



United States Nuclear Regulatory Commission

Protecting People and the Environment

Plan for Updating Cost-Benefit Guidance and Discussion of Qualitative Factors

Public Meeting

May 28, 2014



Purpose

- Part 1: Discussion of SECY-14-0002, “Plan for Updating the U.S. Nuclear Regulatory Commission’s Cost-Benefit Guidance”
- Part 2: Discussion of Qualitative Factors

Agenda

- 1:00p.m. – 1:10p.m. Welcome, introductions and logistics
- 1:10p.m. – 1:55p.m. Discussion of SECY-14-0002
- 1:55p.m. – 2:10p.m. Feedback on SECY-14-0002
- 2:10p.m. – 2:20p.m. Break
- 2:20p.m. – 3:20p.m. Discussion of Qualitative Factors
- 3:20p.m. – 3:50p.m. Feedback on Qualitative Factors
- 3:50p.m. – 4:00p.m. Closing Remarks

Announcements

- **Category 3 Public Meeting**
 - Public participation is actively sought for this meeting to fully engage the public in a discussion of regulatory issues
- **Teleconference Number**
 - 1-888-807-8339 passcode: 77478
- **Webinar**
 - <https://www1.gotomeeting.com/register/190476808>
- **If you are participating via the telephone, please send an email to Aaron.Szabo@nrc.gov confirming your attendance.**



Previous Public Meetings

- Three public meetings
 - May 24, 2012 (ML12130176)
 - August 29, 2012 (ML12283A373)
 - July 29, 2013 (ML13227A201)
- Two ACRS meetings
 - October 2012
 - November 2012
- Commission meeting
 - September 11, 2012



United States Nuclear Regulatory Commission

Protecting People and the Environment

Part 1: Discussion of Plan for Updating Cost-Benefit Guidance

Purpose and Outline of SECY-14-0002

- **Purpose:**
 - Provide plan for updating cost-benefit guidance as directed by SRM-SECY-12-0110, “Consideration of Economic Consequences within the U.S. Nuclear Regulatory Commission’s Regulatory Framework”
- **Outline:**
 - Background
 - Implementation Plan
 - Timeline of 2014 Cost-Benefit activities
 - Price-Anderson Act

Background

- Fukushima accident initiated questions related to how NRC considers economic consequences of a nuclear accident
- Staff submitted SECY-12-0110 in August 2012 that recommended enhancing cost-benefit guidance

Background (cont'd)

- SRM-SECY-12-0110 directed staff to provide a paper describing how the NRC “would help harmonize regulatory guidance [for cost-benefit analysis] across the agency”
 - Identify what activities will be impacted by this work and describe how priorities will be modified
 - Integrate summary and analysis of how federal and international bodies assess Economic Consequences into the NRC’s recommendations
 - Address if and how cost-benefit updates may influence future NRC recommendations to Congress regarding renewal of Price-Anderson Act

Implementation Plan

- **Current Cost-Benefit Initiatives and Related Activities**
 - Update to Replacement Energy Cost
 - Update to Dollar per Person-Rem Conversion Factor
 - Cumulative Effects of Regulation
 - Disposition of Near-Term Task Force (NTTF) Recommendation 1
 - Qualitative Factors
 - Regulatory Gap Analysis

