending (Auto insurance, less claims paid)
	Locally Operated Transit Systems	623	Consumer spending (gas)
		78	Consumption reallocation
		651	Consumer spending (intercity bus)
		603	Consumer spending (other motor vehicles)
		648	Consumer spending (Auto insurance, less claims paid)
	Smart Card Implementation	673	Consumer spending (Bank service charges, trust services, and safe deposit box rentals)
		78	Consumption reallocation
	Transit-Oriented Development	623	Consumer spending (gas)
		78	Consumption reallocation
	Maryland Commuter Tax Credit	63	State Government Spending
	Guaranteed Ride Home	653	Consumer spending (taxicabs)
		78	Consumption reallocation
		68	Government Spending including Non-Pecuniary (Amenity) Aspects
	College Pass	623	Consumer spending (gas)
		78	Consumption reallocation
		651	Consumer spending (intercity bus)
	Ride Share	623	Consumer spending (gas)
		78	Consumption reallocation
		68	Government Spending including Non-Pecuniary (Amenity) Aspects
	Commuter Connections – Washington, D.C. Region	623	Consumer spending (gas)
		78	Consumption reallocation
	Baltimore Collegetown Network	623	Consumer spending (gas)
		78	Consumption reallocation
	Hunt Valley Shuttle	623	Consumer spending (gas)

Strategy	Subprogram	Code	Description
		78	Consumption reallocation
	Kent Street Transit Plaza	623	Consumer spending (gas)
		78	Consumption reallocation
		651	Consumer spending (intercity bus)
		648	Consumer spending (Auto insurance, less claims paid)
	University of Maryland College Park Carpool Program and Shuttle Bus Service	623	Consumer spending (gas)
		78	Consumption reallocation
		651	Consumer spending (intercity bus)
		648	Consumer spending (Auto insurance, less claims paid)
3.2.6	MARC East Baltimore Station	652	Intercity mass transit
		648	Consumer spending (Auto insurance, less claims paid)
		603	Consumer spending (Other motor vehicles)
		78	Consumption reallocation
	Expanded Transit (Purple Line, Corridor Cities Transitway, Red Line)	652	Intercity mass transit
		648	Consumer spending (Auto insurance, less claims paid)
		603	Consumer spending (Other motor vehicles)
		78	Consumption reallocation
	MARC Growth and Investment Plan	652	Intercity mass transit
		648	Consumer spending (Auto insurance, less claims paid)
		603	Consumer spending (Other motor vehicles)
		78	Consumption reallocation
3.2.7	MARC Station Parking Enhancements	652	Intercity mass transit
		623	Consumer spending (gas)
		648	Consumer spending (Auto insurance, less claims paid)
		603	Consumer spending (Other motor vehicles)
	Refurbishing MARC and Other Rail Vehicles	652	Intercity mass transit
		623	Consumer spending (gas)
		648	Consumer spending (Auto insurance, less claims paid)
		603	Consumer spending (Other motor vehicles)
	Update on Maryland High Speed Rail	652	Intercity mass transit
		623	Consumer spending (gas)
		648	Consumer spending (Auto insurance, less claims paid)
		603	Consumer spending (Other motor vehicles)
3.2.8	Bicycle/Pedestrian Enhancements	623	Consumer spending (gas)
		78	Consumption reallocation
	Bike Racks on Buses, MARC, Subway, Light Rail	623	Consumer spending (gas)
		78	Consumption reallocation

