Senators Anderson, Higgins, Sams, Koering and Solon introduced–

S.F. No. 3175: Referred to the Committee on Jobs, Energy and Community Development.

A bill for an act

relating to employment; regulating overtime for certain nurses; amending Minnesota Statutes 2004, section 181.275, subdivisions 1, 2.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. Minnesota Statutes 2004, section 181.275, subdivision 1, is amended to read:

Subdivision 1. **Definitions.** For purposes of this section, the following terms have the meanings given them:

(1) "emergency" means a period when replacement staff are not able to report for duty for the next shift or increased patient need, because of unusual, unpredictable, or unforeseen circumstances such as, but not limited to, an act of terrorism, a disease outbreak, adverse weather conditions, or natural disasters which impact continuity of patient care;

(2) "normal work period" means 12 or fewer consecutive hours consistent with a predetermined work shift;

(3) "nurse" has the meaning given in section 148.171, subdivision 9, and includes nurses employed by the state of Minnesota; and

(4) "taking action against" means discharging; disciplining; threatening; reporting to the Board of Nursing; discriminating against; or penalizing regarding compensation, terms, conditions, location, or privileges of employment.

Sec. 2. Minnesota Statutes 2004, section 181.275, subdivision 2, is amended to read:

Subd. 2. **Prohibited actions.** Except as provided in subdivision 3, a hospital or other entity licensed under sections 144.50 to 144.58, and its agent, or other health care facility licensed by the commissioner of health, and the facility's agent, is prohibited

from taking action against a nurse solely on the grounds that the nurse fails to accept an assignment of additional consecutive hours at the facility in excess of a normal work period, if the nurse declines to work additional hours because doing so may, in the nurse's judgment, jeopardize patient safety. This subdivision does not apply to a nursing facility, an intermediate care facility for persons with mental retardation, a licensed boarding care facility, or a housing with services establishment. This subdivision applies to a nurse employed by the state of Minnesota regardless of the type of facility in which the nurse is employed and regardless of the facility's license, if the nurse is involved in resident or patient care.

Senators Clark; Fischbach; Johnson, D.E.; Sams and Wergin introduced–

S.F. No. 3260: Referred to the Committee on Jobs, Energy and Community Development.

A bill for an act

relating to biotechnology zones; authorizing the designation of additional biotechnology and health sciences industry zones; amending Minnesota Statutes 2004, section 469.334, subdivisions 1, 4.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. Minnesota Statutes 2004, section 469.334, subdivision 1, is amended to read:

Subdivision 1. **Commissioner to designate.** (a) The commissioner, in consultation with the commissioner of revenue and the director of the Office of Strategic and Long-Range Planning, shall designate ~~not more than~~ one or more biotechnology and health sciences industry zone. Priority must be given to applicants with a development plan that links a higher education/research institution with a biotechnology and health sciences industry facility.

(b) The commissioner may consult with the applicant prior to the designation of the zone. The commissioner may modify the development plan, including the boundaries of the zone or subzones, if in the commissioner's opinion a modified plan would better meet the objectives of the biotechnology and health sciences industry zone program. The commissioner shall notify the applicant of the modifications and provide a statement of the reasons for the modifications.

Sec. 2. Minnesota Statutes 2004, section 469.334, subdivision 4, is amended to read:

Subd. 4. **Designation schedule.** (a) The schedule in paragraphs (b) to (e) applies to the designation of the first biotechnology and health sciences industry zone.

(b) The commissioner shall publish the form for applications and any procedural, form, or content requirements for applications by no later than August 1, 2003. The

commissioner may publish these requirements on the Internet, in the State Register, or by any other means the commissioner determines appropriate to disseminate the information to potential applicants for designation.

(c) Applications must be submitted by October 15, 2003.

(d) The commissioner shall designate the zones by no later than December 31, 2003.

(e) The designation of the zones takes effect January 1, 2004.

(f) Additional zones may be designated in later years, following substantially the same application and designation process as provided in paragraphs (b) to (e).

Sec. 3. **EFFECTIVE DATE.**

This act is effective the day following final enactment.

Senate Counsel, Research, and Fiscal Analysis

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Senate
State of Minnesota

S.F. No. 1596 - Employee Invention Agreements

Author: Senator Thomas Bakk

Prepared by: John C. Fuller, Senate Counsel (651/296-3914) JCF

Date: March 23, 2006

Current state law regulates agreements between an employer and employee concerning the employer's rights in inventions of the employee. In general, these agreements are enforceable, but current law makes unenforceable agreements that attempt to give an employer an interest in an invention that an employee developed on his own time, using his own facilities, and that is unrelated to the employee's work.

Section 1 provides that an employer forfeits the right to develop an invention or proposal of an employee if the employer does not make a substantial investment in the invention or proposal within ten years of its submission. Upon forfeiture, the employee may transfer interest in the invention or proposal to anyone.

JCF:cs

Senator Anderson from the Committee on Jobs, Energy and Community Development, to which was referred

S.F. No. 1596: A bill for an act relating to employment; regulating employee invention agreements; amending Minnesota Statutes 2004, section 181.78, by adding a subdivision.

Reports the same back with the recommendation that the bill be amended as follows:

Page 1, line 14, delete "ten" and insert "two"

And when so amended the bill be re-referred to the Committee on Commerce without recommendation. Amendments adopted. Report adopted.

.....
(Committee Chair)

March 24, 2006 .....
(Date of Committee recommendation)

Senator Bakk introduced--

S.F. No. 1596: Referred to the Committee on Jobs, Energy and Community Development.

A bill for an act

relating to employment; regulating employee invention agreements; amending Minnesota Statutes 2004, section 181.78, by adding a subdivision.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. Minnesota Statutes 2004, section 181.78, is amended by adding a subdivision to read:

Subd. 4. [FORFEITURE OF EMPLOYER RIGHTS.] (a) This subdivision applies to an invention or proposal by an employee in which the employer has an enforceable interest by contract or otherwise.

(b) An employer who has a right to develop or utilize an invention or proposal must make a substantial investment in the invention or proposal within ten years of the submission of the invention or proposal or forfeit all rights and interests in the invention or proposal to the employee.

(c) An employee who has acquired the rights and interests of an employer under paragraph (b) may transfer that interest in the invention or proposal to anyone.

(d) An employer must notify in writing an employee who submits an invention or proposal to the employer of the employee's right under this subdivision within ten days of the submission. The employer must date and describe the proposal or invention received by the employer and provide a copy to the employee.

Senate Counsel, Research, and Fiscal Analysis

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Senate
State of Minnesota

S.F. No. 3398 - Mercury Emissions Reduction Act of 2006

Author: Senator D. Scott Dibble

Prepared by: Matthew S. Grosser, Senate Research (651/296-1890) MG

Date: March 23, 2006

The bill requires reductions in airborne mercury emissions at certain coal-fired electric generation facilities. The bill also extends the sunset date for emissions reduction rate rider, originally set for June 30th of this year, until June 30, 2012.

Section 1 titles the bill the Mercury Emissions Reduction Act of 2006.

Section 2 extends the sunset date for the emissions reduction rate rider until June 30, 2012. The emissions reduction rate rider allows for cost recovery from rate payers for emissions reductions projects at existing large electric generation facilities not subject to emissions standards in the federal Clean Air Act, and was enacted in 2001 to implement Xcel's Metropolitan Emission Reduction Plan.

Section 3 provides definitions. Defines a "qualifying facility" as an electric generating facility with a total coal-fired capacity as of January 1, 2006, in excess of 750 megawatts. This would include Xcel Energy's Sherco Plants1, 2, and 3, and Minnesota Power's Boswell Plants 3 and 4. This section also defines a "qualifying unit" as a coal-fired electric generating unit that exceeds 300 megawatts.

Section 4 requires a public utility owning a qualifying facility to install, maintain, and operate continuous mercury emissions monitoring systems, as set forth in the federal Clean Air Mercury Rule, on those facilities included in its mercury emissions reduction plan. Data from these monitoring systems must be used to establish a baseline of mercury emission to be reported to the Minnesota Pollution Control Agency (PCA).

