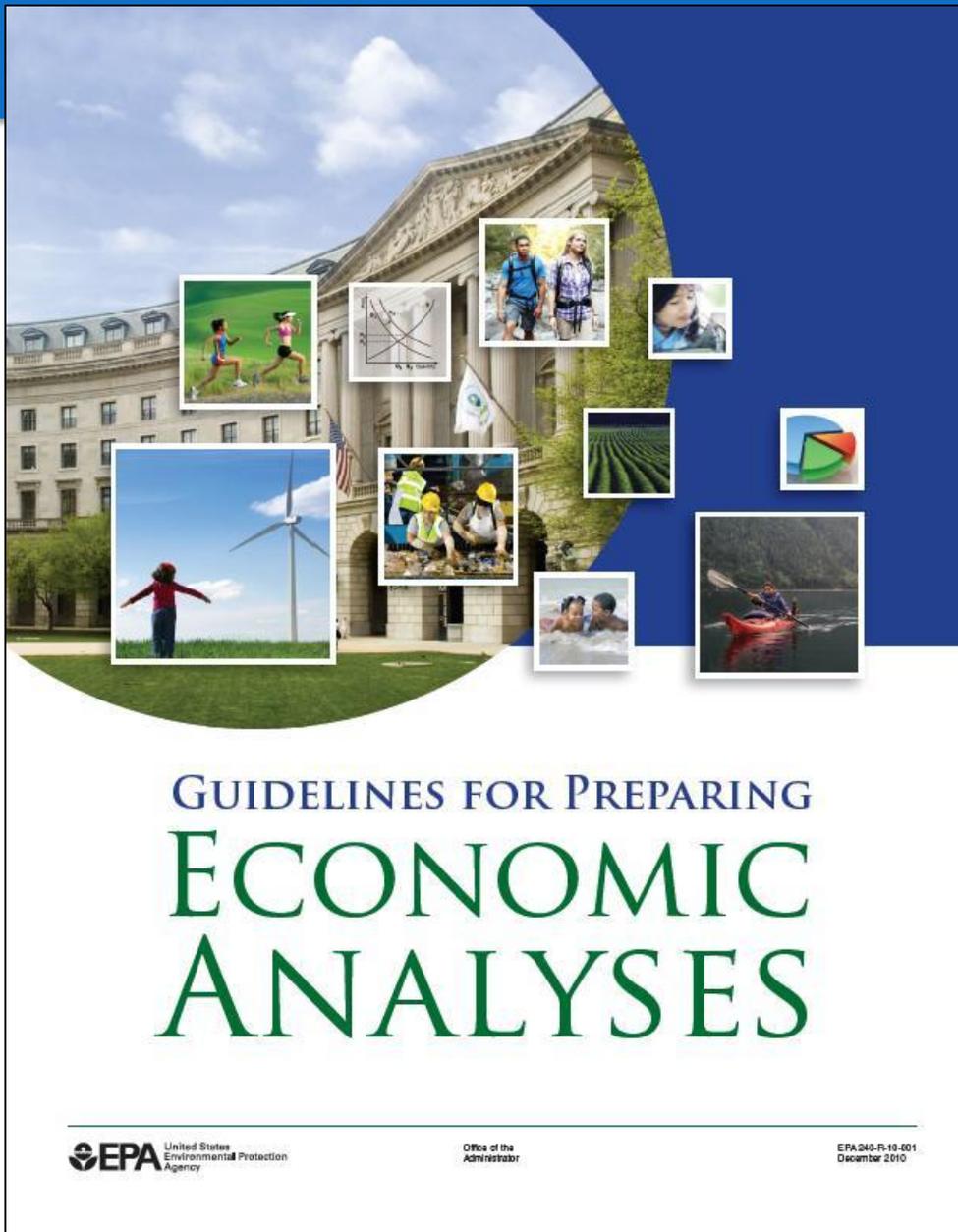




Third Edition of EPA's *Guidelines for Preparing Economic Analyses**

Presentation to the SAB Economic
Guidelines Review Panel
April 23, 2020



Background



- Every Administration since President Reagan has required benefit-cost analysis (BCA) of economically significant regulations (EO 12291, EO 12866, EO 13563).
- Building on earlier guidance issued in 1983, EPA issued the first edition of our *Guidelines for Performing Economic Analyses* in 2000; last comprehensive revision in 2010.
- The Office of Management and Budget has broad economic guidelines (Circular A-4) for conducting BCA across regulatory agencies.
- EPA's *Guidelines* complement OMB Circular A-4 by providing greater detail and coverage of analytic challenges faced by EPA analysts.
- This new edition reflects updated science and expansion of “best practices.” This overview will highlight significant changes.

Three Tenets for the *Guidelines*



1. Economics is a science; *Guidelines* must be consistent with theory and principles of economics.
2. The conduct of economic analysis is a positive exercise, not a normative one.
3. *Guidelines* should integrate several other sciences into an economic framework.

Goals of the *Guidelines*



The *Guidelines* should:

- Provide a sound scientific foundation for performing Agency economic analyses.
- Be consistent with economic theory and science more broadly and provide guidance on conducting:
 - benefit cost analyses,
 - economic impact analyses, and
 - other distributional analyses.
- Promote best practices for analysis and presentation across EPA programs.

Intended Audience/Scope



- Core audience is Agency analysts or contractors who conduct economic analysis of EPA actions.
- Assumes reader has some knowledge of microeconomic theory but recognizes that engineers, risk assessors, and other practitioners will be consulting the *Guidelines*.
- Not intended to be a “cookbook” with step-by-step directions, but guidance on best practices.
- Unique data and tools developed for media-specific needs are not discussed. These tools change over time.

