

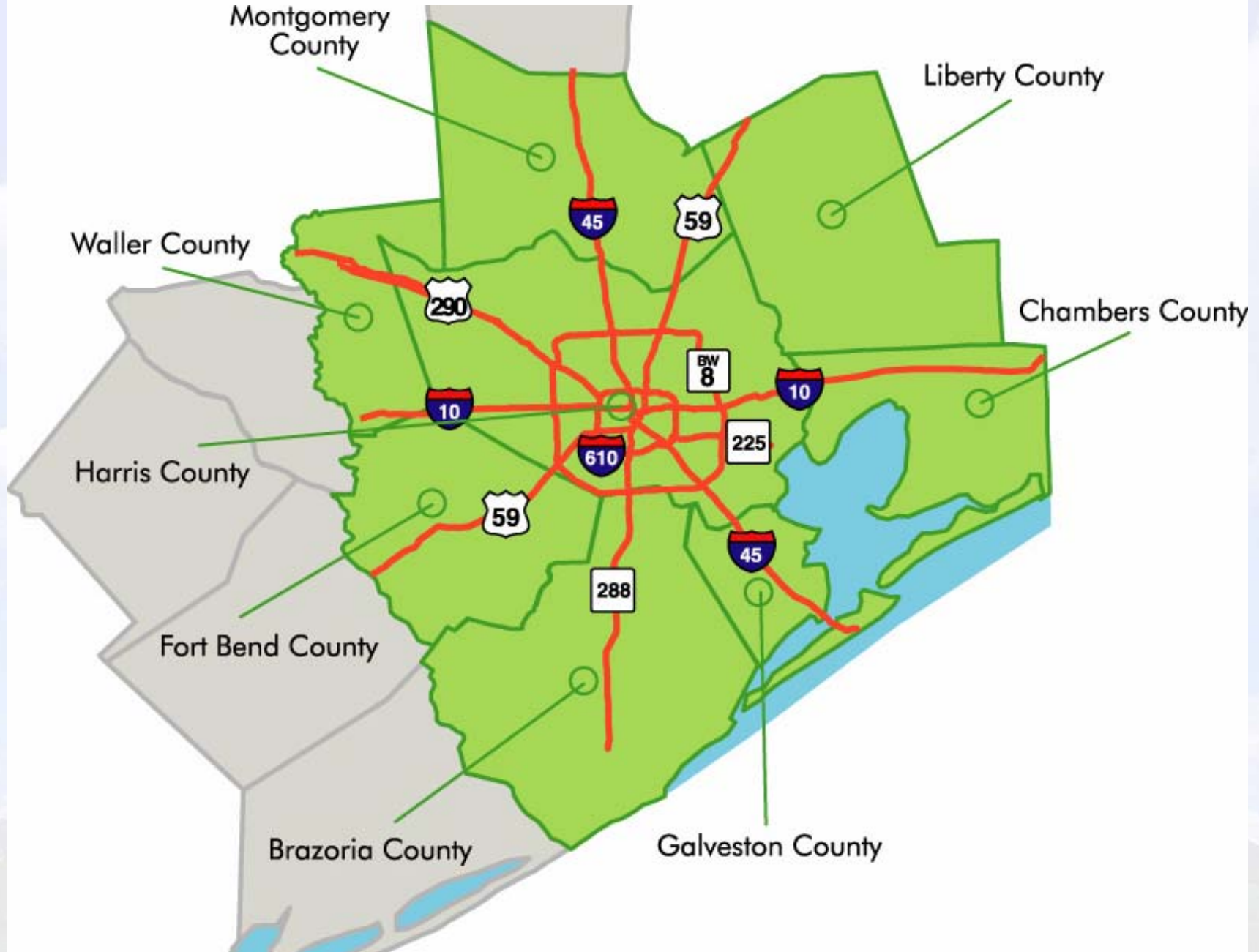
Regional Growth, Transportation Needs and the Dynamics of Air Quality Issues in the Houston-Galveston Region

National Surface Transportation Policy and Revenue Study Commission

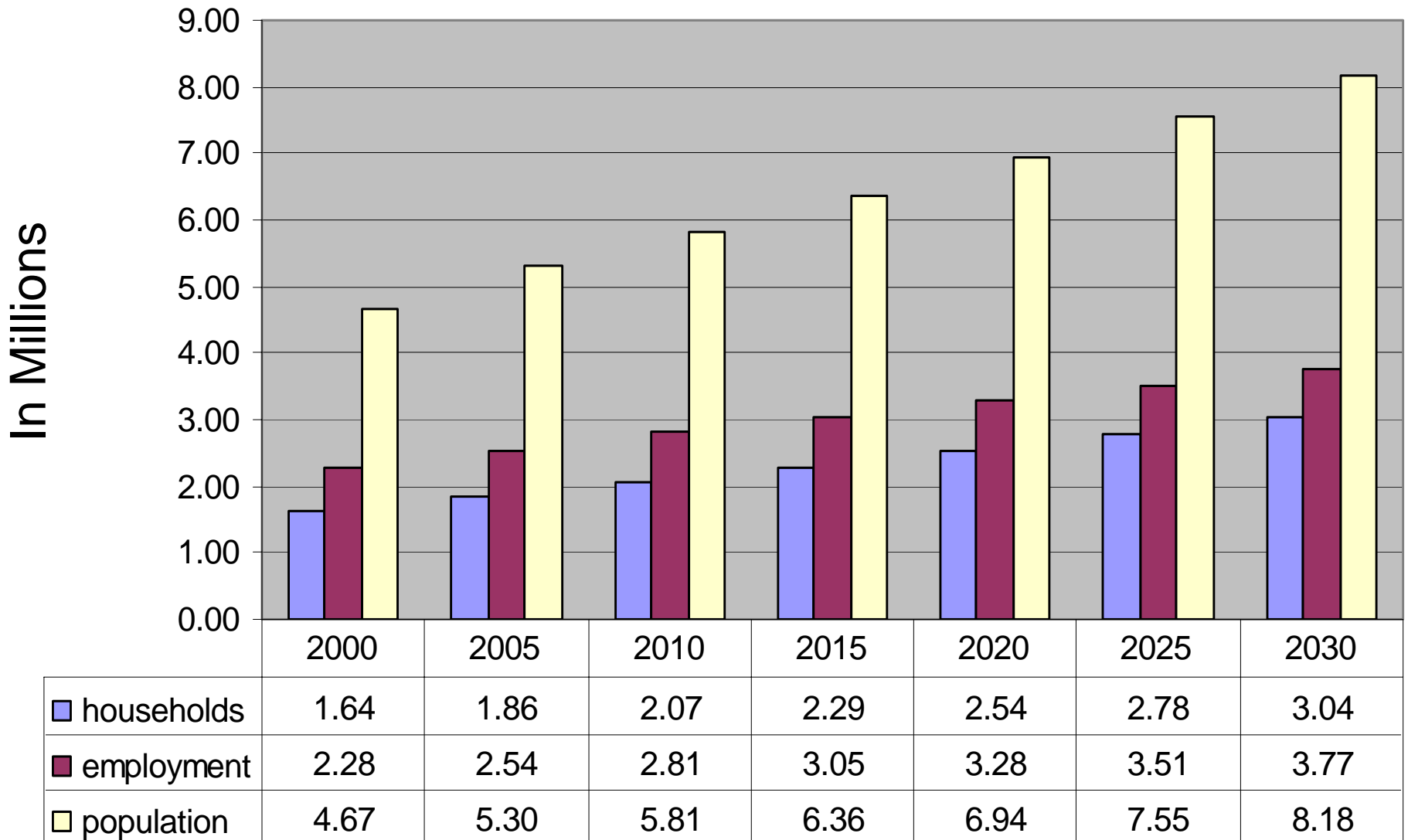
September 21, 2006

Alan Clark, Director
Transportation and Air Quality Planning
Houston-Galveston Area Council

