

# Review of the O<sub>3</sub> NAAQS: Overview of First Drafts of Risk and Exposure Assessments (REAs) and Policy Assessment (PA)

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CASAC Ozone Panel  
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## *Roles of REAs and PA in review of O<sub>3</sub> NAAQS*

- Both documents draw from the ISA . . . they do not revisit conclusions reached in the ISA
- The REA focuses on an appropriate set of studies that provide concentration- or exposure-response functions and other information necessary to perform quantitative analyses
  - Intended to characterize estimates of exposures and risks, including uncertainties and relative confidence in results
  - Not intended to address policy implications of results
- The final PA will integrate and interpret information from the ISA and REAs to frame the broadest range of policy options that could be supported by available scientific evidence and assessments for consideration by the Administrator
  - Intended to facilitate CASAC's advice and recommendations on any new standards or revisions to existing standards as may be appropriate
  - Also intended to facilitate public comment on the standards



## *Overarching issues . . . interpreting epidemiological evidence*

- ISA concludes there is a lack of a discernible threshold in O<sub>3</sub> concentration-response functions . . . puts emphasis on decreased confidence in shape and magnitude of responses at very low O<sub>3</sub> concentrations
- How to appropriately reflect this consideration in the REA in presenting risk results over the full range of O<sub>3</sub> concentrations
  - How best to characterize confidence in the risk estimates while reflecting this ISA conclusion
- How to appropriately reflect this consideration in the PA in translating air quality information from epidemiological studies into basis for reaching conclusions on potential alternative standards
  - Look at distributional air quality statistics when available
- Have drawn from advice from CASAC PM Panel in addressing this issue in the first drafts of the REAs and PA



## *Overarching issues . . . background O<sub>3</sub> concentrations*

- Clearly relevant in *implementing* the standards
- In *setting* the standards, case law makes clear that attainability and technological feasibility are not relevant considerations (PA, p. 1-3)
  - Thus, background O<sub>3</sub> is not a bright-line constraint in setting NAAQS
- How to appropriately take background O<sub>3</sub> into account in estimating risks
  - In past reviews, estimated risks in excess of policy-relevant background
  - In current review, estimated total risks to comprehensively characterize risks actually experienced regardless of source
  - Account for U.S. background in simulating just meeting current standards to focus on impacts of U.S. emissions
  - In both past and current reviews, more confidence in estimates of reductions in risk across alternative standards since not sensitive to uncertainties in background or in applying response functions down to very low levels
- How to appropriately take background O<sub>3</sub> into account in PA
  - Provide context for understanding implications of potential alternative standards
  - Whether background O<sub>3</sub> should be given any consideration in assessing lower standard levels as scientific evidence and analyses become increasingly uncertain is a matter for further discussion in the second draft PA