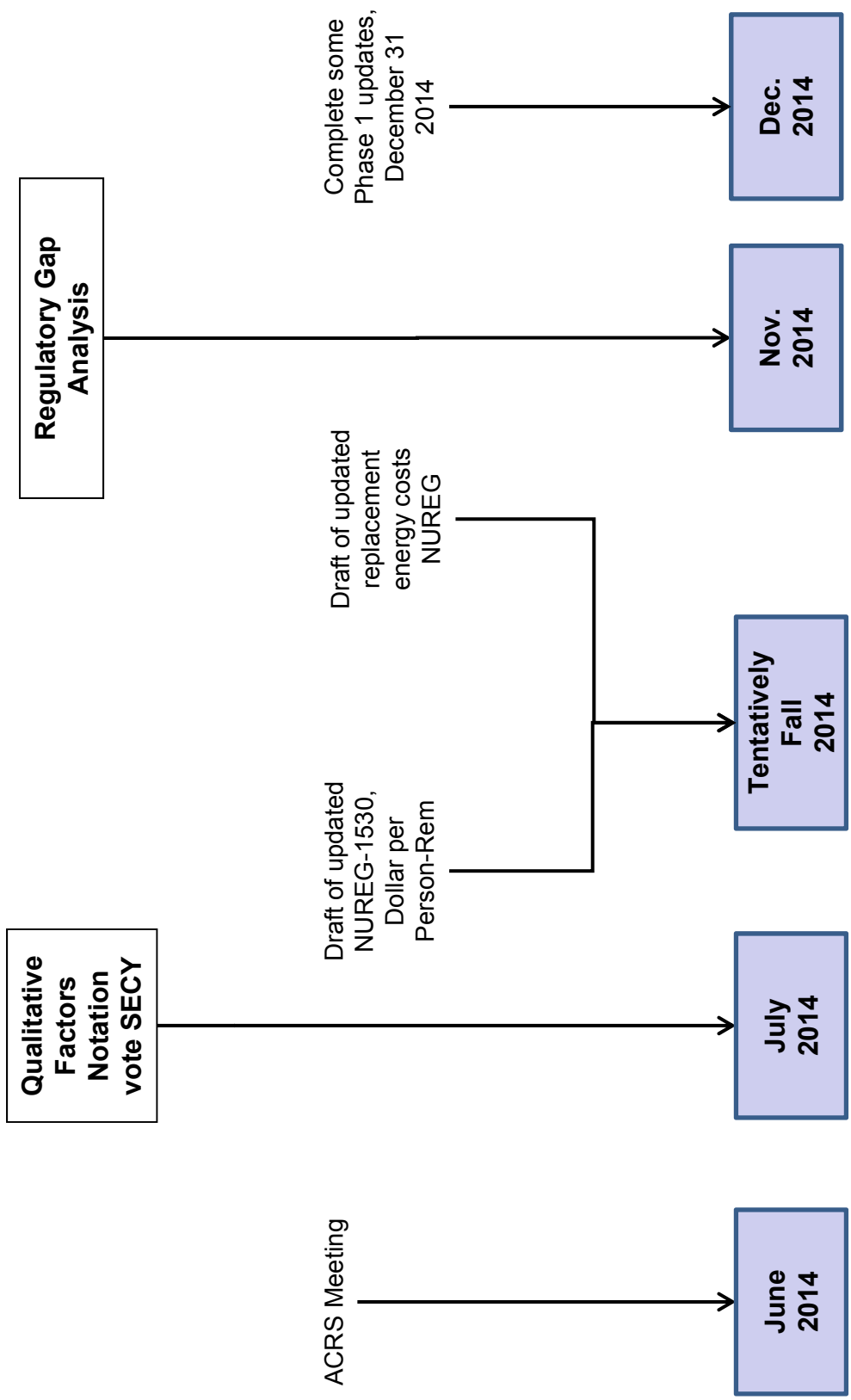
Updating Cost-Benefit Guidance: Two-Phased Approach

- Phase 1 – Administrative Changes
 - Consolidate and clean up cost-benefit guidance (NUREG/BR-0058, NUREG/BR-0184, and NUREG-1409)
 - Restructure guidance by mid-2015
- Phase 2 – Address potential changes in policy and methodology
 - Process for addressing policy issues
 - Consequence and probabilistic methodology review
 - Periodic review of cost-benefit guidance
 - Begin after gap analysis
 - Multi-year phase



United States Nuclear Regulatory Commission
Protecting People and the Environment

Timeline of 2014 Cost-Benefit Activities



Dates are estimates and subject to resources and Commission direction.



