

Comparison of Regional Ozone-Related Emissions									
	1999			2005			2011		
	NE*	MW	SE	NE	MW	SE	NE	MW	SE
NOx Emissions (Tons)									
Coal EGU	399,962	1,334,164	1,719,411	298,891	773,069	1,049,821	183,111	390,644	422,337
Mobile	1,928,881	2,007,299	2,856,769	1,862,650	2,230,013	3,253,341	1,087,993	1,487,992	2,182,046
Industrial	482,241	664,370	1,012,932	468,786	535,334	712,532	355,046	425,969	438,879
Other	119,344	35,236	244,255	81,580	24,366	131,634	25,766	17,310	70,259
Total	2,930,428	4,041,068	5,833,366	2,711,904	3,562,781	5,147,328	1,651,914	2,321,916	3,113,521
Subtotal Non-Coal	2,530,466	2,706,904	4,113,955	2,413,013	2,789,712	4,097,507	1,468,803	1,931,272	2,691,184

Total NOx and VOC (Ozone precursors)									
Coal EGU	404,117	1,339,893	1,728,342	301,275	779,187	1,058,254	184,026	396,756	429,591
Mobile	3,314,602	3,389,377	4,907,068	3,058,120	3,434,481	4,970,448	1,801,894	2,356,240	3,397,639
Industrial	2,007,708	2,345,163	3,428,268	1,736,353	1,857,934	2,922,864	1,149,135	1,428,286	1,788,443
Other	124,576	37,193	258,910	93,233	25,872	136,372	28,719	19,285	75,462
Total	5,851,001	7,111,622	10,322,588	5,188,977	6,097,471	9,087,938	3,163,772	4,200,567	5,691,138
Subtotal Non-Coal	5,446,884	5,771,729	8,594,246	4,887,702	5,318,284	8,029,684	2,979,746	3,803,811	5,261,547

Percent Change in NOx Emissions						
	1999-2011			2005-2011		
	NE*	MW	SE	NE	MW	SE
Coal EGU	-54%	-71%	-75%	-39%	-49%	-60%
Mobile	-44%	-26%	-24%	-42%	-33%	-33%
Industrial	-26%	-36%	-57%	-24%	-20%	-38%
Other	-78%	-51%	-71%	-68%	-29%	-47%
Total	-44%	-43%	-47%	-39%	-35%	-40%
Subtotal Non-Coal	-42%	-29%	-35%	-39%	-31%	-34%

Percent Change in Total NOx and VOC Emissions						
	1999-2011			2005-2011		
	NE*	MW	SE	NE	MW	SE
Coal EGU	-54%	-70%	-75%	-39%	-49%	-59%
Mobile	-46%	-30%	-31%	-41%	-31%	-32%
Industrial	-43%	-39%	-48%	-34%	-23%	-39%
Other	-77%	-48%	-71%	-69%	-25%	-45%
Total	-46%	-41%	-45%	-39%	-31%	-37%
Subtotal Non-Coal	-45%	-34%	-39%	-39%	-28%	-34%

*NE EGUs subject to OTC NOx MOU Phase II in 1999.

Percent of NOx Emissions							
	1999			2011			
	NE*	MW	SE	NE	MW	SE	
Coal EGU	14%	33%	29%	11%	17%	14%	
Mobile	66%	50%	49%	66%	64%	70%	
Industrial	16%	16%	17%	21%	18%	14%	
Other	4%	1%	4%	2%	1%	2%	
Total	100%	100%	100%	100%	100%	100%	
Subtotal Non-Coal	86%	67%	71%	89%	83%	86%	