Section 5 requires a public utility owning a qualified facility to submit plans to reduce mercury emissions to the PCA and Public Utilities Commission (PUC). The plans must be designed to

achieve a total reduction in mercury emissions among the utility's Minnesota facilities equivalent to 90 percent of the mercury emissions at the utilities targeted units by December 31, 2013. This section also permits a utility owning a qualified facility to submit one or more alternative mercury emissions plans that balance environmental benefits with associated costs, including cost to the utility's customers and the state's economy. The alternative plans may provide measures to reduce mercury emissions through pretreatment of coal, averaging reductions among different generating units at a qualifying facility, or equivalent mercury emissions reductions at other facilities in the state. The alternative plans may specify numeric emissions targets or percent removal expectations. Each plan must provide the costs, technical feasibility, and expected emissions reductions. This section also specifies that mercury emissions reductions under the Metropolitan Emissions Reduction Plan may not be counted toward total mercury emissions reductions required in this bill.

Section 6 permits a utility required to submit a mercury emissions reduction plan under this bill to propose associated emissions reduction rate riders to comply with state and federal statute or regulation governing air pollutants other than mercury that became effective after December 31, 2004.

Section 7 permits a utility required to submit a mercury emissions reduction plan under this bill to include in the emissions reduction rate rider costs associated with the installation of continuous mercury monitoring systems, ongoing operation and maintenance costs associated with its mercury control initiatives, and any studies undertaken by the utility in support of the mercury emissions reduction plan.

Section 8 requires the PCA to submit its evaluation of a utility's mercury emissions reduction plans to the PUC within 180 days of the date the plan is filed with the PUC and PCA.

Section 9 requires PUC approval of a utility's mercury emissions reduction plans within 180 days of receiving the PCA's assessment of those plans. In reviewing the plans, the PUC must consider environmental and public health benefits, technological feasibility, competitiveness of customer rates and power supply costs, and cost-effectiveness. If the PUC is unable to approve the utility's 90-percent reduction plan, the PUC must order the utility to implement the most stringent mercury control alternatives proposed by the utility.

Section 10 requires the utility to implement the plan as approved by the PUC, and prohibits the PCA from enforcing a mercury emissions reduction permit incorporated during the project's first year. If, after the first year, the utility can meet the reduction goal, the PCA shall incorporate it into the permit as a state-only condition, to be enforced by the PCA rather than the federal EPA. If after the first year the emissions reduction cannot be achieved, the PCA shall revise the permit to reflect the actual emissions reduction achieved. The PCA shall revise the utility's permit within five years of the first year of the emissions reduction plan to insure optimal operation given technological and operational advancements.

Section 11 specifies that mercury emissions reduction equipment must meet all applicable requirements related to mercury emissions, including those under the federal Clean Water Act.

Specifies that, except where otherwise provided in the bill, a utility implementing a mercury emissions reduction plan under this bill shall not be required by state law or regulation to make additional investments to reduce mercury.

MSG:cs

Senators Dibble; Johnson, D.E.; Metzen; Rosen and Frederickson introduced–

S.F. No. 3398: Referred to the Committee on Jobs, Energy and Community Development.

A bill for an act

relating to the environment; requiring mercury emissions reductions by public utilities; amending Minnesota Statutes 2004, section 216B.1692, subdivision 8; proposing coding for new law in Minnesota Statutes, chapter 216B.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. **TITLE.**

This act may be cited as the Mercury Emissions Reduction Act of 2006.

Sec. 2. Minnesota Statutes 2004, section 216B.1692, subdivision 8, is amended to read:

Subd. 8. **Sunset.** This section is effective until ~~June 30, 2006~~ June 30, 2012, and applies to projects and riders approved prior to that date.

Sec. 3. **[216B.68] DEFINITIONS, MERCURY EMISSIONS REDUCTIONS.**

Subdivision 1. **Scope.** Terms used in sections 216B.68 to 216B.688 have the meanings given them in this section and section 216B.02.

Subd. 2. **Qualifying facility.** "Qualifying facility" means an electric generating power plant in Minnesota that, as of January 1, 2006, had a total net dependable capacity in excess of 750 megawatts from all coal-fired electric generating units at the power plant.

Subd. 3. **Targeted unit.** "Targeted unit" means a coal-fired electric generation unit greater than 300 megawatts at a qualifying facility.

Subd. 4. **Agency.** "Agency" means the Minnesota Pollution Control Agency.

Subd. 5. **Federal mercury regulations.** "Federal mercury regulations" means the federal clean air mercury rule as of January 1, 2006, published in Code of Federal Regulations, title 40, parts 60, 63, 70, and 72.

Subd. 6. **Reduction.** "Reduction" means the capture of total mercury emissions from a qualifying facility relative to the emissions baseline from that facility established under section 216B.681, expressed as a percentage.

Subd. 7. **Dry scrubbed units.** "Dry scrubbed units" means a targeted unit at which pollution control technology that uses a spray dryer and fabric filter system to remove pollutants from air emissions is installed.

Subd. 8. **Wet scrubbed units.** "Web scrubbed units" means a targeted unit at which pollution control technology that uses water or solutions to remove pollutants from air emissions is installed.

Subd. 9. **Startup period.** "Startup period" means a period of one year after the date of compliance set forth in section 216B.682, paragraph (a), or such longer period as the commission may approve after consultation with the Pollution Control Agency.

Sec. 4. **[216B.681] MONITORING MERCURY EMISSIONS.**

By July 1, 2007, a public utility that owns or operates a qualifying facility shall install, maintain, and operate continuous mercury emissions monitoring systems on coal-fired electric generation units that the utility may include in a mercury emissions reduction plan under section 216B.682. The monitoring systems must use methods set forth in federal mercury regulations or other methods as may be approved by the agency. The data from monitoring systems or other methods of measurement approved by the agency associated with a utility's qualifying facilities must be used to establish a baseline for mercury emissions reductions under section 216B.682. The public utility shall report to the agency the quality assured and controlled data produced from the systems implemented pursuant to this section on a quarterly basis thereafter.

Sec. 5. **[216B.682] MERCURY EMISSIONS REDUCTION PLANS.**

(a) By December 31, 2007, for dry scrubbed units and by December 31, 2009, for wet scrubbed units, a public utility that owns or operates a qualifying facility shall develop and submit to the Pollution Control Agency and the Public Utilities Commission plans to reduce mercury emissions in this state. A public utility filing a plan for a wet scrubbed unit on or before December 31, 2007, may file a plan for any other wet scrubbed unit at its qualifying facility by July 1, 2011. Mercury emissions reduction initiatives must be implemented by December 31, 2010, at dry scrubbed units, and by December 31, 2013, at wet scrubbed units.

(b) A public utility must file a set of plans under paragraph (a) that, taken together, are designed to achieve total mercury reductions among the utility's Minnesota facilities

equivalent to a goal of 90 percent reduction of mercury emissions at the utility's targeted units by December 31, 2013.

(c) The utility may also submit one or more alternatives to the plans required under paragraph (b). The alternatives must be designed to achieve mercury emissions reductions at its qualifying facilities greater and earlier than required under federal mercury regulations. The utility shall also provide information as to how the utility would have planned to meet federal mercury reduction requirements in the absence of this legislation and the estimated cost and timing of meeting federal mercury reduction requirements.

(d) For each required and alternative plan submitted pursuant to this subdivision, the utility shall present information assessing that plan's ability to optimize human health benefits and achieve cost efficiencies. The utility shall assess how each plan balances environmental benefits with the associated costs, considering the impact of the resulting electricity costs on both the utility's customers and the state's economy. Plans must provide the cost, technical feasibility, and mercury emissions reduction expected for each option. Plans may also provide measures to reduce the cost and maximize the flexibility of each option, including, but not limited to, mercury emissions reductions achieved through pretreatment of the coal burned at the facility, averaging mercury emissions reductions among different generating units at the same plant and achieving equivalent mercury emissions reductions on other plants in the public utility's electric system in Minnesota. The plans may specify permit targets or conditions proposed by the public utility for each mercury emissions control option, including, but not limited to, numeric emission targets, percent removal expectations, emission control technology installation and operative requirements, or work practice standards.

(e) Mercury emissions reductions under a plan approved by the commission under section 216B.1692 before January 1, 2006, may not be counted toward total mercury emissions reductions of a plan under this section.

Sec. 6. **[216B.683] OTHER ENVIRONMENTAL IMPROVEMENT PLANS.**

In order to encourage a utility to address multiple pollutants, a utility required to submit mercury reduction plans under sections 216B.68 to 216B.688 may also propose plans and associated emission reduction riders addressing investments in additional pollution control equipment and related expenses needed to comply with state or federal statute or regulation that became effective after December 31, 2004. The plans must propose to implement emission control initiatives that exceed or are implemented in advance of state or federal requirements. The utility must show that plans submitted

under this subdivision and any related riders are the least-cost alternative for complying with state and federal regulations.

