

Appendix 3F: Descriptive Statistics for All Scenario Results¹

Reduction Policy: Large (Default Case)² and Moderate NO_x Reductions (Figure 3-2)

Table 3F-1. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Default Assumptions

	2010	2015	2020	2025
Minimum	40	543	501	552
25th Percentile	156	1,341	1,119	1,185
50th Percentile (Median)	187	1,582	1,310	1,376
75th Percentile	225	1,848	1,521	1,597
Maximum	383	2,983	2,411	2,501
Mean	191	1,608	1,331	1,401
Std. Dev.	57	412	324	330
No. of Iterations	500	500	500	500
Haiku Cost Estimates	-90	970	840	1,340

Table 3F-2. Benefits and Costs of Moderate NO_x Reduction Policy from CAIR Baseline: Default Assumptions

	2010	2015	2020	2025
Minimum	-225	208	197	183
25th Percentile	-108	558	464	455
50th Percentile (Median)	-71	660	544	541
75th Percentile	-37	773	635	631
Maximum	93	1,262	1,019	1,025
Mean	-73	670	554	549
Std. Dev.	56	177	139	143
No. of Iterations	500	500	500	500
Haiku Cost Estimates	-290	350	470	710

¹ All benefit and cost values are in million US\$. Cited references are listed in Chapter 5 in the main report.

² Table 3F-1 represents the default scenario with central population and gas price estimates, and default assumptions for all source-receptor matrices and concentration-response and valuation functions.

Population Assumptions: Total Effects (Figure 3-2)

Table 3F-3. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Low Population

	2010	2015	2020	2025
Minimum	57	383	536	546
25th Percentile	218	650	1,249	1,213
50th Percentile (Median)	263	737	1,465	1,421
75th Percentile	312	836	1,705	1,647
Maximum	530	1,222	2,737	2,616
Mean	266	747	1,492	1,444
Std. Dev.	80	146	372	351
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-230	930	1,020	1,330

Table 3F-4. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: High Population

	2010	2015	2020	2025
Minimum	48	532	635	726
25th Percentile	398	1,295	1,394	1,760
50th Percentile (Median)	492	1,525	1,626	2,074
75th Percentile	597	1,780	1,883	2,421
Maximum	1,047	2,870	2,978	3,896
Mean	499	1,551	1,652	2,107
Std. Dev.	169	395	396	537
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-250	1,120	1,430	2,380

Population Assumptions: Holding Emissions Constant (Figure 3-3)

Table 3F-5. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Low Population, Holding Emissions Constant

	2010	2015	2020	2025
Minimum	39	519	470	506
25th Percentile	152	1,291	1,057	1,098
50th Percentile (Median)	183	1,524	1,239	1,276
75th Percentile	220	1,780	1,440	1,482
Maximum	375	2,880	2,292	2,338
Mean	187	1,549	1,260	1,300
Std. Dev.	56	398	309	310
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-6. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: High Population, Holding Emissions Constant

	2010	2015	2020	2025
Minimum	41	576	544	619
25th Percentile	160	1,408	1,206	1,311
50th Percentile (Median)	192	1,661	1,411	1,523
75th Percentile	231	1,940	1,634	1,762
Maximum	393	3,124	2,580	2,741
Mean	196	1,689	1,432	1,548
Std. Dev.	59	430	345	360
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Low Population: Analysis of Spatial Differences (Table 3-1)³

Table 3F-7. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Low Population Analysis, Location Effect (Holding Ages Constant)

	2010	2015	2020	2025
Minimum	40	543	501	552
25th Percentile	156	1,341	1,119	1,185
50th Percentile (Median)	187	1,582	1,310	1,376
75th Percentile	225	1,848	1,521	1,597
Maximum	383	2,983	2,411	2,502
Mean	191	1,608	1,331	1,401
Std. Dev.	57	412	324	330
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-8. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Low Population Analysis, Age Effect (Holding Locations Constant)

	2010	2015	2020	2025
Minimum	40	545	503	555
25th Percentile	157	1,353	1,132	1,203
50th Percentile (Median)	188	1,598	1,326	1,398
75th Percentile	226	1,866	1,541	1,624
Maximum	386	3,019	2,453	2,561
Mean	192	1,624	1,348	1,425
Std. Dev.	58	417	330	339
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

³ For population analysis, all other inputs remain at the default settings, including emissions.

