

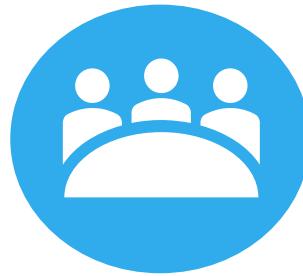
# Cost-Benefit Guidance Update

Public Meeting  
August 17, 2022

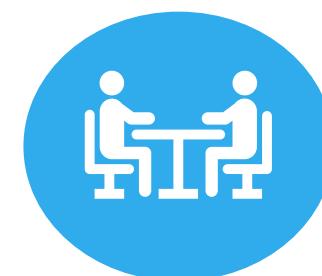
# Purpose

- 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

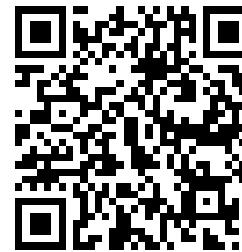
# How to Provide Comments

- 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](mailto:Dawn.Forder@nrc.gov)
  - Technical questions: Pamela Noto,  
301-415-6795, [Pamela.Noto@nrc.gov](mailto: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](#)