

# Industry Guideline for Early Site Permit (ESP) Renewal (NEI 25-06)

July 22<sup>nd</sup>, 2025

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# Topics

- **Discussion of General Approach to Renewing an Early Site Permit (ESP) Under Current Regulations**
- **Discussion of NEI's Proposed Streamlined Approach to Renewal of an ESP**
- **Conclusions & Recommendations**

# General Approach to Renewing an Early Site Permit (ESP) Under Current Regulations

# Background on Early Site Permits

By issuing an ESP, the U.S. Nuclear Regulatory Commission (NRC) approves one or more sites for a nuclear power facility, independent of a specific reactor technology (if PPE approach is used) or an application for a construction permit or combined license.

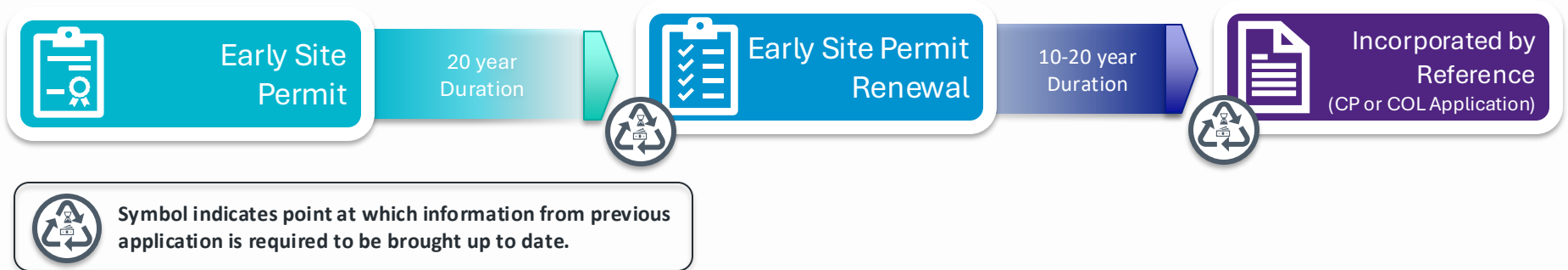
- Currently, an ESP is valid for 10 to 20 years from the date of issuance and can be renewed for an additional 10 to 20 years.
- In reviewing an ESP application, the NRC staff will address site safety issues, environmental protection issues, and plans for coping with emergencies, independent of the review of a specific nuclear plant design.
- This allows the applicant to resolve potential site-related challenges early and “bank” the site for a future commercial facility and prior to making additional resource commitments.



# Current Regulatory Framework for ESP Renewals

While there is significant guidance on developing ESP applications, the NRC has yet to develop guidance on the required content of, and process for reviewing, an ESP renewal application.

- Under the provisions of § 52.29(a), licensees are required to bring up to date the information and data contained in the previous application for renewal of the ESP.
- The approach taken in NEI's guidance proposes to address only that information that has materially changed from the original application.



# Timely Renewal of Early Site Permits

- Under current regulations, an ESP holder seeking to renew the ESP must file for renewal not less than 12 months (and no more than 36 months) before the expiration date stated in the ESP.
- The protections afforded by timely renewal are important if an ESP holder plans to seek renewal of the ESP.
- It is possible to seek an exemption from the 12-month period for establishing timely renewal protections.
- The NRC has granted exemptions to its timely renewal requirements for ESP renewals and in numerous other types of licensing proceedings, including power reactor license renewals.

