

**Enclosure 2 – Non-Proprietary Version Blue Energy  
Regulatory Engagement Plan Revision 1, BE-RA-2025-01-NP**



Blue Energy Regulatory Engagement Plan (non-proprietary)

Doc Number: BE-RA-2025-01-NP

Rev 1

Date: 09/18/2025

# BLUE ENERGY REGULATORY ENGAGEMENT PLAN

## BLUE ENERGY GLOBAL, INC.

### REVISION 1



Document Number	BE-RA-2025-01-NP	Revision	1
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Approval			
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## Blue Energy Regulatory Engagement Plan

### RECORD OF REVISION PAGE

Revision	Approval Date	Change Description	Page(s)	Effective Date
0	03.21.2025	Initial Release	ALL	03.21.2025
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### Information Notice

This, BE-RA-2025-01-NP, is the non-proprietary version of the Blue Energy Regulatory Engagement Plan, document number BE-RA-2025-01-P Revision 1. Portions of this document will indicate the proprietary information by an open and closed double bracket as shown here [[ ]]<sup>abcde</sup>.

The design, engineering, and other information contained in this document is furnished for the purpose of obtaining Nuclear Regulatory Commission (NRC) review and determination of acceptability for the Blue Energy Small Modular Reactor design and licensing basis information contained herein. The use of this information by anyone for any purpose other than that for which it is intended is not authorized; and with respect to any unauthorized use, Blue Energy makes no representation or warranty, and assumes no liability as to the completeness, accuracy, or usefulness of the information contained in this document.



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## 1. Introduction

The purpose of this Regulatory Engagement Plan (REP) is to provide a structured framework for guiding and evaluating anticipated interactions between Blue Energy Global Inc. (Blue Energy) and the U.S. Nuclear Regulatory Commission (NRC). The REP fosters effective communication during pre-application and application activities in support of licensing Blue Energy's proposed reactor technology. This REP serves as a planning and communication tool for both Blue Energy and the NRC. It outlines Blue Energy's regulatory strategy, provides an overview of the reactor design, and identifies anticipated areas of engagement with the NRC. The primary objectives are to reduce regulatory uncertainty by establishing early alignment on Blue Energy's licensing approach, licensing expectations, issue resolution processes, and schedule planning necessary for thorough and complete reviews while considering both Blue Energy's and NRC timeliness goals.

Blue Energy's approach emphasizes the intentional and significant use of proven, NRC-approved technologies and methodologies to support a streamlined and predictable licensing process. This REP, and its future revisions, will reflect the current state of readiness of the Blue Energy design. It is intended to evolve in parallel with NRC interactions, refinements in project scope, licensing maturity, and emerging regulatory considerations.

This document generally follows the guidance in NEI 18-06, "Guidelines for Development of a Regulatory Engagement Plan," and is intended to be a living document, maintained by Blue Energy. It will be updated as needed to reflect changes in engagement strategy, review scope, and project milestones, ensuring the NRC is informed and enabling early identification of potential regulatory misalignments.

The information in this REP is current at the time of submittal. Note that this document is not a formal design document or license application. In the event of a conflict between this REP and a formal licensing submission (e.g., construction permit application, topical report, or response to NRC requests for additional information), the formal licensing document will govern.

While REPs are not formally reviewed or approved by the NRC, Blue Energy welcomes candid NRC feedback on any areas that are unclear or potentially problematic, so that this REP may be revised accordingly.



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## 1.1. Contact Information

Effective 10/1/2025  
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## 1.2. Company and Project Structure

Blue Energy is a privately owned Delaware C-Corporation without foreign investment, ownership, control, or domination. The primary market for initial deployment of Blue Energy's reactor concept is commercial, NRC-regulated, domestic US electricity production. Blue Energy aims to be scalable at an individual site, repeatable at new sites, and as reactor agnostic as possible throughout licensing to facilitate future siting and technological applications.

Strategic direction at Blue Energy is managed by the board, which consists of Chief Executive Officer Jake Jurewicz, Chief Commercial Officer Tom O'Neill, representatives from the lead venture capital firms that own equity stake in the company, and an independent board member with experience in the power generation sector. Blue Energy also maintains an advisory board, which consists of experts in shipyard manufacturing, nuclear energy, and business. However, NRC interactions will predominantly be led through the Regulatory Affairs Department at Blue Energy.

Blue Energy is an advanced nuclear reactor pre-applicant, as defined in 10 CFR 170.3 and is seeking the reduced Part 170 fees called for by the ADVANCE Act.

## 1.3. Summary of Strategic Project Approach

Blue Energy's internal platform is designed to retain technology-inclusive and reactor agnostic aspects, enabling flexible, low-risk design and deployment decisions across early-stage technology options. Blue Energy is not designing or seeking to design a new Nuclear Steam Supply System (NSSS); rather, it endeavors to use proven or licensed technologies for the reactor, balance of plant (BOP), and supporting infrastructure, minimizing technology risk. As such, pre-construction permit application engagement by Blue Energy will focus on [REDACTED] abce. Another key benefit of this approach is to ensure from the start that considered technologies meet regulations rather than an after-the-fact consideration requiring large research and development efforts. This approach will not only minimize regulatory uncertainty and requests for additional information but will also enable the NRC to view submitted designs and safety analysis reports as logical decisions with a clear basis from a reasonably competent applicant, consistent with NRC timeliness and quality expectations.

