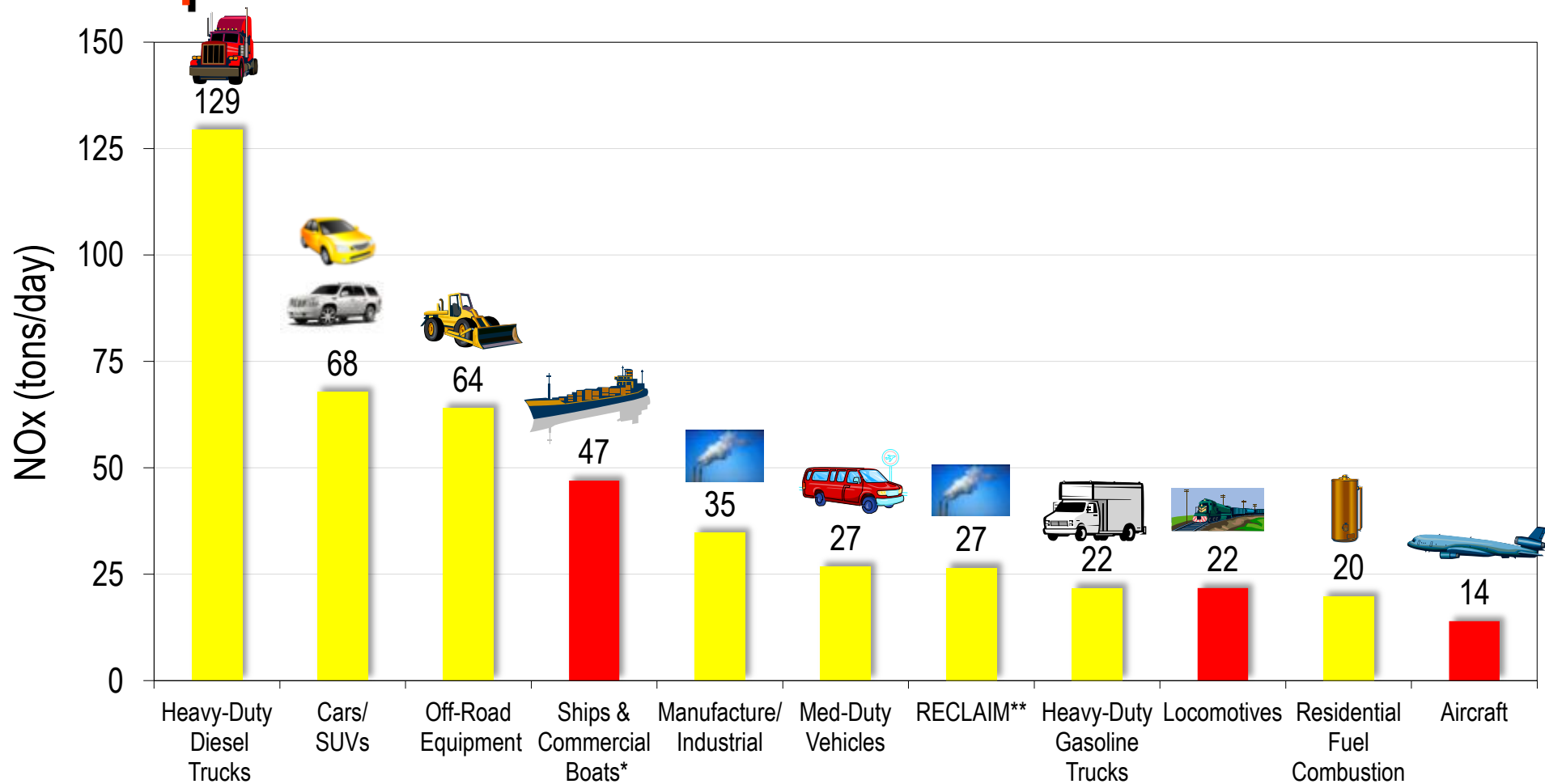




# National/International Transportation Sources

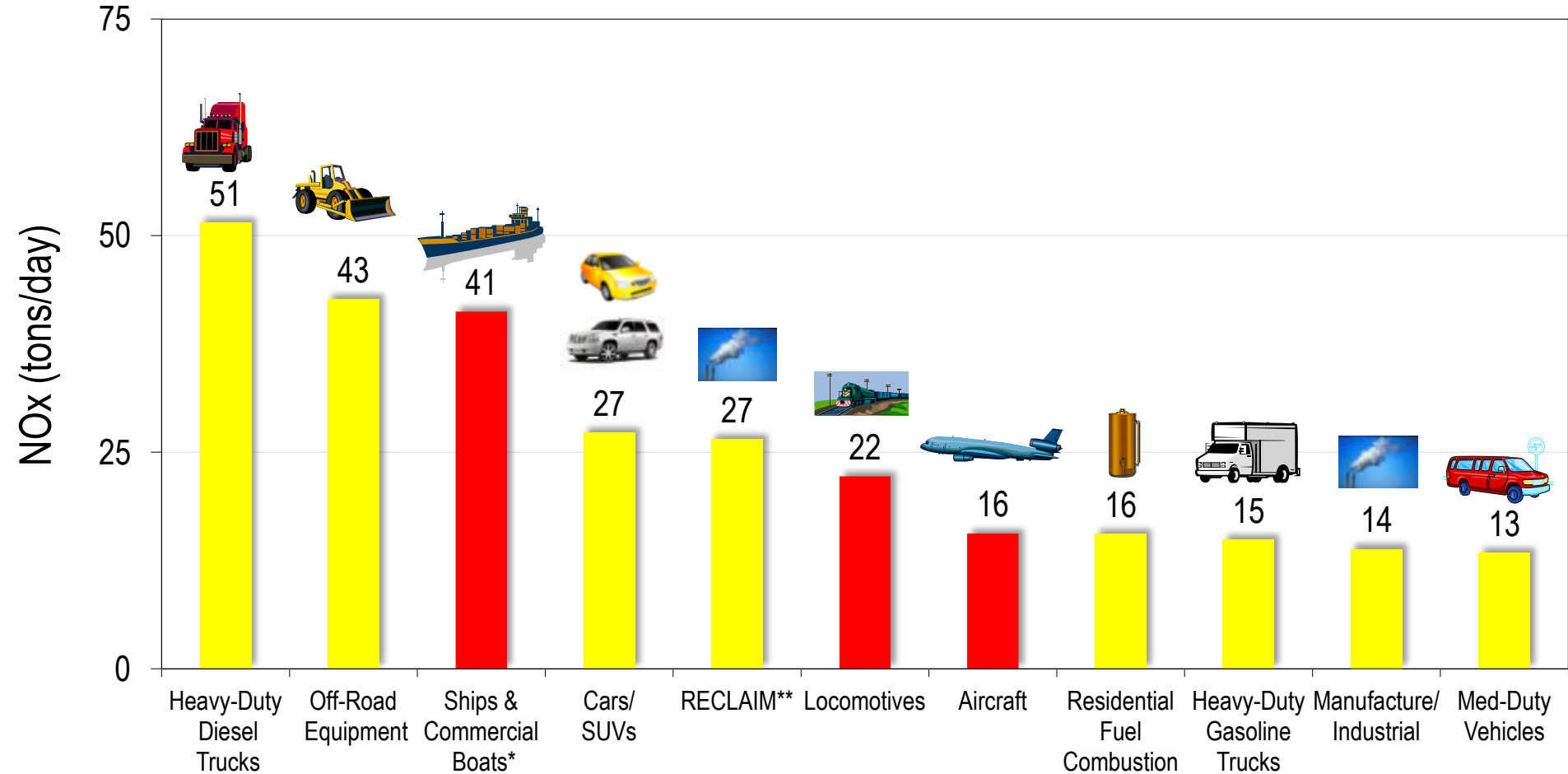
# Top NOx Emissions Sources in 2014



\* Ocean-going vessels = 35 tons/day

\*\*RECLAIM: 320 largest stationary sources, including all refineries and power plants