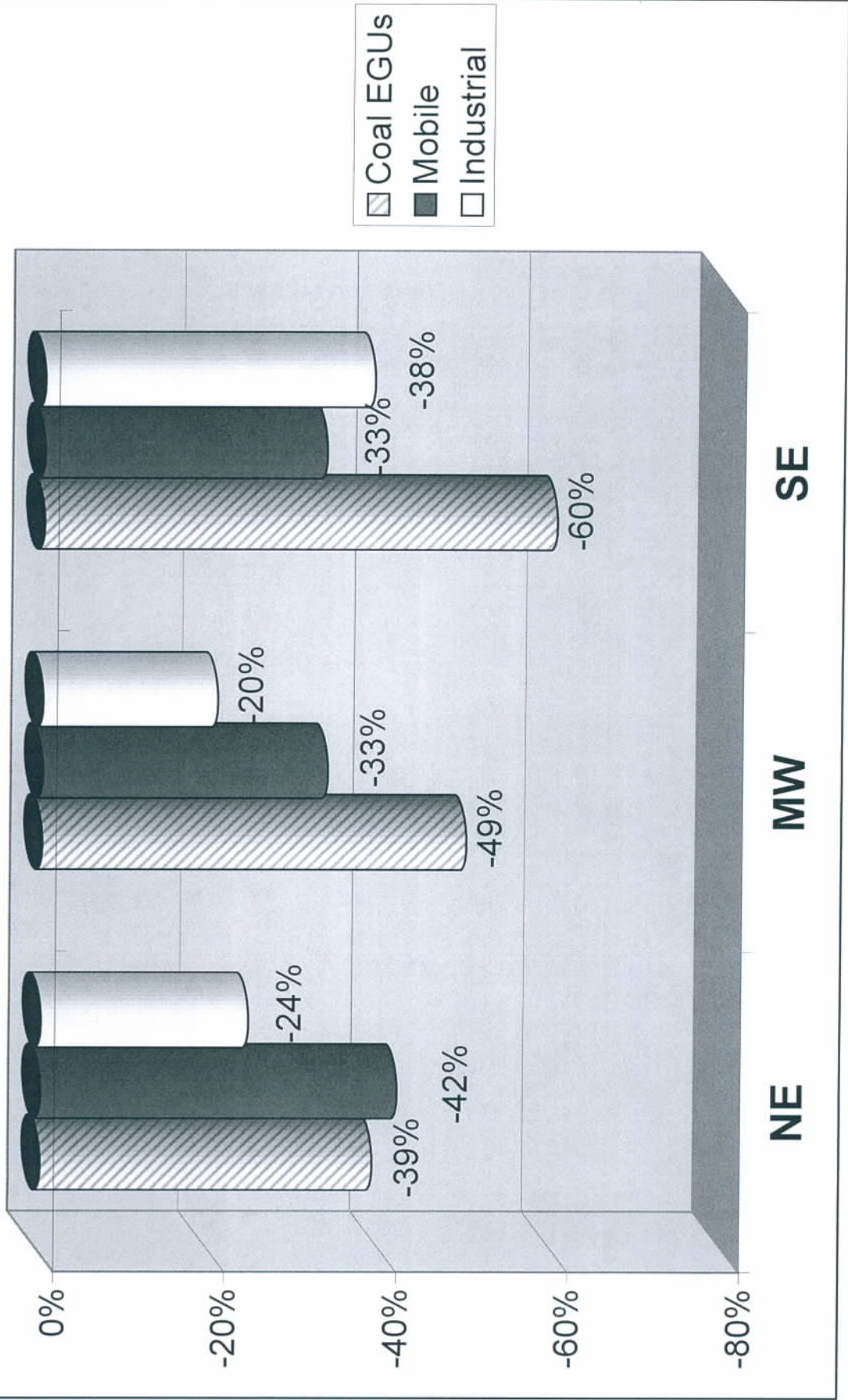
Percent of Total NOx and VOC Emissions							
	1999			2011			
	NE*	MW	SE	NE	MW	SE	
Coal EGU	7%	19%	17%	6%	9%	8%	
Mobile	57%	48%	48%	57%	56%	60%	
Industrial	34%	33%	33%	36%	34%	31%	
Other	2%	1%	3%	1%	0%	1%	
Total	100%	100%	100%	100%	100%	100%	
Subtotal Non-Coal	93%	81%	83%	94%	91%	92%	

*NE EGUs subject to OTC NOx MOU Phase II in 1999.