[REDACTED]





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The following diagrams, a potential site layout and artistic rendering, illustrate the preliminary site concept and the [REDACTED] abcde:

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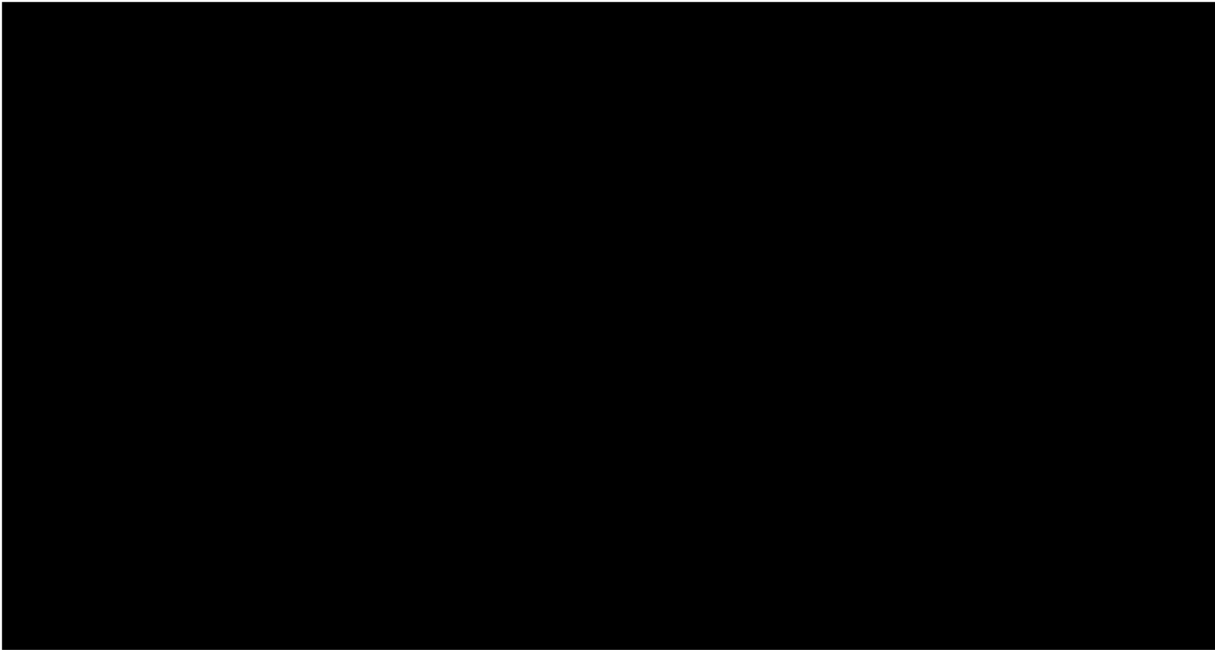


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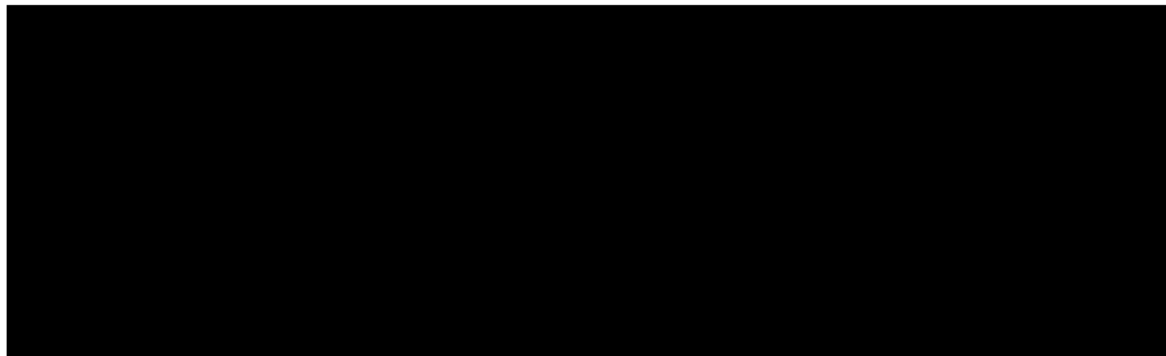


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Figure 1: Example site layout including [[



[[



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Figure 2: Rendering of preliminary design including [[



This architecture enables modular scalability, [[



The plant can expand incrementally, 2, 6, 12, 24, or otherwise, with additional NRC applications, as offtake agreements mature, allowing Blue Energy to match build-out with energy



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demand, rather than overbuilding prematurely. By maintaining technology inclusiveness, modularity, and strategic regulatory engagement, Blue Energy presents a unique, scalable approach to modern nuclear deployment that leverages existing technologies while minimizing licensing burden and capital risk. Additionally, following the success of the initial construction permit, Blue Energy will be pursuing additional sites. At this stage, large changes will be made to the REP to reflect a business shift from first-of-a-kind (FOAK) to Nth-of-a-kind (NOAK).

#### 1.4. Summary of Regulatory Strategy

Blue Energy intends to pursue a construction permit and an operating license under the two-step licensing framework defined in 10 CFR Part 50, supported by a series of topical reports. This approach is a deliberate choice, recognizing that this is a FOAK project with an accelerated schedule, and that the design commitments required for a Part 52 combined license application (COLA) are not aligned with Blue Energy's current engineering path. For future NOAK deployments, Blue Energy will evaluate alternative licensing pathways, such as the COL process, design certification, standard design approval, or the evolving Part 53 framework, but these should not be a primary focus for NRC consideration at this time.

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For the initial construction permit application under Part 50, Blue Energy has identified several regulatory contingencies to maintain flexibility and alignment with NRC expectations:

- In accordance with 10 CFR 2.101(a)(5), Blue Energy may choose to submit its CP application in two parts: an Environmental Report (ER) and a Preliminary Safety Analysis Report (PSAR). Should this option be exercised, both parts will be submitted within the six-month window required by regulation.
- Per the Limited Work Authorization (LWA) under 10 CFR 50.10, Blue Energy may seek allowance for certain non-safety-related construction activities to begin prior to CP issuance. If pursued, the LWA application would be submitted either concurrently with the CP application or as a partial application, consistent with 10 CFR 2.101(a)(9). In the latter case, Blue Energy would submit the remainder of



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the full CP application within 18 months, as required. While the current project schedule (see Enclosure 1) does not include the ESP or LWA placeholder, these options are being considered by Blue Energy.

The following sections discuss types of engagements and associated expectations as perceived by Blue Energy.