Sec. 7. **[216B.684] EMISSIONS REDUCTION RIDERS.**

A public utility required to file a mercury emissions reduction plan under section 216B.682 may also file for approval of an emissions reduction rate rider pursuant to section 216B.1692, subdivision 3, for its mercury control and other environmental improvement initiatives under sections 216B.68 to 216B.688. The emissions reduction rate rider may include recovery of costs associated with the installation of continuous mercury emission monitoring systems, ongoing operation and maintenance costs associated with the utility's mercury control initiatives, and any studies undertaken by the utility in support of the mercury emissions reduction plan required under section 216B.682, in addition to the cost recovery provided by section 216B.1692, subdivision 3. The utility may propose to phase in the emissions reduction riders to recover these costs over the development and life of the projects.

Sec. 8. **[216B.685] ENVIRONMENTAL ASSESSMENT.**

The Pollution Control Agency shall evaluate a utility's mercury emissions reduction plans and alternatives filed under section 216B.68 to 216B.688, and submit its evaluation to the Public Utilities Commission within 180 days of the date the plan is filed with the agency and commission under subdivision 3. In its review, the agency shall:

(1) assess whether the utility's plan under section 216B.682, paragraph (b), meets the requirements of that paragraph;

(2) evaluate the environmental and public health benefits of each plan submitted under section 216B.682, including benefits associated with reductions in pollutants other than mercury;

(3) assess the technical feasibility and cost-effectiveness of technologies proposed for achieving mercury emissions reduction in each plan submitted; and

(4) advise the commission of the appropriateness of each plan.

Sec. 9. **[216B.686] COMMISSION APPROVAL.**

(a) The Public Utilities Commission shall review and evaluate a utility's mercury emissions reduction plans submitted under this section. In its review, the commission shall consider the environmental and public health benefits, the agency's determination of a technology's technical feasibility, competitiveness of customer rates and power supply costs, and cost-effectiveness of the utility's proposed mercury control initiatives in light of

the agency's report under section 216B.685. The commission shall rely on the expertise of the agency on issues regarding technical feasibility of emissions control technology. For multi-emissions reduction plans, the commission shall consider the overall environmental and public health benefits, total costs, and competitiveness of customer rates and power supply costs.

(b) Within 180 days of receiving the agency's report, the commission shall approve a utility's mercury or multi-emissions reduction plans provided under section 216B.682, paragraph (b), if the commission reasonably expects that set of plans will be technically able to achieve, by December 31, 2013, total mercury reductions among the utility's Minnesota facilities equivalent to a goal of 90 percent reduction of mercury emissions at the utility's targeted units in a manner that does not impose excessive consumer and power supply costs.

(c) If the commission is unable to approve the utility's 90 percent reduction plan under paragraph (b), the commission shall, in consultation with the agency, order the utility to implement the most stringent mercury control alternatives proposed by the utility under section 216B.682, paragraph (c), that will achieve the maximum mercury emissions reductions technically feasible and protective of the public health and environment without imposing excessive consumer and power supply costs. The commission shall attempt to achieve the greatest level of mercury reduction that can be obtained without imposing excessive consumer costs.

(d) Section 216B.1692 applies to plans and emissions control riders proposed under sections 216B.68 to 216B.688, except that projects included in a plan approved under those sections are deemed to be qualifying projects for the purposes of section 216B.1692; and section 216B.1692, subdivision 5, paragraph (c), and subdivision 6, do not apply to plans or riders submitted under sections 216B.68 to 216B.688. Commission approval of an emissions reduction plan under sections 216B.68 to 216B.688 includes approval of an emissions reduction rider associated with that plan, if one was submitted by the utility. Nothing in sections 216B.68 to 216B.688 requires a utility to convert a wet scrubbed unit into a dry scrubbed unit as part of an emissions reduction plan.

Sec. 10. **[216B.687] IMPLEMENTATION AND OPERATION.**

(a) A public utility required to file a mercury emissions reduction plan under section 216B.682 shall implement the plan as approved by the commission under section 216B.685.

(b) During the startup period, except as required by federal regulation, any mercury emission or reduction limit incorporated into a qualifying facility's permit as established

under the plan is a state-only condition of the permit and is not subject to enforcement by the agency. If, after the startup period ends, it is determined that the qualifying facility is able to comply with the applicable emission or reduction limit, the agency shall incorporate the mercury limit into the facility's permit as an enforceable state-only limit. If, after the startup period, despite the utility's reasonable best efforts consistent with the approved plan, the equipment installed at a unit under an approved plan fails to achieve the mercury reduction expected in the approved plan, the agency shall revise the mercury limit for the qualifying facility to reflect the actual mercury emissions expected from the unit and incorporate that limit as an enforceable state-only limit in the facility's permit. The utility shall report periodically to the agency of its efforts to optimize the operation of installed equipment, and the agency shall revise the unit's air permit within five years of initial operation, to ensure optimal operation of equipment installed under a plan approved pursuant to sections 216B.68 to 216B.688, in light of technical and operational advances made since the date of plan approval.

(c) For qualifying facilities using both dry scrubbed and wet scrubbed units, the agency may establish permit limits as set forth in paragraph (b) for each individual unit. After the startup periods for all units at the qualifying facility have concluded and the actual mercury emissions for the units expected under the approved plan have been determined, the agency may establish a single enforceable state-only mercury emission limit for the qualifying facility covering all units at that facility.

Sec. 11. **[216B.688] RELATIONSHIP TO STATE AND FEDERAL REGULATIONS.**

Mercury emissions reduction equipment installed under this section must fulfill all applicable requirements related to mercury emissions from a qualifying facility, including but not limited to any mercury-related requirements related to total maximum daily loads under the federal Clean Water Act. Except as otherwise provided in this section, a public utility implementing a mercury emissions reduction plan under sections 216B.68 to 216B.688 shall not be required to undertake additional investments to reduce mercury by state law or regulation.

Senator ..... moves to amend S.F. No. 3398 as follows:

Delete everything after the enacting clause and insert:

"Section 1. Minnesota Statutes 2004, section 216B.1692, subdivision 8, is amended to read:

Subd. 8. **Sunset.** This section is effective until ~~June 30, 2006~~ December 31, 2011, and applies to projects and riders approved before that date.

Sec. 2. **[216B.1695] MERCURY EMISSIONS REDUCTIONS.**

Subdivision 1. **Definitions.** For the purpose of this section, the following terms have the meanings given them:

(1) "coal-fired electric generating unit" means any electric generating power plant in Minnesota that supplied more than one-third of its potential output capacity and 250 megawatts or more of electrical output from coal-fired generation to any public utility as of January 1, 2006;

(2) "dry-scrubbed units" means a coal-fired electric generating unit at which pollution control technology that uses a spray dryer and fabric filter system to remove pollutants from air emissions is installed; and

(3) "wet-scrubbed units" means a coal-fired electric generating unit at which pollution control technology that uses water or solutions to remove pollutants from air emissions is installed.

Subd. 2. **Monitoring.** By January 1, 2007, a public utility that owns or operates a coal-fired electric generating unit shall install, maintain, and operate a continuous mercury emissions monitoring system approved by the Pollution Control Agency on each coal-fired electrical generating unit. The data from six months of continuous emissions monitoring or its equivalent must be used to establish a baseline for mercury emissions reductions under subdivision 3. The public utility shall report to the Pollution Control Agency as public data the quality assured data produced from monitoring implemented pursuant to this subdivision on a quarterly basis on a form prescribed by the agency.

Subd. 3. **Mercury emissions limits.** Subject to commission approval, mercury emissions from coal-fired electric generating units relative to the baseline established by monitoring under subdivision 2 must be reduced as follows:

(1) mercury emissions from dry-scrubbed units must be reduced by 90 percent by January 1, 2009; and

(2) mercury emissions from wet-scrubbed units must be reduced by 90 percent by January 1, 2011.

Subd. 4. **Compliance plans.** (a) By September 1, 2007, for dry-scrubbed units, a public utility that owns or operates a coal-fired electrical generating unit shall submit to the Pollution Control Agency and the commission a plan for compliance with the mercury emissions limit in subdivision 3, clause (1).

(b) By July 1, 2008, for wet-scrubbed units, a public utility that owns or operates a coal-fired electrical generating unit shall submit to the Pollution Control Agency and the commission a plan for compliance with the mercury emissions limit in subdivision 3, clause (2).

