

# Netting Overview

## I. Is Netting Triggered?

- A. If the planned emission rate (potential to emit or projected actual) of new or modified equipment, compared to the baseline actual emission rate, is greater than the netting significance level then netting is required.
- B. Only project increases are included in this step. Decreases are not considered unless project emission decreases exceed the amount of increases such that the project has a net increase of zero. The decreases must constitute actual emission reductions.

## II. What Is Netting?

- A. Netting is an applicability step that is used to determine if either PSD and/or nonattainment review has been triggered.
- B. Netting applies to existing major sources only. Netting does not apply to minor sources that may become major during the current project.
- C. Netting is an evaluation of the current project undergoing review, plus all creditable actual emission increases and decreases within the contemporaneous period (also called the netting window) and is conducted to ensure that smaller projects do not add up to be a major modification.
- D. For a project at an existing “major” source, if the net emissions increase is greater than or equal to the major modification significant emission rate\* for the pollutant (Table 1 for criteria pollutants, Table 2 for non-criteria pollutants), major NSR is triggered.

**Table 1: Criteria Pollutants**

<b>Criteria Pollutant</b>	<b>Emission Rate (tons/year)</b>
Carbon monoxide	100
Nitrogen oxides	40
Sulfur dioxide	40
Particulate matter (PM, PM <sub>10</sub> , PM <sub>2.5</sub> )	25, 15, 10
Ozone (VOCs)	40
Lead	0.6

**Table 2: Non-Criteria Pollutants**

<b>Non-Criteria Pollutant</b>	<b>Emission Rate (tons/year)</b>
Fluorides	3
Sulfuric acid mist	7
Hydrogen sulfide	10
Total reduced sulfur (including hydrogen sulfide)	10
Total reduced sulfur compounds (including hydrogen sulfide)	10
Municipal waste combustor organics (measured as total tetra-through-octa chlorinated dibenzo-p-dioxins and dibenzofurans)	3.5(10 <sup>-6</sup> )
Municipal waste combustor metals (measured as particulate matter)	15
Municipal waste combustor acid gases (measured as sulfur dioxide and hydrogen chloride)	40

\* Other Significant Emissions: Any emission rate of a pollutant subject to regulation under the Act that is not listed in Table 1 or Table 2 above. This includes ozone depleting substances regulated under Title VI, Chlorofluorocarbons (CFCs) 11, 12, 112, 114, 115, and Halons 1211, 1301, and 2402. Also includes any emission rate or net emission increase associated with a major stationary source, or major modification, which would construct within ten kilometers (km) of a Class I area and have an impact on such area that is equal to or greater than one microgram per cubic meter on a 24-hour average.

Criteria pollutants are those for which a NAAQS exists, and non-criteria pollutants are pollutants regulated by the EPA for which no NAAQS exists.

- E. The “Net Increase” in emissions is defined as the amount by which the sum of the current project increases plus any non-project source-wide (stationary source) creditable contemporaneous emission increases minus any source-wide (stationary source) creditable contemporaneous emission decreases (including project).
- F. An increase or decrease in emissions is “creditable” only if it occurs during the contemporaneous period and it has not been relied on in issuing a federal new source review permit for the source, and the permit is in effect when the increase in emissions occurs.
- G. An increase in emissions is “creditable” if 1) it is the result of a modification of a stationary source only to the extent that the new level of emissions exceeds the baseline actual emission rate and 2) it does not include emission increases at facilities under a plant-wide applicability limit.
- H. A decrease in emissions is “creditable” to the extent that all of the following conditions are met:
  - 1. The baseline actual emission rate exceeds the new level of emissions.
  - 2. The decrease is enforceable at and after the time that actual construction on the particular change begins (must be enforceable and real before the unit starts operation).
    - a. If the facility is authorized by a permit, the allowable emission rate would be reduced (an APD-CERT or PI-7-CERT form must be completed for the facility if it is authorized under standard permit or permit by rule);
    - b. The executive director has not relied on it in issuing a prevention of significant deterioration or nonattainment permit;