## 2. Types and Frequencies of Interactions

Blue Energy considers preapplication engagement as the period following an initial kickoff meeting with the NRC and before submission of the construction permit application and preliminary safety analysis report (PSAR). The anticipated benefits of pre-application engagement are early identification and resolution of issues that might otherwise adversely affect the licensing process. Therefore, Blue Energy intends to prioritize those topics for pre-application engagement that are complex and/or that involve new or novel concepts. Blue Energy's goal is to ensure that NRC has the information necessary to make regulatory decisions so that issues can be resolved in a timely manner. All topical areas are expected to follow NRC guidance where possible. Where deviations are expected, Blue Energy will aim to submit methodologies in support of minimizing regulatory uncertainty.

### 2.1. Written Submittals

During pre-application engagement, Blue Energy plans to provide the NRC with various written submittals including formal topical reports and less formal documents such as presentations and white papers used to support ongoing discussion of issues. The types of written submittals are discussed below. Enclosure 1 of this engagement plan includes a detailed list of planned submittals.

#### 2.1.1. White Papers

A white paper is a document that Blue Energy may prepare and submit to the NRC with the intent of fostering common understanding of an issue, a resolution, quick familiarization to a concept, or an approach to satisfying regulations. Because there are no specific regulatory requirements surrounding white papers, Blue Energy will, to the extent practicable, attempt to use white papers in a manner consistent with other licensees and applicants to minimize confusion.



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Each white paper will be transmitted with a cover letter that provides an estimated level of NRC review resources commensurate with the level of detail being sought and specific areas of feedback being requested.

### 2.1.2. Topical Reports

Blue Energy recognizes that topical reports will be reviewed independently of its construction permit application and that the NRC will issue requests for additional information (RAIs) as needed during its review of each topical report. Blue Energy may request readiness assessments on topical reports and may engage in specific technical discussions commensurate with the complexity of the report.

Blue Energy requests rapid audits on topical reports to gain and incorporate initial feedback on the methodology to ensure that the final version is more likely to gain NRC acceptance with fewer RAIs needed. Blue Energy requests that topical reports be reviewed and approved within 12 months of submittal and intends to support this timeliness goal through dedicated staff efforts.

An initial list of the topical reports that Blue Energy intends to submit to the NRC during pre-application engagement is also included as Enclosure 1 to this document. Blue Energy expects that this list will evolve following its systematic review of the Standard Review Plan post reactor vendor selection. However, efforts have been made to account for areas where NRC engagement would be most beneficial. Should the anticipated areas of engagement change, NRC will be notified by email as well as in a revision to this regulatory engagement plan.

As discussed in Section 1, topical reports submitted by Blue Energy aim to add regulatory certainty to topic areas in a technology inclusive manner. As such, many of the topical reports will be methodologies.

### 2.1.3. Technical Reports

Blue Energy does not intend to submit technical reports to the NRC. Instead, if proprietary information is needed for the NRC to make a regulatory decision, Blue Energy will provide a proprietary topical report accompanied by a public (redacted) version. Information that is useful to the NRC but does not rise to the level of a topical report will be provided via white papers.





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## 2.1.4. Audits and In-Office Reviews

In-office reviews and pre-application audits have improved the efficiency of past NRC reviews. The face-to-face conversations enabled by this approach are particularly helpful when resolving complex technical issues. Blue Energy encourages the use of such interactions and is glad to host the NRC at its DC offices. Alternatively, Blue Energy staff are happy to travel to NRC HQ.

Blue Energy strives to submit high quality documentation for NRC reviews and respond in a timely manner. When entering an audit, Blue Energy will attempt to respond as quickly and efficiently as possible to provide clarity, add details to support NRC findings, or otherwise resolve any concerns found in the audit. Blue Energy staff are capable of remote-based audits but also acknowledge efficiency gains found with in-person interactions and may request as such pending the scope of the audit. Blue Energy views interactions with the NRC as an opportunity for additional review to the shared goal of ensuring safety. Similar to technical discussions, staff familiarization meetings, or drop-ins, Blue Energy aims to seek alignment with NRC staff. During application reviews, audits are a preferred venue for questions and resolutions, even in the event where audits may be extended to simplify the RAI process.

It is expected that Blue Energy will be provided with NRC staff limitations and conditions prior to issuance of a safety evaluation to ensure alignment. In the Audit Plan for Blue Energy Topical Report BE-BOPTR-02 (ML25216A095), Blue Energy and NRC discussed and agreed on the following audit logistics that are planned to continue through other engagements unless otherwise agreed upon:

- Blue Energy creates an electronic reading room (eRR) portal for document viewing and makes documents available for viewing at their office location.
- NRC PM provides audit issues as soon as they are available and schedules audit meetings when needed.
- During the audit meetings, Blue Energy and NRC staff will:
  - Clarify audit issues.
  - Discuss audit issue resolutions.
  - Discuss additional document needs.
  - Discuss and decide on timeframe for issue resolution.
    - The expectation is 2 weeks for response to be posted to eRR.
    - Other timelines to be developed, if necessary, for a complete resolution.





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- Determine if docketing a response is required.
- Blue Energy to develop responses to audit issues/questions.
- Blue Energy will upload audit responses and any associated documents, self-determined or requested by NRC staff, to the eRR.
  - NRC PM will be notified via email when responses are available.
- NRC to review audit issue responses and associated documents, if any, in the eRR.
- Feedback on audit issue responses and related discussions to be held in audit meetings; as appropriate; NRC staff will provide written feedback via encrypted email or SharePoint to Blue Energy.
- NRC staff is to communicate to Blue Energy acceptance or rejection of audit issue responses.
  - If an issue response is acceptable and requires docketing, the NRC staff will issue a formal request to Blue Energy to submit it on the docket.
  - If a response is rejected, Blue Energy will take it back for internal deliberation and dispositioning.
- NRC staff and Blue Energy will make every effort to resolve audit issues in one attempt; in some scenarios, a second round (revised) of response may be needed. Once an original response and a revised response are posted, further cycles may be moved to a formal RAI process if further audit interactions are not preferred.
- Both Blue Energy and NRC staff have the option to request elevating an audit issue to RAI process via email.
- The RAI process will be used when:
  - NRC requires formal docketing of a response.
  - Completion of the response will extend past the audit close date.
  - Requested by Blue Energy or NRC.
- NRC will send formal RAIs to Blue Energy via email.
  - RAI clock starts on the day the question is sent.
  - Less than 30 days from receipt to response posted in eRR.
- Blue Energy will respond to the following RAI-related questions:
  - Does the RAI contain proprietary, ECI, SRI information?
  - Is clarification needed?
  - Is the 30-day timeline achievable?
- Blue Energy's responses to RAIs will be submitted to NRC EIE formally.