Houston-Galveston Region



Growth Forecast for the Houston-Galveston Region



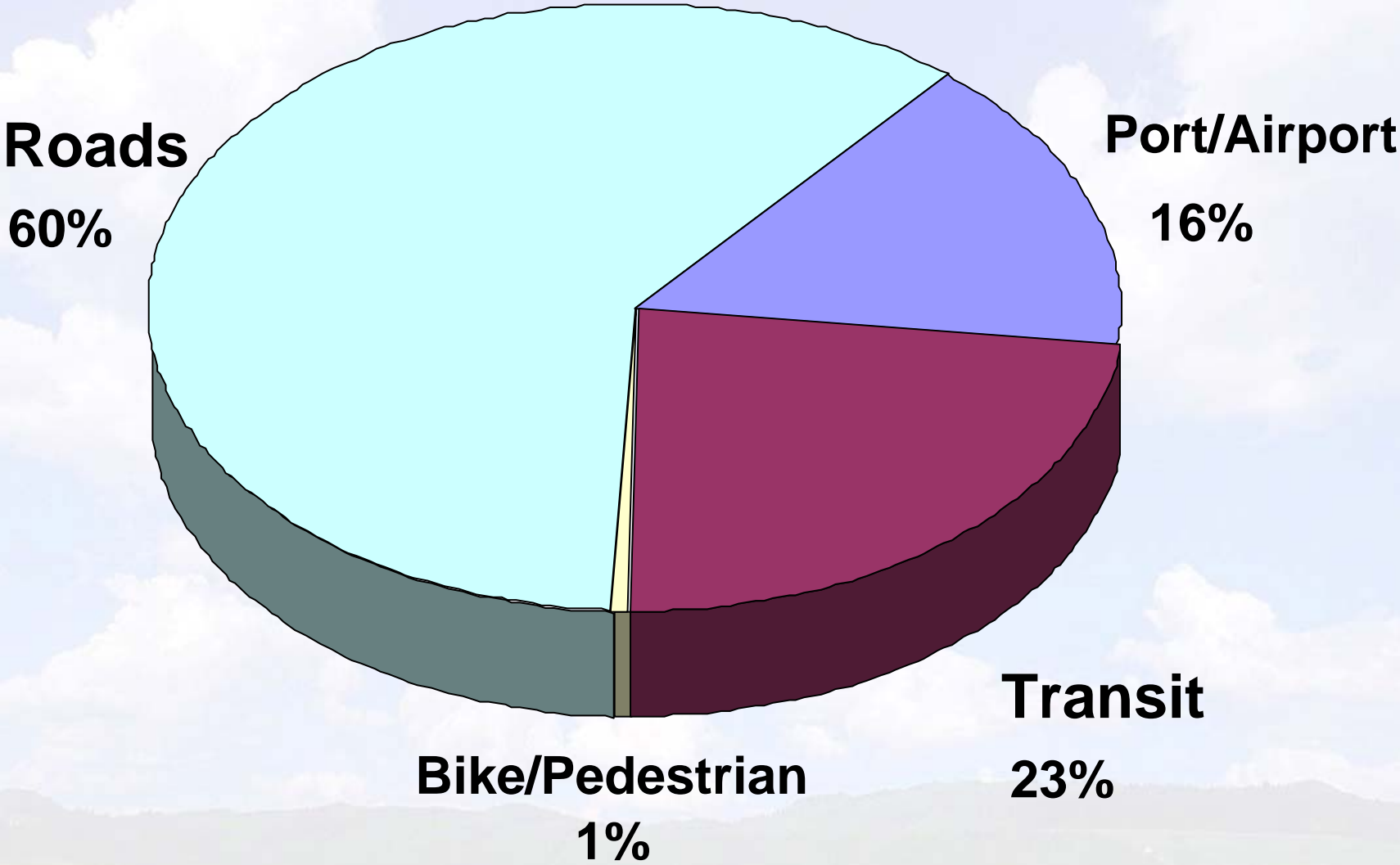
Goods Movement

300% growth projected in Goods Movement to/through the Houston-Galveston area



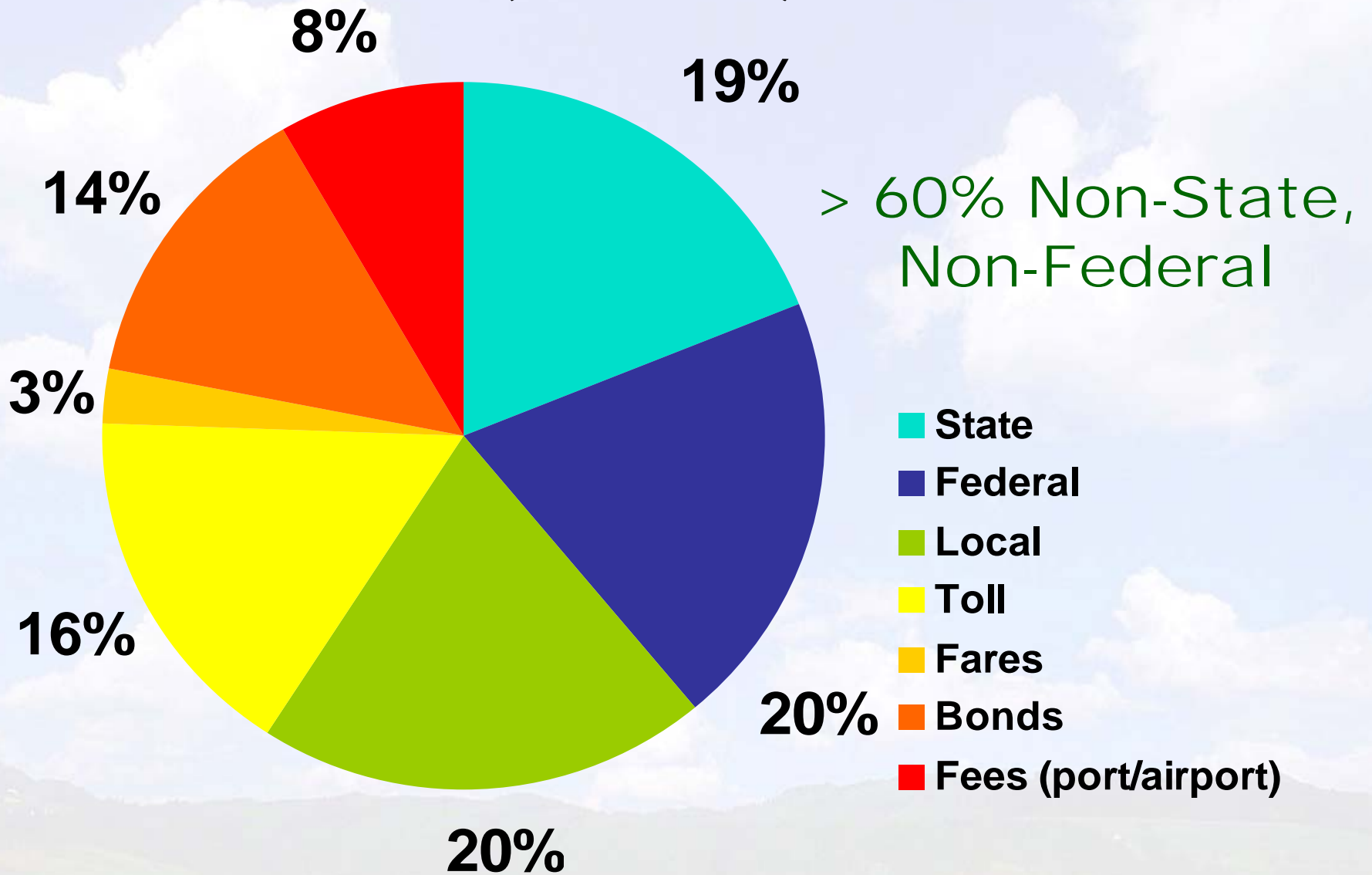
System Investments - \$77B

(2025 Plan)