(c) Plans under paragraphs (a) and (b) shall provide the cost, technical feasibility, operational conditions, and mercury emissions reductions expected for each option. The plans may specify permit conditions proposed by the public utility for each mercury emission control option, including, but not limited to, numeric emission target, percent removal expectations, emission control technology installation, and operative requirements or work practice standards.

(d) The public utility may also submit one or more alternatives to the plans required under subdivision 3. For each required and alternative plan submitted pursuant to this subdivision, the utility shall present information assessing the plan's ability to optimize human health benefits and achieve cost efficiencies.

Subd. 5. **Multiple pollutant reductions.** A utility required to submit a compliance plan under this section may also propose plans and associated emissions-reduction riders to reduce emissions of multiple pollutants. The plans must propose to implement emission control initiatives that exceed and are implemented in advance of state or federal requirements.

Subd. 6. **Emission-reduction rider.** A public utility required to file a compliance plan under subdivision 4 may also file for approval of an emissions-reduction rate rider, under section 216B.1692, subdivision 3, for its compliance and multiple pollutant reduction plans under this section. The emissions-reduction rate rider may include recovery of capital, operating, and maintenance costs associated with continuous monitoring, mercury emissions reduction, multiple pollutant emissions reduction, and any studies undertaken by the utility in support of the compliance plan, in addition to the cost recovery under section 216B.1692, subdivision 3. The utility may propose to phase in the emissions-reduction riders to recover these costs over the development and life of the projects.

Subd. 7. **Compliance assessment.** (a) The Pollution Control Agency shall evaluate a utility's compliance plan and alternatives, and within 90 days for dry-scrubbed units

and within 180 days for wet-scrubbed units from the date the plan was submitted, assess the following:

(1) whether the plan will result in compliance with subdivision 3; and

(2) the technical feasibility and effectiveness of the technologies proposed in achieving maximum mercury reductions.

(b) For multiple pollutant emissions reduction plans, the Pollution Control Agency shall evaluate within 180 days whether the plan complies with the requirements of subdivisions 3 and 5, in addition to providing an environmental assessment under section 216B.1692, subdivision 4.

Subd. 8. **Commission approval.** (a) Within 90 days of receiving the Pollution Control Agency's compliance assessment for dry-scrubbed units, and within 180 days of receiving the Pollution Control Agency's compliance assessment for wet-scrubbed units, the commission shall approve a utility's compliance plan that has been assessed to comply with subdivision 3, clause (1) or (2), unless the applicant or other party establishes that the plan would impose excessive customer costs.

(b) If the commission is unable to approve a plan under paragraph (a), the commission shall, in consultation with the Pollution Control Agency, order the utility to implement the most stringent mercury reduction alternative proposed that does not impose excessive costs. The commission shall not require the replacement of existing pollution control equipment for that unit. The order must include provisions:

(1) requiring the utility to optimize the operation of installed equipment to obtain maximum mercury reductions and report its efforts and results quarterly to the Pollution Control Agency; and

(2) stating that if compliance with the 90 percent reduction requirement has not been met by January 1, 2013, the Pollution Control Agency and the commission shall conduct a de novo review to determine the technical feasibility of compliance with subdivision 3.

(c) Within 180 days of receiving the Pollution Control Agency's assessments, the commission may approve a utility's multiple pollutant emissions-reduction plan if it:

(1) results in compliance with subdivision 3 in a manner that is technically feasible without excessive consumer costs; and

(2) provides greater environmental and public health benefits by reducing multiple emissions simultaneously, including, but not limited to, emissions of mercury, sulfur oxides, nitrogen oxides, and particulate matter.

(d) The commission shall defer to the expertise of the Pollution Control Agency on compliance issues under subdivision 3, technical feasibility of emission control technology, and environmental and public health benefits.

(e) Section 216B.1692 applies to plans and emission control riders proposed under this section, and projects included in a plan approved under this section are considered qualifying projects under section 216B.1692. Section 216B.1692, subdivision 5, paragraph (c), and subdivision 6, do not apply to plans or riders submitted under this section. Commission approval of an emissions-reduction plan under this section shall include approval of an emissions-reduction rider associated with that plan, if one was submitted by the utility.

Subd. 9. **Implementation and operation.** (a) A public utility required to file a compliance plan shall implement the plan as approved under subdivision 8.

(b) For the first year of operation, except as required by federal regulation, any mercury emission limit incorporated into the permit of a coal-fired electric generating unit for which a plan has been approved, shall be a state-only condition of the permit and is not enforceable by the Pollution Control Agency.

(c) After one year, the Pollution Control Agency shall incorporate the mercury limit as an enforceable state-only limit for any coal-fired electric generating unit that is in compliance with its plan.

(d) For any coal-fired electric generating unit that is not in compliance with the limits of subdivision 3 after one year, the Pollution Control Agency shall:

(1) provide public notice and revise the mercury limit for that unit, incorporating that limit as an enforceable state-only limit in the facility's permit; and

(2) revise the unit's air permit on a biannual basis or as the plan for mercury reduction at that unit is modified to ensure optimal mercury emissions reduction in light of technical and operational advances made since the date of plan approval.

(e) For any coal-fired electric generating unit that is not in compliance with the limits of subdivision 3 after one year, the public utility shall report its efforts to optimize the operation of installed equipment quarterly to the Pollution Control Agency until compliance with the emission limits set in subdivision 3 is attained."

Amend the title accordingly

STATE OF MINNESOTA

Office of Governor Tim Pawlenty

130 State Capitol ♦ 75 Rev. Dr. Martin Luther King Jr. Boulevard ♦ Saint Paul, MN 55155

February 16, 2006

Commissioner Sheryl Corrigan
Minnesota Pollution Control Agency
520 Lafayette Road North
Saint Paul, MN 55155

Dear Commissioner Corrigan:

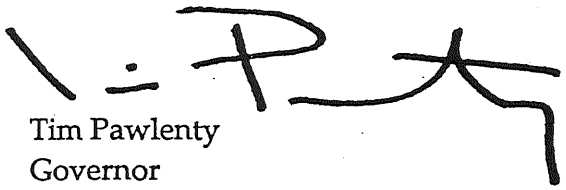
Mercury poses a major threat to the health of our citizens and our environment. While most mercury emissions deposited in our state come from outside our borders, Minnesota has made significant progress on mercury reductions in the past 15 years. Total annual mercury emissions declined 72% during that time. That is important progress and I congratulate all those who helped make that happen.

Now we need to do more. The 93% mercury reduction goal you have proposed through the regional mercury total maximum daily load ("TMDL") is a great step toward addressing this problem. I share your concern, however, that the TMDL plan and related process has become mired in divergent opinions, misperceptions, and competing interests. The TMDL also faces the likelihood of litigation which will cause further delay.

Given those dynamics, the best way to proceed is to move boldly and decisively to resolve this issue by passing legislation this session. Such legislation should require Minnesota's electric utilities that operate the largest coal-fired facilities in the state to submit plans to the Public Utilities Commission to reduce mercury emissions by 90% in a timeframe well in advance of the federal clean air requirements. These plans should include the cost of implementing this goal so that the Commission can protect rate-payers while providing the utilities' recovery of the costs.

The success of this proposal will come from the full and constructive engagement of a broad range of stakeholders. I ask you to continue to work with stakeholders and key members of our administration to pass this legislation.