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For additional information on the eRR and RAI, see the following sections.

### 2.1.5. Electronic Reading Room

Blue Energy will make documents available for NRC staff using an access-controlled electronic reading room<sup>1</sup>. This platform will enable read-only access to documents and can be used to facilitate audits, in-office reviews, and ad-hoc sharing of information as needed. Blue Energy will, by default, submit revisions with marked changes and in-line comments to further facilitate reviews. Resolved and clean versions will also be uploaded and titled appropriately for final reviews.

### 2.1.6. Requests for Additional Information

RAIs are a known part of the NRC's review process; however, it is possible to resolve some technical issues without RAIs. Blue Energy's preference is for less formal ways of interaction to precede the development and transmittal of RAIs.

Figure 3 below depicts Blue Energy's preferred way of resolving technical issues. Once an issue is identified by NRC, Blue Energy will work to resolve the issue using "pre-RAI tools." This can take a variety of forms including one-on-one technical conversations, posting supplemental information to an electronic reading room, and formal audits. In some cases, this non-docketed exchange of information will be enough to resolve the issue, and no RAI will be needed. An example of this situation would be a case where the information needed to resolve the issue had already been submitted and the NRC technical reviewer was not aware of its location.

Another possibility is that Blue Energy has the information needed to resolve the issue but has not yet submitted it to the NRC on the docket. An example of this could be a calculation that supports a design decision or a document that explains the basis for a key assumption. Under this scenario, Blue Energy would still rely on pre-RAI tools to quickly gain a common understanding of the issue with the NRC with the recognition that a formal RAI (or in some cases, a supplement) will be needed to resolve the issue in a manner that is transparent to the public. Blue Energy can also supplement the application to support requests for confirmation of information or RCIs. In these cases, Blue Energy would appreciate the opportunity to review and comment on draft RAIs or RCIs before they are issued. In a similar fashion, Blue Energy requests an opportunity to share draft RAI or RCI responses with the NRC prior to formally transmitting them.

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<sup>1</sup> Blue Energy is currently using Certrec and will inform NRC if this changes in the future.



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Blue Energy's target RAI response time is 30 days; should more time be needed (e.g., for RAI responses that require substantial analysis or testing) Blue Energy will request additional time.

