**The ANS Risk-informed, Performance-based Principles and Policy Committee: Community of Practice (RP3C CoP)ꟷPresentation Bibliography**

**(**[**Link to RP3C CoP Collection on NST Open Research**](https://nstopenresearch.org/collections/rp3c-cop)**)**

[Application of a qualitative risk-informed, performance-based approach for the MARVEL microreactor at the Idaho National Laboratory](https://nstopenresearch.org/slides/3-47)

Gerstner D. Application of a qualitative risk-informed, performance-based approach for the MARVEL microreactor at the Idaho National Laboratory [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:47 (<https://doi.org/10.21955/nuclscitechnolopenres.1115189.1>) Presented August 29, 2025

[RIPB Design and Licensing of the NuScale US460 SMR](https://nstopenresearch.org/slides/3-36)

Welter K. NuScale US460 risk-informed performance-based (RIPB) design and licensing [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:36 (<https://doi.org/10.21955/nuclscitechnolopenres.1115180.1>) Presented July 25, 2025

[Application of a Qualitative Risk-Informed, Performance-Based Approach for the MARVEL Microreactor at the Idaho National Laboratory](https://nstopenresearch.org/slides/3-30)

Sande T. A risk-informed framework for managing nuclear facility security risks [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:30 (<https://doi.org/10.21955/nuclscitechnolopenres.1115177.1>) Presented June 27, 2025

[Risk-informing: When, where, and how to Start](https://nstopenresearch.org/slides/3-21)

Harkema M, Krahn S and Ibrahim I. Risk-informing: When, where, and how to Start [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:21 (<https://doi.org/10.21955/nuclscitechnolopenres.1115171.1>). Presented May 27, 2025.

[Risk-informed, performance-based design approaches for enhanced safety and reliability in new nuclear](https://nstopenresearch.org/slides/3-17)

Amico P. Risk-informed, performance-based design approaches for enhanced safety and reliability in new nuclear [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:17 (<https://doi.org/10.21955/nuclscitechnolopenres.1115168.1>). Presented May 2, 2025.

[Risk-Informed Performance-Based (RIPB) design methods for external hazards: Application of the Licensing Modernization Project (LMP) Criteria](https://nstopenresearch.org/slides/3-15)

Grant FF. Risk-Informed Performance-Based (RIPB) design methods for external hazards: Application of the Licensing Modernization Project (LMP) Criteria [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:15 (<https://doi.org/10.21955/nuclscitechnolopenres.1115167.1>). Presented April 4, 2025.

[EPRI research on risk metrics for advanced reactors](https://nstopenresearch.org/slides/3-12)

Thornsbury E. EPRI research on risk metrics for advanced reactors [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:12 (<https://doi.org/10.21955/nuclscitechnolopenres.1115164.1>). Presented February 28, 2025

[The Safety-in-Design (SiD) methodology—As applied to advanced fission projects & beyond](https://nstopenresearch.org/slides/2-70)

Krahn S and Harkema M. The Safety-in-Design (SiD) methodology—As applied to advanced fission projects & beyond [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:70 (<https://doi.org/10.21955/nuclscitechnolopenres.1115152.1>). Presented October 25, 2024.

[RI-PB design with ASME PSD-1](https://nstopenresearch.org/slides/2-67)

Hill R. RI-PB design with ASME PSD-1 [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:67 (<https://doi.org/10.21955/nuclscitechnolopenres.1115151.1>). Presented September 27, 2024.

[ANS Community of Practice: Risk-informing codes and standards](https://nstopenresearch.org/slides/2-65)

Facemire J. ANS Community of Practice: Risk-informing codes and standards [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:65 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115150.1](https://doi.org/10.21955/nuclscitechnolopenres.1115150.1)). Presented August 30, 2024.

[A risk informed environmental process for microreactors](https://nstopenresearch.org/slides/2-57)

Yang C. A risk informed environmental process for microreactors [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:57 ([https://doi.org/10.21955/nuclscitechnolopenres.  
1115146.1](https://doi.org/10.21955/nuclscitechnolopenres.1115146.1)). Presented June 28, 2024.

[Where is the PB in RIPB? A sharing of perspectives-- more discussion than presentation](https://nstopenresearch.org/slides/2-52)

Franovich R and Kadambi NP. Where is the PB in RIPB? A sharing of perspectives-- more discussion than presentation [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:52 (<https://doi.org/10.21955/nuclscitechnolopenres.1115143.1>). Presented May 31, 2024.

[Next steps on 10 CFR part 53: Updates on developing a new regulatory framework for advanced reactors](https://nstopenresearch.org/slides/2-40)

White P. Next steps on 10 CFR part 53: Updates on developing a new regulatory framework for advanced reactors [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, **2**:40 (slides) (<https://doi.org/10.21955/nuclscitechnolopenres.1115136.1>). Presented March 29, 2024.

