## JOINT TAR AND FD CONCLUSIONS FOR MY2022-2025 GHG STANDARDS

- Automakers are developing and deploying fuel efficient technologies at a faster rate than forecasted in 2012 final rule and compliance costs are lower than those projected in the final rule
- Advanced gasoline vehicle technologies will continue to be main compliance pathway through 2025; very low levels of PHEVs and BEVs are needed to comply with current GHG standards
- A number of emerging technologies are not included in the analysis, but offer the
  potential to lower costs and achieve greater reductions in the future
- More stringent standards for MY2025 could have been justified, but better approach is to strengthen standards in MY2026 and beyond

## STUDY FINDINGS FOR POSSIBLE CO2 REDUCTIONS IN THE POST-2025 TIMEFRAME

- Underutilized conventional technologies available to further reduce CO2 emissions, but limited to about 10 to 30 grams per mile for many manufacturers
- The cost of lithium ion batteries is declining rapidly; 100 mile BEVs could be cost competitive with a conventional technology vehicle by 2030
- Widespread introduction of ZEV models is possible by 2030
- The availability of cost competitive ZEV technologies opens a technological pathway for all OEMs to achieve very large CO2 emission reductions by 2030