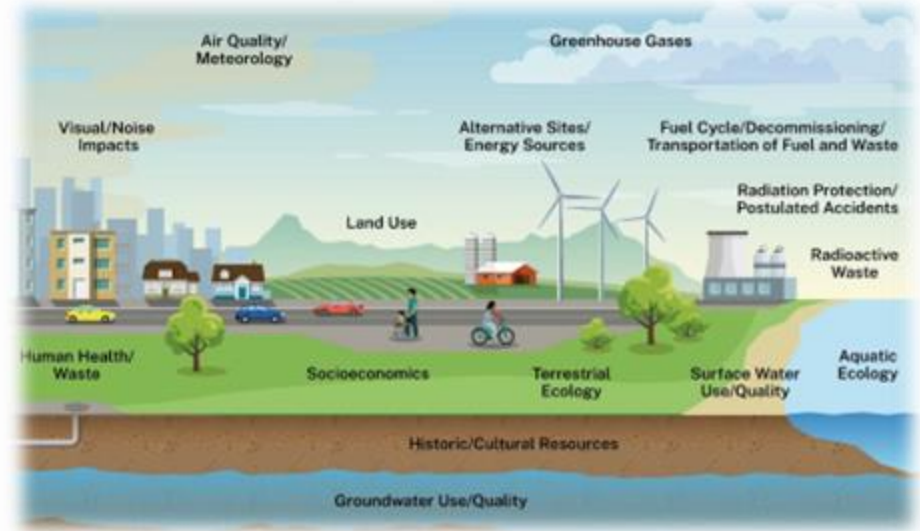


# Content of Early Site Permits

The ESP application is required to provide design information pertaining to structures, systems, and components along with site-specific parameters related to site safety, environmental protection, and emergency planning.

## Example Table of Contents

1. Administrative Information
2. Site Safety Analysis Report (SSAR)
3. Environmental Report (ER)
4. Limited Work Authorization (if applicable)
5. Emergency Planning
6. Departures and Exemption Requests



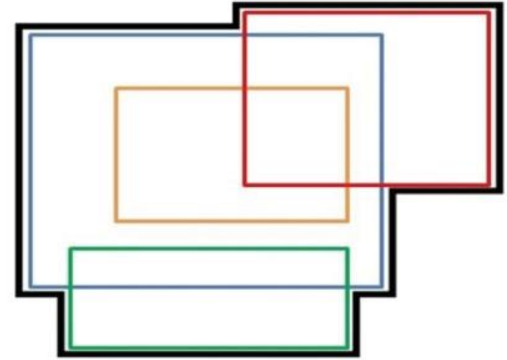
# Approach to Updates to Site Safety Analysis Report

1. SSAR addresses effects of external hazards (nearby facilities, hydrology, seismology, etc.) **FROM** the environment (extreme weather, quakes, nearby facilities) **ON** the plant.
2. Changes to many of the topic areas in the SSAR are likely to be procedural and would not require extensive re-analysis or discussion for the renewal application.
3. Other areas may have been updated and approved by NRC during the initial ESP term. (e.g., Quality Assurance Program, Emergency Plan)
4. For site-related information, applicants should rely on reliable pre-existing data from Federal, State, and local sources, contrasting this information to the site characterization data used in the original ESP application.



# Approach to Updates to Plant Parameter Envelope

1. The PPE is a composite of reactor and engineered parameters that bound the safety and environmental impact of plant construction and operations.
2. It considers the design parameters of a variety of reactor designs that an applicant might be considering to create a surrogate, or “Black Box,” plant.
3. The applicant should evaluate whether any of the previous parameters of the PPE have changed or require modification.



# Approach to Updates to Environmental Report

1. ER addresses impacts **ON** the environment **FROM** the construction and operation of the proposed facility.
2. The applicant's ER is a source of information used by the NRC to support its environmental review under NEPA.
3. The ER should only address changes from the original ESP application, such as updates to the analysis or facility designs, if any.
4. For site-related information, applicants should rely on reliable pre-existing data from Federal, State, and local sources, contrasting this information to the site characterization data used in the original ESP application.

# New & Significant Information Review

New information related to conclusions in the revised ESP ER will be identified and evaluated to determine if the new information could **materially** alter the assumptions, analyses, or conclusions in the ESP EIS. The NRC staff defines “new” as information that:

1. Was not generally known or publicly available during the preparation of the EIS and thus was not considered in preparing the ESP ER or EIS; and
2. Has become known and available since the issuance of the ESP.