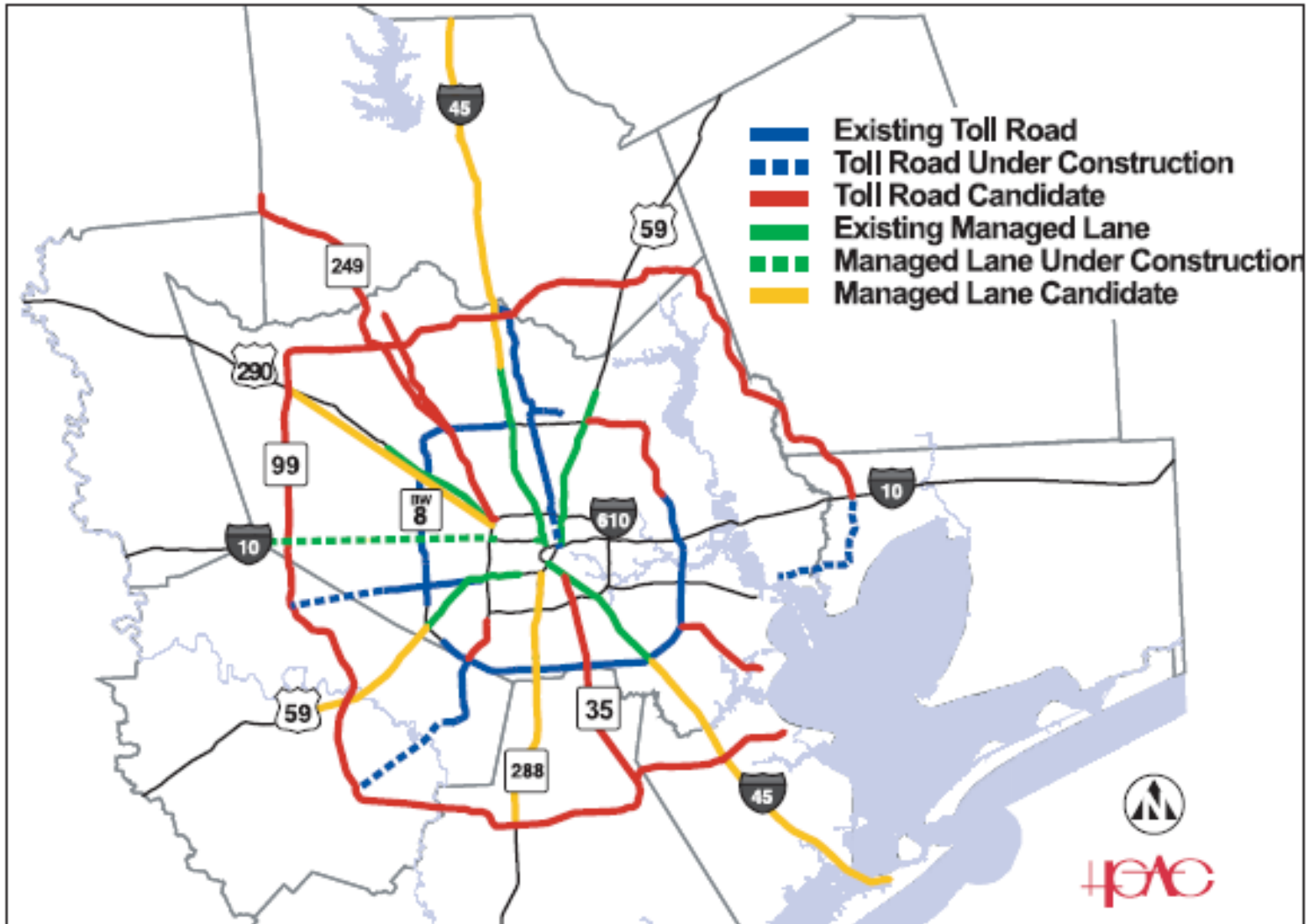


Revenue by Source

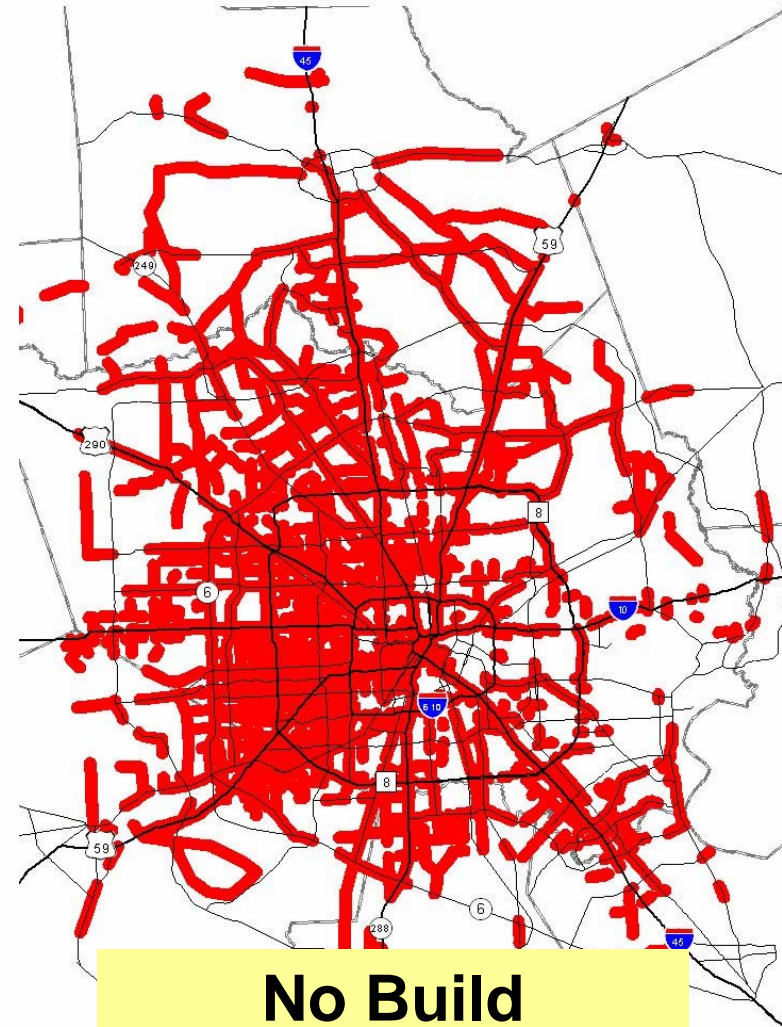
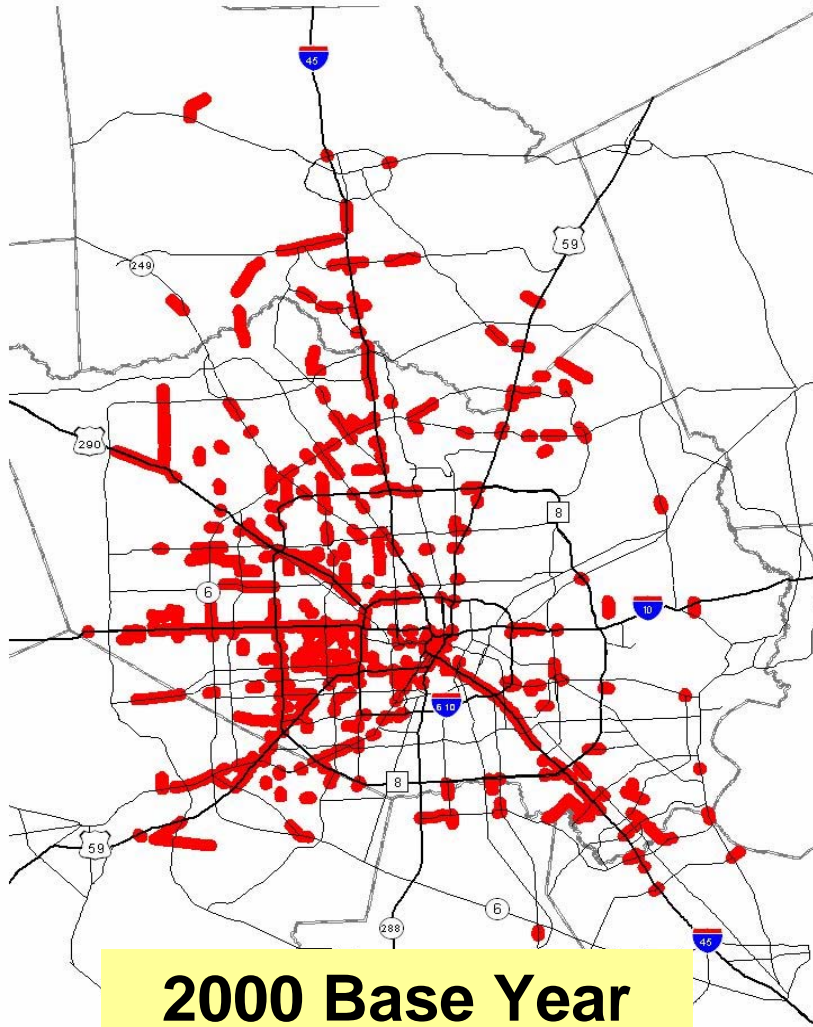
(2025 Plan)