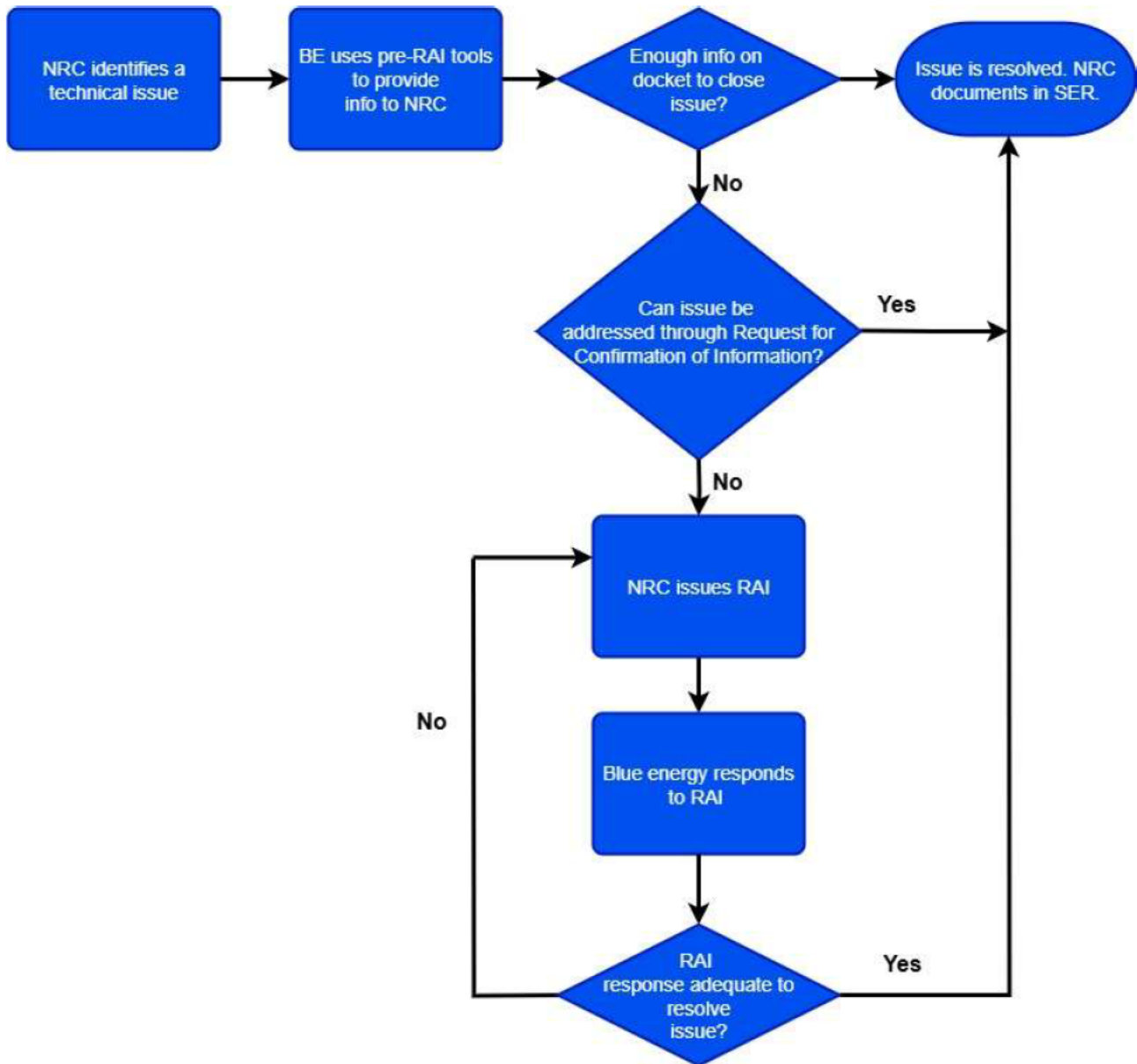


Figure 3: Proposed RAI and RCI Process



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## 2.2. Routine Project Management Discussions

Blue Energy's Licensing Office is intentionally located in the greater Washington DC area. The VP for Regulatory Affairs, Director of Licensing, and multiple senior licensing engineers are stationed there to facilitate timely interactions with the NRC. This group will routinely interact with the NRC's lead Project Manager(s) to maintain a consistent and accurate understanding of outstanding technical and regulatory issues. As Blue Energy increases its staffing levels, this role may be delegated to a different organizational position. Blue Energy will keep NRC apprised of the roles and responsibilities of the personnel in its licensing office.

## 2.3. Drop-in Meetings

Blue Energy will conduct periodic, non-public "drop-in" meetings with NRC staff and managers involved in the Blue Energy review. During active periods of pre-application engagement and during review of the application itself, drop-in meetings may occur every few weeks. These meetings can provide a valuable opportunity to exchange non-technical information such as planning for future interactions and discussions about scheduling. Detailed technical discussions will be outside the scope of drop-ins and will be conducted in public settings. Some limited technical discussions can take place during drop-ins, but this is typically limited to discussing the status of issues that are already under review or identifying new issues for separate discussions. Blue Energy will comply with all NRC guidance (e.g., current OEDO procedure) on drop-in visits with NRC staff and managers.

Blue Energy also plans to conduct periodic drop-in visits with NRC Commissioners to discuss policy issues. These meetings are expected to occur two or three times per year, and Blue Energy will attempt to schedule them so that drop-ins can also take place with senior NRC managers including but not limited to the NRR Office Director, Deputy Executive Directors for Operations (DEDOs) and the Executive Director for Operations (EDO).

## 2.4. Technical Discussions

Blue Energy expects to have technical discussions with the NRC so that NRC reviewers can have direct access to Blue Energy subject-matter experts. These conversations may be focused on individual topics or one meeting may cover several topics to make travel and logistics more efficient. Again, Blue Energy has intentionally chosen an office





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near NRC headquarters and can easily send personnel to the NRC for face-to-face meetings. Alternatively, video conferencing can be used.

Consistent with the “Openness” Principle of Good Regulation, Blue Energy expects that most of these meetings will be open to the public and will be publicly noticed by the NRC staff at least ten working days prior to the meeting. If a meeting is needed to discuss proprietary or security-related topics, Blue Energy will request that the NRC close the meeting.

Blue Energy’s submittal ultimately will include a safety review and an environmental review. Each review will include several technical topics that may require meetings, with the potential for some overlap between the two reviews. Blue Energy will coordinate such meetings with the appropriate safety and environmental project managers to help ensure attendance by the appropriate staff members for the subject(s) to be discussed.

Blue Energy respects the time and efforts of all staff involved in these activities. As such technical topics will be chosen deliberately to inform, or to receive feedback from, NRC staff, enabling quality submissions and timely reviews.

## 2.5. NRC Staff Familiarization

One of Blue Energy’s objectives during the pre-application phase will be to assist the NRC staff with familiarizing themselves with the application, and particularly those areas of the design that will inevitably differ from the chosen NSSS vendor. Blue Energy intends to provide background information via meetings, conferences, visits to the Blue Energy offices, visits to the selected site, visits to shipyards with whom we are partnering, and other relevant locations. If it would be helpful, Blue Energy can conduct formal training on its concept.

## 2.6. ACRS engagement

While the NSSS used by Blue Energy is not expected to be new or novel, Blue Energy recognizes that portions of the design are FOAK and will be of interest to the ACRS. Where ACRS intends to review, Blue Energy requests that ACRS familiarization with the design occur *prior* to the staff completing its safety review. Blue Energy believes that early ACRS familiarization with the design will lead to more focused and efficient interactions with the ACRS. Blue Energy requests that the NRC staff provide ACRS with design descriptions of the safety-significant aspects of the design and a discussion as to what parts of the design have already been reviewed.



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## 2.7. Blue Energy and NRC Communication

During pre-application engagement, it is critical that there is a common understanding as to how the NRC will provide feedback. Blue Energy's expectations are outlined below. If NRC has a different set of expectations, Blue Energy would appreciate advance notice.

### 2.7.1. Blue Energy and NRC Communication Protocols and Resolution of Issues

Throughout the licensing process, it is recognized that there may be technical and/or regulatory issues between Blue Energy and NRC staff, ranging from clarity seeking to full disagreements. Blue Energy views this as part of the normal licensing process and asks that there is a mutual commitment from both parties that:

- High impact technical issues (HITIs) are identified early.
- Any issue that is not resolved at the working level is elevated promptly to the appropriate level of management (applies to both NRC and Blue Energy).

To facilitate the issue resolution process, Blue Energy intends to resolve as many issues as possible in the pre-application engagement areas.

### 2.7.2. Routine and Topic-Specific Interactions

Blue Energy's licensing team is planning to grow with the company. For now, Blue Energy requests that all communications regarding licensing be directed at the VP for Regulatory Affairs, Director of Licensing, or senior licensing engineers directly named in submission. In the future, as licensing staff grows, certain areas of communication may be delegated to specific Blue Energy staff. In such an event, this will be noted in a revision to the REP and in relevant submissions.

