

## **Air Emissions Inventory Reporting**

**Recommendation:** Amend NR 438, Wis. Adm. Code, to 1) lower the carbon dioxide (CO<sub>2</sub>) emissions reporting threshold for all stationary sources from 100,000 tons/year to 10,000 tons/year and 2) add the reporting of methane and nitrous oxide emissions from stationary combustion sources that report CO<sub>2</sub> emissions.

**Policy Description:** This recommendation would amend an existing regulation. It proposes to adjust the current CO<sub>2</sub> emissions threshold and require the reporting of combustion-related methane and nitrous oxide emissions from these sources. This recommendation would result in a more robust greenhouse gas (GHG) emissions reporting system. This in turn would lead to a more comprehensive, empirical statewide GHG emissions inventory for stationary sources. It would not change the reporting methods or emission estimation methodology.

**Background:** The Wisconsin Air Emissions Inventory (ARS- Annual Reporting System) program, outlined in Ch. NR 438, Wis. Adm. Code, requires facilities to report their annual air emissions and sets reporting thresholds for different pollutants. Currently the reporting threshold for CO<sub>2</sub> is 100,000 tons/year. This provides CO<sub>2</sub> emissions data from utilities and very large industrial combustion sources, but leaves a substantial information gap for emissions from medium and small sources. Macro-level emission estimates for these sources are possible through the use of “top down” inventories (such as the WRI inventory), but these techniques have limitations. Methane is not currently included in ch. NR 438, however it is one of the primary anthropogenic GHGs and thus should be included in an effort to construct an inventory of these emissions. Nitrous oxide is currently included in NR 438, with a reporting threshold of 6000 lbs. Under this proposal, all nitrous oxide emissions related to combustion would be reported concurrently with the methane and CO<sub>2</sub> emissions.

The lowering of the CO<sub>2</sub> reporting threshold was proposed by the Industry Work Group. It grew out of frustration at the lack of emissions data from all but the largest industrial sources, and the difficulty in developing policy recommendations for emission reductions in the absence of this information. With their proposal the Industry Work Group sought to close this important information gap while minimizing the reporting burden on industry and small businesses. The Work Group’s intent was to provide a reliable macro-measure of statewide industry GHG emissions, as well as a facility-specific micro-measure baseline (for covered facilities) to enable the tracking of progress in reducing GHG emissions. In addition, the Work Group felt that a reporting system would encourage voluntary reductions by companies by serving as a feedback loop that would make them aware of their facility emissions and emission trends.

As requested by the Task Force Co-Chairs, the Technical Advisory Group (TAG) is considering a number of proposals to address overall statewide data and information needs to better inform future climate change policy decisions. The Industry Work Group proposal was included in this process; the TAG supported their proposal and decided to add the methane and nitrous oxide emissions reporting requirement to the recommendation.

**Who would be affected and how:** In developing this proposal, the Industry Work Group performed an analysis to assess the impacts on industry. The analysis assumed natural gas as the

fuel source, a CO<sub>2</sub> reporting threshold of 10,000 tons/year and no change in other emission reporting requirements. The analysis concluded that a source that emits 10,000 ton/year CO<sub>2</sub> from fuel combustion should already be reporting to the emissions inventory since their fuel combustion-related nitrogen oxides (NO<sub>x</sub>) emissions would exceed the reporting threshold of 5 tons/year of NO<sub>x</sub> emissions. Thus, lowering the CO<sub>2</sub> reporting threshold should not pull new sources into the reporting requirements. Furthermore, there are default emission factors for CO<sub>2</sub>, methane and nitrous oxide from stationary combustion based on the type and amount of fuel consumed. With fuel data already being reported to the emissions inventory, this proposal should place minimal additional reporting burden on facilities.

In addition, coal and oil fired sources would report their methane emissions, which they currently do not. These sources are not new to emission inventory reporting and there would be little additional impact to them from this requirement. In addition, CO<sub>2</sub> emissions would be reported from the use of limestone in emission control equipment and from the production of cement or lime.

This policy proposal will help fill the medium to small stationary source information gap and provide more information on large stationary sources. Using ARS data on reported fuel usage and calculating the CO<sub>2</sub> emissions, it is estimated that an additional 150-250 facilities would be required to report their emissions. This would yield an estimated 5-6% increase in reported facility level CO<sub>2</sub> emissions beyond what is currently reported to ARS. This more comprehensive emissions inventory would include data on the number of sources, industry type and size, location, annual emissions and emission trends. It should be noted that while this recommendation begins to address medium to smaller sources of CO<sub>2</sub> emissions, it doesn't address the very large number of diffuse, small sources – i.e., those with less than 10,000 tons of CO<sub>2</sub> emissions.