

Cost-Benefit Guidance Update

Public Meeting
August 17, 2022

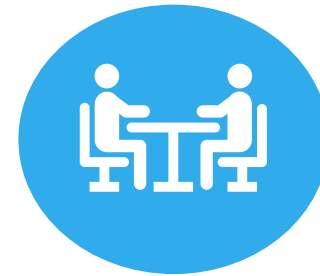
Purpose

- Present updated information on the cost-benefit guidance project
- Facilitate public comment on the draft appendices to NUREG/BR-0058, Revision 5, *Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission*

Logistics and Ground Rules



INFORMATION MEETING
WITH A QUESTION AND
ANSWER SESSION



PLEASE IDENTIFY YOURSELF
AND THE ORGANIZATION YOU
REPRESENT (IF ANY) BEFORE
SPEAKING

Questions are
Encouraged



Agenda

Background

Overview of Appendices K and L

Question and answer

Next steps

How to provide comments

Background

- NUREG/BR-0058 appendices were developed for specific technical areas related to regulatory analysis so that each can be revised independently
- Portions of NUREG/BR-0058 and appendices are currently with the Commission for review and approval prior to issuance
 - Final guidance document and five appendices (2020)
 - Four appendices (2022)

Overview of Appendices K and L

Appendix K:

Monetary Valuation of Nonfatal Cancer Risk for Use in Cost-Benefit Analysis

Background

- What has changed?
 - NUREG-1530, Revision 1, *Reassessment of the NRC's Dollar per Person-Rem Conversion Factor Policy*, used the Environmental Protection Agency's cancer mortality risk coefficient
- Staff reviewed the current state of practice for the valuation of morbidity and nonfatal health risks to fill in the gap in quantifying averted morbidity costs
- SECY-20-0074, *Valuing Nonfatal Cancer Risks in Cost-Benefit Analysis*, informed the Commission of the staff's plan to develop a quality-adjusted life-year (QALY) approach
- Appendix K contains a method to quantify morbidity effects using the QALY approach

Appendix K

- Presents a dollar per person-rem conversion factor for averted cancer morbidity
 - The benefits of an averted nonfatal cancer case are monetized using QALYs
 - Cancer risk coefficient is the nonfatal component of the Environmental Protection Agency's cancer incidence risk coefficient

Appendix K

- Adds the morbidity conversion factor to the conversion factor for mortality risks in NUREG-1530, Rev.1, to provide a total health detriment conversion factor
- Provides the value of averted health risks from radiation exposure when applied to population collective dose

Appendix L:

Replacement Energy Costs

Background

- Replacement energy cost estimates are used to evaluate regulatory actions that
 - Require safety modifications that might necessitate temporary reactor outages
 - Reduce the potential for extended outages resulting from a severe reactor accident
- NUREG-2242, *Replacement Energy Cost Estimates for Nuclear Power Plants: 2020-2030*
 - Current replacement energy cost estimates for both short- and long-term outages
 - Updates information provided in previous evaluations contained in NUREG/CR-4012 and NUREG/CR-6080
- Technical approach, assumptions, and data sources for replacement energy cost estimates in Appendix L

Appendix L

- Guidance for estimating replacement energy costs for regulatory actions that may result in nuclear reactor outages
- Application of estimates provided in NUREG-2242, for use in cost-benefit analysis

Approach and Methodology

- Replacement energy costs refer to changes in wholesale power prices that would result when a reactor unit is taken offline
- Replacement energy attributes
 - Shutdown costs to install or implement mandated safety changes
 - Present value of averted onsite costs due to changes in reactor accident frequencies
- Details methods and provides examples on how to quantify using the information in NUREG-2242

Questions and Answers



Next Steps



Consider feedback from this public meeting and formal public comments submitted when developing the final appendices



Submit final appendices to the Commission for review and approval

How to Provide Comments

- Federal Rulemaking Web Site
 - <http://www.regulations.gov>
 - Docket ID NRC-2017-0091
 - Comments due by September 6, 2022

- NRC Contacts
 - Docket questions: Dawn Forder,
301-415-3407 Dawn.Forder@nrc.gov
 - Technical questions: Pamela Noto,
301-415-6795, Pamela.Noto@nrc.gov

How Did We Do?

There are several ways you can provide your feedback on this meeting:

- Scan QR code for NRC Public Meeting Feedback Form



- Go to the Public Meeting Schedule and click on the “Meeting Feedback” link.

References

- SECY-20-0008 available at ML19261A277 (package)
- SECY-22-0028 available at ML21228A118 (package)
- SECY-20-0074 available at ML20058C219 (package)
- NUREG-1530, Revision 1 available at ML22053A025
- NUREG-2242 available at ML2117A176
- NUREG/CR-4012 available at ML20073J435
- NUREG/CR-6080 available at ML20076F500