

APPENDIX Q

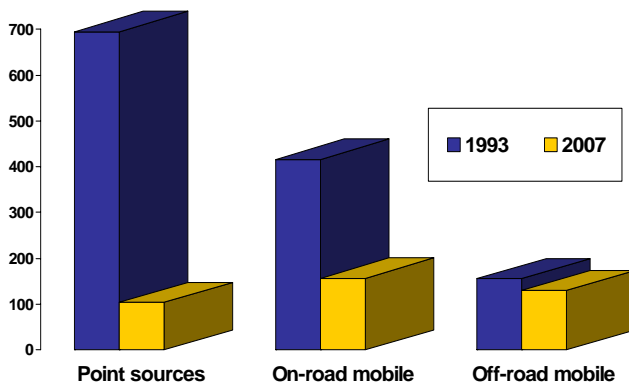
Air Quality

One way the 2025 RTP demonstrates environmental responsibility is by meeting air quality constraints outlined in the Clean Air Act (CAA). Air pollution is one of the most studied and regulated environmental impacts of transportation. Emissions from vehicle engines have significant impacts on air quality, particularly in urban areas. Vehicle emissions include a variety of pollutants such as carbon monoxide (CO), volatile organic compounds (VOCs), and particulate matter. Internal combustion engines also produce various oxides of nitrogen (NOx). Ground-level ozone, the major constituent of smog, is formed when VOCs and NOx react to sunlight. The Houston-Galveston Area is designated as a severe non-attainment area for ground-level ozone because pollutants contained in the region's air, specifically VOCs and NOx, exceed safe limits as defined by National Ambient Air Quality Standards (NAAQS). All pollution sources - industrial, off-road and on-road sectors - contribute in varying degrees to the region's air quality problems. However, only the transportation system is required to perform a conformity analysis and show direct coordination with air quality improvement plan.

Transportation Conformity

Transportation conformity is an analytical process that establishes the major connection between projected emissions, known reductions and the transportation plan. Under the federal Intermodal Surface Transportation Efficiency Act requirements, transportation planning projects cannot be approved, funded, advanced or implemented unless the projects are in both a fiscally constrained and a conforming transportation plan. Transportation Planning Organizations must demonstrate, through the conformity process, that all transportation programs contained in the RTP have on-road mobile source air quality constraints consistent with those contained in State Implementation Plans (SIPs) for achieving National Ambient Air Quality Standards. Through the process of transportation conformity, the RTP uses the SIP on-road mobile strategies and air quality targets to demonstrate whether or not the RTP complies with federal air quality requirements. Vehicle emissions resulting from the implementation of transportation projects and programs must not exceed emission budgets established in the State Implementation Plan for each milestone year.

Houston Galveston Area SIP Reductions by Source 1993 - 2007 by tpd

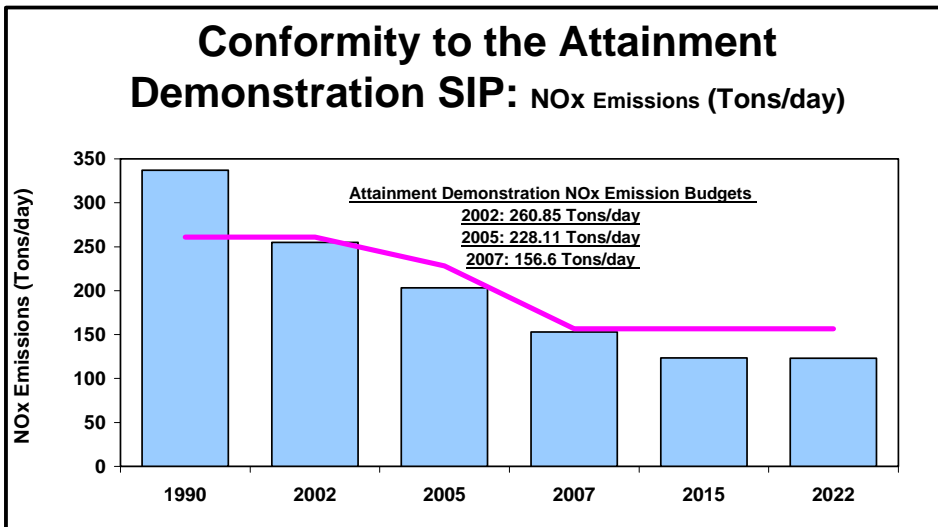


Specifically, the region must demonstrate:

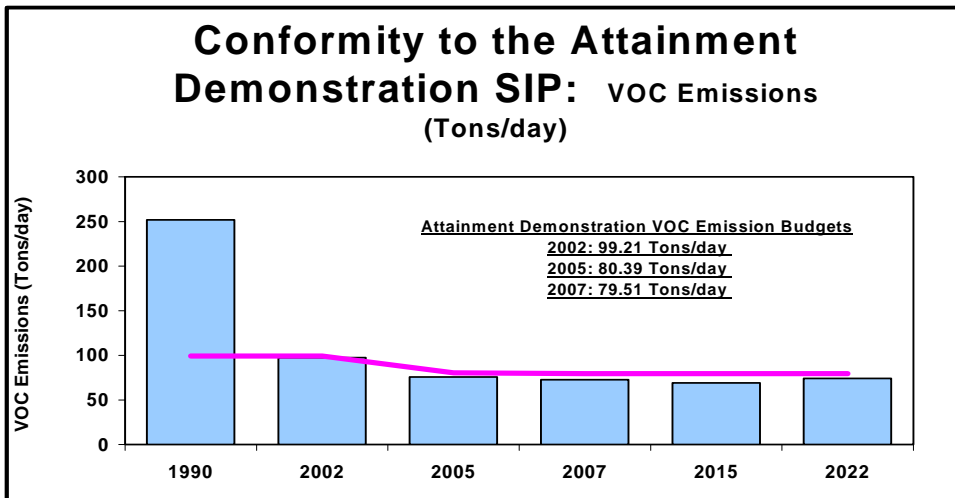
- The 2004-2006 Transportation Improvement Plan (3-year planning horizon) and the 2025 RTP result in less volatile organic compound (VOC) and nitrogen oxide (NOx) emissions than the levels established for 2005 and 2007 (milestone years), as well as for the 1990 base-year; and
- The 2004-2006 Transportation Improvement Plan and 2025 RTP result in less volatile organic compound (VOC) and nitrogen oxide (NOx) emissions than the 2007 attainment levels and, 2015 and 2025 horizon year levels.

The results from the previous conformity determination showed that the 2022 *Metropolitan Transportation Plan Update* and the 2002 - 2004 *Transportation Improvement Program* for the Houston-Galveston Transportation Management Area met the requirements of the State Implementation Plan. This conformity was approved on June 5, 2002.

Conformity of the MTP & TIP: NOx Emissions



Conformity of the MTP & TIP: VOC Emissions



Conformity Timeline

The Conformity Process demonstrates compliance of the Regional Transportation Plan (RTP) with the latest motor vehicle emissions budgets (MVEBs) in the State Implementation Plan (SIP). This Conformity must use MOBILE6, the new on-road emissions model developed by the Environmental Protection Agency (EPA). The Texas Commission on Environmental Quality (TCEQ) is currently developing a new SIP for the Houston-Galveston Area using MOBILE6. Therefore, the timing of this Conformity analysis is contingent on the timing of the SIP.

A period of eight months separates the initial release of the SIP by TCEQ in April and the final submittal to EPA in December. H-GAC will develop the technical modeling portions of the Conformity Analysis while the SIP is out for public review. The EPA has 90 days from the receipt of the SIP until a finding is made on the MVEBs. Working on the Conformity while the SIP is out for comment enables the earliest possible Conformity submittal to the Federal Highway Administration following EPA’s approval of the MVEBs. Summarized below is an approximate Conformity timeline. The following dates assume that the TCEQ does not change any of the critical dates in the SIP process. Reviewing agencies have agreed to “parallel process” the Conformity finding simultaneously with review of the SIP.

The Mid-Course SIP will contain both Rate-of-Progress (ROP) budgets as well as Attainment Demonstration (AD) budgets. The ROP budgets pertain to the years 2005 and 2007. The AD budgets pertain to the years 2007, 2015, and 2025. Analyses to all budgets will be included in the Conformity.

Current Conformity Timeline

May, 2004	Conformity Analysis begins
December, 2004	TCEQ submits SIP to EPA
Jan/Feb, 2005	30 day Public Comment period
March, 2005	EPA Adequacy Review concludes
March, 2005	TPC action on Conformity
April, 2005	Conformity Finding: result of parallel processing
June, 2005	Current Conformity lapses