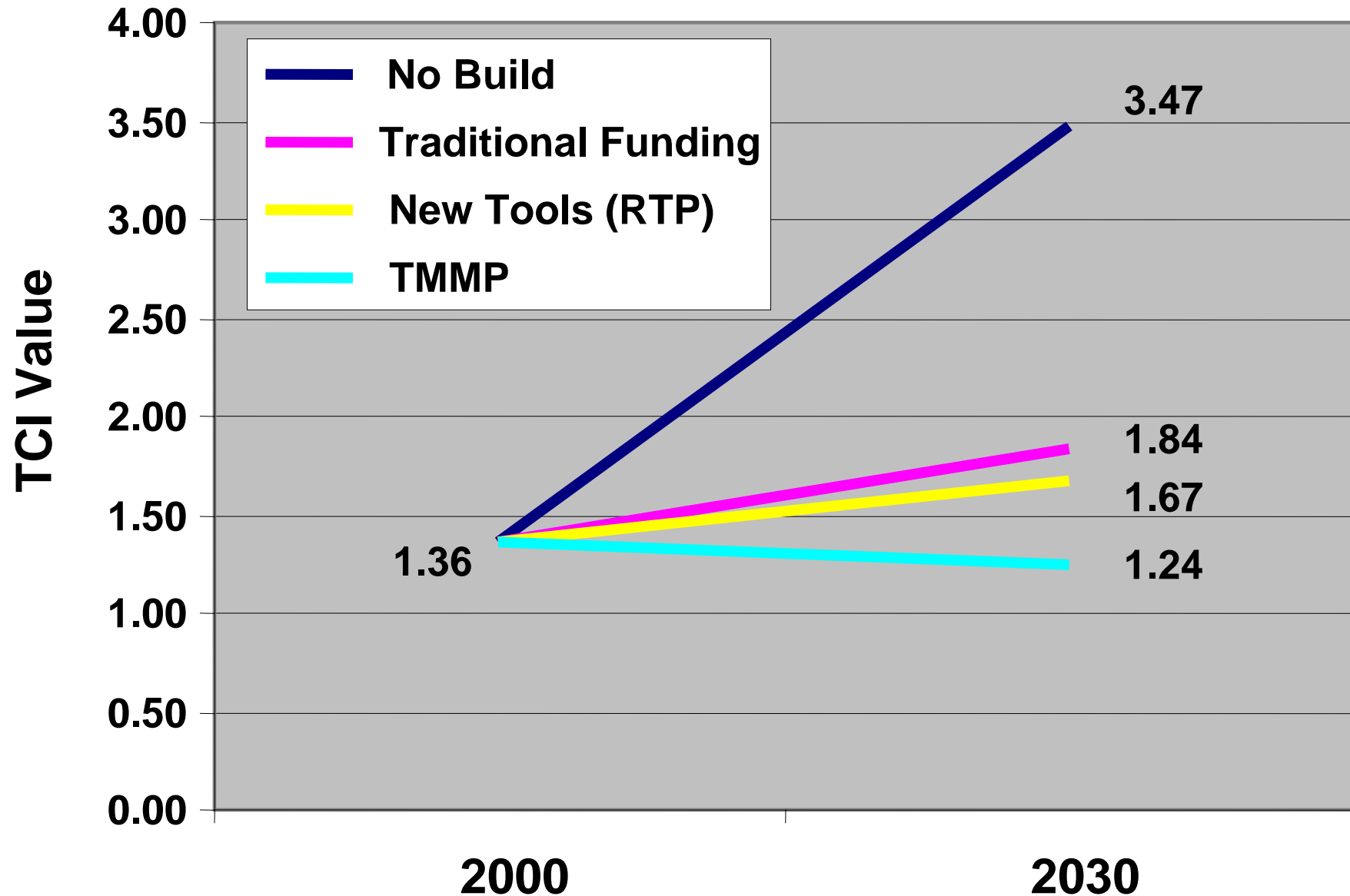
Tollway/Managed Lane System (2025 Plan)



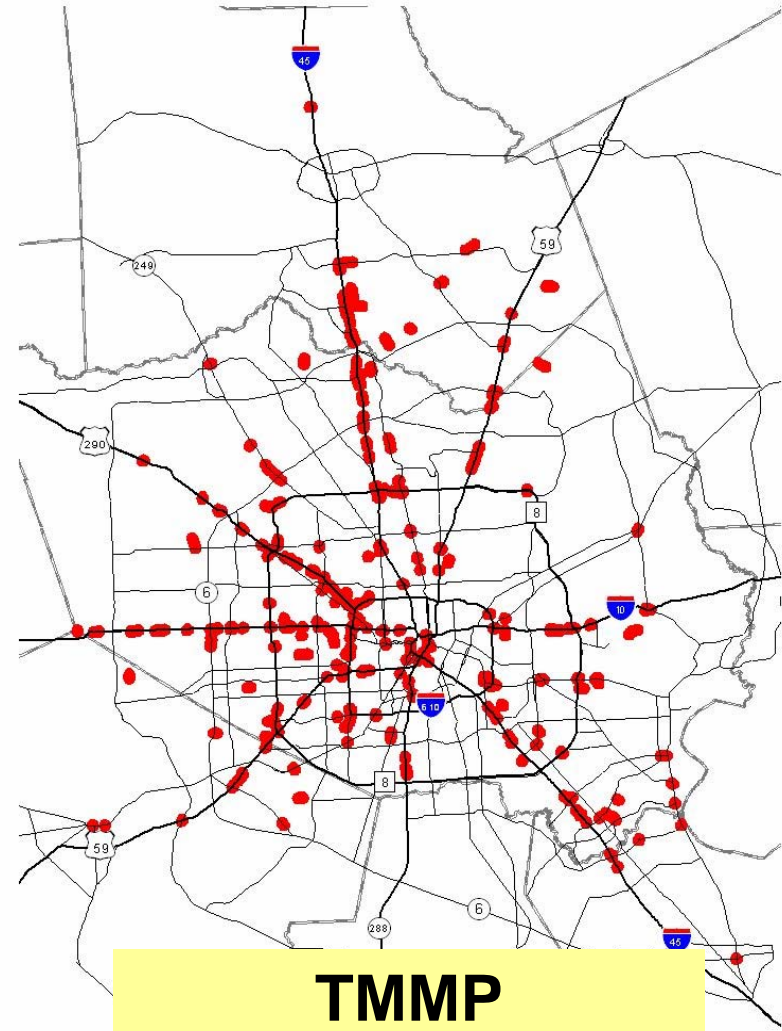
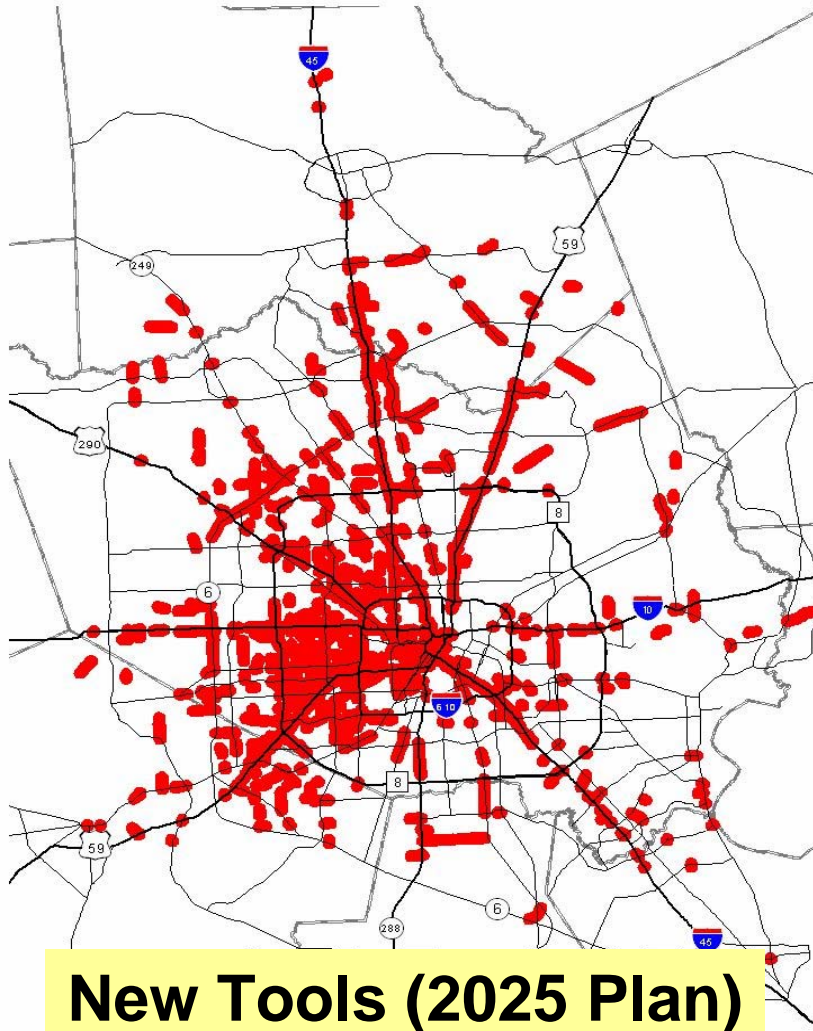
Severe Congestion Base Year vs. No Build