High Population: Analysis of Spatial Differences (Table 3-1)

Table 3F-9. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: High Population Analysis, Location Effect (Holding Ages Constant)

	2010	2015	2020	2025
Minimum	40	543	501	552
25th Percentile	156	1,341	1,119	1,184
50th Percentile (Median)	187	1,582	1,310	1,375
75th Percentile	225	1,848	1,521	1,596
Maximum	383	2,983	2,410	2,499
Mean	191	1,608	1,331	1,401
Std. Dev.	57.1	411.7	323.5	329.6
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-10. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: High Population Analysis, Age Effect (Holding Locations Constant)

	2010	2015	2020	2025
Minimum	40	542	498	549
25th Percentile	154	1,326	1,105	1,165
50th Percentile (Median)	186	1,564	1,293	1,353
75th Percentile	223	1,826	1,497	1,565
Maximum	379	2,941	2,364	2,436
Mean	189	1,590	1,312	1,375
Std. Dev.	57	405	316	320
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Natural Gas Price Assumptions (Figure 3-2)

Table 3F-11. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: With Low Natural Gas Prices

	2010	2015	2020	2025
Minimum	126	446	555	517
25th Percentile	292	806	1,362	1,131
50th Percentile (Median)	347	925	1,607	1,320
75th Percentile	401	1,058	1,875	1,528
Maximum	652	1,584	3,034	2,418
Mean	350	940	1,633	1,343
Std. Dev.	88	195	418	321
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	750	1,160	1,040	1,050

Table 3F-12. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: With High Natural Gas Prices

	2010	2015	2020	2025
Minimum	-51	385	533	620
25th Percentile	21	803	1,146	1,351
50th Percentile (Median)	40	931	1,333	1,574
75th Percentile	61	1,075	1,544	1,824
Maximum	136	1,683	2,434	2,884
Mean	41	947	1,355	1,601
Std. Dev.	32	220	321	382
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	100	1,180	1,520	1,250

Table 3F-13. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: With Higher Natural Gas Prices

	2010	2015	2020	2025
Minimum	-39	359	538	538
25th Percentile	92	822	1,274	1,128
50th Percentile (Median)	131	964	1,500	1,310
75th Percentile	174	1,118	1,751	1,513
Maximum	336	1,789	2,826	2,369
Mean	134	980	1,528	1,332
Std. Dev.	65	242	387	309
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-260	940	930	1,050

Source Receptor Assumptions: All States Included (Figure 3-4)

Table 3F-14. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Default Assumptions, Median Annual Elevated NO_x Matrix (#18)

	2010	2015	2020	2025
Minimum	62	687	615	680
25th Percentile	169	1,445	1,207	1,271
50th Percentile (Median)	210	1,778	1,466	1,531
75th Percentile	243	1,974	1,602	1,671
Maximum	316	2,483	2,011	2,087
Mean	202	1,691	1,398	1,471
Std. Dev.	58	419	329	334
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-15. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: With Low Annual Elevated NO_x Matrix (#25)

	2010	2015	2020	2025
Minimum	63	686	614	679
25th Percentile	174	1,440	1,202	1,266
50th Percentile (Median)	216	1,771	1,459	1,523
75th Percentile	251	1,966	1,595	1,664
Maximum	326	2,473	2,001	2,076
Mean	208	1,685	1,392	1,464
Std. Dev.	60	417	327	332
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-16. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: With High Annual Elevated NO_x Matrix (#4)

	2010	2015	2020	2025
Minimum	58	692	620	685
25th Percentile	152	1,463	1,226	1,290
50th Percentile (Median)	187	1,803	1,491	1,560
75th Percentile	217	2,005	1,633	1,701
Maximum	281	2,522	2,049	2,127
Mean	180	1,715	1,422	1,495
Std. Dev.	51	427	336	342
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-17. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Default Assumptions (Matrix 18) with ASTRAP Uncertainty for Western States