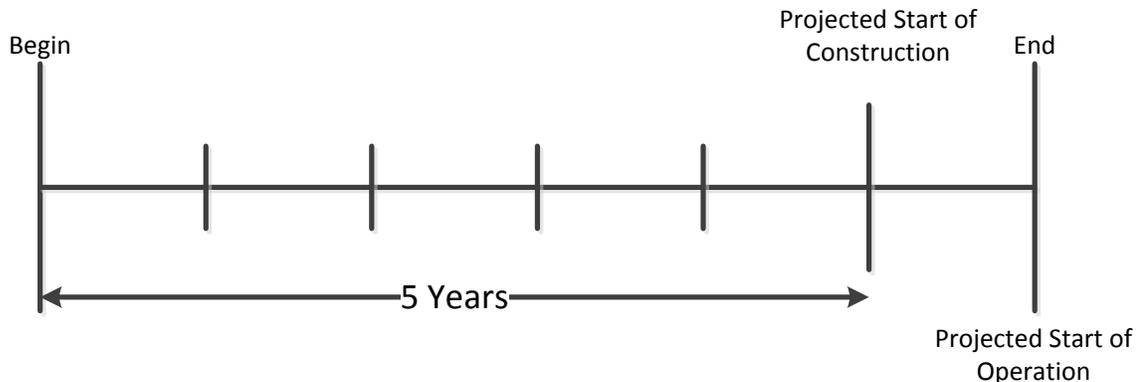
- c. The decrease has approximately the same qualitative significance for public health and welfare as that attributed to the increase from the particular change; and
  - d. In the case of nonattainment applicability, the statute has not relied on the decrease to demonstrate attainment or reasonable further progress in the State Implementation Plan.
- I. All creditable emissions should be identified on TCEQ Table 3F. Though not indicated on the form, processing the application may be expedited by providing the project number that authorized the modification. Creditable decreases should also be accompanied by TCEQ Table 4F.
- J. Permit reviewers are reliant on the Emissions Inventory to verify creditable emissions. If creditable emissions cannot be verified, the values submitted in the inventory will be utilized unless information can be provided to verify the emissions claimed. Update of the inventory may be required.
- K. During netting, changes are determined on a facility-by-facility pollutant-by-pollutant basis for all facilities across the entire site (source) that have undergone a physical change or change in the method of operation (modification) during the contemporaneous period (netting window).
- L. The netting window begins five years prior to the projected start of construction, out to the proposed start of operation. The permit holder must project planned future projects.
- M. It is possible to trigger both PSD and nonattainment review for NO<sub>x</sub>.

### **III. Netting Definitions**

- A. The baseline actual emission rate is the average emission rate, in tons/year, that was actually emitted during a consecutive twenty four month period out of the previous ten years (five years for electric utilities) from the date of the project.
- B. The planned emission rate is either:
  - 1. The potential to emit (PTE), or
  - 2. A projected actual emission rate. This rate is the emission rate that an existing modified facility is expected, or projected, to emit. A “projected actual emission rate” should not be confused with either “baseline actual emission rate” or “actual emission rate”. Projected actual emission rates are outside of the scope of this presentation outline; however, the reader should

be aware that it is another option that can be considered when discussing planned emission rates.

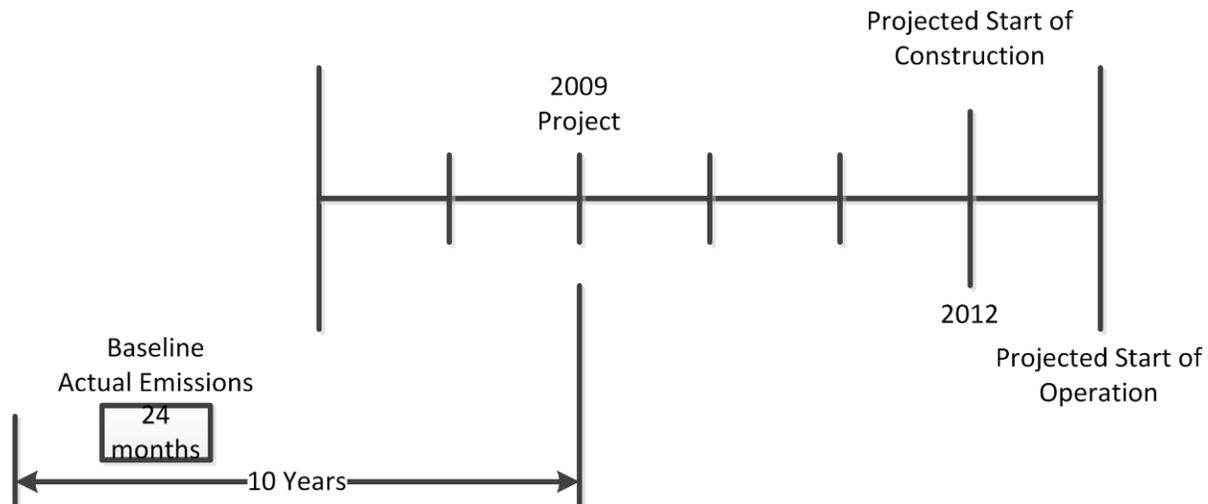
- C. The contemporaneous period (netting window) extends from:
1. Five years before the date the application is submitted, to
  2. The proposed start of operation.