Strategy	Subprogram	Code	Description
	Construction of Bike Lanes and Bike Paths	623	Consumer spending (gas)
		78	Consumption reallocation
	East Coast Greenway	623	Consumer spending (gas)
		78	Consumption reallocation
	Bike Stations	623	Consumer spending (gas)
		78	Consumption reallocation
	Bike Rentals	623	Consumer spending (gas)
		78	Consumption reallocation
	Bike Racks	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.9	Electronic Toll Collection	623	Consumer spending (gas)
		78	Consumption reallocation
	High Occupancy Toll Lanes	623	Consumer spending (gas)
		78	Consumption reallocation
	VMT Fees	623	Consumer spending (gas)
		78	Consumption reallocation
	Congestion Pricing and Managed Lanes	623	Consumer spending (gas)
		78	Consumption reallocation
	Parking Impact Fees	623	Consumer spending (gas)
		78	Consumption reallocation
	Employer Commute Incentives	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.10	Traffic Flow Improvements	623	Consumer spending (gas)
		78	Consumption reallocation
	Truck Stop Electrification	623	Consumer spending (gas)
		78	Consumption reallocation
	Timing of Highway Construction Schedules	623	Consumer spending (gas)
		78	Consumption reallocation
	Electronic Toll Collection	623	Consumer spending (gas)
		78	Consumption reallocation
	Traffic Signal Synchronization	623	Consumer spending (gas)
		78	Consumption reallocation
	Variable Message Signs	623	Consumer spending (gas)
		78	Consumption reallocation
	Telework Partnership With Employers	623	Consumer spending (gas)
		78	Consumption reallocation
	Smart Card Implementation	673	Consumer spending (Bank service charges, trust

Strategy	Subprogram	Code	Description
			services, and safe deposit box rentals)
		78	Consumption reallocation
	Light-Emitting Diode Traffic Signals	X6409	Exogenous final demand, Electric power generation, distribution and transmission
		63	State Government Spending
	Vehicle Technologies	648	Consumer spending (Auto insurance, less claims paid)
		78	Consumption reallocation
	Transportation Fuels	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.11	Vehicle-to-Grid (V2G)	X6409	Exogenous final demand, Electric power generation, distribution and transmission
	Electric Vehicles	623	Consumer spending (gas)
		78	Consumption reallocation
	Maryland Electric Vehicles Initiative	623	Consumer spending (gas)
		78	Consumption reallocation
	Maryland Transit Administration Support for Howard County Electric Bus Project	63	State Government Spending
	Clean and Efficient Strategies	623	Consumer spending (gas)
		78	Consumption reallocation
	Baltimore City Electric Vehicles Infrastructure	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.12	Howard Transit Paratransit Fleet Replacement Vehicles	623	Consumer spending (gas)
		78	Consumption reallocation
	Clean and Efficient Strategies	623	Consumer spending (gas)
		78	Consumption reallocation
3.2.13	*Evaluating GHG Emissions Impacts of Major Projects*	*OMITTED*	*OMITTED*
3.2.14	Compressed Natural Gas Buses	63	State Government Spending
	Air Emissions Reductions	63	State Government Spending
	BWI Energy Audit	63	State Government Spending
	BWI Utility Master Plan	63	State Government Spending
	BWI Energy Efficiency	63	State Government Spending
	Enhanced Access to BWI by Other Travel Modes	63	State Government Spending
	BWI's Periodic Air Quality Assessments	63	State Government Spending
3.2.15	Port of Baltimore Initiatives	63	State Government Spending
3.2.16	Auxiliary Power Units for Existing Locomotives	63	State Government Spending
		623	Consumer spending (gas)
		78	Consumption reallocation

Strategy	Subprogram	Code	Description
3.2.17	Renewable Fuels Standard	623 78	Consumer spending (gas) Consumption reallocation
3.2.18	CAFÉ Standards: Model Years 2008-2011	623 78	Consumer spending (gas) Consumption reallocation
3.2.19	Promoting Hybrid and Electric Vehicles	623 78	Consumer spending (gas) Consumption reallocation
3.2.20	Pay-As-You-Drive Insurance	648 78	Consumer spending (auto insurance) Consumption reallocation
Agriculture			
3.3.1	Managing Forests to Capture Carbon	X5401	Forestry; fishing, hunting, trapping, Sales
3.3.2	Wetland Markets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Stream and Waterway Markets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Forest Markets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Critical Area Markets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Species and Habitat Markets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Nutrient Markets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Carbon Markets: RGGI and Maryland CO2 Budget Trading Program Offsets	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Carbon Markets: GGRA of 2009 - Offsets and Early Reductions	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping
	Carbon Markets: GGRA of 2009 - Nutrient Trading with Carbon Co-benefits	63 X7802 X7801	State Government Spending Production costs, Logging Production costs, Forestry, fishing, hunting, trapping

