Public Meeting to Discuss Possible Efficiencies on the Subsequent License Renewal Application Review

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Meeting Agenda

A. SECY-24-0026: License Renewal Roadmap (Commission Paper + Supplement)

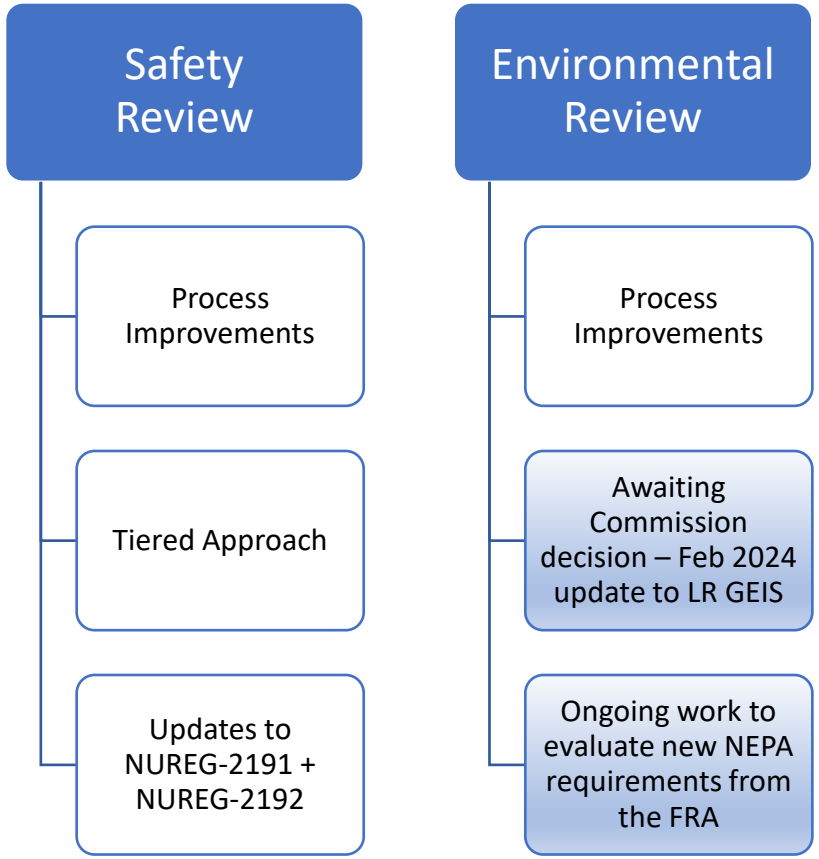
B. The Tiered Approach

C. Piloting the Tiered Approach

D. Standardization of Applications

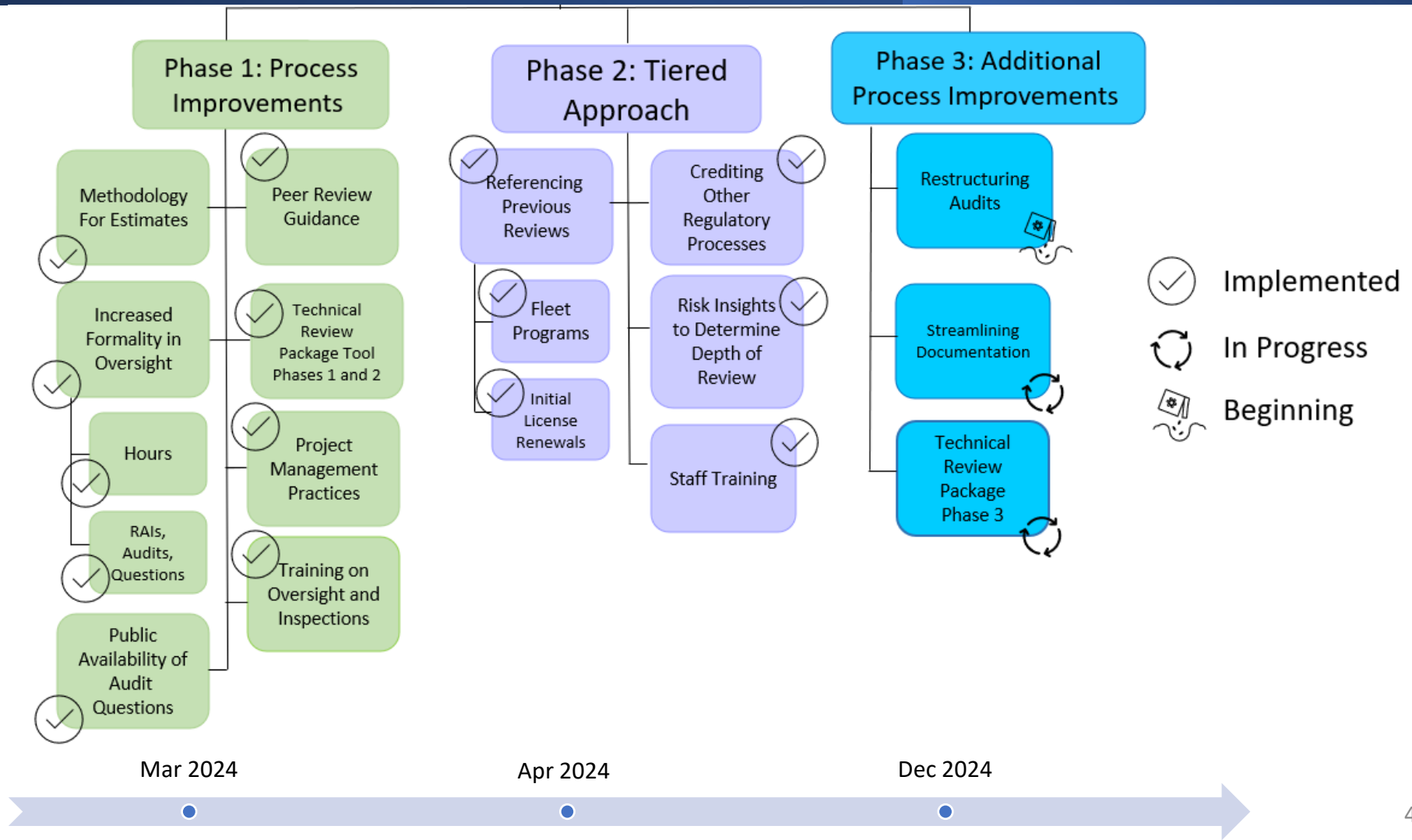
SECY-24-0026, "Achieving Timely Completion of License Renewal Safety and Environmental Reviews (License Renewal Roadmap)" (ML24059A131, March 28, 2024)

License Renewal Roadmap: Goal of timely and predictable 18-month reviews, while reducing staff resources



- An optimized, efficient review depends on a high-quality, uncontested application, and timely and sufficient responses to requests for information
- Enhanced review approaches, many adapted from new and advanced reactor application reviews, have already led to efficiency gains
- 18-month schedules
  - Feasible starting FY 2026
  - Staff recommendation to stagger applications
- Public dashboard on Roadmap Progress (August 2024)

Safety Review: 3-Phase Approach



For more information, see SECY-24-0026, Appendix D.

Environmental Review

	Process Improvement Initiatives
1	Streamline EIS Development
2	Agile Methodology for Workload Planning
3	Realignment of the ECOE
4	Use of Technology Tools to Improve Audits
5	Requests for Confirmatory Information (RCIs)
6	Improvements in Comment Processing
7	Streamlining Administrative Prepublication Reviews