	2010	2015	2020	2025
Minimum	64	744	669	741
25th Percentile	149	1,376	1,122	1,182
50th Percentile (Median)	198	1,616	1,337	1,401
75th Percentile	238	1,922	1,584	1,651
Maximum	328	2,578	2,095	2,178
Mean	195	1,646	1,361	1,431
Std. Dev.	61	417	329	335
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-18. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Low Annual Elevated NO_x Matrix (#25) with ASTRAP Uncertainty for Western States

	2010	2015	2020	2025
Minimum	73	825	749	835
25th Percentile	165	1,417	1,176	1,240
50th Percentile (Median)	191	1,551	1,276	1,339
75th Percentile	249	1,929	1,573	1,642
Maximum	355	2,629	2,183	2,299
Mean	201	1,641	1,360	1,434
Std. Dev.	66	433	349	360
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-19. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: High Annual Elevated NO_x Matrix (#4) with ASTRAP Uncertainty for Western States

	2010	2015	2020	2025
Minimum	65	818	741	824
25th Percentile	148	1,484	1,236	1,292
50th Percentile (Median)	171	1,632	1,367	1,452
75th Percentile	205	1,885	1,566	1,653
Maximum	292	2,587	2,132	2,231
Mean	175	1,666	1,385	1,460
Std. Dev.	51	406	319	324
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-20. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Using ASTRAP Source Receptor Matrices Only with ASTRAP Uncertainty

	2010	2015	2020	2025
Minimum	68	878	907	997
25th Percentile	148	1,548	1,630	1,694
50th Percentile (Median)	188	1,914	2,021	2,104
75th Percentile	227	2,252	2,378	2,464
Maximum	304	2,972	3,153	3,257
Mean	187	1,907	2,013	2,098
Std. Dev.	57	518	556	561
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Source Receptor Assumptions: Interior URM States Only (Eastern) (Figure 3-6)⁴

Table 3F-21. Benefits of Large NO_x Reduction Policy from CAIR Baseline: Default Assumptions (Matrix 18), Interior URM States Only

	2010	2015	2020	2025
Minimum	-5	61	62	46
25th Percentile	-4	235	239	178
50th Percentile (Median)	-3	314	318	237
75th Percentile	-2	378	383	286
Maximum	-1	495	502	374
Mean	-3	303	307	229
Std. Dev.	1	100	102	76
No. of Iterations	40	40	40	40

Table 3F-22. Benefits of Large NO_x Reduction Policy from CAIR Baseline: Low Annual Elevated NO_x Matrix (#25), Interior URM States Only

	2010	2015	2020	2025
Minimum	1	59	60	45
25th Percentile	3	230	234	173
50th Percentile (Median)	3	307	312	231
75th Percentile	4	370	376	278
Maximum	5	485	492	364
Mean	3	296	301	222
Std. Dev.	1	98	100	74
No. of Iterations	40	40	40	40

⁴ Cost estimates are not provided when examining only interior URM states. The only cost estimates we generate are for the entire continental United States.

Table 3F-23. Benefits of Large NO_x Reduction Policy from CAIR Baseline: High Annual Elevated NO_x Matrix (#4), Interior URM States Only

	2010	2015	2020	2025
Minimum	-39	65	66	51
25th Percentile	-30	254	257	197
50th Percentile (Median)	-25	338	343	263
75th Percentile	-19	408	413	317
Maximum	-5	534	541	415
Mean	-24	326	330	253
Std. Dev.	8	108	110	84
No. of Iterations	40	40	40	40

Table 3F-24. Benefits of Large NO_x Reduction Policy from CAIR Baseline: ASTRAP Matrices Only (with Uncertainty), Interior URM States Only

	2010	2015	2020	2025
Minimum	5	179	180	150
25th Percentile	15	647	652	546
50th Percentile (Median)	21	843	854	714
75th Percentile	28	1,033	1,047	876
Maximum	38	1,467	1,480	1,239
Mean	22	836	843	706
Std. Dev.	9	310	314	263
No. of Iterations	40	40	40	40

Uncertainty Contributions of Statistical Inputs (Figure 3-5)⁵

Table 3F-25. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Default Assumptions, Allowing All Statistical Uncertainty