Sincerely,



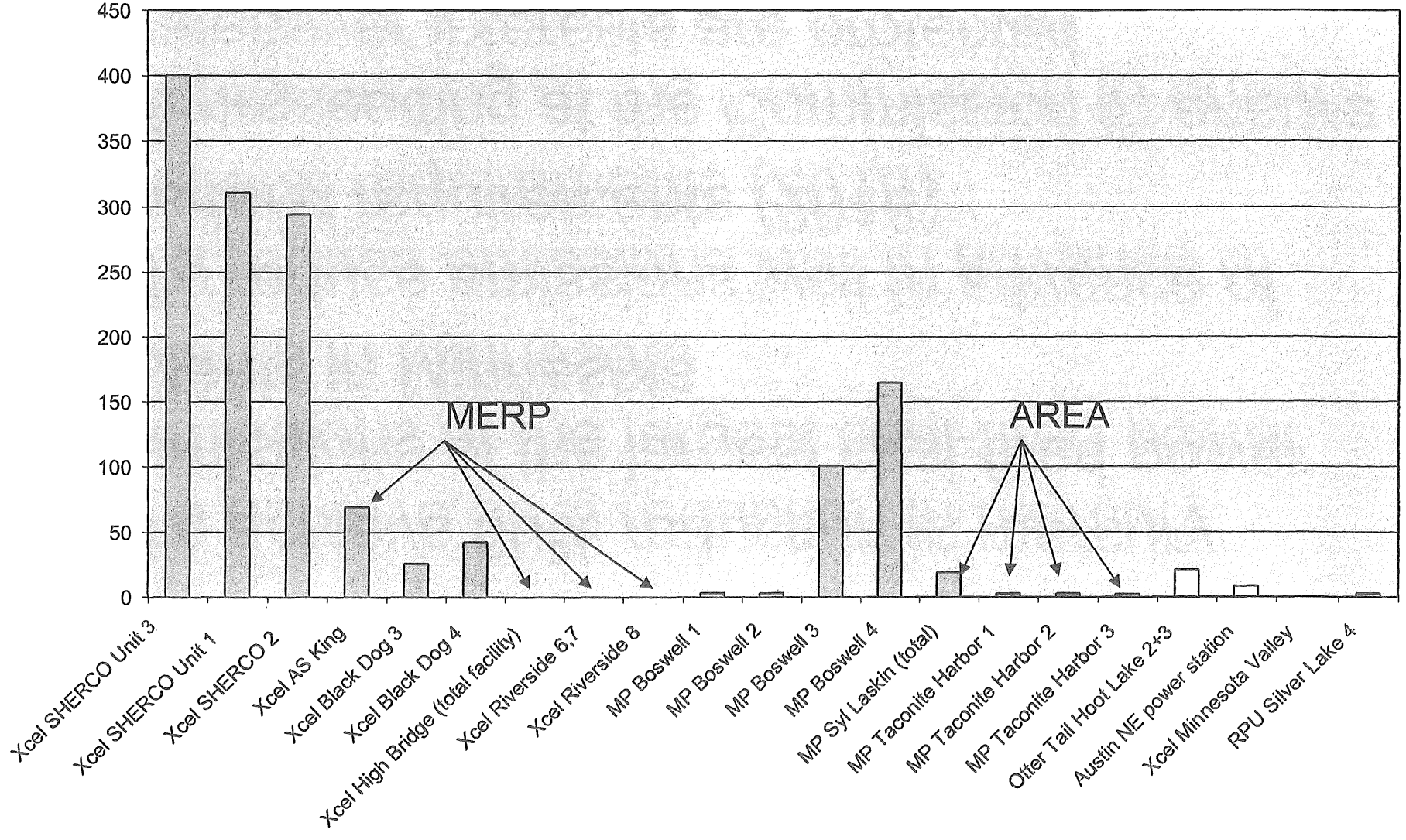
Tim Pawlenty
Governor

Minnesota Mercury Emissions Reduction Act of 2006

Overarching Principles

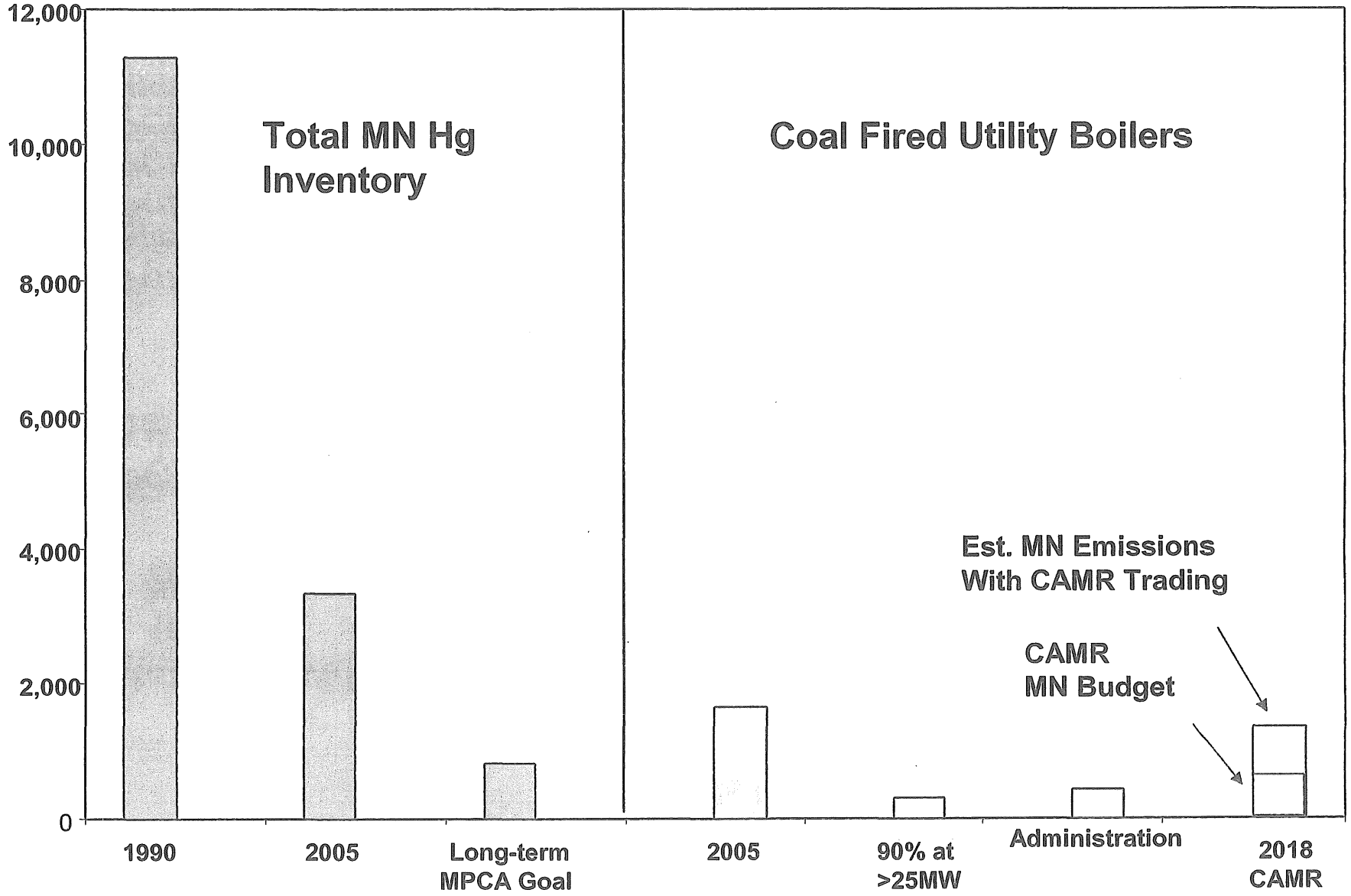
- To achieve 90% reduction in mercury emissions at the largest coal-fired power plants in Minnesota
- To reduce emissions well in advance of federal requirements (2018)
- A proceeding at the Commission to ensure ratepayer interests are protected

Estimated Mercury Emissions from MN Coal-Fired Utilities - 2009



Mercury Reductions from Coal Fired Power Plants in Minnesota

(Annual Pounds of Mercury)



MN Mercury Emissions Estimates
(pounds)

- **Total Statewide Emissions**
  - 1990 — 11,272[1]
  - 2005 — 3,341[1]
- **MPCA Long-term Statewide Goal**
  - 789[2]
- **Coal Fired Utility Emissions**
  - 1990 — 1,418[1]
  - 2005 — 1,650[1]
- **90% Reduction at Units > 25MW**
  - 289[3]
- **Administration Proposal**
  - 422[4]
- **EPAs Clean Air Mercury Rule**
  - Mn 2018 Budget — 548[5]
  - Est.2018 Emissions with Trading — 1,336[6]

1 MPCA 2005 Mercury Report to the Legislature
2 MPCA Mercury TMDL Proposal
3 MPCA est. of 2006 Dibble/Cox Bill
4 MPCA est. of 90% reduction at SHERCO 1,2,3 and Boswell 3,4
5 From EPA's CAMR
6 Est. by VISTAS using EPA/IPM modeling

- News Releases
- Executive Speeches
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News Releases

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1/6/2006

Xcel Energy: Natural gas customers should check meters as result of heavy mountain snows

DENVER - Xcel Energy reminds customers to clear snow away from natural gas meters in order to help maintain the proper flow of natural gas to their homes and appliances. The company also recommends that appliance vents, often located on a home's roof, be kept clear in order to operate properly.