8	Assessment of Public Meetings
9	Increased Use of Contractor Support for Reviews

Ongoing based on lessons learned

More to come, following:

- ❖ Commission decision on Feb 21, 2024 update to LR GEIS (ML23202A179)
- ❖ Staff's Notation Vote Paper (May 2024):
  - Options + recommendations for addressing new NEPA requirements set forth by the FRA

For more information, see SECY-24-0026, Appendix E.

Staff Recommendation: Staggering Future Submittals

One application every 3 months

- Proven successful approach (NFPA 805/ Initial License Renewal)
- Minimizes staffing constraints "Front loading" staff expertise
- Facilitates 18-month reviews
- No significant impact on continued safe operation of reactor fleet

Industry thoughts?

SECY-24-0026A: Supplement to SECY-24-0026 (ML24101A364, April 15, 2024)

Supplement: Detailed analysis of resource usage for Comanche Peak LRA and Monticello SLRA reviews to illustrate the efficiency gains already achieved

Underbudget + On Schedule

Efficiency gained from already implemented Roadmap initiatives

Notable Safety + Environmental Review Experiences

*Note: As these reviews are still ongoing, the data cited is **preliminary** and does not portray the total expenditures for the reviews.*

Comanche Peak LRA

Receipt Date	Acceptance Date	Expected License Issuance Date	Estimated Duration to Issue License (months)
10/3/2022	11/23/2022	September 2024	22 months

- **Safety**: Issued SE (3/18/24, 16 months); ACRS FC Meeting (4/30/24)
- **Environmental**: Issued DSEIS (10/31/23); FSEIS (Target: 4/2024)