	2010	2015	2020	2025
Minimum	64	744	669	741
25th Percentile	149	1,376	1,122	1,182
50th Percentile (Median)	198	1,616	1,337	1,401
75th Percentile	238	1,922	1,584	1,651
Maximum	328	2,578	2,095	2,178
Mean	195	1,646	1,361	1,431
Std. Dev.	61	417	329	335
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-26. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: VSL Uncertainty Only (Mrozek and Taylor 2002)

	2010	2015	2020	2025
Minimum	158	1,356	1,132	1,197
25th Percentile	183	1,548	1,284	1,352
50th Percentile (Median)	195	1,637	1,354	1,424
75th Percentile	201	1,684	1,392	1,462
Maximum	225	1,869	1,538	1,612
Mean	193	1,623	1,343	1,413
Std. Dev.	15	115	91	93
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

⁵ These results represent model runs holding all probabilistic variables at their mid levels while allowing one parameter of interest to vary. The default case allowing all probabilistic variables to vary is in Table 3F-25.

Table 3F-27. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: PM_{2.5} Mortality CRF Uncertainty Only (Pope et al. 2002)

	2010	2015	2020	2025
Minimum	53	631	569	629
25th Percentile	156	1,362	1,139	1,206
50th Percentile (Median)	199	1,668	1,378	1,448
75th Percentile	224	1,845	1,517	1,588
Maximum	321	2,532	2,052	2,130
Mean	195	1,638	1,355	1,425
Std. Dev.	52	373	291	294
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-28. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Ozone Mortality CRF Uncertainty Only, Weighted by Study

	2010	2015	2020	2025
Minimum	189	1,588	1,308	1,376
25th Percentile	192	1,614	1,335	1,404
50th Percentile (Median)	192	1,620	1,341	1,411
75th Percentile	193	1,625	1,346	1,416
Maximum	195	1,639	1,360	1,433
Mean	192	1,619	1,340	1,410
Std. Dev.	1	10	11	12
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-29. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: PM_{2.5} Chronic Bronchitis CRF Uncertainty Only (Abbey 1995)

	2010	2015	2020	2025
Minimum	171	1,463	1,219	1,291
25th Percentile	187	1,578	1,309	1,379
50th Percentile (Median)	193	1,627	1,346	1,416
75th Percentile	197	1,654	1,367	1,437
Maximum	212	1,763	1,451	1,519
Mean	193	1,622	1,342	1,412
Std. Dev.	8	59	45	45
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-30. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: ASTRAP Uncertainty Only

	2010	2015	2020	2025
Minimum	145	1,359	1,057	1,072
25th Percentile	180	1,562	1,276	1,334
50th Percentile (Median)	196	1,639	1,362	1,436
75th Percentile	204	1,676	1,402	1,484
Maximum	237	1,842	1,583	1,699
Mean	193	1,622	1,343	1,414
Std. Dev.	21	104	113	135
No. of Iterations	40	40	40	40
Haiku				
Cost Estimates	-90	970	840	1,340

PM_{2.5} Mortality Concentration–Response Function Assumptions (Figure 3-7)⁶

Table 3F-31. Benefits of Large NO_x Reduction Policy from CAIR Baseline (PM_{2.5} Only): PM_{2.5} Mortality CRF, Default Case (Pope et al. 2002)

	2010	2015	2020	2025
Minimum	24	176	136	137
25th Percentile	143	1,006	778	780
50th Percentile (Median)	175	1,231	952	957
75th Percentile	212	1,491	1,156	1,162
Maximum	365	2,580	2,004	2,021
Mean	178	1,250	968	973
Std. Dev.	57	408	318	321
No. of Iterations	500	500	500	500

Table 3F-32. Benefits of Large NO_x Reduction Policy from CAIR Baseline (PM_{2.5} Only): PM_{2.5} Mortality CRF (Krewski et al. 2000)

	2010	2015	2020	2025
Minimum	94	662	512	513
25th Percentile	171	1,204	933	937
50th Percentile (Median)	200	1,409	1,092	1,099
75th Percentile	236	1,663	1,288	1,297
Maximum	350	2,483	1,931	1,949
Mean	204	1,432	1,110	1,117
Std. Dev.	47	331	258	261
No. of Iterations	500	500	500	500

⁶ Results shown are for the PM_{2.5} pathway only. Ozone benefits are constant for all PM_{2.5} CRFs.