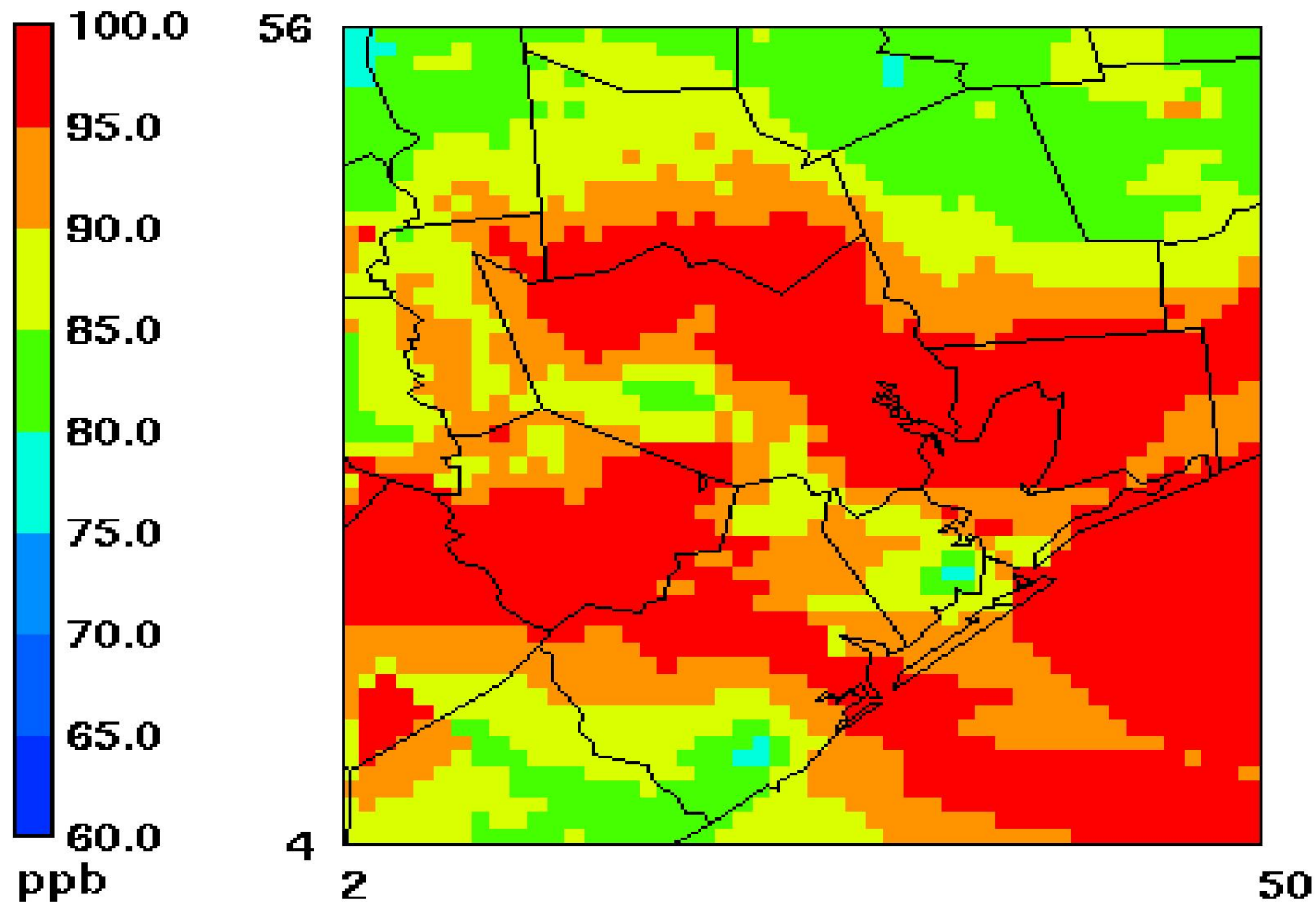
System Performance Scenarios



Severe Congestion Plan vs. TMMP

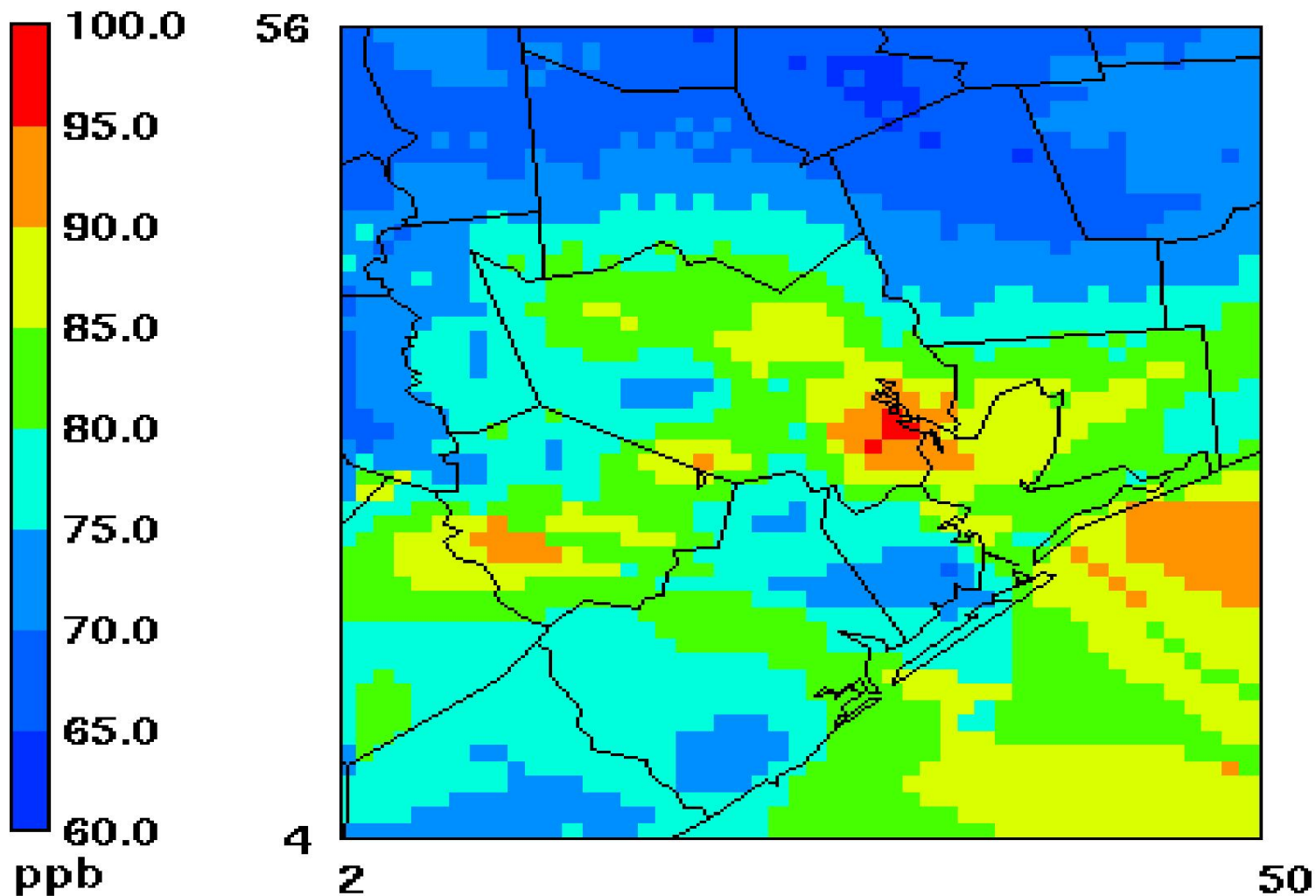


2000 Baseline Ozone Design Value



Min=77.3 at (34,21), Max=113.8 at (4,26)