[Licensing modernization project—A systems engineering approach to RIPB design safety and licensing](https://nstopenresearch.org/slides/2-35)

Wallace E. Licensing modernization project—A systems engineering approach to RIPB design safety and licensing [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:35 (slides) (<https://doi.org/10.21955/nuclscitechnolopenres.1115132.1>). Presented October 30, 2020.

[Technology-inclusive implications of ANS-30.3, “LWR risk-informed, performance-based design”](https://nstopenresearch.org/slides/2-32)

Kadambi NP. Technology-inclusive implications of ANS-30.3, “LWR risk-informed, performance-based design” [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:32 (<https://doi.org/10.21955/nuclscitechnolopenres.1115130.1>). Presented February 23, 2024.

[Development of a risk-informed and performance-based safety case for TerraPower’s Molten Chloride Reactor Experiment (MCRE)](https://nstopenresearch.org/slides/2-31)

Chisholm BM. Development of a risk-informed and performance-based safety case for TerraPower’s Molten Chloride Reactor Experiment (MCRE) [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:31 (slides) ([https://doi.org/10.21955/nuclscitechnolopenres.  
1115129.1](https://doi.org/10.21955/nuclscitechnolopenres.1115129.1)). Presented January 26, 2024.

[Commodification of advanced and micro reactors: An invested civil engineer’s perspective](https://nstopenresearch.org/slides/2-30)

Whittaker A. Commodification of advanced and micro reactors: An invested civil engineer’s perspective [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:30 (slides) (<https://doi.org/10.21955/nuclscitechnolopenres.1115128.1>). Presented October 27, 2023.

[Safety assessment and strategy using a risk-informed approach for the BWRX-300](https://nstopenresearch.org/slides/2-29)

Henneke D. Safety assessment and strategy using a risk-informed approach for the BWRX-300 [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:29 (slides) ( [https://doi.org/  
10.21955/nuclscitechnolopenres.1115127.1](https://doi.org/10.21955/nuclscitechnolopenres.1115127.1)). Presented September 29, 2023.

[Benefits of adoption of RIPB approaches for operating reactors' licensing and standards](https://nstopenresearch.org/slides/2-28)

Lawrence S and Kadambi NP. Benefits of adoption of RIPB approaches for operating reactors' licensing and standards [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:28 (slides) (<https://doi.org/10.21955/nuclscitechnolopenres.1115126.1>. Presented August 25, 2023.

[Liquid fueled reactors: The benefits of a RIPB approach](https://nstopenresearch.org/slides/2-27)

Moneghan D. Liquid fueled reactors: The benefits of a RIPB approach [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:27 (slides) ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115125.1](https://doi.org/10.21955/nuclscitechnolopenres.1115125.1)). Presented July 28, 2023.

[Introduction to ASME section XI, division 2: Reliability and Integrity Management (RIM)](https://nstopenresearch.org/slides/2-26)

Roberts AT. Introduction to ASME section XI, division 2: Reliability and Integrity Management (RIM) [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:26 ([https://doi.org/  
10.21955/nuclscitechnolopenres.1115124.1](https://doi.org/10.21955/nuclscitechnolopenres.1115124.1)). Presented May 26, 2023.

[Application of objectives-driven assurance cases to system development in an evolving acquisition model](https://nstopenresearch.org/slides/2-25)

Youngblood R. Application of Objectives-Driven Assurance Cases to System Development in an Evolving Acquisition Model [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:25 (slides) (<https://doi.org/10.21955/nuclscitechnolopenres.1115123.1>). Presented January 27, 2023.

[RIPB aspects in part 53 draft rule package](https://nstopenresearch.org/slides/2-23)

Reckley W. RIPB aspects in part 53 draft rule package [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:23 (<https://doi.org/10.21955/nuclscitechnolopenres.1115122.1>). Presented October 28, 2022.

[Policy challenges of technology-inclusive, risk-informed, performance-based regulation](https://nstopenresearch.org/slides/2-22)

White P. Policy challenges of technology-inclusive, risk-informed, performance-based regulation [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:22 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115121.1](https://doi.org/10.21955/nuclscitechnolopenres.1115121.1)). Presented September 30, 2022.

[What society needs in 10 CFR part 53](https://nstopenresearch.org/slides/2-21)

Franovich R. What society needs in 10 CFR part 53 [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:21 (<https://doi.org/10.21955/nuclscitechnolopenres.1115120.1>). Presented August 26, 2022.

[A performance-based approach for 10 CFR Part 53](https://nstopenresearch.org/slides/2-20)

Kadambi NP and Franovich RL. A performance-based approach for 10 CFR Part 53 [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:20 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115119.1](https://doi.org/10.21955/nuclscitechnolopenres.1115119.1)). Presented July 29, 2022.