#### IV. Netting Methodology

- A. Identify the contemporaneous period (window) for the project.
- B. Identify all modifications that have occurred at the site (source) or that are projected to occur within the defined contemporaneous period (future projects must be projected by the permit holder). Modifications identified may be based on either the date the modification was authorized or the date of the start of operation. The method used should be identified in the application. Both methods are acceptable. However, the method selected should continue to be used for any future permit actions.
- C. For each project within the contemporaneous period, calculate the creditable increases and decreases for each facility affected by the project. For modifications occurring in the “pre-project” portion of the window (five years prior), creditable increases and decreases must be determined based on the difference between the PTE for the project and the calculated baseline actual emission rate. Projected actual emissions may only be used to determine creditable emissions in the current project. Baseline actual emissions must be used to determine creditable increases and decreases for previous projects within the netting window even though projected actual emissions may have been used when the project occurred.
- D. In the example below, a modification was authorized in 2009 that is within the contemporaneous period for the current project. The baseline actual emissions

are the emissions, in tons per year, actually emitted during a consecutive 24-month period out of the previous ten-year period (five years for electric utilities) from the date the project is authorized. The baseline actual emission rate is compared to the PTE for the project to determine the creditable increase or decrease. For each modification evaluated, the same consecutive 24-month period must be used for all affected facilities emitting a particular pollutant; however, a different 24-month period can be used for different pollutants.



For new equipment that was authorized in a project, the baseline actual emission rate is zero and the increase is equal to the PTE. For equipment that had been in operation for less than two years, the baseline actual emission rate is equal to the PTE that was authorized prior to the modification (potential to potential). For example, the 2009 project increased the VOC PTE for a facility from two tons/year to five tons/year. At the time of the project, the facility had been in operation for less than two years. The baseline actual emission rate is equal to the PTE prior to the change or two tons/year. The creditable increase for the facility is three tons/year.

- E. All increases and decreases are calculated on a pollutant basis for each modification in the window.
- F. For each individual pollutant, sum the creditable increases and decreases for all projects within the netting window. If the emissions net increase equals or exceeds the major modification significant emission rate for the pollutant, major source review is triggered.
- G. Creditable increases and decreases for each pollutant in which netting occurs should be submitted on TCEQ Table 3F.

## V. Examples

### A. Example 1.

1. The company is a named major source located in a serious nonattainment area for ozone.
2. The sum of the current PTE for facilities affected by the project is 50 tons/year of NO<sub>x</sub>.
3. The sum of the proposed PTE/projected actuals for affected project facilities is 60 tons/year of NO<sub>x</sub>.
4. For each affected facility, the baseline actual emission rate is determined by selecting the actual emissions that occurred within a consecutive 24-month period out of the previous ten years from the date of the current project. The same 24-month period is used when determining the actual emissions of NO<sub>x</sub>. The sum of all baseline actual NO<sub>x</sub> emissions is 47 tons/year.

Increases for the project are 13 tons/year (60 tons/year – 47 tons/year).

The project is a named major source in a serious nonattainment area and the emission increase exceeds the netting significance level of five tons/year of NO<sub>x</sub>. Netting is required.

Netting includes the current project and all credible increases and decreases within the contemporaneous period.

The contemporaneous period includes the current project as well as two other projects that have occurred at the source. The net increase including the current project totals of 14 tons/year. The TCEQ Table 3F is included as an example (Attachment 1).

The major modification significant emission rate for a serious nonattainment area is 25 tons/year of NO<sub>x</sub>. The project is not a “major modification” and major NSR is not required.

### B. Example 2.

1. The company is a named major source located in a serious nonattainment area.
2. The company has four steam boilers that are authorized in the permit as a group or under a cap with a permitted allowable emission rate of 100 tons/year of NO<sub>x</sub>. The cap contribution from each boiler is 25 tons/year.
3. The company is requesting an increase in the firing rate of one of the boilers that will increase the NO<sub>x</sub> emission rate of the boiler by three tons/year such that the contribution of the boiler is now 28 tons/year of NO<sub>x</sub> and the cap emission rate is now 103 tons/year of NO<sub>x</sub>.

4. The combined baseline actual emission rate for all boilers in the cap is determined to be 90 tons/year.
5. The company proposes a project increase of three tons/year of NO<sub>x</sub> (28 tons/year – 25 tons/year).