2009 Ozone Design Value

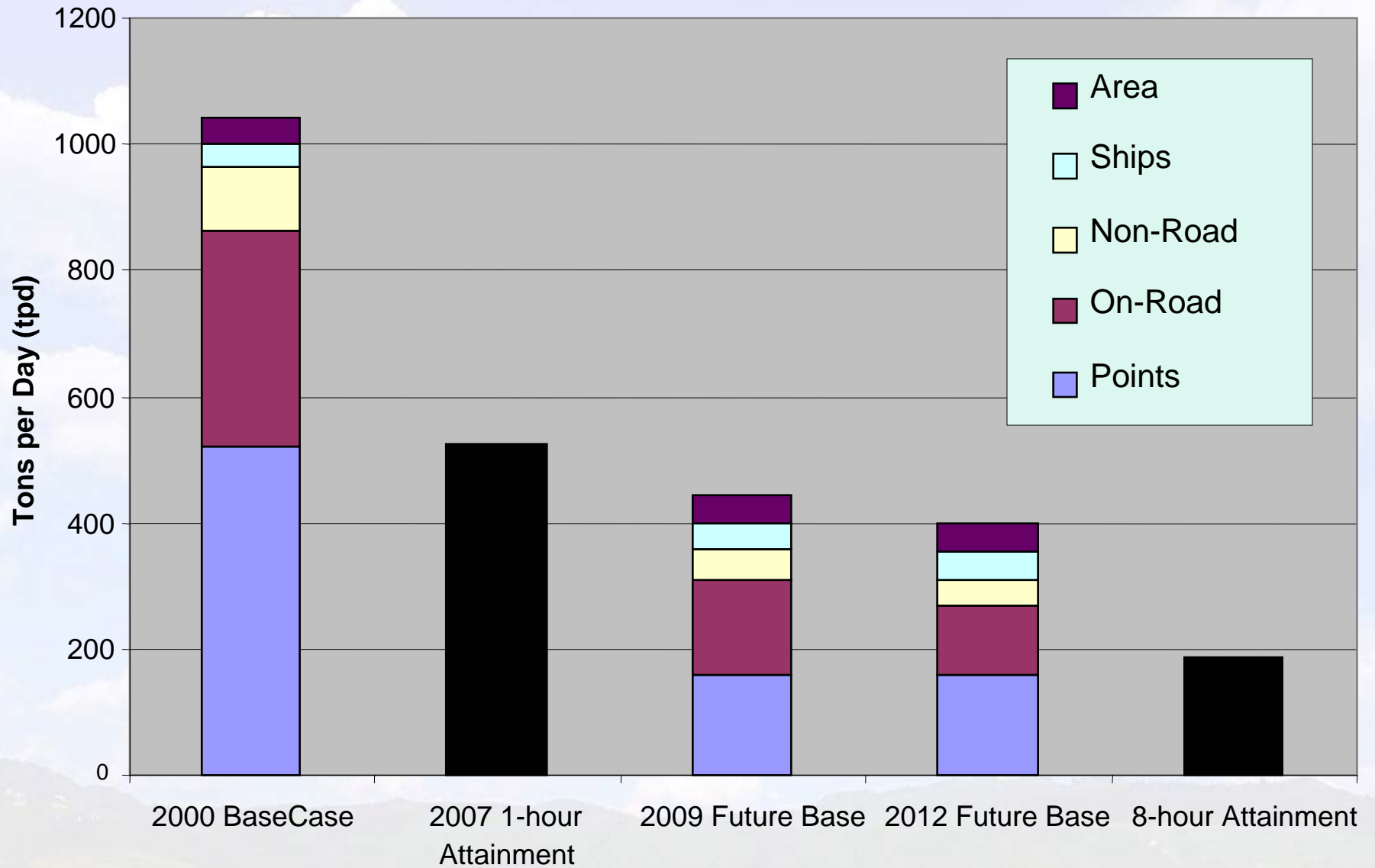


Min=64.1 at (30,51). Max=96.0 at (31,30)

Attainment Years According to 8-hr Ozone Designation

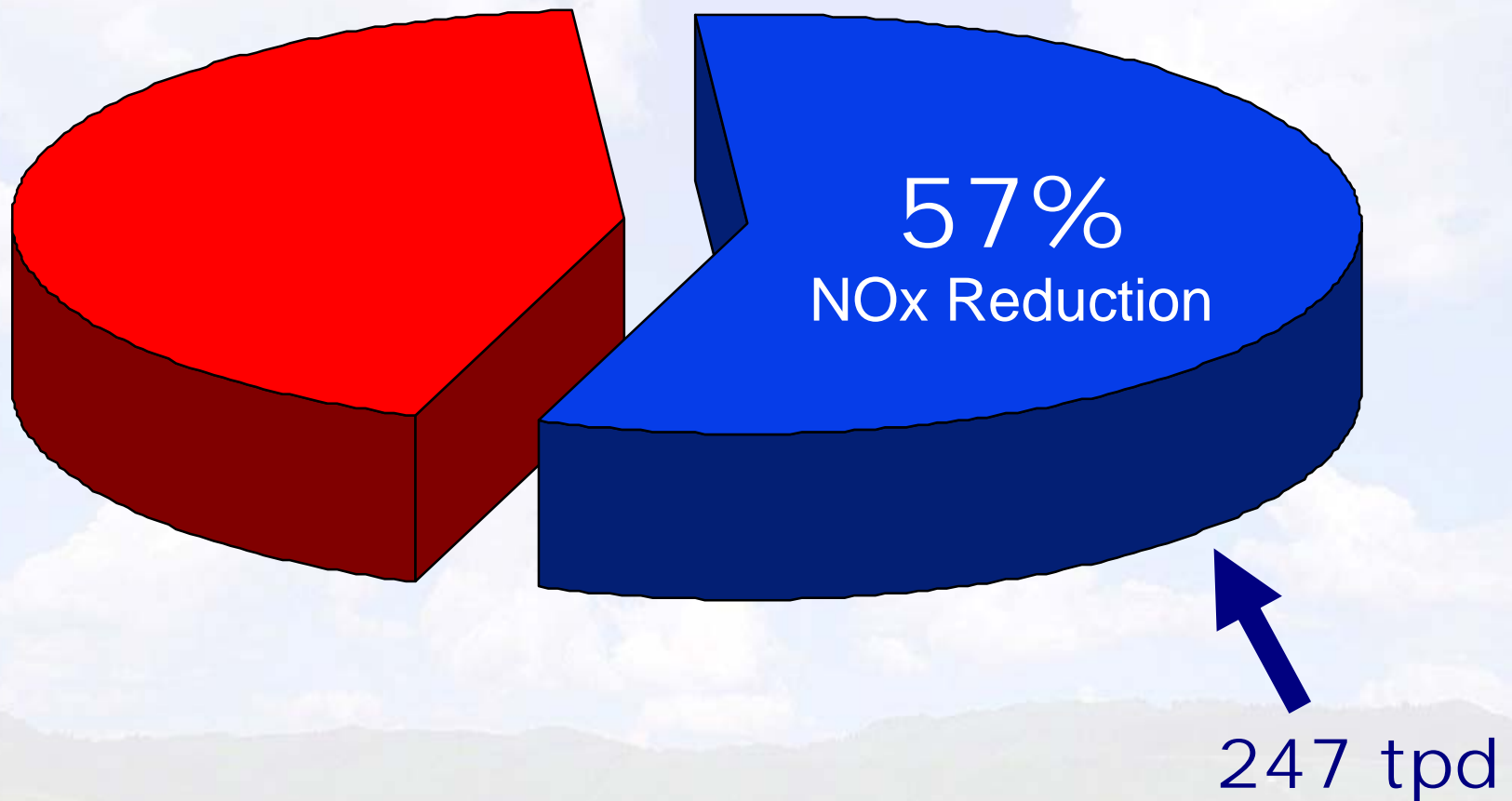
Moderate Designation 2010	Serious Designation 2013	Severe Designation 2019
Control Strategies Implemented by 2009	Control Strategies Implemented by 2012	Control Strategies Implemented by 2018
1.15 to 1 New Source Review Offsets	1.2 to 1 New Source Review Offsets	1.3 to 1 New Source Review Offsets
Impose Reasonably Available Control technology on all major sources emitting more than 100 TPY	Impose Reasonably Available Control technology on all major sources emitting more than 50 TPY	Impose Reasonably Available Control technology on all major sources emitting more than 25 TPY