Table 3F-33. Benefits of Large NO_x Reduction Policy from CAIR Baseline (PM_{2.5} Only): PM_{2.5} Mortality CRF (Dockery et al. 1993)

	2010	2015	2020	2025
Minimum	37	259	196	192
25th Percentile	357	2,521	1,957	1,973
50th Percentile (Median)	475	3,359	2,615	2,643
75th Percentile	565	4,007	3,118	3,150
Maximum	850	6,032	4,697	4,746
Mean	471	3,332	2,591	2,616
Std. Dev.	148	1,052	821	831
No. of Iterations	500	500	500	500

Table 3F-34. Benefits of Large NO_x Reduction Policy from CAIR Baseline (PM_{2.5} Only): PM_{2.5} Mortality CRF, Equal Weight for All Studies

	2010	2015	2020	2025
Minimum	128	899	696	699
25th Percentile	243	1,710	1,326	1,336
50th Percentile (Median)	282	1,990	1,545	1,558
75th Percentile	324	2,289	1,777	1,792
Maximum	504	3,558	2,764	2,789
Mean	285	2,014	1,563	1,576
Std. Dev.	59	419	326	330
No. of Iterations	500	500	500	500

Ozone Mortality Concentration–Response Function Assumptions (Figure 3-8)⁷

Table 3F-35. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF Default Case, Weighted by Study^a

	2010	2015	2020	2025
Minimum	0	158	164	193
25th Percentile	9	311	318	373
50th Percentile (Median)	13	353	359	423
75th Percentile	16	402	407	480
Maximum	28	597	601	709
Mean	13	358	363	428
Std. Dev.	5	72	72	85
No. of Iterations	500	500	500	500

^a The Default case uses the following weights: 8.25% (Ito and Thurston 1996) B, 45% (Moolgavkar et al. 1995), 21.75% (Samet et al. 1997) B, and 25% (Bell 2004).

Table 3F-36. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF (Ito and Thurston 1996) A

	2010	2015	2020	2025
Minimum	22	387	395	475
25th Percentile	39	654	665	803
50th Percentile (Median)	45	737	752	906
75th Percentile	51	814	828	1,001
Maximum	79	1,206	1,224	1,483
Mean	45	735	748	902
Std. Dev.	9	124	126	152
No. of Iterations	500	500	500	500

⁷ Results shown are for the Ozone pathway only. PM_{2.5} benefits are constant for all Ozone CRFs.

Table 3F-37. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF (Ito and Thurston 1996) B

	2010	2015	2020	2025
Minimum	12	239	241	287
25th Percentile	29	501	509	615
50th Percentile (Median)	35	595	606	731
75th Percentile	42	697	708	853
Maximum	71	1,104	1,121	1,355
Mean	36	598	608	732
Std. Dev.	10	142	144	174
No. of Iterations	500	500	500	500

Table 3F-38. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF (Moolgavkar et al. 1995)

	2010	2015	2020	2025
Minimum	-3	153	157	180
25th Percentile	8	282	288	338
50th Percentile (Median)	11	329	335	394
75th Percentile	14	381	385	452
Maximum	27	549	555	654
Mean	11	334	339	399
Std. Dev.	5	69	69	82
No. of Iterations	500	500	500	500

Table 3F-39. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF (Samet et al. 1997) A

	2010	2015	2020	2025
Minimum	-9	149	154	177
25th Percentile	4	312	317	371
50th Percentile (Median)	7	363	368	427
75th Percentile	12	408	413	481
Maximum	25	611	617	718
Mean	8	364	369	430
Std. Dev.	5	71	71	83
No. of Iterations	500	500	500	500

Table 3F-40. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF (Samet et al. 1997) B

	2010	2015	2020	2025
Minimum	-6	148	152	176
25th Percentile	5	306	312	364
50th Percentile (Median)	8	351	357	417
75th Percentile	12	402	407	477
Maximum	26	596	602	702
Mean	9	355	360	421
Std. Dev.	5	71	71	84
No. of Iterations	500	500	500	500