[Modernizing NASA’s space flight safety and mission success (S&MS) assurance framework](https://nstopenresearch.org/slides/2-19)

Everett C. Modernizing NASA’s space flight safety and mission success (S&MS) assurance framework [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:19 (<https://doi.org/10.21955/nuclscitechnolopenres.1115118.1>). Presented May 27, 2022.

[Risk-informed performance-based approach to manage plant operations: From data to decisions](https://nstopenresearch.org/slides/2-18)

Mandelli D. Risk-informed performance-based approach to manage plant operations: From data to decisions [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:18 (<https://doi.org/10.21955/nuclscitechnolopenres.1115117.1>). Presented February 25, 2022.

[ANS’s advanced reactors working group addresses NEIMA](https://nstopenresearch.org/slides/2-17)

Kadambi NP. ANS’s advanced reactors working group addresses NEIMA [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:17 (https://doi.org/10.21955/  
nuclscitechnolopenres.1115116.1). Presented January 28, 2022.

[ANS-30.3 and performance-based decision making](https://nstopenresearch.org/slides/2-16)

Welter KB. ANS-30.3 and performance-based decision making [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:16 ([https://doi.org/10.21955/nuclscitechnolopenres.  
1115115.1](https://doi.org/10.21955/nuclscitechnolopenres.1115115.1)). Presented October 29, 2021.

[Licensing novel designs on the basis of margin](https://nstopenresearch.org/slides/2-15)

Youngblood R. Licensing novel designs on the basis of margin [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:15 ([https://doi.org/10.21955/nuclscitechnolopenres.  
1115114.1](https://doi.org/10.21955/nuclscitechnolopenres.1115114.1)). Presented June 25, 2021.

[Safety margin in RIPB methods](https://nstopenresearch.org/slides/2-14)

Kadambi NP. Safety margin in RIPB Methods [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:14 (<https://doi.org/10.21955/nuclscitechnolopenres.1115113.1>). Presented May 28, 2021.

[NRC staff experience with advanced reactor vendors applying RIPB principles](https://nstopenresearch.org/slides/2-13)

Magruder S. NRC staff experience with advanced reactor vendors applying RIPB principles [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:13 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115112.1](https://doi.org/10.21955/nuclscitechnolopenres.1115112.1)). Presented April 30, 2021.

[RIPB in ALARA](https://nstopenresearch.org/slides/2-12)

Hayes RB. RIPB in ALARA [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:12 (<https://doi.org/10.21955/nuclscitechnolopenres.1115111.1>). Presented March 26, 2021.

[The necessity of systems engineering for nuclear power deployment](https://nstopenresearch.org/slides/2-11)

Welter K. The Necessity of Systems Engineering for Nuclear Power Deployment [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:11 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115110.1](https://doi.org/10.21955/nuclscitechnolopenres.1115110.1)). Presented February 26, 2021.

[ANS-20.2 writing group: Our experience and feedback](https://nstopenresearch.org/slides/2-10)

Kutsch J. ANS-20.2 writing group: Our experience and Feedback [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:10 ([https://doi.org/10.21955/nuclscitechnolopenres.  
1115109.1](https://doi.org/10.21955/nuclscitechnolopenres.1115109.1)). Presented January 29, 2021.

[Overview and status: ASME's plant systems design standard](https://nstopenresearch.org/slides/2-9)

Hill R. Overview and Status: ASME's Plant Systems Design Standard [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:9 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115108.1](https://doi.org/10.21955/nuclscitechnolopenres.1115108.1)). Presented September 25, 2020.

[RIPB design and licensing lessons learned](https://nstopenresearch.org/slides/3-7)

Bristol S. RIPB design and licensing lessons learned [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2025, 3:7 (<https://doi.org/10.21955/nuclscitechnolopenres.1115163.1>). Presented July 31, 2020.

[Recent developments in RIPB methods for seismic design](https://nstopenresearch.org/slides/2-8)

Chokshi NC. Recent developments in RIPB methods for seismic design [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:8 ([https://doi.org/10.21955/  
nuclscitechnolopenres.1115107.1](https://doi.org/10.21955/nuclscitechnolopenres.1115107.1)). Presented June 26, 2020.

[Is the NRC’s reactor oversight process RIPB?](https://nstopenresearch.org/slides/2-7)

Kadambi NP. Is the NRC’s Reactor Oversight Process RIPB? [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:7 (<https://doi.org/10.21955/nuclscitechnolopenres.1115106.1>). Presented April 24, 2020.

[Importance of systems engineering to support risk-informed performance-based methods](https://nstopenresearch.org/slides/2-6)

Welter K. Importance of systems engineering to support risk-informed performance-based methods [version 1; not peer reviewed]. Nucl Sci Technol Open Res 2024, 2:6 (<https://doi.org/10.21955/nuclscitechnolopenres.1115105.1>). Presented February 28, 2020.

6/11/25