

Fiscal Estimate — 2007 Session

<input type="checkbox"/> Original <input checked="" type="checkbox"/> Updated <input type="checkbox"/> Corrected <input type="checkbox"/> Supplemental	LRB Number AM-32-05 <hr/> Bill Number	Amendment Number if Applicable <hr/> Administrative Rule Number NR 446
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Subject
 Mercury emission reductions from coal-fired electric generating units

Fiscal Effect

State: No State Fiscal Effect
 Check columns below only if bill makes a direct appropriation or affects a sum sufficient appropriation.

<input type="checkbox"/> Increase Existing Appropriation <input type="checkbox"/> Increase Existing Revenues <input type="checkbox"/> Decrease Existing Appropriation <input checked="" type="checkbox"/> Decrease Existing Revenues <input type="checkbox"/> Create New Appropriation	<input checked="" type="checkbox"/> Increase Costs — May be possible to absorb within agency's budget. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Decrease Costs
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Local: No Local Government Costs

1. <input checked="" type="checkbox"/> Increase Costs <input type="checkbox"/> Permissive <input checked="" type="checkbox"/> Mandatory 2. <input type="checkbox"/> Decrease Costs <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory	3. <input type="checkbox"/> Increase Revenues <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory 4. <input type="checkbox"/> Decrease Revenues <input type="checkbox"/> Permissive <input type="checkbox"/> Mandatory	5. Types of Local Governmental Units Affected: <input type="checkbox"/> Towns <input type="checkbox"/> Villages <input type="checkbox"/> Cities <input type="checkbox"/> Counties <input checked="" type="checkbox"/> Others <input type="checkbox"/> School Districts <input type="checkbox"/> WTCS Districts
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Fund Sources Affected <input type="checkbox"/> GPR <input type="checkbox"/> FED <input checked="" type="checkbox"/> PRO <input type="checkbox"/> PRS <input type="checkbox"/> SEG <input type="checkbox"/> SEG-S	Affected Chapter 20 Appropriations 20.370 2(bg)
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Assumptions Used in Arriving at Fiscal Estimate

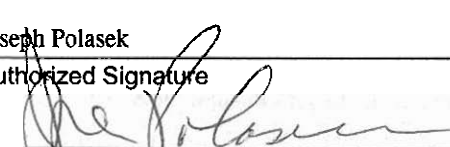
SUMMARY OF RULE – The proposed revisions retain the January 1, 2010 mercury reduction requirement in the current state mercury rule. Under this requirement the state's four major utilities, Wisconsin Power & Light Company, Dairyland Power Cooperative, We Energies and Wisconsin Public Service Corporation, must reduce mercury emissions 40% from the baseline established under provisions in the current rule for their existing coal-fired electric generating units.

The proposed revisions require large and small coal-fired electric generating units to meet revised mercury reduction requirements on a unit-by-unit basis beginning in 2015. These requirements will affect an additional four utilities including Madison Gas and Electric Company, Xcel Energy, Mid-American, and Manitowoc Public Utilities.

Beginning January 1, 2015, the state's large coal-fired electric generating units, 150 megawatts and larger, must follow one of two compliance paths to achieve a 90% mercury emission reduction. The primary compliance requirement is for a large unit, beginning January 1, 2015, to achieve a 90% mercury reduction, as measured from the mercury content of coal combusted, or limit the concentration of mercury emissions to 0.0080 pounds mercury per gigawatt-hour. Alternatively, a utility may elect to follow a multipollutant compliance path which requires mercury reductions of 70% by 2015, 80% by 2018, and 90% by 2021. For each mercury percent reduction requirement the utility can meet a corresponding limit in pounds of mercury per gigawatt-hour. Under the multipollutant compliance path, beginning January 1, 2015, a large unit must also achieve control of nitrogen oxides and sulfur dioxide emissions beyond those currently required by federal and state regulations. Owners and operators must designate which of their large electric generating units will follow the multipollutant option by December 31, 2010. Large electric generating units that are not designated for the multipollutant option, will, by default, be required to achieve the 90% mercury emission reduction by 2015.

The proposed revisions provide flexibility to large units through emissions averaging between units owned or operated by a utility to meet emission limitations. The proposed revisions have an opportunity to request a two year compliance extension from the 2015 emission limitations to accommodate control equipment installations. A variance is may also be requested in the event that economic or technological infeasibility is demonstrated. In addition, large units, under the multipollutant pathway, may generate and use early reduction emission credits up to 10% of allowable emissions annually. Small coal-fired electric generating units, greater than 25 megawatts but less than 150 megawatts, must reduce their mercury emissions to a level defined as Best Available Control Technology (BACT). This control requirement considers cost in determining the level of mercury control that is required.

Long-Range Fiscal Implications

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Page 2 Assumptions Narrative Continued

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Assumptions Used in Arriving at Fiscal Estimate – Continued

The revisions also propose that any new or modified coal-fired electric generating unit install mercury control technology which achieves a minimum 90% mercury reduction, as measured from the mercury content of combusted fuel.