Strategy	Subprogram	Code	Description
	Biomass Markets	63	State Government Spending
		X7802	Production costs, Logging
		X7801	Production costs, Forestry, fishing, hunting, trapping
3.3.3	Increasing Urban Trees to Capture Carbon	640	Consumer spending (electricity)
		78	Consumption reallocation
		82	Electricty (Commerical Sector) Fuel Costs, All Commerical Sectors
3.3.4	Creating and Protecting Wetlands and Waterway Borders to Capture Carbon	TOUR1	Tourism spending
3.3.5	Geological Opportunities to Store Carbon	80	Electricty (Industrial Sector) Fuel Costs, All Industrial Sectors
		84	Natural Gas (Industrial Sector) Fuel Costs, All Industrial Sectors
		88	Residual (Industrial Sector) Fuel Costs, All Industrial Sector
3.3.6	Planting Forests in Maryland	640	Consumer spending (electricity)
		78	Consumption reallocation
3.3.7	Expanded Use of Forests and Feedstocks for Energy Production	X7809	Production costs, Electric power distribution, generation and transmission
3.3.8	Conservation of Agricultural Land for GHG Benefits	104	Farm output (total)
3.3.9	Buy Local for GHG Benefits	104	Farm output (total)
		63	State Government Spending
3.3.10	Nutrient Trading for GHG Benefits	63	State Government Spending
		99	Investment spending, Non-residential
		106	Farm Value Added, with no effect on sales or employment
Recycling			
3.4.1	Recycling and Source Reduction	X7939	Production costs, Waste management and remediation services
		63	State Government Spending
Buildings			
3.5.1	Green Buildings	X6409	Exogenous final demand, Electric power generation, transmission, and distribution
		63	State Government Spending
3.5.2	Building and Trade Codes in Maryland	X933	Industry Employment, Management of companies and enterprises

Strategy	Subprogram	Code	Description
Land Use			
3.6.1	Maryland Sustainable Growth Commission	X5412	Industry Sales, Construction
	PlanMaryland	-	*No additional benefits or costs associated with this program*
3.6.2	Transportation GHG Targets for Local Governments and Metropolitan Planning Organizations	641 78	Consumer spending (gas) Consumption reallocation
3.6.3	Funding Mechanisms for Smart Growth	X3612	Firm Employment, Construction
3.6.4	GHG Benefits from Priority Funding Areas and Other Growth Boundaries	X3211	Industry Sales, Water, sewage, and other systems
Innovative Initiatives			
3.7.1	Leadership-by-Example - Local Government	X3209 65	Industry sales, Electrical power generation, transmission, and distribution Local Government Spending
3.7.2	Leadership-by-Example - Federal Government	X6409 94	Exogenous final demand, Electric power generation, distribution, and transmission Federal Government Spending
3.7.3	Leadership-by-Example - Maryland Colleges and Universities	X3209 63	Industry sales, Electrical power generation, transmission, and distribution State Government Spending
3.7.4	Greenhouse Gas Early Voluntary Reductions	X7809	Production costs, Electrical power distribution, transmission, and generation
3.7.5	High Performance Buildings	X10540 X10564	Electrical Fuel Costs (Individual Industry), Elementary and secondary schools; Junior colleges, colleges, universities, and professional schools; Other educational services Electrical Fuel Costs (Individual Industry), Civic, social, professional, and similar organizations
	Green Maryland Act of 2010	-	*No additional costs or benefits associated with this program*
3.7.6	Maryland Environmental Footprint	X6409 68	Exogenous final demand, Electric power generation, distribution, and transmission Government Spending including Non-Pecuniary (Amenity) Aspects
3.7.7	Job Creation and Economic Development Initiatives	X7165	Private households, Compensation
3.7.8	State Climate Change Environmental Health and Protection Advisory Council	662 78	Consumer spending (health insurance) Consumption reallocation