Estimated @ Acceptance		Expended (As of 3/23/24)		
Hours	**Cost**	**Staff Cost**	**Contractor Costs***	**Total Costs**
23,000	$6.9M	$4.1M	$0.5M	$4.6M
Approximately 67% of original expected resources has been expended				

- Safety: 70% fewer RAIs and 70% fewer RCIs than previous SLR review; No significant challenging technical issues
- Env: Leverages 2013 LR GEIS, limited RAIs and RCIs (12 RAIs, 25 RCIs), successfully applied contractor support

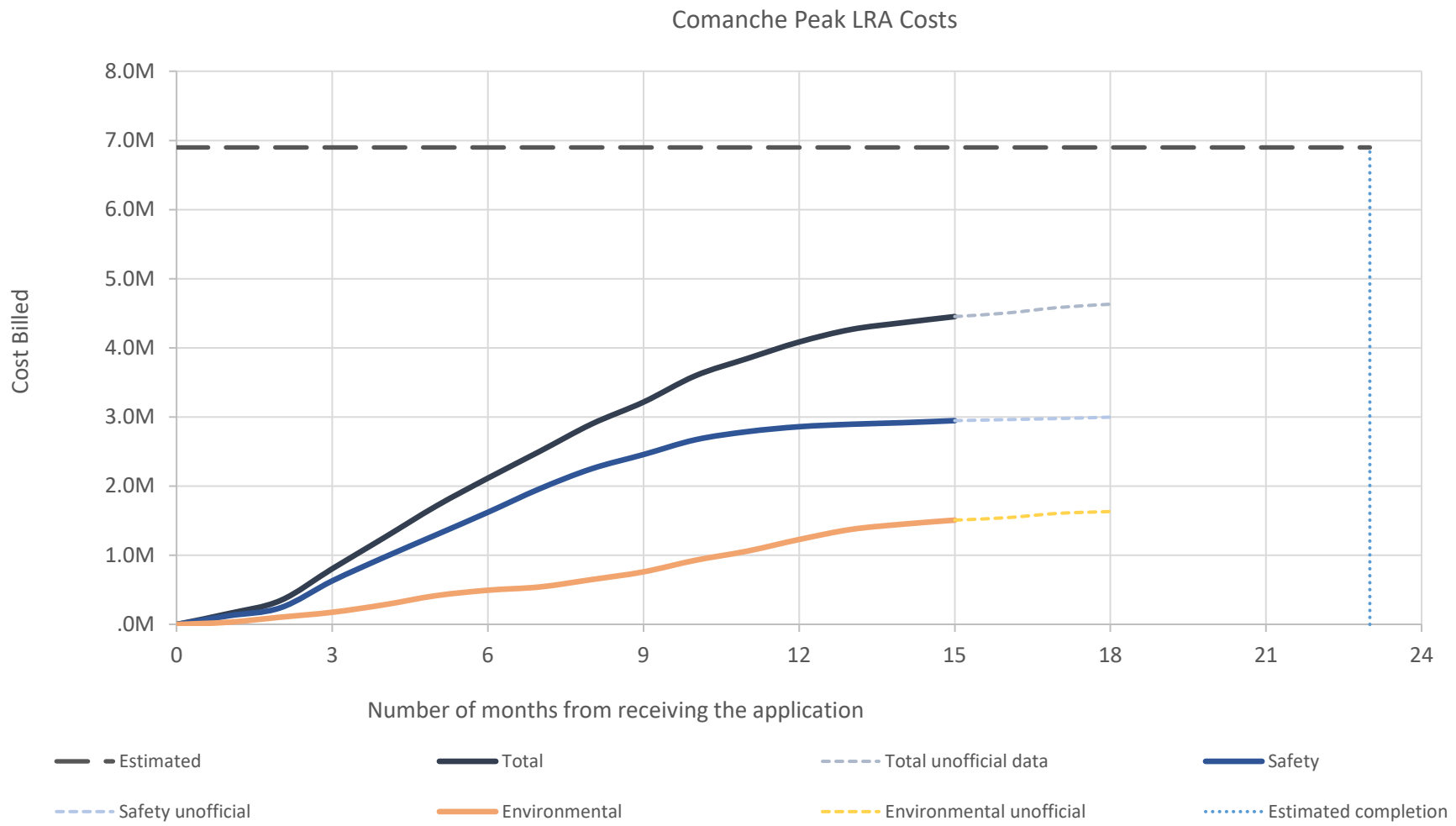
Process Improvements Implemented
(SECY-24-0026, Appendices D and E)