Table 3F-41. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF (Bell 2004)

	2010	2015	2020	2025
Minimum	-1	135	139	161
25th Percentile	8	280	285	335
50th Percentile (Median)	11	323	329	389
75th Percentile	15	373	377	445
Maximum	27	543	548	647
Mean	12	329	334	394
Std. Dev.	5	68	68	81
No. of Iterations	500	500	500	500

Table 3F-42. Benefits of Large NO_x Reduction Policy from CAIR Baseline (Ozone Only): Ozone Mortality CRF, Equal Weights for all Studies

	2010	2015	2020	2025
Minimum	7	255	261	308
25th Percentile	18	415	421	503
50th Percentile (Median)	22	464	472	561
75th Percentile	26	518	527	628
Maximum	39	700	710	847
Mean	22	467	475	566
Std. Dev.	5	78	79	94
No. of Iterations	500	500	500	500

Value of a Statistical Life Assumptions (Figure 3-9)⁸

Table 3F-43. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Value of a Statistical Life, BenMAP Normal Distribution

	2010	2015	2020	2025
Minimum	-48	-51	38	88
25th Percentile	234	1,982	1,630	1,698
50th Percentile (Median)	346	2,834	2,307	2,391
75th Percentile	506	3,994	3,208	3,314
Maximum	995	7,492	5,972	6,137
Mean	380	3,070	2,491	2,584
Std. Dev.	203	1,496	1,178	1,197
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-44. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Value of a Statistical Life, BenMAP Uniform Distribution

	2010	2015	2020	2025
Minimum	-31	44	108	157
25th Percentile	200	1,753	1,459	1,537
50th Percentile (Median)	337	2,738	2,231	2,316
75th Percentile	517	4,124	3,318	3,426
Maximum	1,119	8,288	6,549	6,683
Mean	379	3,062	2,485	2,578
Std. Dev.	227	1,680	1,323	1,344
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

⁸ For the default case (Mrozek and Taylor 2002), see Table 3F-1 in this appendix.

Table 3F-45. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Value of a Statistical Life, BenMAP Triangular Distribution

	2010	2015	2020	2025
Minimum	-91	-282	-130	-78
25th Percentile	237	2,019	1,674	1,749
50th Percentile (Median)	360	2,891	2,352	2,435
75th Percentile	486	3,875	3,125	3,227
Maximum	1,171	8,854	7,024	7,178
Mean	378	3,052	2,477	2,569
Std. Dev.	192	1,407	1,106	1,123
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-46. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Value of a Statistical Life (Krupnick et al. 2002)

	2010	2015	2020	2025
Minimum	26	352	333	380
25th Percentile	79	755	653	702
50th Percentile (Median)	94	865	740	793
75th Percentile	108	978	832	894
Maximum	176	1,495	1,260	1,348
Mean	94	863	741	799
Std. Dev.	22	165	135	142
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-47. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Value of a Statistical Life (Fisher et al. 1989)

	2010	2015	2020	2025
Minimum	-28	61	120	169
25th Percentile	214	1,830	1,512	1,583
50th Percentile (Median)	307	2,512	2,058	2,143
75th Percentile	440	3,508	2,825	2,927
Maximum	1,434	10,690	8,450	8,620
Mean	346	2,808	2,284	2,372
Std. Dev.	193	1,423	1,121	1,140
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

Table 3F-48. Benefits and Costs of Large NO_x Reduction Policy from CAIR Baseline: Value of a Statistical Life (Hagler Bailly Consulting 1995), Age Weighted

	2010	2015	2020	2025
Minimum	-28	56	117	166
25th Percentile	188	1,621	1,345	1,411
50th Percentile (Median)	261	2,165	1,775	1,861
75th Percentile	357	2,858	2,314	2,404
Maximum	1,022	7,601	6,009	6,131
Mean	296	2,418	1,974	2,057
Std. Dev.	161	1,188	935	951
No. of Iterations	500	500	500	500
Haiku				
Cost Estimates	-90	970	840	1,340