New information may include, but is not limited to:

- Specific design information that was not available during the review of the ESP application (especially where the design interacts with the environment).
- Information that was in the ESP application but has changed by the time of the ESP renewal application submittal (e.g., change in the regional socioeconomic profile resulting from a natural disaster).
- Information in previously unknown or unavailable reports, studies, and treatises.

# Approach to Updates to Other Portions of ESPs

- 1. Limited Work Authorization/Site Redress Plan:** If an LWA was issued in conjunction with the ESP, appropriate updates to the associated SSAR and ER (and site redress plan, if applicable) would be addressed in the renewal application. If there are no changes, or new authorizations being requested, then it should simply be stated as such.
- 2. Emergency Planning:** If the original ESP application proposed “major features” of the emergency plan, then the renewal application would update that information, as appropriate. If there are no changes, then it should simply be stated as such.
- 3. Quality Assurance:** During the duration of an ESP, the QA program may be updated several times. The ESP renewal application should reference the most recently approved QA program under which activities are being performed.
- 4. Departures and Exemptions:** If this information was included in the original ESP application, then it should be updated as part of the ESP renewal application.

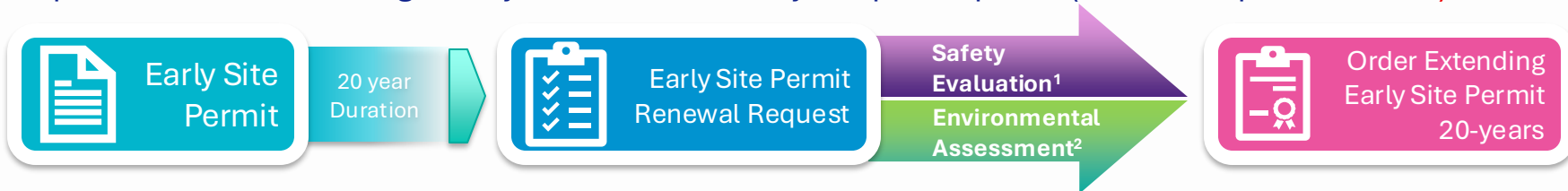
# NEI's Proposed Streamlined Approach to Renewal of an ESP from Appendix A of NEI 25-06

# Proposed Streamlined Approach to ESP Renewal

The regulatory framework for ESP Renewals should be commensurate with the level of finality and impacts associated with the authorizations under an ESP.

NEI's proposed alternative approach in Appendix A to NEI 25-06, which involves an exemption from 10 CFR 54.29(a), is derived from three important considerations:

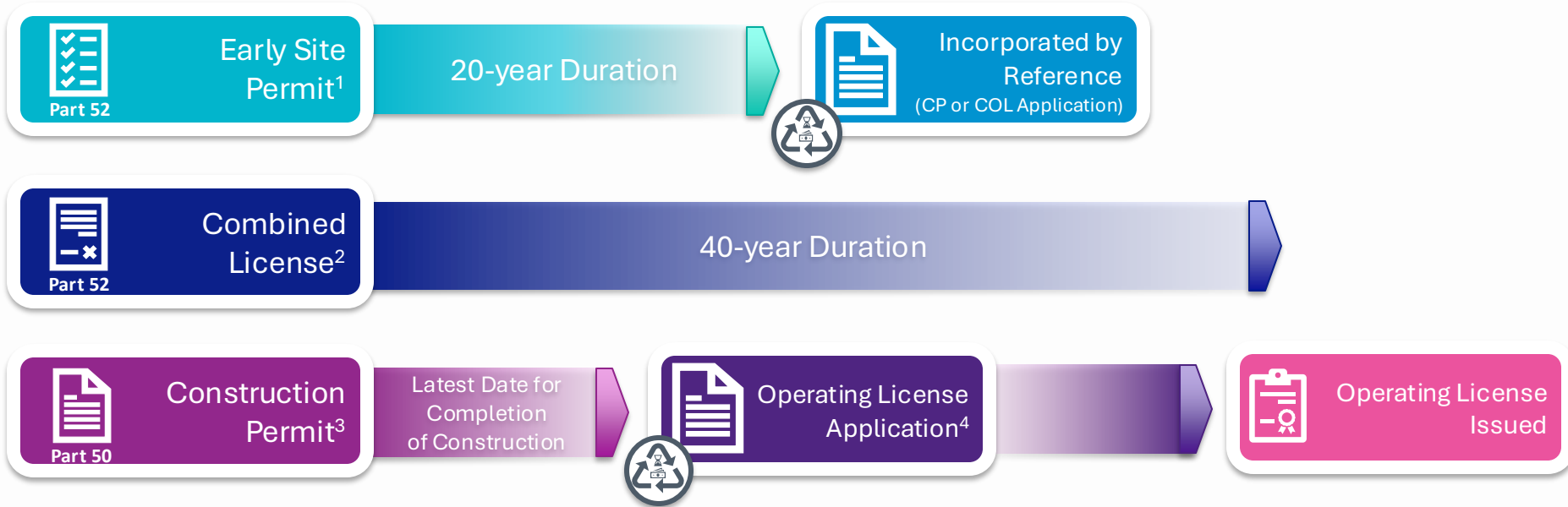
1. Applicants referencing an ESP are required to bring up to date all necessary information at the CP or COL stage, and as such, doing so for ESP renewal is redundant.
2. Based on current guidance, it would require significant time and resource expenditures for both the NRC and applicant, at a time when the financial viability of a potential project is considered to be uncertain.
3. Extensive analysis of safety and environmental factors is unnecessary, as the health and safety of the public will not be endangered by the renewal of early site permit per se (i.e., new expiration dates).



<sup>1</sup> Link: [Example Safety Evaluation from Construction Permit Extension](#) (~3 pages)

<sup>2</sup> Link: [Example Environmental Assessment from Construction Permit Extension](#). (~8 pages)

# Durability of Licenses and Permits for New Reactors



Symbol indicates point at which information from previous application is required to be brought up to date.

<sup>1</sup> An ESP does not authorize construction nor operation.

<sup>2</sup> Authorizes nuclear construction and operation under Part 52.

<sup>3</sup> Authorizes nuclear construction under Part 50.

<sup>4</sup> Authorizes operations under part 50.

Note: The scaling of graphics should not be misconstrued as being representative of actual durations.

# Justification for Streamlined Approach

1. While permitted by NRC regulations, there is no regulatory precedent for the renewal of an ESP from a process perspective.
2. However, under the Atomic Energy Act of 1954, as amended (AEA) and current regulations, the NRC may extend the completion date for a construction permit “upon good cause shown,” and has done so on numerous occasions.
3. The statutory authority for extension of a construction permit is found in the same section of the AEA (section 185) that authorizes the NRC to issue an early site permit. Thus, there appears to be nothing precluding the NRC from implementing a similar approach for ESPs, i.e., renewing the ESP based on "good cause shown"
4. Aligns with the ADVANCE Act, Fiscal Responsibility Act (FRA) amendments to NEPA, NRC modernization goals, and recent Executive Orders promoting nuclear deployment.



# Conclusions and Recommendations

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1. NEI's guidance provides predictable, efficient approaches that give permit holders who wish to renew their ESP's flexibility and optionality and will retain the value of the ESP while maintaining future nuclear site viability.
2. CP or COL applicants referencing an ESP are already required to bring up to date all the necessary data and information from the previous application.
  - Such efforts are not only redundant but would also require significant time and resource expenditures.
  - Extensive re-analysis of data and information would be unnecessary, as the health and safety of the public will not be endangered by the mere renewal of the early site permit, and the previously authorizations therein.
3. NEI requests that NRC staff promptly indicate its support for implementation of the approaches described herein, and consider in a future rulemaking, issuing a Direct Final Rule to extend the duration of ESPs to 40-years.