Houston NO_x Emissions



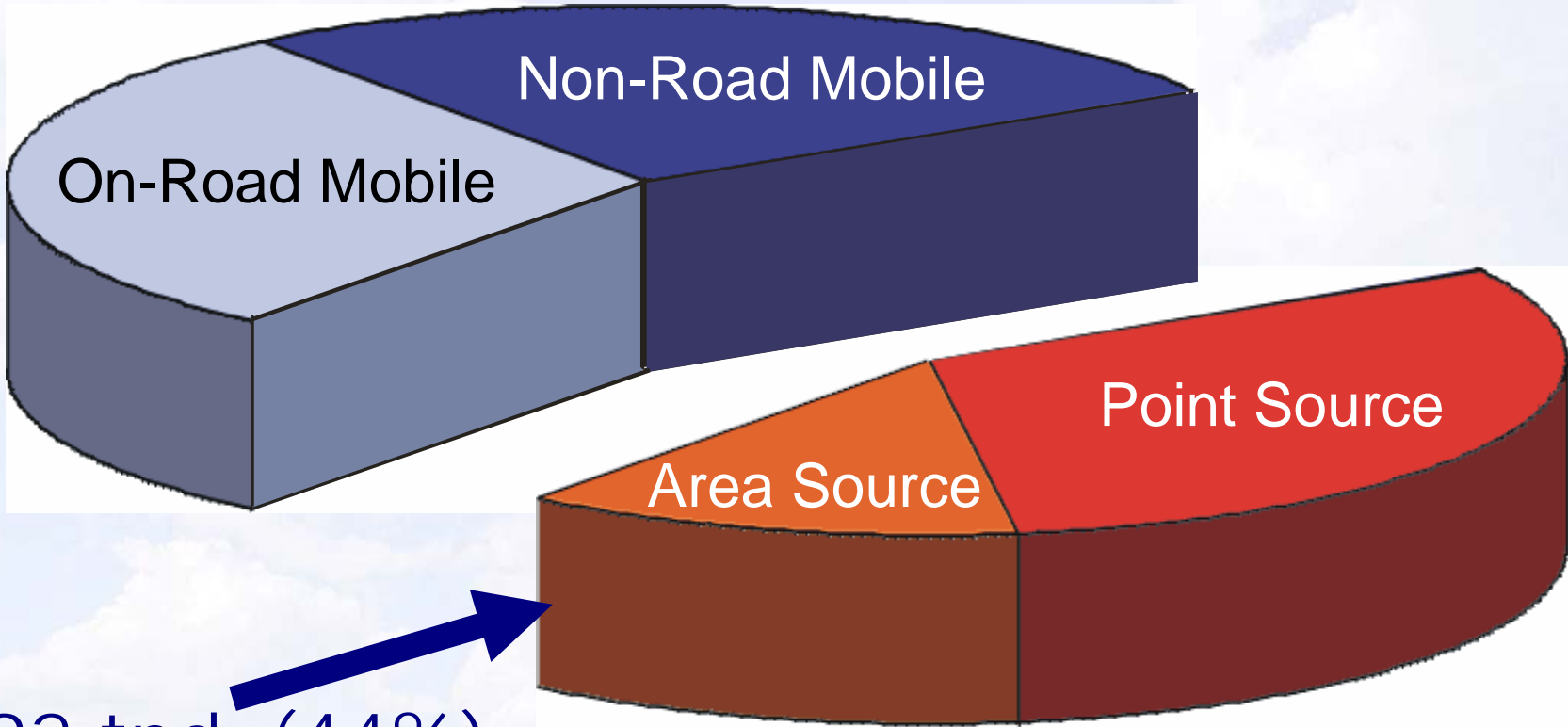
HGB 2009 Emissions Inventory

Estimate of HGB NOx Reductions Needed



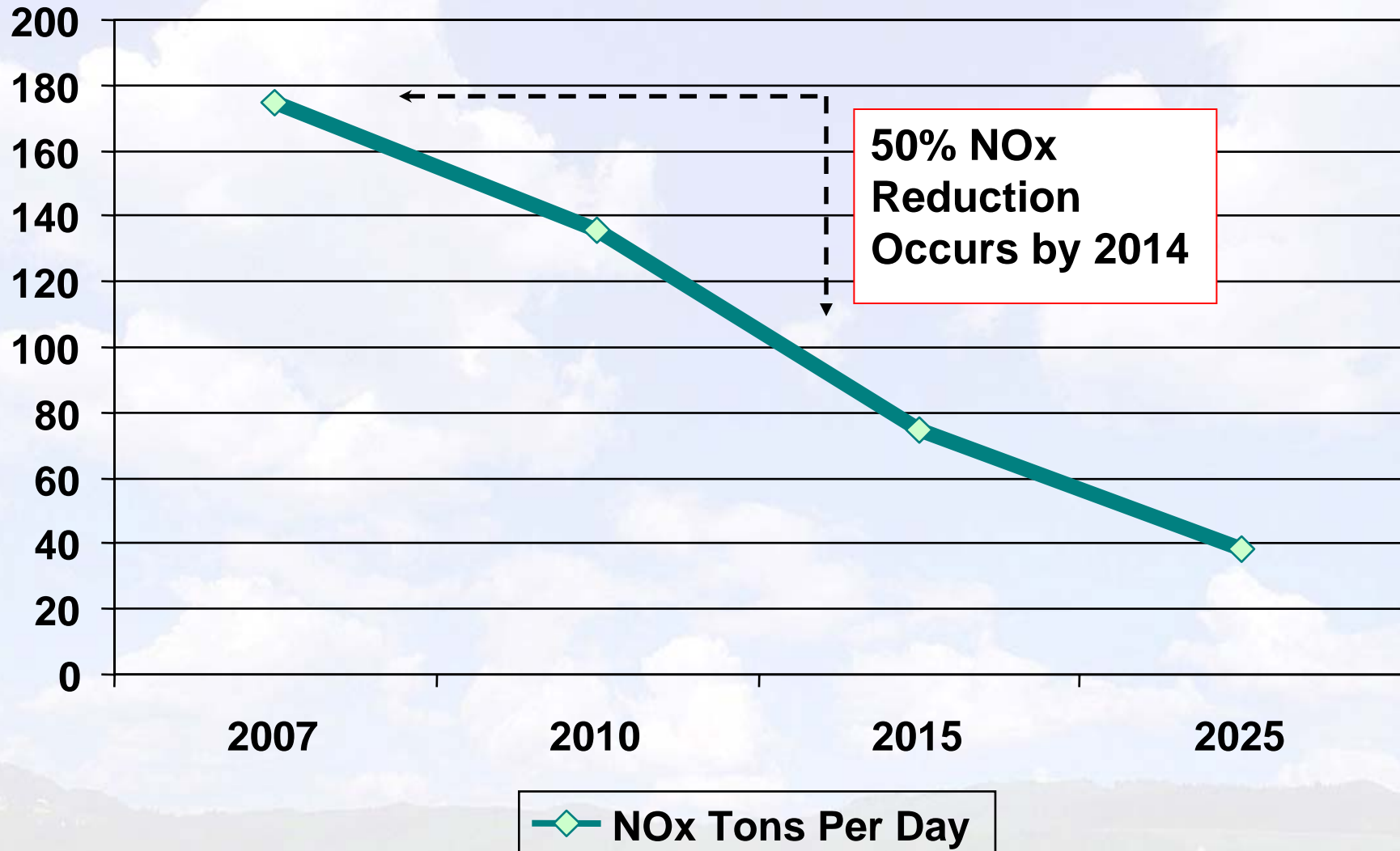
HGB 2009 Emissions Inventory

Only 44% of NOx Sources Directly Regulated by TCEQ

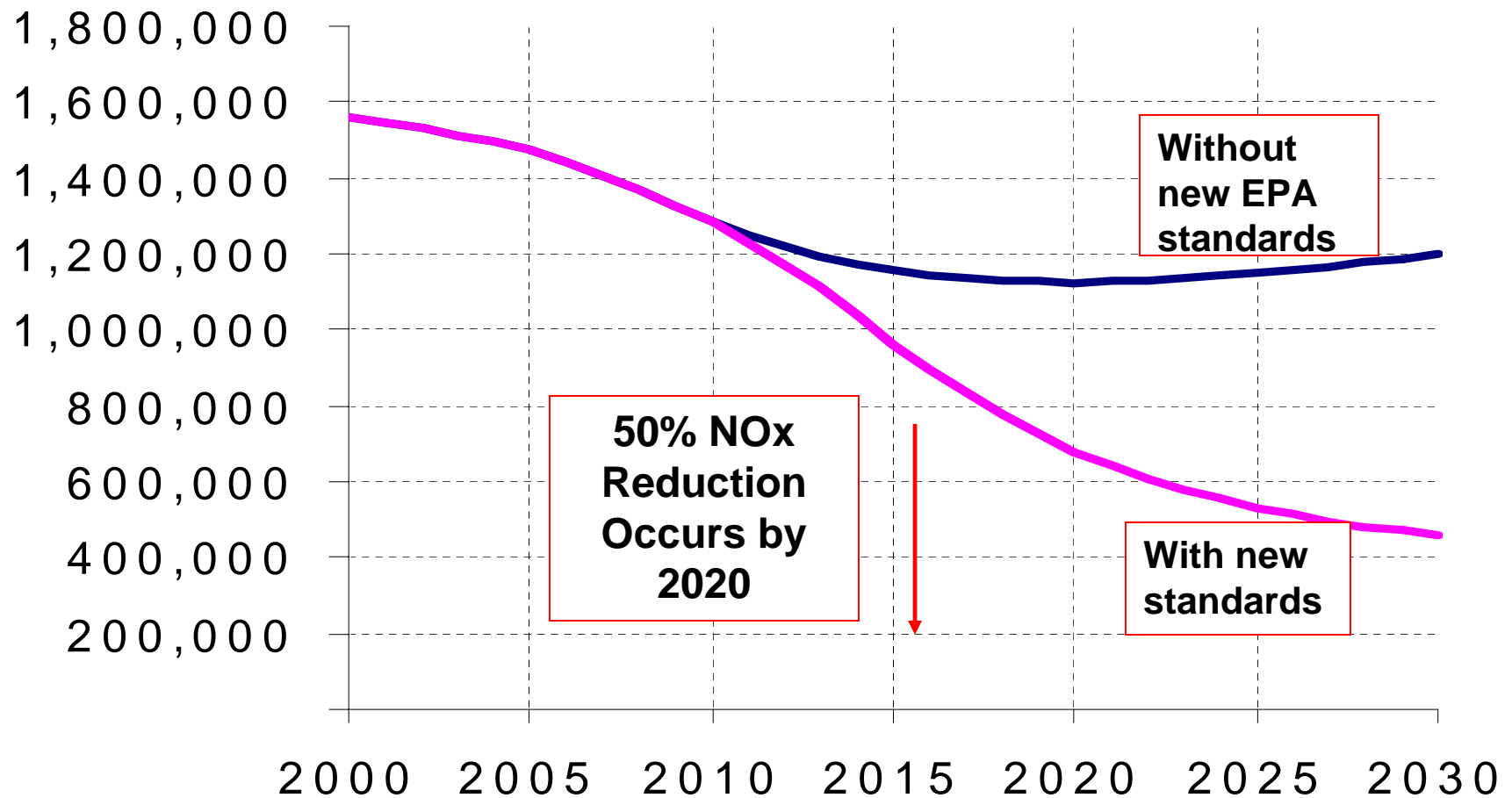


192 tpd (44%)