Safety		Environmental
Early Process Improvements (Table D-1)	Phase 1 (Table D-2)	Process Improvements (Table E-1)
88%	57%	78%

- ✓ Complete, well-developed LRA
- ✓ Applicant provided prompt, proactive responses to staff's questions

**: Contractor costs are estimated and a lagging indicator of actual expended costs.*

Comanche Peak LRA - Costs Expended



Monticello SLRA

Receipt Date	Acceptance Date	Expected License Issuance Date	Estimated Duration to Issue License (months)
1/9/2023	2/23/2023	12/2024	22 months

- **Safety**: Issued SE (3/18/24, 13 months); ACRS FC Meeting (4/30/24)
- **Environmental**: Issued DSEIS (4/12/24); FSEIS (Target: 10/2024)

Estimated @ Acceptance		Expended (As of 3/23/24)		
Hours	**Cost**	**Staff Cost**	**Contractor Costs***	**Total Costs**
24,000	$7.2M	$3.2M	$0.4M	$3.6M
Approximately 50% of original expected resources has been expended				

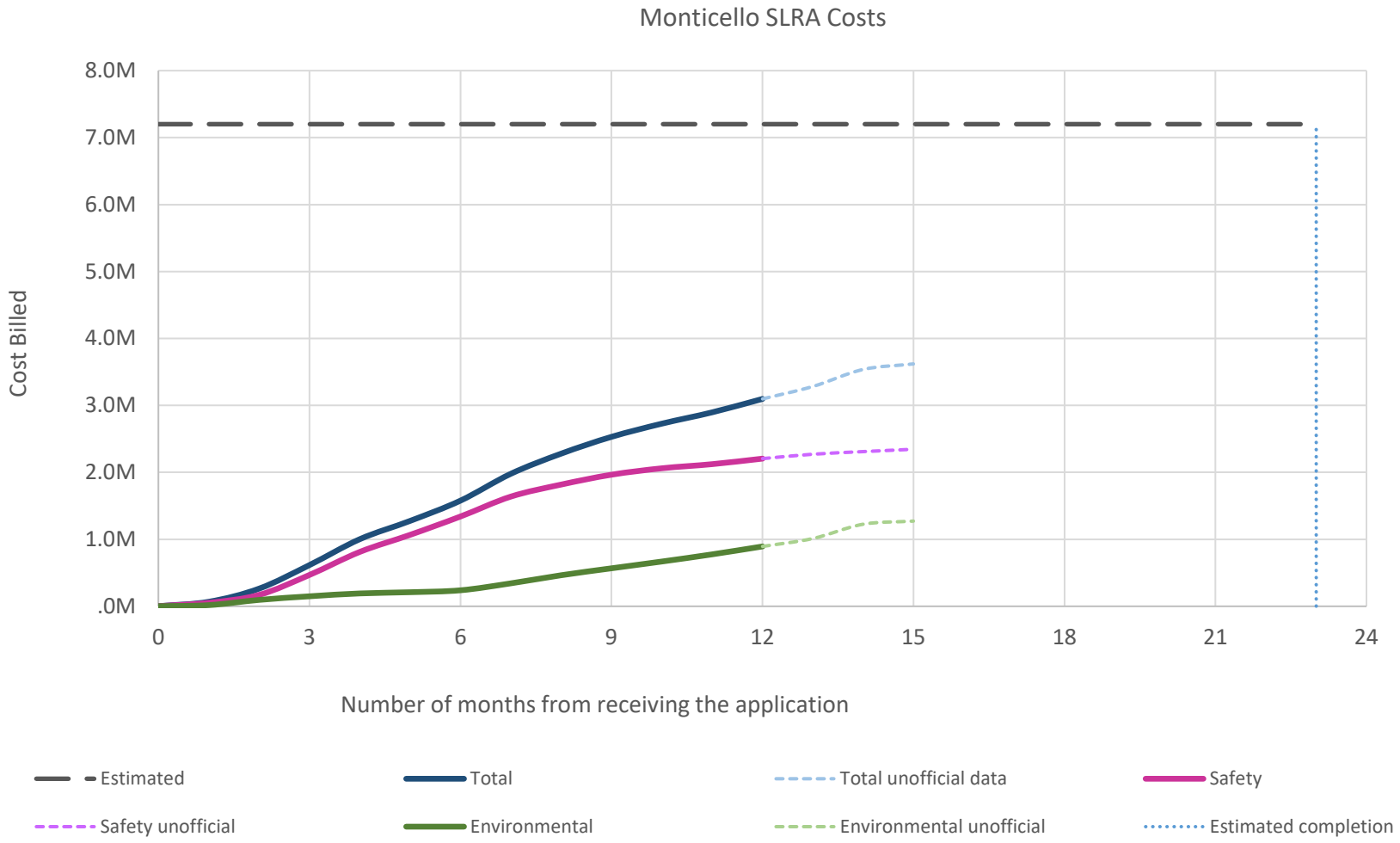
- Safety: 75% fewer RAIs and 90% fewer RCIs than previous SLR review; Leveraged 3 audits to successfully resolve technical issues
- Env: Site-specific EIS; while DSEIS timeline was extended due to need for information, FSEIS and licensing decision on schedule