Strategy	Subprogram	Code	Description
3.7.9	Title V Permits for GHG Sources	X7809	Production costs, Electrical power distribution, transmission, and generation
		63	State Government Spending
3.7.10	Outreach and Public Education	63	State Government Spending
3.7.11	GHG Prevention of Significant Deterioration Permitting Program	X7809	Production costs, Electrical power distribution, transmission, and generation
		63	State Government Spending
Not Quantified			
3.8.1	*Greenhouse Gas Emissions Inventory Development*	*OMITTED*	*OMITTED*
3.8.2	*Program Analysis, Goals, and Overall Implementation*	*OMITTED*	*OMITTED*

Source: REMI PI+

B.4 Modeling Example

Overview

For the purpose of providing a transparent and accessible analysis, an example of the steps undertaken by RESI (the modeling assumptions) and their results for one strategy and its subprograms are presented below. First, RESI determined the REMI industry codes which would be affected by the strategy and its subprograms. Next, RESI determined the dollar values to be applied for the investment phase as well as the operation phase. The strategy modeled as an example is "Intercity Transportation Initiatives," under Transportation.

According to the strategy write-up provided by MDE, three subprograms have been designed for this strategy: MARC Station Parking Enhancements, Refurbishing MARC and Other Rail Vehicles, and Update on Maryland High Speed Rail. The subprograms were modeled separately as each involves unique goals.

Assumptions

Investment Phase

1. Determine relevant REMI sectors for each program under the policy.
    - **a. MARC Station Parking Enhancements**
        - i. 63—State Government Spending
        - ii. 68—Government Spending including Non-Pecuniary (Amenity) Aspects
    - **b. Refurbishing MARC and Other Rail Vehicles**
        - i. 68—Government Spending including Non-Pecuniary (Amenity) Aspects
    - **c. Update on Maryland High Speed Rail**
        - i. 68—Government Spending including Non-Pecuniary (Amenity) Aspects
2. Determine overall cost of policy implementation for each program under the policy.
    - **a. MARC Station Parking Enhancements**
        - i. 63—$3,214,166.67 per Year from 2011,2015—2016
        - ii. 63—$3,794,500 per Year from 2012—2014
        - iii. 68—$3,251,666.67 per Year from 2011—2016
    - **b. Refurbishing MARC and Other Rail Vehicles**
        - i. $1,076,000 per Year from 2011—2017
    - **c. Update on Maryland High Speed Rail**
        - i. $10,000,000 per Year from 2011—2016
        - ii. $41,560,000 per Year from 2012—2020[2]
3. Input investment by sector into REMI model and run impacts.
4. Export impacts and analyze.

Operation Phase

1. Determine relevant REMI sectors.
    - **a. MARC Station Parking Enhancements**
        - i. 652 – Intercity Mass Transit
        - ii. 623—Consumer Spending—Gasoline and oil
        - iii. 648—Consumer Spending—Auto insurance less claims paid

[2] Unfunded

   iv. 603—Consumer Spending—Other motor vehicles
- **b. Refurbishing MARC and Other Rail Vehicles**
   i. 652 – Intercity Mass Transit
   ii. 623—Consumer Spending—Gasoline and oil
   iii. 648—Consumer Spending—Auto insurance less claims paid
   iv. 603—Consumer Spending—Other motor vehicles
- **c. Update on Maryland High Speed Rail**
   i. 652 – Intercity Mass Transit