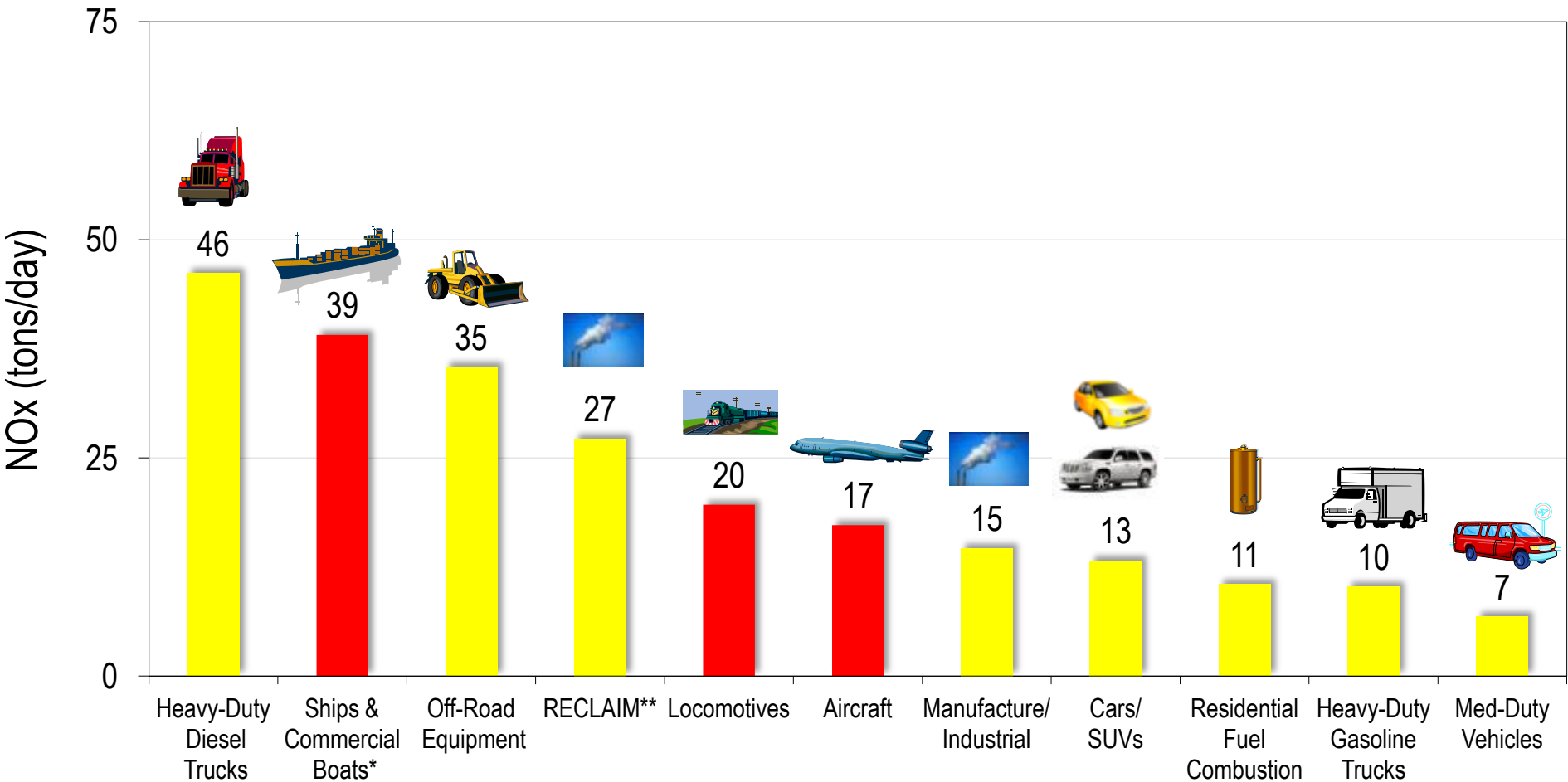
# Top NOx Emissions Sources in 2023



\* Ocean-going vessels = 32 tons/day

\*\*RECLAIM: 320 largest stationary sources, including all refineries and power plants

# Top NOx Emissions Sources in 2032



\* Ocean-going vessels = 29 tons/day

\*\*RECLAIM: 320 largest stationary sources, including all refineries and power plants

# Key Challenges Moving Forward

- Opportunities for Zero-Emission Technology Deployment
- Long Remaining Useful Life
- Primarily Federal/International Authority to Set Emissions Standards



# Potential Additional Emission Reductions

- Greater Use of Alternative Fuels/ Renewable Fuels
- Hybridization/Electrification
- Shorepower/Emissions Capture Systems for Marine Vessels at Berth
- Operational Efficiencies