Natural Gas Meters: The heavy snows in the mountains have damaged some meters, creating the potential for natural gas leaks. If your home has an outside natural gas meter, check it routinely for any accumulation of ice or snow. A plugged regulator vent on a natural gas meter can lead to a dangerous buildup of natural gas inside a building and/or prevent the meter from operating properly, stopping the flow of natural gas. Customers need to gently remove snow or ice from the natural gas meter and any associated piping. Carefully shovel around a meter and move snow away from it. Avoid using a snow blower near a meter. A covered meter, in addition to being potentially dangerous, can also lead to a loss of service and freezing of inside pipes as a result of lost heat.

If you smell a strong and persistent odor similar to sulfur, you may have a natural gas leak. If you suspect a leak, leave your home immediately. Do not use any electric appliances such as light switches and garage door openers and never use a phone, including a cell phone. When you are a safe distance away, call Xcel Energy at 1-800-895-2999 or 911 in an emergency to report the concern. Do not return until you've been told it's safe.

Carbon Monoxide Detection: Xcel Energy strongly recommends annual inspections of your natural gas appliances and venting systems as a key defense against carbon monoxide poisoning. With heavy snowfall, it's possible that your home's venting systems such as an outdoor air intake vent to a fuel-burning appliance can become packed with snow. Carbon monoxide can then develop if venting systems or appliances are not operating properly. Inspections are vitally important because they can determine and correct the source of a problem if one exists. The company also encourages the use of a carbon monoxide detector in the home on each floor with sleeping rooms. Detectors identify traces of carbon monoxide and sound an alarm when carbon monoxide is detected. The most effective detectors have a battery-backup system and include a memory function that records and indicates the highest concentration levels detected. Install, test and maintain detectors according to the manufacturer's recommendations.

Safety
- Call Before You Dig
- Electric Safety
- Downed Power Lines
- Natural Gas Safety
- How to Identify an Xcel Energy Worker

If Your Power Goes Out
Trees and Power Lines
Energy Prices (Rates & Tariffs)
Power Generation
Energy RFPs
Natural Gas
CO Least-cost Resource Plan
Resource Plan (MN)
Blue Lake Proposal
Comanche Unit 3
Electric and Magnetic Fields

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- Bird Cam
- Safety
- Call Before You Dig
- View My Bill
- Pay My Bill
- How Are We Doing?
- Career Opportunities
- Contact Us

Carbon Monoxide Awareness

Carbon monoxide build-up in the home occurs when home heating systems, gas ovens, dryers, fireplaces or automobile engines are improperly vented or used, or when fossil fuels burn inefficiently.

Symptoms of Carbon Monoxide Exposure

At low levels carbon monoxide, or CO, produces flu-like symptoms such as headache, nausea, drowsiness and ringing ears. Higher levels of CO can result in impaired judgment, brain damage or death. Pregnant women, children, and sick and elderly people are at a higher risk if exposed to CO.

If you notice any of the symptoms mentioned above and suspect CO poisoning, get everyone, including pets, out-of-doors immediately and seek medical attention.

Prevention is your best defense

- Never allow an engine to idle in an attached garage or enclosed room.
- Never burn charcoal indoors or in an unventilated area.
- Use your heating equipment and appliances properly, according to manufacturer's instructions.
- Never use a gas range or stove top to heat your home.
- Hire a qualified heating contractor to inspect all of your gas appliances annually.
- Install a UL or A.G.A.-rated carbon monoxide detector according to manufacturer's instructions in your home.

Search

Related Featu
Call Before Yo
Natural Gas Sa
Safety

To: Senator Anderson, Chair

Committee on Jobs, Energy and Community Development

Senator Dibble,

Chair of the Subcommittee on Housing, to which was referred

S.F. No. 1003: A bill for an act relating to housing; requiring carbon monoxide alarms in all dwellings; providing criminal penalties; proposing coding for new law in Minnesota Statutes, chapter 299F.

Reports the same back with the recommendation that the bill be amended as follows:

Page 3, line 1, delete "Uniform" and insert "Minnesota"

And when so amended that the bill be recommended to pass and be referred to the full committee.

.....
(Subcommittee Chair)

March 17, 2006 .....
(Date of Subcommittee recommendation)

A bill for an act

relating to housing; requiring carbon monoxide alarms in all dwellings; providing criminal penalties; proposing coding for new law in Minnesota Statutes, chapter 299F.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. **[299F.50] DEFINITIONS.**

Subdivision 1. **Scope.** As used in sections 299F.50 to 299F.52, the terms defined in this section have the meanings given them.

Subd. 2. **Installed.** "Installed" means that an approved carbon monoxide alarm is hardwired into the electrical wiring, directly plugged into an electrical outlet without a switch, or, if the alarm is battery-powered, attached to the wall of the dwelling.

Subd. 3. **Single and multifamily dwelling.** "Single and multifamily dwelling" means any building or structure which is wholly or partly used or intended to be used for living or sleeping by human occupants.

Subd. 4. **Dwelling unit.** "Dwelling unit" means an area meant for living or sleeping by human occupants.

Subd. 5. **Approved carbon monoxide alarm.** "Approved carbon monoxide alarm" means a device meant for the purpose of detecting carbon monoxide that is certified by a nationally recognized testing laboratory to conform to the latest Underwriters Laboratories Standards (known as UL2034 standards).

Subd. 6. **Operational.** "Operational" means working and in service according to manufacturer's directions.

Sec. 2. **[299F.51] REQUIREMENTS FOR CARBON MONOXIDE ALARMS.**

Subdivision 1. **Generally.** Every single family dwelling and every dwelling unit in a multifamily dwelling must have an approved and operational carbon monoxide alarm installed on each level of the residence and within ten feet of each room lawfully used for sleeping purposes.

Subd. 2. **Owner's Duties.**The owner of a multifamily dwelling which is required to be equipped with one or more approved carbon monoxide alarms must:

(1) provide and install one approved and operational carbon monoxide alarm on each level of the dwelling and within ten feet of each room lawfully used for sleeping; and

(2) replace any approved carbon monoxide alarm that has been stolen, removed, found missing, or rendered inoperable during a prior occupancy of the dwelling unit and which has not been replaced by the prior occupant prior to the commencement of a new occupancy of a dwelling unit.

Subd. 3. **Occupant's Duties.** The occupant of each dwelling unit in a multifamily dwelling in which an approved and operational carbon monoxide alarm has been provided and installed by the owner must:

(1) keep and maintain the device in good repair according to manufacturer's directions; and

(2) replace any device that is stolen, removed, missing, or rendered inoperable during the occupancy of the dwelling unit.

Subd. 4. **Battery removal prohibited.** No person shall remove batteries from, or in any way render inoperable, a required carbon monoxide alarm.

Sec. 3. **[299F.52] ENFORCEMENT.**

A violation of section 299F.50 or 299F.51 subjects the owner of the single family dwelling, multifamily dwelling, or dwelling unit to the same penalty and enforcement mechanism provided for violations of the Minnesota Fire Code provided in section 299F.011, subdivision 6.

Sec. 4. **EFFECTIVE DATE.**

Sections 1 to 3 are effective January 1, 2007, for all newly constructed single family and multifamily dwelling units and August 1, 2008, for all existing and newly constructed single family and multifamily dwelling units.

Senators Pariseau, Scheid, Ruud and Michel introduced--

S.F. No. 1003: Referred to the Committee on Jobs, Energy and Community Development.

A bill for an act

relating to housing; requiring carbon monoxide alarms in all dwellings; providing criminal penalties; proposing coding for new law in Minnesota Statutes, chapter 299F.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. [299F.50] [DEFINITIONS.]

Subdivision 1. [SCOPE.] As used in sections 299F.50 to 299F.52, the terms defined in this section have the meanings given them.

Subd. 2. [INSTALLED.] "Installed" means that an approved carbon monoxide alarm is hardwired into the electrical wiring, directly plugged into an electrical outlet without a switch, or, if the alarm is battery-powered, attached to the wall of the dwelling.

Subd. 3. [SINGLE AND MULTIFAMILY DWELLING.] "Single and multifamily dwelling" means any building or structure which is wholly or partly used or intended to be used for living or sleeping by human occupants.

Subd. 4. [DWELLING UNIT.] "Dwelling unit" means an area meant for living or sleeping by human occupants.