2. Determine part of program to be affected by savings (from strategy write-up).
   - **a. MARC Station Parking Enhancements**
      i. Phase I—428 new parking spaces
      ii. Odenton station feasibility study—2,500 additional parking spaces
   - **b. Refurbishing MARC and Other Rail Vehicles**
      i. 23 cars scheduled to be overhauled between FY 2005 and FY 2012
   - **c. Update on Maryland High Speed Rail**
      i. $9.4 million allocation to MDOT for high-speed stimulus to complete environmental and engineering work to replace BWI Station as of Sept. 2010
3. Research savings data for each policy according to part of program to be affected by savings.
   - **a. MARC Station Parking Enhancements**
      i. Average cost of monthly MARC pass[3]—$349/month (Transit Link Card)
      ii. Average cost savings of using public transit[4]—$9,383/year for Baltimore City
      iii. Average cost of MARC station parking[5]—$6.39/day average (between 7 stations and not including outliers)
      iv. Note about Transit Link Card data use: A Monthly Transit Link pass is used in the calculations of all rail passes. Often users of the MARC system traveling in and around the metropolitan region of Maryland/Washington, D.C. will wish to visit areas within the city which are accessible through walking or easy-to-navigate light rail systems. Instead of purchasing separate fares for each point of travel, most individuals prefer having one card designated for travel within the region. The average cost of monthly fares for MARC has been calculated using the transit link pass over a span of stations from Aberdeen to Washington, D.C.
   - **b. Refurbishing MARC and Other Rail Vehicles**
      i. Average cost of monthly MARC pass[6]—$349/month (Transit Link Card)

[3] MARC Train Service Order Form. CommuterDirect.com®. 2011. MARC. 14 Nov. 2011 <https://www.commuterpage.com/orderforms/transitorders_v3.cfm?sysid=12>.
[4] "Riding Public Transit Saves Individuals $9,242 Annually." APTA Homepage. 1 Dec. 2010. American Public Transportation Association (APTA). 14 Nov. 2011 <http://www.apta.com/mediacenter/pressreleases/2010/Pages/100112_Transit_Savings.aspx>.
[5] MARC Parking Details | Maryland Transit Administration. Home | Maryland Transit Administration. Nov. 2011. Maryland Transit Administration (MTA). 14 Nov. 2011 <http://mta.maryland.gov/marc-parking-details>.

ii. Capacity of MARC train cars (single-level and bi-level)[7]—121 seats (average)
iii. Note about Transit Link Card data use: A Monthly Transit Link pass is used in the calculations of all rail passes. Often users of the MARC system traveling in and around the metropolitan region of Maryland/Washington, D.C. will wish to visit areas within the city which are accessible through walking or easy-to-navigate light rail systems. Instead of purchasing separate fares for each point of travel, most individuals prefer having one card designated for travel within the region. The average cost of monthly fares for MARC has been calculated using the transit link pass over a span of stations from Aberdeen to Washington, D.C.

c. Update on Maryland High Speed Rail

i. Average cost of monthly MARC pass for BWI Rail Station between stations for Baltimore City and Washington, D.C[8].—$227/month (Transit Link Card)
ii. Number of parking spots at BWI Rail Station[9]—3,187 spots
iii. Cost of MARC station parking at BWI Rail Station[10]—$9/day
iv. Cost of BWI Garage (daily)[11]—$12/day
v. Note about Transit Link Card data use: A Monthly Transit Link pass is used in the calculations of all rail passes. Often users of the MARC system traveling in and around the metropolitan region of Maryland/Washington, D.C. will wish to visit areas within the city which are accessible through walking or easy-to-navigate light rail systems. Instead of purchasing separate fares for each point of travel, most individuals prefer having one card designated for travel within the region. The average cost of fare for the BWI Rail Station has been calculated under the assumption that most tourists will travel from BWI to Baltimore and BWI to Washington, D.C.

