

## Fiscal Estimate — 2007 Session

<input checked="" type="checkbox"/> Original <input type="checkbox"/> Updated  <input type="checkbox"/> Corrected <input type="checkbox"/> Supplemental	LRB Number  Bill Number	Amendment Number if Applicable  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        |  |

- Increase Costs — May be possible to absorb within agency's budget.  
 Yes     No
- Decrease Costs

Local:  No Local Government Costs

1.  Increase Costs  
 Permissive     Mandatory
2.  Decrease Costs  
 Permissive     Mandatory

3.  Increase Revenues  
 Permissive     Mandatory
4.  Decrease Revenues  
 Permissive     Mandatory

5. Types of Local Governmental Units Affected:  
 Towns     Villages     Cities  
 Counties     Others  
 School Districts     WTCS Districts

**Fund Sources Affected**

- GPR     FED     PRO     PRS     SEG     SEG-S

Affected Chapter 20 Appropriations  
 20.370 2(bg)

**Assumptions Used in Arriving at Fiscal Estimate**

**SUMMARY OF RULE** – Under these proposed revisions to ch. NR 446, Wis. Adm. Code, 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. By January 1, 2015, the state's large coal-fired electric generating units, 150 megawatts and larger, must achieve a 90% mercury reduction, as measured from the mercury content of coal combusted, or limit the concentration of mercury emissions to 0.008 pounds mercury per gigawatt-hour.

Under the alternative multipollutant compliance path an additional six years, until January 1, 2021, is allowed for large coal-fired electric generating units to achieve the 90% mercury reduction requirement. By January 1, 2015, these large units must achieve nitrogen oxides and sulfur dioxide reductions beyond those currently required by federal and state regulations. An interim mercury reduction of 70% must be achieved by January 1, 2015 and beginning January 1, 2018 another interim reduction of 80% is required. Owners and operators must designate which of their large electric generating units will follow the multipollutant option within 24 months after the effective date of the rule. 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.

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). After all the mercury reduction requirements in these proposed revisions become effective for small and large electric generating units almost 4,400 pounds of mercury air emissions will be prevented from being emitted annually.

These revisions retain the January 1, 2010, mercury reduction requirement in the current state mercury rule. Under this requirement the state's four major utilities, Alliant Energy, Dairyland Power Cooperative, WE Energies and Wisconsin Public Service Corporation, must reduce mercury emissions from their existing coal-fired electric generating units 40% from the baseline established under provisions in the current rule. The proposed revisions will affect an additional four utilities including Madison Gas and Electric Company, Xcel Energy, Mid-American, and Manitowoc Public Utilities.

The revisions also propose that any new coal-fired electric generating unit install mercury control technology which achieves a minimum mercury reduction of 90% when it commences operation.

**Long-Range Fiscal Implications**

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## Fiscal Estimate — 2007 Session

### Page 2 Assumptions Narrative Continued

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#### Assumptions Used in Arriving at Fiscal Estimate – Continued

##### 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<sub>x</sub> and SO<sub>2</sub> 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 2003<sup>1</sup>.
- 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 EGUs 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.

<sup>1</sup> (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:	
A. State Costs by Category		Increased Costs	Decreased Costs
State Operations — Salaries and Fringes		\$	\$ -
(FTE Position Changes)		( FTE )	(- FTE )
State Operations — Other Costs			-
Local Assistance			-
Aids to Individuals or Organizations			-
<b>Total State Costs by Category</b>		\$	\$ -
B. State Costs by Source of Funds		Increased Costs	Decreased Costs
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			-
<b>Total State Revenues</b>		\$	\$ -

**Net Annualized Fiscal Impact**

	<u>State</u>	<u>Local</u>
Net Change in Costs	\$ _____	\$ 160,000 to 500,000
Net Change in Revenues	\$ _____	\$ _____

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