

NPRA Members are Improving America's Environment

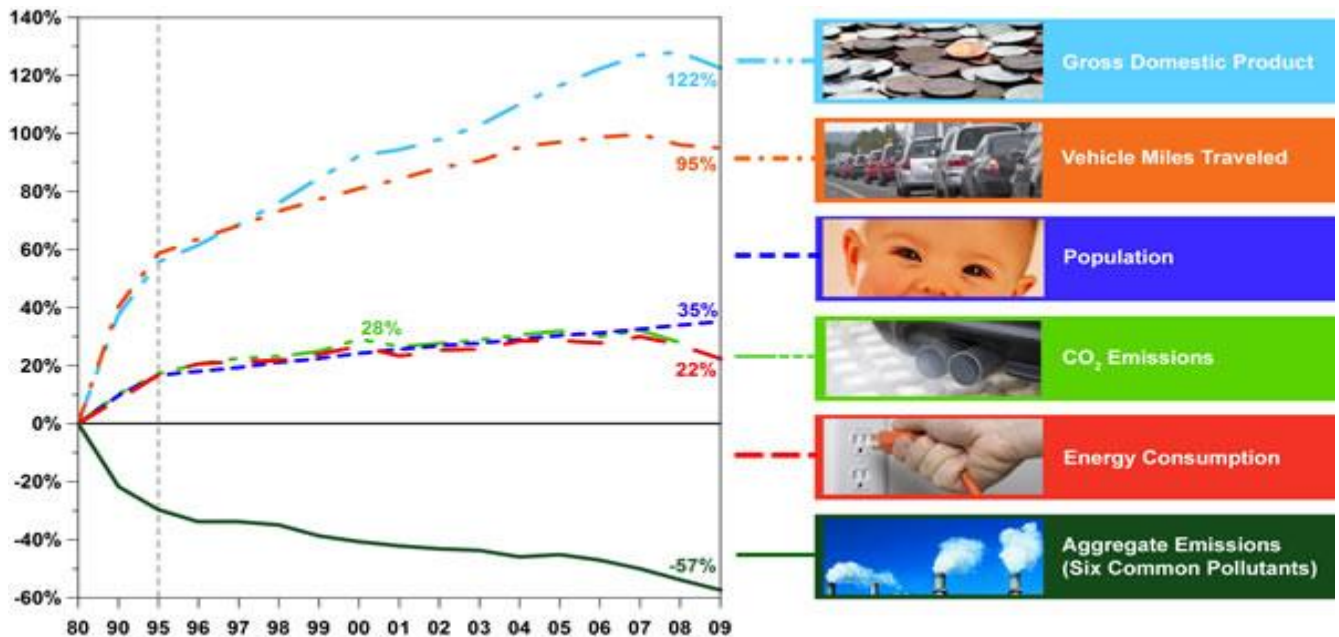
National Petrochemical & Refiners Association members are strongly committed to environmental protection, have an outstanding record of compliance with the Clean Air Act, and have invested hundreds of billions of dollars to dramatically reduce emissions as measured by EPA.

Fuel and Petrochemical Manufacturers Have Significantly Reduced Emissions

- NPRA members have made major emissions reductions. While refiners' production output increased 6 percent between 1996 and 2005, their emissions of chemicals monitored under the Toxic Release Inventory (TRI) **decreased 36 percent** and the emissions of Hazardous Air Pollutants (HAPs) **declined 50 percent**.
- The chemical manufacturing sector's normalized emissions of **all TRI substances declined 61 percent** from 1996 to 2005. During the same period, normalized emissions of **HAPs declined 64 percent**.
- Fuel and petrochemical manufacturers have made considerable investments to comply with federal regulations. Between 1990 and 2008, the industry spent **\$112 billion** to bring refineries into compliance with environmental emissions regulations – equivalent to **\$394 in environmental spending for every U.S. citizen**. Moreover, by 2010 U.S. refining companies had invested **upwards of \$20 billion** to comply with new clean fuel regulations to reduce the sulfur content of gasoline and both highway and off-road diesel.

Economy Wide Emissions have Decreased Dramatically, Despite Increased Economic Activity

- EPA data shows total emissions of the six principal air pollutants in the United States (carbon monoxide, lead, nitrogen oxides, volatile organic compounds – hydrocarbons, particulate matter and sulfur dioxide) have **decreased by 57 percent since 1980**.



- In that time frame, **ozone levels alone have decreased 30 percent** and EPA data shows this **trend continuing**.

Emissions from Transportation Fuels are Continuously Decreasing

- Since 2004, refiners have **reduced sulfur levels in gasoline by 90 percent**, from an average of 300 parts per million (ppm) in 2004 to an average of 30 ppm today.
- In Jan. 2001, EPA issued rules requiring refiners to reduce the sulfur content in highway diesel by 97 percent. EPA's 2004 rule required refiners to reduce the sulfur content in non-road diesel.
- There have been significant Mobile Source Air Toxics (MSAT)/gasoline benzene content reductions. Benzene content in conventional gasoline dropped 45 percent in 2011 for most refineries, and will drop further for small refineries in 2015.

Overall Fuel and Transportation Sector Emissions Are Continuously Decreasing

- From 1970 to 2008 in highway vehicles:
 - Carbon Monoxide (CO) emissions were reduced 76.2 percent.
 - Nitrogen Oxides (NO_x) emissions were reduced 58.8 percent.
 - Sulfur Dioxide (SO₂) emissions were reduced 76.6 percent.
 - Volatile Organic Compounds (VOC) emissions were reduced 79.8 percent.