4. Estimate total annual increase in savings/revenue for each program and then calculate for complete study period (2011-2020).

a. MARC Station Parking Enhancements

i. 652 – Intercity Mass Transit – $12,262,464 [(428 new Phase I parking spots + 2,500 new Odenton parking spots (assume 1 vehicle parked per day) * $349/month (assume all buy monthly pass) * 12 months)]

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[6] MARC Train Service Order Form. CommuterDirect.com®. 2011. MARC. 14 Nov. 2011 <https://www.commuterpage.com/orderforms/transitorders_v3.cfm?sysid=12>.
[7] Dresser, Michael. "New cars may ease MARC crowding - Baltimore Sun." Featured Articles From The Baltimore Sun. 20 Aug. 2008. The Baltimore Sun. 14 Nov. 2011 <http://articles.baltimoresun.com/2008-08-20/news/0808190131_1_marc-new-cars-passenger-cars>.
[8] MARC Train Service Order Form. CommuterDirect.com®. 2011. MARC. 14 Nov. 2011 <https://www.commuterpage.com/orderforms/transitorders_v3.cfm?sysid=12>.
[9] MARC Parking Details | Maryland Transit Administration. Home | Maryland Transit Administration. Nov. 2011. Maryland Transit Administration (MTA). 14 Nov. 2011 <http://mta.maryland.gov/marc-parking-details>.
[10] Ibid.
[11] Parking. Baltimore Washington International Thurgood Marshall Airport. 11 Nov. 2011. < http://www.bwiairport.com/en/parking/information-rates/daily-garage>.

ii. 652–Intercity Mass Transit–$6,829,120.80 [((2,500 new Odenton parking spots + 428 Phase I parking spots)(assume 1 vehicle parked per day) * $6.39/day on average (assume all park at station garage) * 365 days)]=annual increase in revenue
iii. 623—Consumer Spending—Gasoline and oil, 78—Consumption Reallocation—All Consumption Categories—$3,712,871.82 [(2,928 Passengers * 2 minutes idle per trip * 2 trips per Day * 365 trips per year * $0.032 conversion to $)]=Value of Fuel Saved per Year by Passengers
iv. 648—Consumer Spending—Auto insurance less claims paid, 78—Consumption Reallocation—All Consumption Categories $6,307,585.44 [((2,928 passengers * 365 days * 2 trips * 13 miles)/1.34 average persons per vehicle trip) * $0.304 Insurance per Mile]=Value of Insurance Saved by Passengers per Year from 2015—2020
v. 603—Consumer Spending—Other motor vehicles, 78—Consumption Reallocation—All Consumption Categories $6,307,585.44 [((2,928 passengers * 365 days * 2 trips * 13 miles)/1.34 average persons per vehicle trip) * $0.304 driving cost per mile less insurance less fuel]=Value of Driving Cost (less fuel less insurance) Saved by Passengers per Year from 2015—2020

b. Refurbishing MARC and Other Rail Vehicles

i. 652 – Intercity Mass Transit—$11,655,204 [(23 cars refurbished (assume still in use in addition to newer cars) * 121 seats per car on average * $349/month (assume all buy monthly pass) * 12 months]=annual increase in revenue per year from 2010—2020

c. Update on Maryland High Speed Rail

i. 652 – Intercity Mass Transit—$16,138,968 [(3,187 spots at BWI Rail Station (assume 1 vehicle parked per day) * $227/month (assume all buy monthly pass) * 12 months)] + [(3,187 spots at BWI Rail Station (assume 1 vehicle parked per day) * $9/day (assume all park at station) * 260 days)] = annual increase in revenue
ii. 652 – Intercity Mass Transit—$2,485,860 (3,187 spots at BWI Rail Station (assume 1 vehicle parked per day) *$3/day savings (comparing $12/day and $9/day parking fees) * 260 days = annual savings for riders)
iii. 623—Consumer Spending—Gasoline and oil, 78—Consumption Reallocation—All Categories—$879,279.15 [0.002 unfunded mmt CO2e * 405,821,147.4 conversion]=Total value of fuel saved per year from 2012—2020

5. Input savings by sector into REMI model and run impacts.
6. Export impacts and analyze.