Subd. 5. [APPROVED CARBON MONOXIDE ALARM.] "Approved carbon monoxide alarm" means a device meant for the purpose of detecting carbon monoxide that is certified by a nationally recognized testing laboratory to conform to the latest

Underwriters Laboratories Standards (known as UL2034 standards).

Subd. 6. [OPERATIONAL.] "Operational" means working and in service according to manufacturer's directions.

Sec. 2. [299F.51] [REQUIREMENTS FOR CARBON MONOXIDE ALARMS.]

Subdivision 1. [GENERALLY.] Every single family dwelling and every dwelling unit in a multifamily dwelling must have an approved and operational carbon monoxide alarm installed on each level of the residence and within ten feet of each room lawfully used for sleeping purposes.

Subd. 2. [OWNER'S DUTIES.] The owner of a multifamily dwelling which is required to be equipped with one or more approved carbon monoxide alarms must:

(1) provide and install one approved and operational carbon monoxide alarm on each level of the dwelling and within ten feet of each room lawfully used for sleeping; and

(2) replace any approved carbon monoxide alarm that has been stolen, removed, found missing, or rendered inoperable during a prior occupancy of the dwelling unit and which has not been replaced by the prior occupant prior to the commencement of a new occupancy of a dwelling unit.

Subd. 3. [OCCUPANT'S DUTIES.] The occupant of each dwelling unit in a multifamily dwelling in which an approved and operational carbon monoxide alarm has been provided and installed by the owner must:

(1) keep and maintain the device in good repair according to manufacturer's directions; and

(2) replace any device that is stolen, removed, missing, or rendered inoperable during the occupancy of the dwelling unit.

Subd. 4. [BATTERY REMOVAL PROHIBITED.] No person shall remove batteries from, or in any way render inoperable, a required carbon monoxide alarm.

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U.S. Environmental Protection Agency

Indoor Air - Publications

"Protect Your Family and Yourself from Carbon Monoxide Poisoning"

Indoor Environments Division (6607J)
Office of Air and Radiation
EPA-402-F-96-005, October 1996

[En Español]

Contents

Carbon Monoxide Can Be Deadly

You can't see or smell carbon monoxide, but at high levels it can kill a person in minutes. Carbon monoxide (CO) is produced whenever any fuel such as gas, oil, kerosene, wood, or charcoal is burned. If appliances that burn fuel are maintained and used properly, the amount of CO produced is usually not hazardous. However, if appliances are not working properly or are used incorrectly, dangerous levels of CO can result. Hundreds of people die accidentally every year from CO poisoning caused by malfunctioning or improperly used fuel-burning appliances. Even more die from CO produced by idling cars. Fetuses, infants, elderly people, and people with anemia or with a history of heart or respiratory disease can be especially susceptible. Be safe. Practice the DO's and DON'Ts of carbon monoxide.

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CO Poisoning Symptoms

Know the symptoms of CO poisoning. At moderate levels, you or your family can get severe headaches, become dizzy, mentally confused, nauseated, or faint. You can even die if these levels persist for a long time. Low levels can cause shortness of breath, mild nausea, and mild headaches, and may have longer term effects on your health. Since many of these symptoms are similar to those of the flu, food poisoning, or other illnesses, you may not think that CO poisoning could be the cause.

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Play it Safe

If you experience symptoms that you think could be from CO poisoning:

- **DO** ***GET FRESH AIR IMMEDIATELY.*** Open doors and windows, turn off combustion appliances and ***leave the house.***
- **DO** ***GO TO AN EMERGENCY ROOM*** *and tell the physician you suspect CO poisoning.* If CO poisoning has occurred, it can often be diagnosed by a blood test done soon after exposure.
- **DO** Be prepared to answer the following questions for the doctor:
  - Do your symptoms occur only in the house? Do they disappear or decrease when you leave home and reappear when you return?
  - Is anyone else in your household complaining of similar symptoms? Did everyone's symptoms appear about the same time?
  - Are you using any fuel-burning appliances in the home?
  - Has anyone inspected your appliances lately? Are you certain they are working properly?

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Prevention is the Key to Avoiding Carbon Monoxide Poisoning

- **DO** have your fuel-burning appliances – including oil and gas furnaces, gas water heaters, gas ranges and ovens, gas dryers, gas or kerosene space heaters, fireplaces, and wood stoves – inspected by a trained professional at the beginning of every heating season. Make certain that the flues and chimneys are connected, in good condition, and not blocked.
- **DO** choose appliances that vent their fumes to the outside whenever possible, have them properly installed, and maintain them according to manufacturers' instructions.
- **DO** read and follow all of the instructions that accompany any fuel-burning device. If you cannot avoid using an unvented gas or kerosene space heater, *carefully follow the cautions* that come with the device. Use the proper fuel and keep doors to the rest of the house open. Crack a window to ensure enough air for ventilation and proper fuel-burning.
- **DO** call EPA's IAQ INFO Clearinghouse (**1-800-438-4318**) or the Consumer Product Safety Commission EXIT Disclaimer (**1-800-638-2772**) for more information on how to reduce your risks from CO and other combustion gases and particles.
- **DON'T** idle the car in a garage – even if the garage door to the outside is open. Fumes can build up very quickly in the garage and living area of your home.
- **DON'T** use a gas oven to heat your home, even for a short time.
- **DON'T** *ever* use a charcoal grill indoors – even in a fireplace.
- **DON'T** sleep in any room with an unvented gas or kerosene space heater.
- **DON'T** use any gasoline-powered engines (mowers, weed trimmers, snow blowers, chain saws, small engines or generators) in enclosed spaces.
- **DON'T** ignore symptoms, particularly if more than one person is feeling them. You could lose consciousness and die if you do nothing.

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A Few Words About CO Detectors

Carbon Monoxide Detectors are widely available in stores and you may want to consider buying one as a back-up –*BUT NOT AS A REPLACEMENT* for proper use and maintenance of your fuel-burning appliances. However, it is important for you to know that the technology of CO

detectors is still developing, that there are several types on the market, and that they are not generally considered to be as reliable as the smoke detectors found in homes today. Some CO detectors have been laboratory-tested, and their performance varied. Some performed well, others failed to alarm even at very high CO levels, and still others alarmed even at very low levels that don't pose any immediate health risk. And unlike a smoke detector, where you can easily confirm the cause of the alarm, CO is invisible and odorless, so it's harder to tell if an alarm is false or a real emergency.

So What's a Consumer to Do?

First, don't let buying a CO detector lull you into a false sense of security. Preventing CO from becoming a problem in your home is better than relying on an alarm. Follow the checklist of DOs and DON'Ts.

Second, if you shop for a CO detector, do some research on features and don't select solely on the basis of cost. Non-governmental organizations such as Consumers Union (publisher of *Consumer Reports*), the American Gas Association, and Underwriters Laboratories (UL) can help you make an informed decision. Look for UL certification on any detector you purchase.

Carefully follow manufacturers' instructions for its placement, use, and maintenance.

If the CO detector alarm goes off:

- Make sure it is your CO detector and not your smoke detector.
- Check to see if any member of the household is experiencing symptoms of poisoning.
- If they are, get them out of the house immediately and seek medical attention. Tell the doctor that you suspect CO poisoning.
- If no one is feeling symptoms, ventilate the home with fresh air, turn off all potential sources of CO -- your oil or gas furnace, gas water heater, gas range and oven, gas dryer, gas or kerosene space heater and any vehicle or small engine.
- Have a qualified technician inspect your fuel-burning appliances and chimneys to make sure they are operating correctly and that there is nothing blocking the fumes from being vented out of the house.

This fact sheet has been translated into Spanish, Vietnamese, Chinese and Korean. If you would like to get a copy of this fact sheet in one of these languages, contact IAQ INFO at 1-800-438-4318.