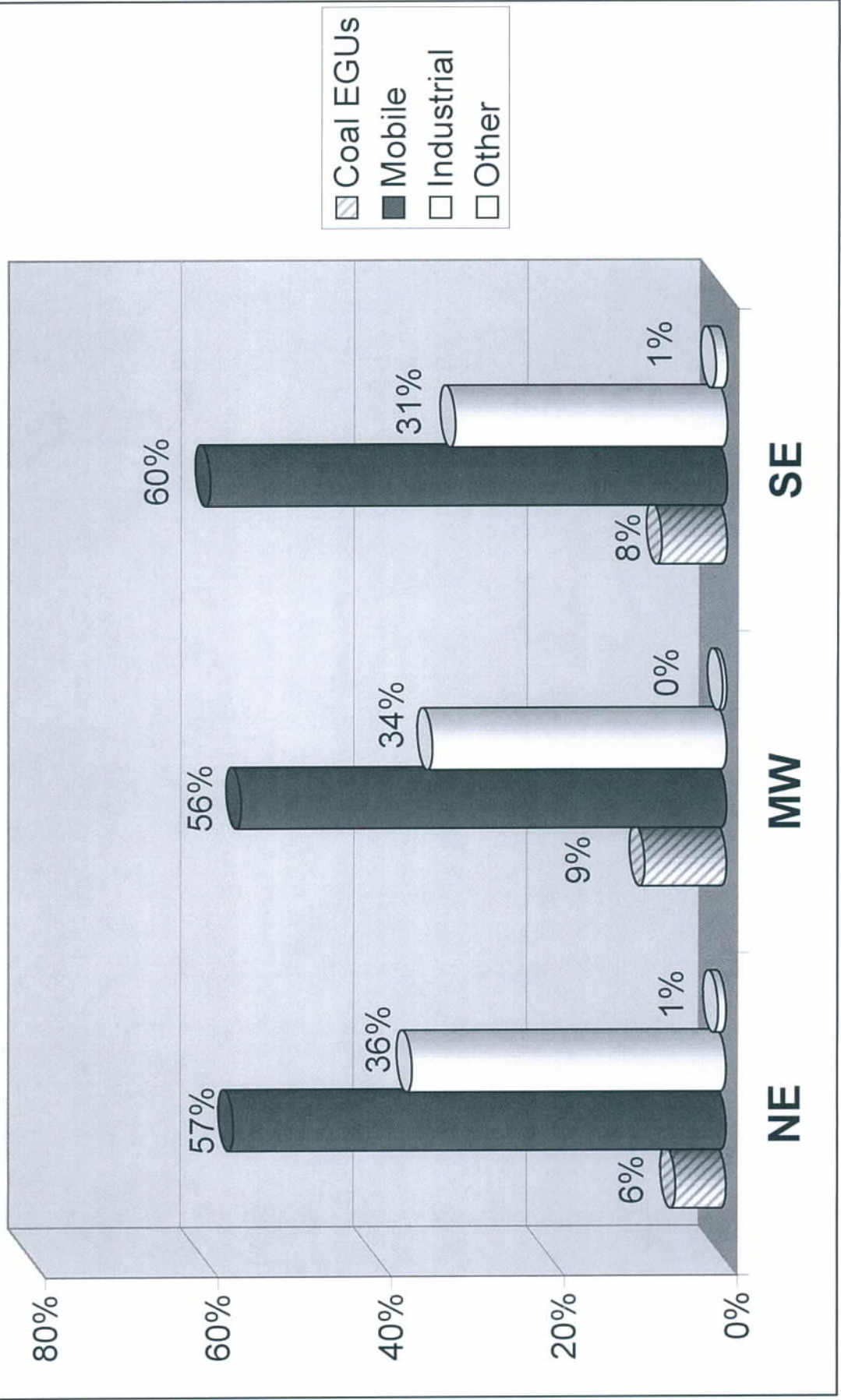
Note: NE region contains OTC states less Virginia, which is included in the SE.
MW region contains LADCO states less Minnesota. SE region covers SESARM.

Source: Alpine Geophysics/ENVIRON Air Trends Reports (2013).

Percent Change in NOx Emissions, 2005-11



Percent of Total NOx/VOC Emissions, 2011



Percent Distribution of NOx Emissions 1999 vs. 2011