Process Improvements Implemented (SECY-24-0026, Appendices D and E)		
Safety		**Environmental**
Early Process Improvements (Table D-1)	Phase 1 (Table D-2)	Process Improvements (Table E-1)
100%	57%	89%

- ✓ Productive interactions with applicant
- ✓ Aligns with NRC recommendation to stagger future submittals

**: Contractor costs are estimated and a lagging indicator of actual expended costs.*

Monticello SLRA – Costs Expended



Future Reviews

With the License Renewal Roadmap and continuous lessons learned, the estimated target starting with applications received in FY 2026 is **15,000 hours***.

<u>Considerations</u>:

- Dependent on Commission decision on LR GEIS
- Staggering of applications (1 application every 3 months)
- Quality of application, timely and sufficient responses, and proper issue resolution

**Estimate will continue to be refined as data is available.*

The Tiered Approach: Tailoring the Level of Staff's Safety Review

Incorporating Risk Insights

Leveraging Operating Programs

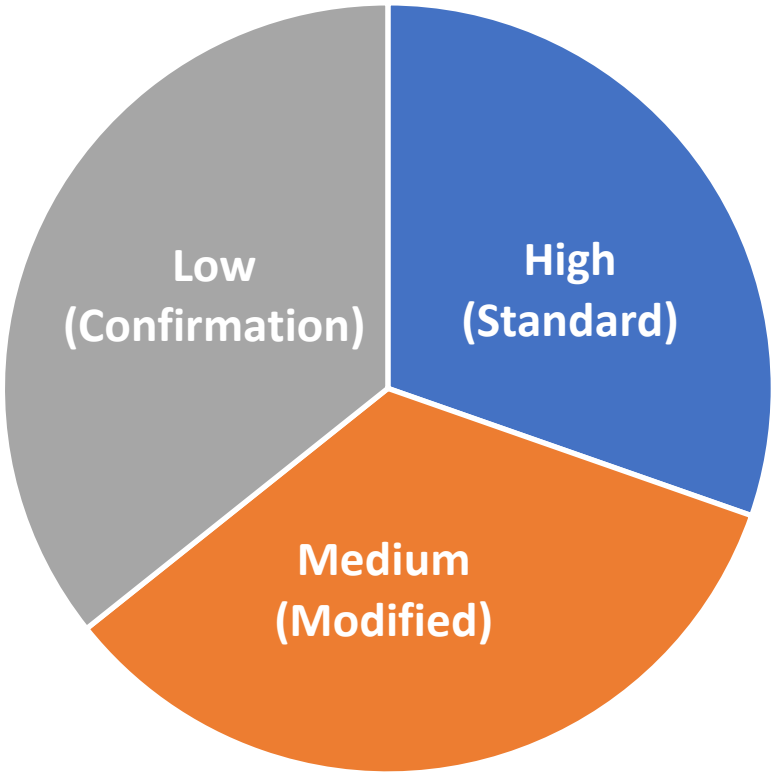
