

EXECUTIVE SUMMARY

BBC Research & Consulting (BBC) was retained by the Center for Energy & Economic Development (CEED), the Midwest Ozone Group (MOG) and NiSource to examine the impacts of electric utility emission controls identified in the “LADCO EGU White Paper” on the Midwest economy. LADCO is considering two levels of utility emission reductions (EGU1 and EGU2) and two intermediate levels of control (IM1 and IM2). The proposed emission reductions under these controls are approximately 50 percent to 75 percent greater than the reductions required by EPA’s 2005 Clean Air Interstate Rule (CAIR).

Economic Study

BBC studied the effects of additional emission controls in Illinois, Indiana, Michigan, Ohio and Wisconsin. Nine case study industries in those states were selected for study based on their intensive use of electricity. These industries included manufacturers of primary metals, transportation equipment, chemicals, food products, plastics and rubber, fabricated metals, paper, machinery and computers/electronic equipment. Coal mining was selected as the tenth case study industry because it is a major supplier to Midwestern electric generation.

BBC estimated the electric rate impacts of the proposed LADCO controls and the corresponding impact of higher electric rates on the case study industries and on household spending in the five states within the LADCO region. Rate impacts were estimated by comparing the projected annual electric utility revenue requirements, including costs of compliance with the LADCO controls, with projected annual electric utility revenue requirements after compliance with CAIR. BBC examined several scenarios of LADCO controls, including with and without replacement power to compensate for early generating unit retirements under EGU1 and EGU2.¹ BBC quantified overall effects on regional output and employment arising from the direct impacts on the case study industries and from the impacts of higher electric rates on household disposable income. Impacts were quantified using partial equilibrium analyses of each case study industry along with the IMPLAN economic input-output model.

The focus of the study was on the direct and secondary (or “multiplier”) effects on the case study industries and on the portions of the economy supported by household spending. Impacts of higher electric rates on other industries and the commercial sector (which together account for about one-third of all electricity sales) were not included. Health and visibility-related economic benefits of emissions reductions and the potential short-term economic effects on the construction industry from building and installing pollution control equipment were also outside the scope of this study.

¹ Annual costs of compliance, including both technology costs and replacement power to compensate for early retirement of older generating units, were provided by James Marchetti, Michael Hein and Edward Cichanowicz. Baseline electric utility revenues for 2012 and 2013 were projected by BBC based on current revenues, Energy Information Administration projections and EPA’s Regulatory Impact Analysis of the CAIR Rule.

Key Findings

1. From a regional standpoint, electric rates in the year 2013 would be about 11 percent higher under EGU1 and nearly 16 percent higher under EGU2 than under the CAIR Rule. Electric rates would increase the most in Indiana (29% increase under EGU2) and the least in Michigan (12% increase under EGU2).
2. Demand for coal mined in Illinois, Indiana and Ohio is expected to decline by 48 percent under EGU1 and 54 percent under EGU2.
3. Economic output in the five-state region is projected to be reduced by \$9.0 billion to \$14.1 billion under EGU2 in 2013. Under EGU1, the reduction in annual state economic output is estimated to be between \$6.9 billion and \$10.4 billion.²
4. Employment in the five-state region is projected to be reduced by between 69,000 and 94,000 jobs under EGU2. Under EGU1, approximately 51,000 to 69,000 jobs would be lost.

Exhibit ES-1 summarizes the projected impacts on regional employment on a state by state basis.

Exhibit ES-1.

Projected job reductions under proposed LADCO EGU control measures

	2012		2013		
			Without Replacement Power	With Replacement Power	
	IM1	IM2	EGU1/EGU2	EGU1	EGU2
Illinois	1,020 – 1,370	4,660 – 6,350	9,300 – 12,110	8,800 – 11,410	13,400 – 17,610
Indiana	5,380 – 8,180	7,590 – 11,730	17,680 – 24,330	17,510 – 24,150	22,280 – 31,140
Michigan	3,270 – 4,520	5,440 – 7,660	6,630 – 9,290	6,270 – 8,730	10,050 – 14,090
Ohio	5,510 – 7,800	5,960 – 8,600	16,410 – 21,120	16,190 – 20,780	18,300 – 23,660
Wisconsin	1,540 – 2,280	2,280 – 3,420	2,870 – 4,330	2,560 – 3,830	5,290 – 7,950
Total	16,720 – 24,140	25,930 – 37,750	52,910 – 71,200	51,340 – 68,890	69,330 – 94,460

Note: Totals may not add due to rounding.

Source: BBC Research & Consulting, 2005.

² Output and employment impact estimates include direct impacts on the case study industries, impacts on the suppliers and employees of those industries, and impacts on the economy due to reduced disposable income of residential consumers as a result of electric rate increases.