United States Nuclear Regulatory Commission

Protecting People and the Environment

Feedback on Plan for Updating Cost-Benefit Guidance



United States Nuclear Regulatory Commission

Protecting People and the Environment

Part 2: Discussion of Qualitative Factors

Background

- SRM-SECY-12-0157 directed the staff to “seek detailed Commission guidance regarding the use of qualitative factors [in regulatory analysis and backfit analysis] in a future notation voting paper”

Background (cont'd)

- Qualitative factors are used in regulatory analysis and backfit analysis
 - NUREG/BR-0058, Revision 4, “Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission”, page 24.
 - SECY-77-388A, “Value-Impact Guidelines” instructed to consider quantitative and qualitative factors
 - SRM-SECY-93-086 allowed for use of qualitative factors for backfit analysis within the “substantial increase” criterion

Background (cont'd)

- Use of qualitative factors by other federal agencies, documents that have required or recommended the use of qualitative factors
 - Executive Order (EO) 12866, “Regulatory Planning and Review”
 - Office of Management and Budget (OMB) Circular A-4, “Regulatory Guidance”
 - Office of Information and Regulatory Affairs (OIRA) primer for regulatory analysis

Background (cont'd)

- Use of qualitative factors in risk-informed decisions
- Safety Goal Policy Statement
- Probabilistic Risk Assessment Policy Statement (e.g., Regulatory Guide 1.174)

Background (cont'd)

- **Qualitative factors are considered in adequate protection decisions**
 - Only quantitative safety goal measure is the Quantitative Health Objectives (QHOs)
 - Applicable to power reactors only
 - Other adequate protection decisions are made based on a qualitative determination

Background (cont'd)

- Qualitative factors are used in cost-justified substantial safety enhancement decisions
 - NUREG-1409, “Backfitting,” allows for the use of qualitative factors
 - SRM-SECY-93-086 also allows for the use of qualitative factors

Discussion

- Multiple cases where qualitative factors can be considered within a cost-benefit analysis for a regulatory analysis and backfit analysis
- Case 1:
 - Benefits are difficult to quantify and, thus, are only presented qualitatively
 - Costs are quantified

Discussion (cont'd)

- **Case 2:**
 - Some benefits are quantified, but not all
 - Costs are quantified
- **Scenario A:**
 - Quantitative analysis results are cost-beneficial
 - Qualitative factors strengthen the staff's recommendation

Discussion (cont'd)

- **Scenario B:**
 - Quantitative analysis results are not cost-beneficial
 - Qualitative factors are used to support the staff's recommendation
- **Scenario C:**
 - Identification of relevant qualitative factors
 - No consideration of qualitative factors into the staff's recommendation

Discussion (cont'd)

- Different evaluation techniques for evaluating qualitative benefits and costs
 - Cost-effectiveness analysis
 - Break-even analysis
 - Internal rate of return
 - Qualitative assessment supplemented with decision analysis tools

Feedback on Qualitative Factors

- Topics to discuss
 - What is the proper consideration of qualitative factors in the staff's decision process?
 - What changes would improve transparency in the consideration of qualitative factors with respect to quantitative cost-benefit results?



Path Forward

- Complete notation-vote SECY paper and send to Commission by mid-July
- Options and recommendation are in development

Enclosures

- List of regulatory actions where the NRC provided qualitative factors
- Use of qualitative factors by external organizations
- Evaluation techniques for benefits and costs that are difficult to quantify



United States Nuclear Regulatory Commission

Protecting People and the Environment

Closing Remarks

References

- EO 12886, 58 FR 51735 (Oct. 4, 1993) and http://www.whitehouse.gov/omb/inforeg_riaguid_e/
- NEI Letter (ML14028A455)
- NRC policy statements available at <http://www.nrc.gov/reading-rm/doc-collections/commission/policy/>
- NUREG/BR-0184 available at ML11290858
- NUREG/BR-0058 available at ML042820192

References (cont'd)

- NUREG-1409 available at ML032230247
- NUREG-1530 available at ML063470485
- OMB Circular A-4, available at ML11231A834
- OIRA Regulatory Analysis Primer, http://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/circular-a-4_regulatory-impact-analysis-a-primer.pdf
- Regulatory Guide 1.174 available at ML003740133

References (cont'd)

- SECYs available at <http://www.nrc.gov/reading-rm/doc-collections/commission/> or in ADAMS
- SECY-12-0110 available at ML12173A478
- SECY-12-0157 available at ML12345A030
- SRM-SECY-12-0110 available at ML13079A055
- SRM-SECY-12-0157 available at ML13078A017
- SRM-SECY-13-0132 available at ML14139A104