Leveraging Previous Reviews

Leveraging NRC/Industry Operating Experience with Aging Management

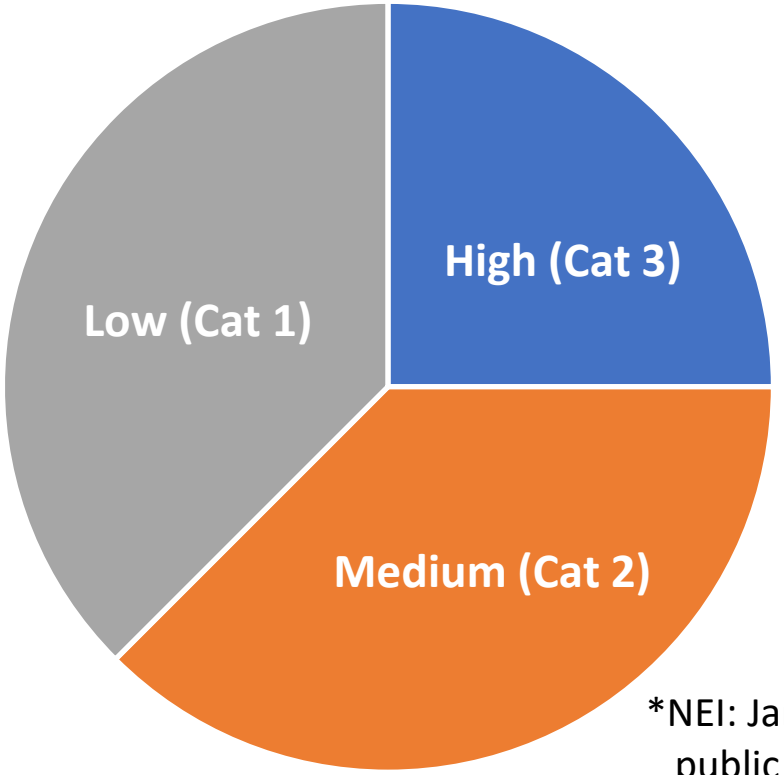
Consistency with NRC Guidance Documents

The Tiered Approach: Generic Tiering

NRC Generic Tiering
AMP Breakdown



NEI Graded Approach
Average of 3 Plants



*NEI: Jan 11, 2024 public meeting

The Tiered Approach: Generic Tiering

Comprehensive Review

Operating experience

Basis documents

As needed: procedures, analyses, inspection results, health reports

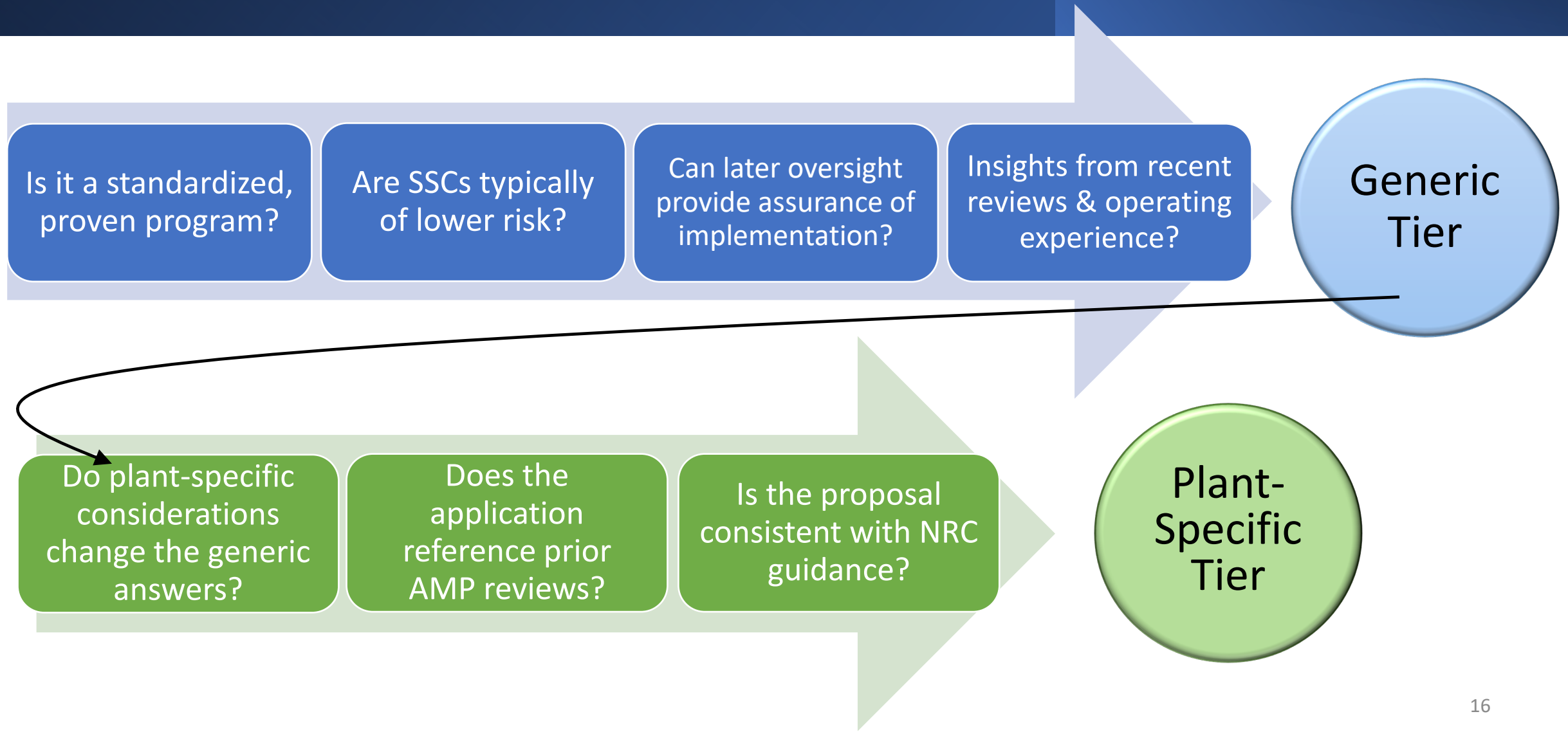
Standard	Modified	Confirmation
Mechanical XI.M20 XI.M22 XI.M26 XI.M27 XI.M33 XI.M35 XI.M36 XI.M41 XI.M42 Structural XI.S6 Electrical X.E1 XI.E1 XI.E2 XI.E3A XI.E3B XI.E3C XI.E6	Mechanical XI.M9 XI.M12 XI.M16A* *with MRP-227, R2-A* XI.M17 XI.M21A XI.M23 XI.M24 XI.M29 XI.M30 XI.M32 XI.M37 XI.M38 XI.M40 Structural X.S1 XI.S3 XI.S8 Electrical XI.E4 XI.E5 XI.E7	Mechanical X.M1 X.M2 XI.M1 XI.M2 XI.M3 XI.M4 XI.M7 XI.M8 XI.M10 XI.M11B XI.M18 XI.M19 XI.M25 XI.M31 XI.M39 Structural XI.S1 XI.S2 XI.S4 XI.S5 XI.S7