The 16 large electric generating units account for 86% of electric utility mercury emissions. Current mercury emissions from large electric generating units of 2,745 pounds will be reduced to 439 pounds after meeting the 90% reduction requirement. Small electric generating units account for 14% of mercury emissions from electric utilities in Wisconsin. A preliminary analysis of the small units affected by BACT has been conducted and it is anticipated that the average mercury control level is likely to be 80%. Wisconsin's 30 small electric generating units have current mercury emissions of 462 pounds that will be reduced to 97 pounds after application of BACT

State Fiscal Estimate:

- 1.) Cost Impacts to the Department - The fiscal estimate for the revisions to Chapter NR 446 that became effective in October 2004 required a staff allocation of 0.5 FTE through 2009 that was reduced to 0.25 FTE from 2010 through 2015. After 2015, requirements would be implemented without an increase in complement. The Department assumes the same staff allocations for these proposed revisions. However, because the proposed rule revisions require additional compliance notifications and determinations, the staff allocation must increase 0.25 FTE from 2010 through 2012. Assuming \$80,000 per FTE, this results in an increase of \$20,000 per year from 2010 through 2012.
- 2.) Revenue Impacts to the Department - The annual emission fees paid to the Department are not significantly affected by the anticipated decrease in mercury emissions. However, fees may significantly decrease if utilities elect to reduce NO_x and SO₂ emissions under the multipollutant provision of the proposed revisions. If all eligible EGUs pursued the multi-pollutant alternative, collected emission fees may be reduced from 2005 levels by approximately \$1,000,000 per year based upon the current emission fee of \$35.71 per ton.

Local Government Fiscal Estimate:

Manitowoc Public Utilities (MPU) is the only one locally-owned electric utility that will be affected by these revisions. The costs to MPU are similar to other electric utilities in the state. The total cost for MPU is estimated to be in the range of 0.04 to 0.12 cents/KWh or \$160,000 to \$500,000 dollars per year.

Electric Utility Sector Fiscal Estimate:

- 1.) Cost of Chapter NR 446 Requirements - The revisions to Chapter NR 446 that became effective in October 2004 affected EGUs operated by "Major Utilities" including Alliant Energy, Dairyland Power Cooperative, WE-Energies, and Wisconsin Public Service Corporation. The cost for achieving a 75% mercury emission reduction for each major utility was estimated to be in the range of 0.16 to 0.18 cents per kilowatt-hour of generated electricity (cents/KWh) with a total cost for the four major utilities of 71 to 84 million dollars per year. These cost estimates are contained in a technical support document developed in 2003¹.
- 2.) Cost of Revised Chapter NR 446 Requirements - The cost estimate for these revisions to Chapter NR 446 replace the 2003 cost estimates. The cost estimates reflect achieving a 90% mercury emission limitation for larger EGU's and BACT level of control for the smaller EGUs. In addition, since the 2003 evaluation, advancements in mercury control technology have occurred and control technology costs have changed. Also, more EGUs are affected by these revisions as compared to the current requirements in Chapter NR 446. The average cost to the utility sector is estimated to be 0.06 to 0.14 cents/KWh and cost to implement the proposed revisions is 38 to 91 million dollars per year. The lower cost range reflects the integration of mercury control with the control of other pollutants.

¹ (2003, WDNR), *An Assessment of Major Utility Air Emission Control and Cost*, Wisconsin Department of Natural Resources, Bureau of Air Management, Attachment to Background Memo to the Board - Request for Adoption of Chapter NR 446, May 2003.

Fiscal Estimate Worksheet — 2007 Session
 Detailed Estimate of Annual Fiscal Effect

Original Updated
 Corrected Supplemental

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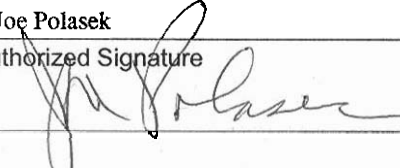
Subject
 Mercury emission reductions from coal-fired electric generating units

One-time Costs or Revenue Impacts for State and/or Local Government (do not include in annualized fiscal effect):
 Increase of \$20,000 for years 2010 to 2012 for staff time in response to additional compliance notifications and determination of BACT for small sources

Annualized Costs:		Annualized Fiscal Impact on State Funds from:	
		Increased Costs	Decreased Costs
A. State Costs by Category			
State Operations — Salaries and Fringes		\$	\$ -
(FTE Position Changes)		(FTE)	(- FTE)
State Operations — Other Costs			-
Local Assistance			-
Aids to Individuals or Organizations			-
Total State Costs by Category		\$	\$ -
B. State Costs by Source of Funds			
GPR		\$	\$ -
FED			-
PRO/PRS			-
SEG/SEG-S			-
State Revenues	Complete this only when proposal will increase or decrease state revenues (e.g., tax increase, decrease in license fee, etc.)	Increased Revenue	Decreased Revenue
GPR Taxes		\$	\$ -
GPR Earned			-
FED			-
PRO/PRS			-
SEG/SEG-S			-
Total State Revenues		\$	\$ -

Net Annualized Fiscal Impact

	State	Local
Net Change in Costs	\$	\$ 160,000 to 500,000
Net Change in Revenues	\$	\$

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Authorized Signature 	Telephone No. 266-2794	Date (mm/dd/ccyy) 06-17-08