### 2.7.3. Feedback as a Function of Submittal Type

Blue Energy expects that feedback will vary according to the type of submittal, the licensing phase and the level of NRC staff or management concurrence that is being sought. For topical reports, Blue Energy expects that NRC will prepare a safety evaluation report, consistent with the NRC's Office Instruction LIC-500.

For less formal submittals (e.g., white papers), Blue Energy requests that NRC provide feedback via NRC staff correspondence. For meetings or other interactions such as



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audits, Blue Energy requests that NRC use its existing processes (e.g., audit reports, trip reports, meeting summaries) to provide written feedback.

## 2.8. RELATION TO OTHER PROCEEDINGS / REVIEWS

### 2.8.1. Related NRC Reviews

Currently, Blue Energy anticipates requesting reviews for topical reports, white papers, an early site permit, and construction permit application. Blue Energy may request an ESP or LWA at some point. As Blue Energy is evolving and growing rapidly, resource allocation and areas of focus may shift accordingly. Blue Energy commits to providing advance notice to the NRC where possible through informal communication and updates to this REP.

### 2.8.2. Other Review Bodies

Other agencies may conduct reviews alongside or as part of the NRC's evaluation. Proactively anticipating their requirements and interactions can enhance licensing predictability. This is especially crucial when another agency collaborates with NRC staff or plays a cooperative review role in the application development and review process. Other potential agencies that Blue Energy may interact with include but are not limited to:

- US Department of Energy (DOE)

DOE does not have a regulatory role in the review of topical reports or construction permit applications. Blue Energy's initial preferred site is not on or adjacent to DOE property; however, Blue Energy is considering future sites that are on DOE property and, accordingly, is in discussions with them.

- US Coast Guard

For Blue Energy's initial site, no Coast Guard approval is anticipated; however, future sites may be offshore, there is a potential for needing Coast Guard approval. This should not be considered for the construction permit being sought in this REP.

- Federal Emergency Management Agency (FEMA)

On July 1, 2024, the NRC and FEMA signed an updated memorandum of understanding, <https://www.nrc.gov/docs/ML2418/ML24184A043.pdf>, Blue Energy will consult with FEMA to support predictability as it prepares its topical report on





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emergency preparedness. Blue Energy intends to apply for a site boundary emergency planning zone (EPZ) consistent with 10 CFR 50.160.

- National Environmental Policy Act (NEPA) Consultations

Blue Energy (with support from its contractor) will consult with state, local, and tribal authorities, as well as Federal agencies including but not limited to the US Fish and Wildlife Service, and the Environmental Protection Agency as part of the Environment Report development.

### 3. Schedule Considerations

Blue Energy is currently developing detailed schedules for engineering and licensing activities, some of these may involve contractors. The extent and timing of pre-application engagement will depend on how rapidly those activities progress. Blue Energy will work with the NRC project manager to ensure that there is alignment in the following areas:

- Scheduling of meetings and submittals; the dates of specific meetings; frequency and timing of routine meetings; timing of planned submittals
- Consideration of NRC staff and applicant resources; schedule based on availability of key resources for specific subject areas
- Timing and duration of NRC staff reviews; not just submittal timing but also when NRC staff review is expected to occur and key milestones along the way (e.g., audits, RAIs, draft SE, OIRA, ACRS, etc.)
- Communication protocols for changes in schedule and scope; understanding that schedules and priorities can change, maintaining clear and frequent communication, including early notification when schedules change or scope of submittals or meetings change

Blue Energy expects that early pre-application engagement will focus on the topical reports listed in Enclosure 1 with anticipated submission schedules.

### 4. Expected Areas of Pre-Application Engagement

Blue Energy proposes that pre-application engagement focuses on the technical and regulatory areas listed in Enclosure 1. It is expected that this enclosure will evolve as design and licensing activities progress and Blue Energy will update the list accordingly.



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General areas, which are less specific to Blue Energy's engineering approach, are described below.

#### 4.1. Environmental Reviews

Blue Energy is initiating a phased environmental and seismic site analysis. [REDACTED]

[REDACTED]

[REDACTED] abce.

A stand-alone topical report on this topic is not expected. Pre-application engagement should be expected in CY 2026.

#### 4.2. Design Criteria

Blue Energy will evaluate the design post NSSS selection for applicability of and compliance with 10 CFR 50, Appendix A, "General Design Criteria for Nuclear Power Plants." As the General Design Criteria (GDC) were established through regulatory precedence, not prescience of future reactor technologies, Blue Energy intends to develop design-specific Principal Design Criteria (PDCs) that align with the intent of the GDC while addressing the novel aspects of our design per 10 CFR 50.34(a)(3)(i).

[REDACTED]



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- [REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED]
- [REDACTED]  
[REDACTED] abce

A standalone topical report in support of this topic is reflected in Enclosure 1. Additional engagement surrounding PDC development will likely coincide with CP engagement and readiness assessments.

#### 4.3. PRE-APPLICATION SITE VISITS, AUDITS, AND INSPECTIONS

Prior to submitting its construction permit application, Blue Energy anticipates that NRC will conduct various audits, either virtually or in-person. Blue Energy commits to working proactively with the NRC project manager to facilitate scheduling and alignment on the scope of pre-application audits. An initial list of potential audit topics is listed below. Blue Energy would support audits on any subject(s) that the NRC wishes to pursue.

##### 4.3.1. Quality Assurance

Blue Energy is not yet performing safety-related activities. It is expected that initial safety-related activities will be conducted by Blue Energy's sub-contractors working under their audited and approved NQA-1/Appendix B QA programs. An early example of this type of activity is site characterization. It is anticipated this work will be conducted on behalf of Blue Energy by sub-surface contractor(s) under their own, audited and approved NQA-1/Appendix B QA programs that would also comply with Part II, Subpart 2.20 of the American Society of Mechanical Engineers' (ASME's) "Quality Assurance Requirements for Nuclear Facility Applications" (NQA-1-2022) as endorsed by the NRC.