Confirmation Check

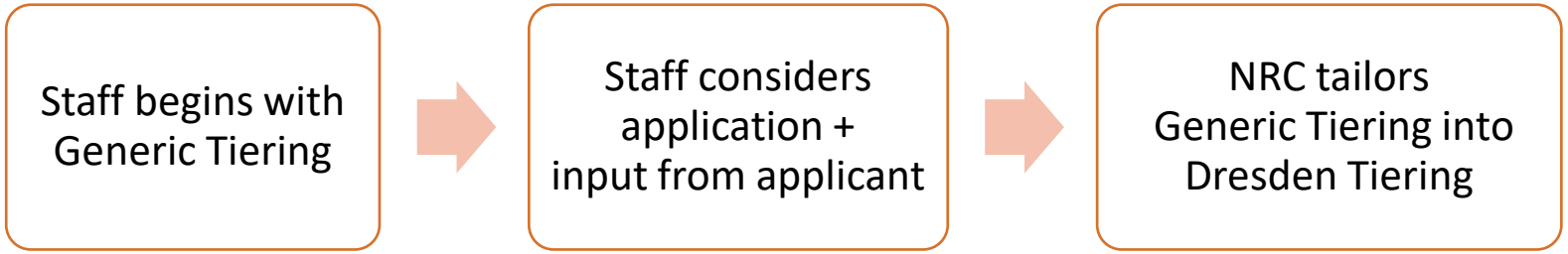
Operating experience

Verify essential details in basis documents

Tiering Process

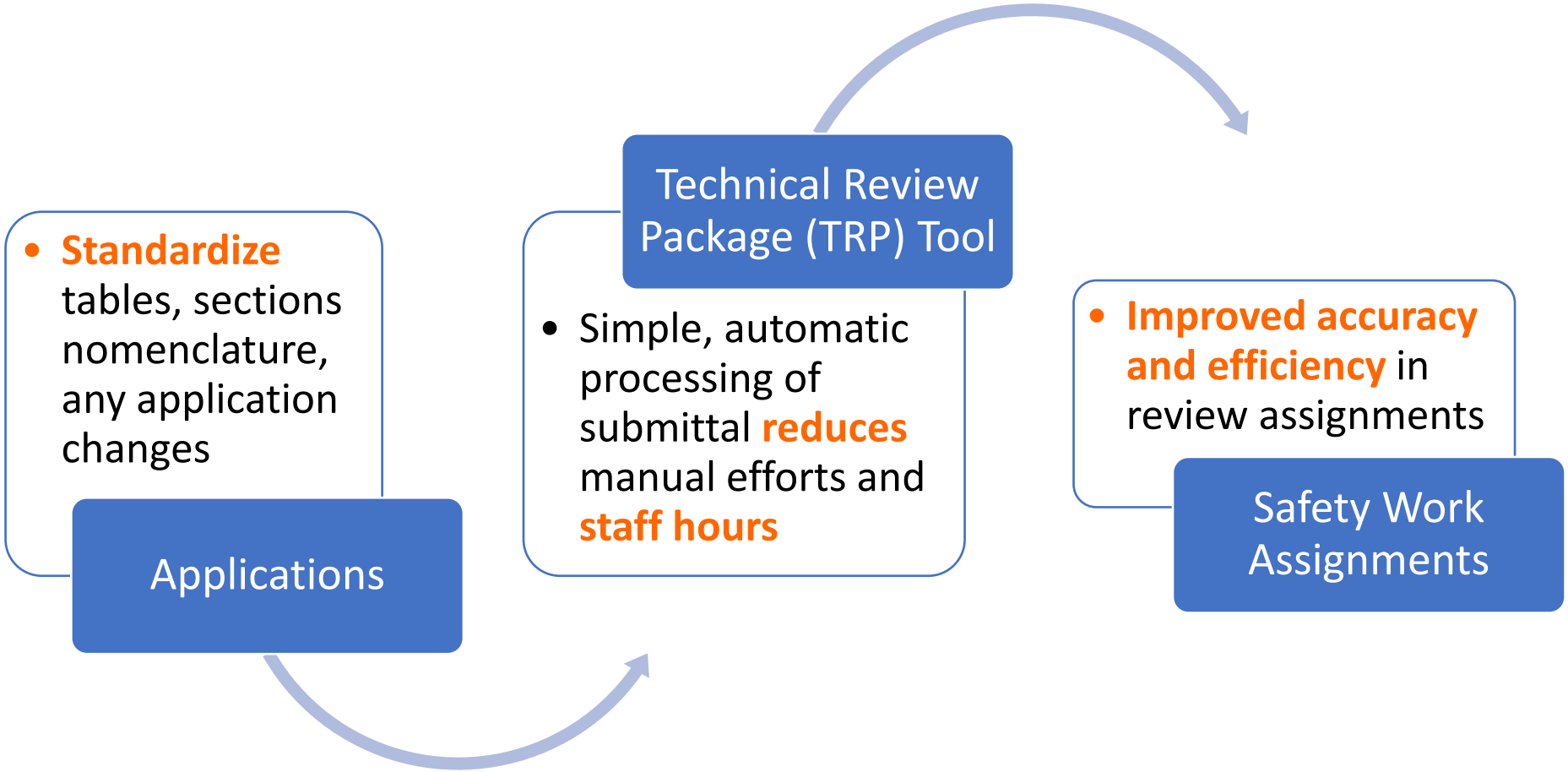


Pilot Plant: Dresden Nuclear Power Station, Units 2 and 3, SLRA



Input Requested of Applicant	
	1) Plant-specific operating experience, e.g., significant or frequent aging degradation
	2) Consistency with the GALL-SLR Report, e.g., complexity and number of exceptions and/or enhancements
	3) The extent to which an AMP is largely a continuation of existing operating (40-60 year) programs, e.g., reliance on NRC-approved Codes and Standards, topical reports, or other mature inspection frameworks
	4) Plant-specific risk insights and/or risk significance of SSCs within the scope of an AMP
	5) Reliance of fleet-wide programs that have been reviewed during previous LRA or SLRA reviews, with a clear basis for why those programs are also appropriate for the specific site (considering plant configuration, operating experience)

Standardization of Applications: Safety Review



Example #1: Changes to Table 2s as a Result of RAI Responses/Supplements

- **Automatically read the changes** throughout the life of the review and **notify reviewers** of impacted TRP assignments

Table X.X.X-XX – AMRs – (Description)									
AMR ID	Component	Function(s)	Material	Environment	AERM	AMP	NUREG-2191 Item	NUREG-2192 Item	Notes
Difference - 12345	Kept Text New Text ~~Deleted Text~~	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text
Changed - 12345	Kept Text New Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text	Kept Text
New - 12346	New Text	New Text	New Text	New Text	New Text	New Text	New Text	New Text	New Text
Difference - 12344	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~	~~Deleted Text~~
Deleted - 12344									

- Applicants will create a unique identifier to “number” each AMR item in the application
- When a change is made, additional lines are added to the tables to explicitly describe the change.

Example #2: Appendix A – New Summary Table for AMPs/TLAAs

AMP/TLAA Summary Table			
NUREG-2191 Number	**(Plant Name) Program/TLAA**	**Appendix A Section**	**Appendix B Section**
XX.XX	XXXX	A.X.X	B.X.X
Plant Specific	XXXX	A.X.X	B.X.X
TLAA	XXXX	A.X.X	N/A

- New table to summarize the AMPs/TLAAs requires low effort from applicants
- Consistent nomenclature allows TRP Tool to **assign AMPs/TLAAs automatically**

Questions?