The approach presented is not valid. Increasing the cap from 100 tons/year of NO<sub>x</sub> to 103 tons/year of NO<sub>x</sub> is increasing the cap for all the boilers in the cap and not just the modified boiler. Increasing the cap is relaxing a federally enforceable limit. Thus, all the units in the cap are considered modified and are subject to review. Given this information, the project increase becomes 13 tons/year of NO<sub>x</sub> (103 tons/year – 90 tons/year). The project increase of 13 tons/year exceeds the netting significance level of five tons/year so netting would be required.

Alternatively, a second approach may be considered. By setting a separate enforceable limit for the affected boiler, the permit holder may be able to avoid netting and thus the potential for federal NSR.

A separate emission point number (EPN) for the boiler is created with an authorized emission limit of 28 tons/year (25 tons/year + 3 tons/year). The baseline actual emission rate of the affected boiler is 24 tons/year. The project increase of four tons/year of NO<sub>x</sub> is less than the netting significance level of five tons/year. Netting is therefore not required. As long as the cap is not increased, the other boilers are not considered modified facilities. The affected boiler can remain in the cap or the original contribution of the boiler can be backed out of the cap such that the affected boiler is now no longer included in the cap and is a standalone unit.

### C. Example 3.

1. Netting has been triggered for a small tank farm with three emission points. There are three projects (modifications) within the contemporaneous period, including the current project.
2. Using the traditional method to determine the net increases (baseline actual to PTE), the total increase would be 35 tons/year. Of the total 35 tons/year, 28 tons/year (8+10+10) are attributable to EPN 1. The increase is greater than the final allowable emission rate (26 tons/year) indicating that portions of the increase have been counted more than once. The actual increases in emissions at the site can be better reflected by using the endpoints method for EPN 1 in order to avoid double counting emissions increases.
3. In endpoints netting, the final increase is equal to the final PTE minus the baseline actual identified in the earliest project that is included in the contemporaneous period.
4. Increase = Final PTE – Earliest Baseline Actual.

5. Using endpoints netting, the contribution of EPN 1 is 16 tons/year and the total project net increase is 23 tons/year. The TCEQ Table 3F is included as an example (Attachment 2). The method can only be used when determining the net emission increase. Baseline emissions are always used to determine the project emission increase.

D. Additional Example.

1. The company is a named major source located in a serious nonattainment area for ozone.
2. The sum of the current PTE for facilities affected by the project is 21 tons/year of VOC.
3. The sum of the proposed PTE/projected actuals for affected project facilities is 32 tons/year.
4. For each affected facility, the baseline actual emission rate is determined by selecting the actual emissions that occurred within a consecutive 24-month period out of the previous ten years from the date of the current project. The same 24-month period is used when determining the actual emissions of VOC. The sum of all baseline actual VOC emissions is 16 tons/year.
5. Additional information provided in the application indicates that VOC emissions from the internal floating roof tank landing EPN are being reduced by 25 tons/year. The application indicates that the reductions are reductions in actual VOC emissions. The applicant has provided documentation necessary to support that the reductions constitute actual VOC emission reductions. The application further indicates that 19 tons/year of these reductions will be used as offsets for a current federal permit.

The answer to the question of whether netting is triggered is dependent on the status of the current federal permit. If the permit has been issued and the units authorized by the permit have started operation (this includes the authorized shakedown period) then 19 tons of the reductions have been “used” as offsets in the issuance of the federal permit and cannot be included in the determination of whether netting is triggered for the current project. If the federal permit has not been issued or if the facilities authorized by the federal permit have not started operation, then the reductions have not yet been relied upon by the federal permit and the reductions can be included in the determination of whether netting is required. Assuming the modifications authorized by the federal permit have not started operation, the decreases in actual emissions of 25 tons/year totally offset the project increase in emissions of 16 tons/year. Since the emission reductions constitute actual reductions and the reductions equal or exceed the project increases, netting would not be required. For purposes of the example in the slide, it is assumed that the facilities authorized by the federal permit are in operation and that 19 tons of the reductions are not available. The project increase of 16 tons/year exceeds the netting significance level of five tons/year and netting is required.

The netting evaluation includes the current project and all credible increases and decreases within the contemporaneous period.

Project increases in the current project are 16 tons/year. Available decreases total six tons/year (25 tons/year – 19 tons/year).

Two projects are within the contemporaneous period and have creditable increases in VOC emissions of three tons/year and five tons/year, respectively. The TCEQ Table 3F is included as an example (Attachment 3)

The major modification significant emission rate for a severe nonattainment area is 25 tons/year of VOC. The total net project increase within the contemporaneous period is 18 tons/year. Since the net project increase does not exceed the major modification significant emission rate, major NSR (nonattainment review) is not required.