Currently, Blue Energy has its own Appendix B QA program that has a Quality Assurance Program Description topical report, discussed in Enclosure 1, under review by the NRC. Once reviewed and approved by the NRC, this QA program will be used for safety-related activities.



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#### 4.3.2. Testing

Engineered components (such as the SMR Nuclear Power Module) and its associated support systems will be procured in accordance with the Blue Energy NQA-1 QA program. As such, there will be specified witness and hold points as well as owner acceptance testing incorporated into the fabrication/manufacturing processes. In some cases, Blue Energy will have personnel stationed on site to oversee fabrication and manufacturing. In addition, some Purchase Orders will require appropriate notification to Blue Energy by the supplier prior to any QA/QC owner hold points. Any of these points that the NRC would like to observe and/or participate in, Blue Energy will coordinate such participation with the NRC and the supplier.

Blue Energy anticipates commissioning of systems to take place as systems and components are turned over to commissioning/operations by the construction team at site. Similarly, commissioning and acceptance testing will be performed in accordance with appropriate ASME, NEC, and other applicable Code and Standards requirements under the oversight and approval by qualified Blue Energy QA/QC personnel and in accordance with the Blue Energy Quality Program. The NRC is welcome to observe any of these points; Blue Energy will work with and support any participation by the NRC and the commissioning team.

#### 4.3.3. Site Selection and Characterization

Blue Energy invites the NRC to visit its pilot site in [REDACTED]<sup>abce</sup> as well as other sites that are under consideration for future efforts. Such visits are expected to inform the NRC staff's generation of the portion of the environmental impact statement associated with the site and site alternatives. Blue Energy anticipates that NRC staff may also perform one or more audits of site characterization activities such as subsurface exploration, seismic and geotechnical evaluation, hydraulic testing, and cultural resource investigations. At the NRC's discretion, these audits may be combined with site visits. Blue Energy will coordinate these visits with the NRC project manager.



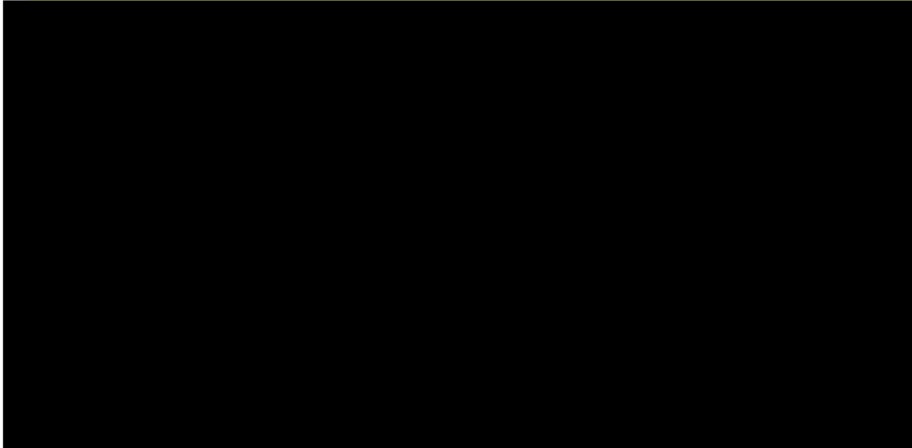
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[[



]]abce

Figure 4: Site location, [[redacted]]abce.



[[

]]abce

Figure 5: Site location, [[redacted]]abce



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Figure 6: Photo of site; blue rectangle estimates nuclear island.



Figure 7 :Site rendering for [REDACTED] (note: multiple reactors installed in rendering. Initial construction permit will not include all pictured [REDACTED]).

#### 4.3.4. Security and Critical Infrastructure

Blue Energy is aware of Section 657 of the Energy Policy Act of 2005<sup>2</sup>, which requires the NRC to consult with the Department of Homeland Security (DHS) prior to issuing a license for a utilization facility. The purpose of this consultation is to identify any potential vulnerabilities of the proposed facility to terrorist attack. Blue Energy will work

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<sup>2</sup> As implemented by a [memorandum of understanding](#), dated March 6, 2007





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with both agencies to ensure that they have the information and site access needed to perform their respective roles.

#### 4.3.5. Vendors and Supply Chain

Blue Energy expects that NRC staff may wish to conduct audits or inspections of vendors and suppliers that are performing safety-related activities. Blue Energy will work with the NRC to coordinate these activities. Blue Energy's perspective is that the timing of such audits and inspections is important. Specifically, if the audits or inspections are conducted too early, there may not be enough safety-related work underway for the NRC to draw a regulatory conclusion. On the other hand, if the audits/inspections are conducted too late (i.e., after significant safety-related work has been completed) then there is a risk that any deficiencies that are identified will require substantial rework. Therefore, Blue Energy requests a collaborative approach to timing to ensure that the resources of all three organizations (NRC, Blue Energy, Vendor/Supplier) are being used efficiently.

#### 4.4. Preliminary Safety Information Document

Blue Energy does not intend to submit a preliminary safety information document (PSID); however, if the NRC indicates that this would be helpful, Blue Energy would be willing to do so.

### 5. Summary and Next Steps

The purpose of this REP is to inform NRC of Blue Energy's plans and to solicit feedback. Blue Energy is an advanced nuclear reactor pre-applicant, as defined in 10 CFR 170.3 and in Nuclear Energy Innovation and Modernization Act (42 U.S.C. 2215 note). As such, Blue Energy is also seeking the reduced Part 170 fees called for by the ADVANCE Act for the activities described within this REP. Blue Energy's next steps will be to incorporate the NRC's feedback into subsequent revisions of this document. Changes within Blue Energy, including large design decisions, schedule changes, or other changes that may affect this document will also result in a revision.

<sup>1</sup>Withheld pursuant to 10 CFR 2.390(a)(4) as information which discloses process, method, or apparatus, including supporting data and analyses, where prevention of its use by Blue Energy competitors without license or contract from Blue Energy constitutes a competitive economic advantage over other companies in the industry.