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Links

Office of Air and Radiation page - "CO - How Carbon Monoxide Affects the Way We Live and Breathe"

National Center for Environmental Health
Air and Respiratory Health Branch
Centers for Disease Control and Prevention
Checklist for Prevention of Carbon Monoxide Poisoning EXIT disclaimer

U.S. Consumer Product Safety Commission,
Office of Information and Public Affairs,
Washington, D.C. 20207
Carbon Monoxide Questions and Answers (CPSC document #466) EXIT disclaimer

The U.S. Consumer Product Safety Commission protects the public

CO Alarm Mandates in Model Codes as Public Policy

Presented at ICC Code Technology Committee on CO Alarms

Ted A. Williams,
Director, Codes, Standards & Technical Support
American Gas Association
Washington, DC*

July 25-26, 2005
Schiller Park, IL

*With technical contributions from Dr. Irwin Billick, WEC Consulting

Some Current Views of the Federal Government on CO Alarms and Mandates

"CPSC will eventually go back to that [making proposals to model codes for CO alarm requirements], but we are concerned about the long term durability of CO alarms." Don Switzer, Directorate of Engineering Sciences, CPSC, responded to questions at the UL Gas Products Council Meeting, Itasca, IL, May 3, 2005

"CPSC would not support mandatory requirements for CO alarms while long term reliability is still at issue." Richard Stern, Compliance Division, CPSC, responding to questions at the ASHRAE 62.2 Indoor Air Quality Subcommittee Meeting, Orlando, FL, February 4, 2005.

"Carbon Monoxide Detectors are widely available in stores and you may want to consider buying one as a back-up --*BUT NOT AS A REPLACEMENT* for proper use and maintenance of your fuel-burning appliances. However, it is important for you to know that the technology of CO detectors is still developing, that there are several types on the market, and that they are not generally considered to be as reliable as the smoke detectors found in homes today. Some CO detectors have been laboratory-tested, and their performance varied. Some performed well, others failed to alarm even at very high CO levels, and still others alarmed even at very low levels that don't pose any immediate health risk. And unlike a smoke detector, where you can easily confirm the cause of the alarm, CO is invisible and odorless, so it's harder to tell if an alarm is false or a real emergency." U. S. EPA Fact Sheet, "Protect Your Family and Yourself from Carbon Monoxide Poisoning," http://www.epa.gov/pubs.coftsht.html.

you need a gas detector.

2. How long does a Carbon Monoxide Alarm last?

First Alert alarms are warranted for 5 years, then it should be replaced with a new CO Alarm. SensorPack Modules and batteries should be replaced as needed for those alarms requiring them.

3. Where should I install my First Alert residential Carbon Monoxide Alarm?

Install at least one CO Alarm near or in each separate sleeping area. For added protection, install an additional CO Alarm at least 15-20 feet away from the furnace or fuel burning heat sources. Also, locate CO Alarms at least 10 feet from sources of humidity like bathrooms and showers. In two story houses, install one CO Alarm on each level of the home. If you have a basement, install that CO Alarm at the top of the basement stairs.

4. Is there anywhere I shouldn't install my Carbon Monoxide Alarm?

DO NOT locate a CO Alarm in garages, kitchens, furnace rooms, or in any extremely dusty, dirty, humid, or greasy areas. Do not place units in direct sunlight, or areas subjected to temperature extremes. These include unconditioned crawl spaces, unfinished attics, uninsulated or poorly insulated ceilings, and porches. CO Alarms should not be located in outlets covered by curtains or other obstructions. Do not place in turbulent air-near ceiling fans, heat vents, air conditioners, fresh air returns, or open windows. Blowing air may prevent CO from reaching the CO sensors.

5. Can First Alert Carbon Monoxide detectors be used in RVs?

No. Our carbon monoxide detectors are designed for residential use only, not for recreational vehicles, automobiles, airplanes, or marine vehicles.

6. Is one CO Alarm enough for my home? If not, how many should I have?

Install a CO Alarm on every level of your home. If you install only one CO Alarm in your home, locate it near or in your bedroom.

7. How high should I install my CO Alarm?

For ease of viewing you can locate the alarm about 5 feet off the floor. Carbon monoxide weighs about the same as air and distributes evenly throughout the room/house. Choose a location where the CO Alarm will stay clean and out of the way of children or pets. See your User's Manual for specific installation requirements.

8. Why does my CO Alarm sound when there doesn't seem to be a problem?

Remember, CO is an odorless, colorless gas. If your carbon monoxide alarm went off, it detected potentially harmful amounts of CO. Make sure no one has

NEWS from CPSC

U.S. Consumer Product Safety Commission

Office of Information and Public Affairs — Washington, DC 20207

FOR IMMEDIATE RELEASE
October 19, 2004
Release # 05-017

CPSC Consumer Hotline: (800) 638-2772
CPSC Media Contact: Ken Giles (301) 504-7052, or Eric Criss (301) 504-7908

Install a carbon monoxide alarm in your home
CPSC Urges Annual Furnace Inspection to Prevent CO Deaths

WASHINGTON, D.C. – As the weather turns colder, consumers need to be aware of an invisible killer that can seep through the home, causing serious injury or death. In Benton Harbor, Mich., three family members were hospitalized due to carbon monoxide poisoning caused by a malfunctioning furnace or gas water heater. In Salt Lake City, Utah, a man was hospitalized with carbon monoxide poisoning after the furnace in his condominium malfunctioned. These incidents are not old news; they occurred just last month.

To help prevent carbon monoxide (CO) poisonings, the U.S. Consumer Product Safety Commission (CPSC) urges consumers to have a professional inspection of all fuel-burning heating systems, including furnaces, boilers, fireplaces, water heaters, space heaters, chimneys, flues, and vents.

"Each year, CO poisoning from heating systems, water heaters, and ranges and ovens kills about 80 people in the U.S.," said CPSC Chairman Hal Stratton. "Many of these tragedies could be prevented by having a professional check these appliances annually for proper operation and CO leaks."

CO is a colorless, odorless gas that can be produced by burning fuels such as natural gas, propane, oil, kerosene, coal, or wood. Properly installed and operating fuel-burning appliances pose minimal CO hazards. However, under certain conditions, all appliances that burn fuels can leak deadly levels of CO into the home. The initial symptoms of CO poisoning are similar to flu (but without the fever) and include headache, fatigue, shortness of breath, nausea and dizziness. Exposure to high levels of CO can cause death.

CPSC recommends that the yearly professional inspection include checking chimneys, flues and vents for leakage, blockage by debris, and to make sure they are not loose or disconnected. Birds, other animals and insects can build nests in vents over spring and summer, resulting in blockages that cause deadly exhaust to enter the home. The inspector should also check appliance operation to ensure proper fuel input rate, gas pressure, and operating temperatures.

In addition, the inspector should check appliances for gas leaks and adequate ventilation. A supply of fresh air is important to help carry pollutants up the chimney, stovepipe or flue, and fresh air is necessary for the complete combustion of any fuel. Never block ventilation air openings and check the appliance filter to ensure it is clean. Make sure the appliance is operating on the fuel that it is designed to use. To convert an appliance to burn propane, hire a professional to do the modification.

"CPSC recommends that every home have a CO alarm in the hallway near bedrooms in each sleeping area," said Chairman Stratton. "A CO alarm can wake you up and give you time to save your family." The CO alarm should meet one of these standards: Canadian Standards Association 6.19-01, 2001; Underwriters Laboratories Inc. 2034, Second Edition, October 1998; or the International Approval Services 6-96, Second Edition, June 1, 1998. Check batteries monthly and replace them annually.

CPSC worked with the furnace and boiler industry and the manufacturers of high-temperature plastic vent (HTPV) pipes to conduct a vent pipe recall program. The program's purpose is to replace, free, an estimated 250,000 HTPV pipe systems attached to gas or propane furnaces or boilers in consumers' homes. The HTPV pipes could crack or separate at the joints and leak CO. Consumers should call the HTPV pipe recall Hotline toll-free at (800) 758-3688, between 7 a.m. and 11 p.m. ET, seven days a week, to verify whether their appliance venting systems are subject to this program.

CPSC staff continues to work with the furnace industry and other interested parties to develop new technologies to address the hazards of CO poisoning and fire. Results include a furnace voluntary standard that includes requirements for blocked-vent shut-off devices to protect against blocked vent pipes and chimneys, and vented heater requirements to guard against a vent pipe becoming separated from the furnace. Both conditions could lead to CO poisonings. Although improvements have been made in modern furnaces, they do not protect against all conditions that can lead to CO exposure. All gas-fired furnaces manufactured since 1987 have flame roll-out protection technology that prevents flames from spilling out of the furnace's combustion chamber and starting a fire.

Consumers should never use gasoline-powered generators or charcoal grills indoors or in attached garages because of the risk of CO poisoning: opening doors and windows or operating fans cannot supply adequate ventilation and can be deadly. Use a generator outside in a dry area away from doors, windows, and vents that could allow CO to come indoors. Even with a CO alarm, NEVER use a gasoline-powered generator or a charcoal grill inside.