Houston On-Road Mobile Source NOx Emission Reductions

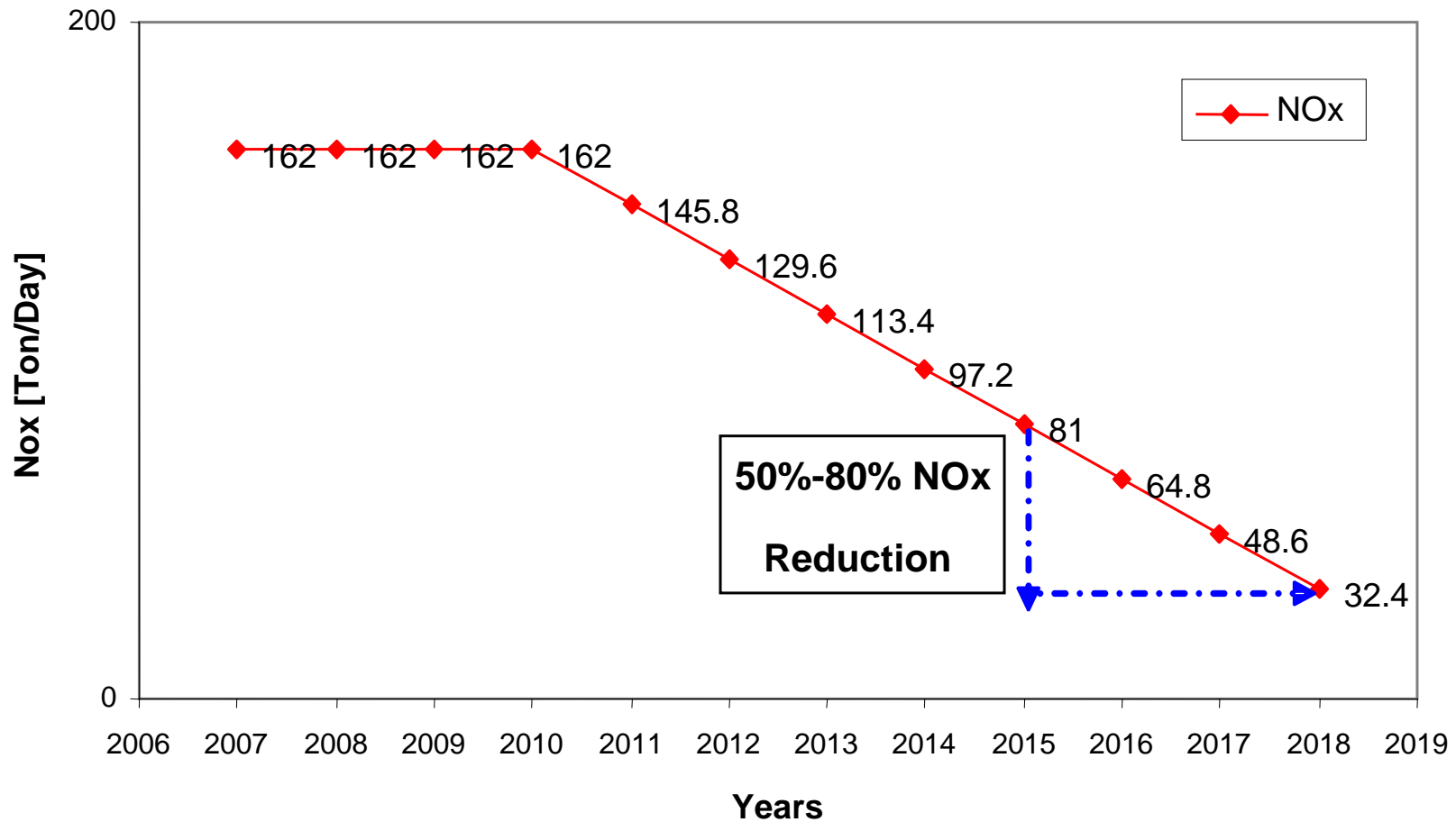


Nationwide Non-Road Mobile Source-NOx Emission Reductions



Houston Point Source NOx Emission Reductions

Houston Point Source NOx Emissions





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For More Information:

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