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## 6. Enclosure 1 – List of anticipated submissions

[[

[REDACTED]	[REDACTED]
[REDACTED] [REDACTED]	[REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED]	[REDACTED] [REDACTED] [REDACTED]



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	[REDACTED] [REDACTED]
[REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED] [REDACTED]	[REDACTED]
[REDACTED] [REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED] [REDACTED]	[REDACTED]
[REDACTED] [REDACTED]	[REDACTED] [REDACTED]
[REDACTED]	
[REDACTED] [REDACTED] [REDACTED]	[REDACTED]
[REDACTED] [REDACTED]	[REDACTED]

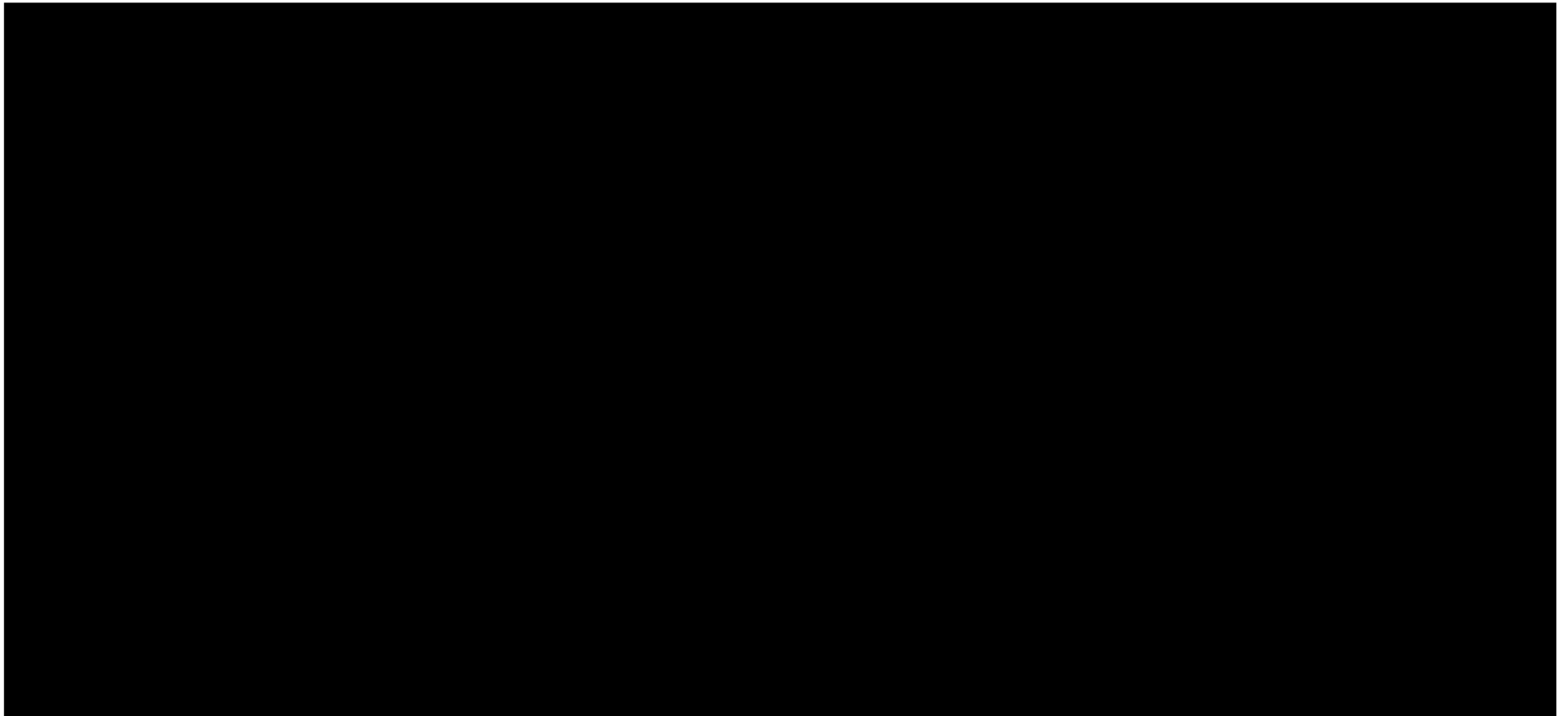


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<div>[REDACTED]</div> <div>[REDACTED]</div> <div>[REDACTED]</div>	<div>[REDACTED]</div> <div>[REDACTED]</div>
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*Figure 8 Scheduling Gantt Chart Illustrating anticipated submittals and conservative NRC review schedules. Dates are estimates for which CY Quarter they will be submitted.*



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## 7. Enclosure 2 – Anticipated near-term meetings

Blue Energy is open to readiness assessments for various topical reports submitted. Blue Energy will notify NRC via email to plan such engagements, as needed.

Beyond the scope of the above schedule, no other near-term meetings are expected with the NRC.



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<sup>a</sup> Withheld pursuant to 10 CFR 2.390(a)(4) as information which discloses process, method, or apparatus, including supporting data and analyses, where prevention of its use by Blue Energy competitors without license or contract from Blue Energy constitutes a competitive economic advantage over other companies in the industry.

<sup>b</sup> Withheld pursuant to 10 CFR 2.390(a)(4) as information, which if used by a competitor, would reduce his or her expenditure of resources or improve his or her competitive position in design, manufacture, shipment, installation, assurance of quality.

<sup>c</sup> Withheld pursuant to 10 CFR 2.390(a)(4) as information which reveals aspects of past, present, or future Blue Energy or customer funded development plans or programs, of potential commercial value to Blue Energy.

<sup>d</sup> Withheld pursuant to 10 CFR 2.390(a)(4) as information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

<sup>e</sup> Withheld pursuant to 10 CFR 2.390(a)(4) as information obtained through Blue Energy actions which could reveal additional insights into reactor system development, testing, qualification processes, and/or regulatory proceedings, and which are not otherwise readily obtainable by a competitor.