Chapter Title	Description
1: Introduction	Discusses core principles and best practices for all economic analyses
2: Statutory and Executive Order Requirements	Highlights directives from statutes and executive orders that may apply to economic analyses across all of EPA's programs
3: Need for Regulatory Action and Evaluation of Policy Options	Reviews how analyses should describe the economic basis for the policy action and evaluate consequences of multiple regulatory options.
4: Regulatory and Nonregulatory Approaches	Describes regulatory and non-regulatory approaches used in environmental policy.
5: Scope, Baseline and Other Analytic Design Considerations	Covers which benefits and costs should be assessed, baseline specification, the treatment of uncertainty, and other analytic elements
6: Discounting	Addresses discounting in the short-term and over much longer time horizons as well as important discounting issues for applied policy analysis
7: Analyzing Benefits	Provides an overview of the benefits analysis process and describes methods and approaches for monetizing benefits.
8: Analyzing Costs	Discusses estimating costs for use in benefit-cost analyses
9: Economic Impacts	Covers regulatory impacts including changes in employment, prices, profitability and plant closures as well as impacts outside the marketplace
10: Environmental Justice and Life Stage Considerations	Considers the distribution of environmental quality and human health risks across several populations
11: Presentation of Analysis and Results	Presents guidance on how to present the results of economic analyses
Appendix A: Economic Theory	Provides an overview of economic theory
Appendix B: Mortality Risk Valuation Estimates	Summarizes Agency guidance on the monetization of mortality risk estimates

Chapters 1 & 2



Chapter 1: Introduction

- New to this chapter is a discussion of core principles important for any and all EPA economic analyses:
 - based on sound economics and science,
 - objective and unbiased, and
 - transparent and replicable.
- The chapter provides a summary of key best practices and where they are discussed in the *Guidelines*.
- Other topics, including scope and standing, have been moved to other chapters.

Chapter 2: Statutory and Executive Order Requirements

- New to this chapter are discussions of Executive Orders issued since 2010.

Chapters 3 & 4



Chapter 3: Need for Regulatory Action and Evaluation of Policy Options

- This chapter now includes strengthened guidance on
 - describing the externality addressed by the policy,
 - clearly justifying the need for federal intervention,
 - identifying appropriate policy options to evaluate, and
 - considering options when “co-benefits” are significant.

Chapter 4: Regulatory and Nonregulatory Approaches

- New to this chapter is a dedicated section and text box on Behavioral Economics and Policy “Nudges.”
- The discussion of market based approaches has been updated to reflect new literature.

Chapter 5: Scope, Baseline and Other Analytic Design Considerations



Chapter 5 has been expanded to include more comprehensive direction on designing the analysis.

- **Standing** – whose benefits and costs should be included
- **Scope** – which benefits and costs to include
- **Baseline** – establishing “the world without the regulation”
 - When to include multiple baselines
 - Evaluation of related rules
 - Accounting for benefits and costs across multiple rules
- **Desirable features of models** – peer reviewed, publicly available
- Additional scrutiny of “**cost savings**” – e.g., potential for unaccounted costs if regulation “pays for itself”
- **Uncertainty analysis** – dedicated discussion, including model uncertainty



Revisions to this chapter are primarily focused on improving its readability and clarity.

- Foundational materials retain much of the original information and were revised for clarity.
- Intergenerational discounting discussion has been streamlined to focus on technical issues and intuition; references have been updated.
- A new section recommends the use of private discount rates when forecasting behavioral responses and explains the connection with social discounting in BCA.

Chapter 7: Analyzing Benefits



Changes to this chapter are primarily focused on improving readability and clarity and incorporating the latest literature, but also include:

- Broader presentation of benefits analysis process,
- Expanded discussion of ecological benefits,
- Updated treatment of valuation methods,
- New section on cost-effectiveness analysis, and
- New text boxes on
 - the Chesapeake Bay, and
 - the adding-up condition.

Chapter 8: Analyzing Costs



This chapter has been updated and reorganized for readability and clarity, including:

- Updated section on practical issues and challenges in cost estimation,
- Expanded discussion of how compliance costs relate to social costs,
- New section on the use of economy-wide models in cost estimation focused on computable general equilibrium (CGE) models and previous advice received from the SAB, and
- Updated text boxes:
 - Retrospective Cost Analysis,
 - Construction of Social Accounting Matrix,
 - Non-separability of Benefits and Costs, and
 - Linking Models.

Chapter 9: Economic Impacts



This chapter includes updated and expanded guidance on a number of issues including:

- Conceptual frameworks to improve understanding of economic impacts,
- Potentially useful data sources,
- Impacts on consumers with emphasis on determinants of cost pass through and characteristics of consumers,
- Economy-wide impacts and impacts of benefits, and
- Employment impacts including
 - Gross rather than net change in jobs,
 - Displaced workers and potential negative health effects, and
 - Factors that affect impacts of job transitions – declining industry, worker mobility, unemployment rate



Chapter 10: Environmental Justice and Life Stage Considerations

- Revisions made to this chapter
 - Improve consistency with EPA's *Environmental Justice Technical Guidelines*, and
 - Include explicit consideration of costs.

Chapter 11: Presentation of Analysis and Results

- Minor edits made for consistency with other chapters

Charge to Panel



Questions for each revised chapter :

- Are the statements and analytic recommendations made in the chapter consistent with the theoretical and empirical peer-reviewed economics literature?
- Does the chapter contain an objective, balanced, and reasonable presentation and interpretation of the peer-reviewed theoretical and empirical economics literature, as well as any analytic methods described?
- Are there topics that warrant more discussion or elaboration in the chapter?
- Are there any inconsistencies in the way an issue or topic is discussed either within or across chapters?
- Are the definitions provided in the glossary accurate? Please identify any in need of revision.

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