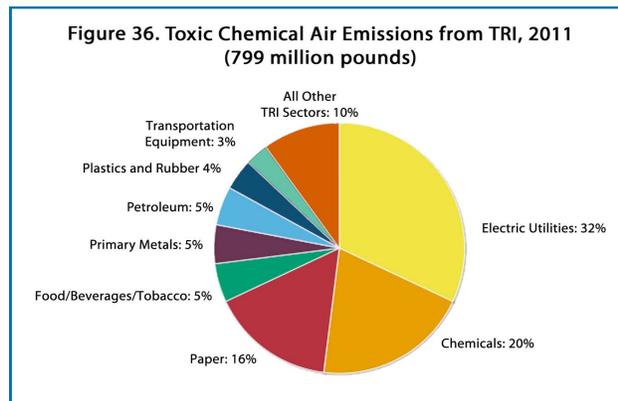
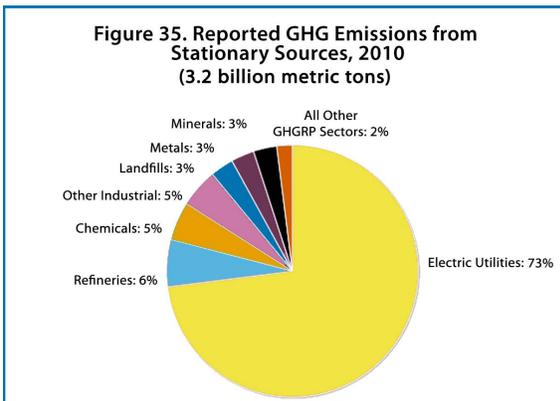


Comparing TRI and Greenhouse Gas Reporting

In 2010, under the authority of the Clean Air Act, EPA initiated the Greenhouse Gas Reporting Program (GHGRP), which requires large emitters of greenhouse gases and suppliers of certain products to submit annual greenhouse gas reports to EPA. Emissions of greenhouse gases lead to elevated concentrations of these gases in the atmosphere, leading to a change in Earth's radiative balance that contributes to climate change. These elevated concentrations are reasonably anticipated to endanger both the public health and the public welfare of current and future generations. The purpose of the GHGRP is to collect timely, industry-specific data to help us better understand the source of greenhouse gas emissions and to inform climate policy.

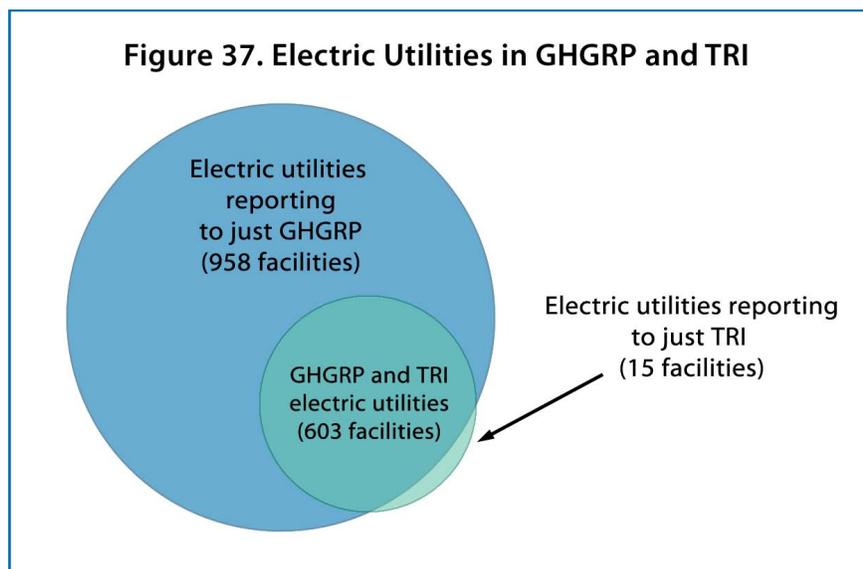
While facilities report a variety of greenhouse gases to EPA, the predominant gas is carbon dioxide (CO₂), which is released during fossil fuel combustion and various industrial processes. TRI reporting covers different chemicals, some of which are byproducts of energy production, but TRI chemicals are also used in and released from additional processes ranging from metal mining to surface cleaning. Therefore, the top air emitting sectors in TRI are similar, but not identical to, the top emitting sectors covered by the GHGRP. Analyzing toxic chemical releases reported to TRI and greenhouse gas emissions reported to the GHGRP together creates a more complete picture of emissions at the facility and sector levels. Figures 35 and 36 reflect the most recent data from TRI (2011) and the GHGRP (2010).



In 2010, over 6,200 facilities reported direct emissions of 3.2 billion metric tons of carbon dioxide equivalent (mt CO₂e), about 7 trillion pounds, to the GHGRP, which represents about half of the 6.8 billion mt CO₂e that EPA estimated was released in the United States from all human-related sources. The GHGRP does not require direct emissions reporting from all U.S. sources. For example, the transportation sector is a large source of greenhouse gas emissions in the United States, but is not included in Figure 35. To learn more about human-related greenhouse gas emissions in the U.S., see the latest version of the U.S. Greenhouse Gas Inventory (www.epa.gov/climatechange/ghgemissions/usinventoryreport.html). Sectors with the highest reported greenhouse gas emissions include electric utilities, petroleum refineries, and chemical manufacturing, which accounted for almost 2.7 billion mt CO₂e.

Among TRI reporters, the electric utility sector is also the largest source of air emissions – primarily because of contaminants present in fossil fuels, such as sulfur, which are released during combustion. Electric utilities account for 32% of the 799 million pounds of air emissions reported to TRI in 2011, as shown in Figure 36. The top air emitting sectors in the TRI program, electric utilities and chemical manufacturing, are large in part because they use or process large volumes of materials, such as fuels and chemicals. The top emitting sectors in the GHGRP, electric utilities and petroleum refineries, are the largest due to the large quantities of fossil fuel that are combusted on site at these facilities. The relative contribution of each sector to the total emissions for each program differs because of the relative magnitude of chemical manufacturing, processing and use among TRI reporters versus fossil fuel combustion among GHG reporters.

When comparing the GHGRP to TRI, users should keep in mind that TRI and GHGRP have different reporting thresholds and define sectors differently. For example, TRI requires only electric utilities that burn coal or oil as fuel to report*, whereas the GHGRP requires electric utilities that emit greater than 25,000 mt CO_{2e} to report regardless of the fuels used. Most of the electric utilities reporting to the GHGRP only are natural gas fired, which emit less greenhouse gas per unit of power generated than coal-fired electric utilities do. Figure 37 shows the overlap between the two programs within the electric utilities sector.



To learn more about the GHG Reporting Program, visit the program's website at www.epa.gov/ghgreporting/.

*U.S. government owned and operated federal facilities that meet chemical use thresholds must report to TRI regardless of the sector in which they operate. As a result, four government-operated nuclear power plants that do not combust coal or petroleum do report to TRI, but do not report to the GHGRP. The other electric utilities in TRI, but not GHGRP, include nuclear-fueled utilities with small fossil fuel use and others that came on line in 2011.