ARC/NRC-PM-010

December 22, 2025

US Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: ARC Clean Energy LLC
Submittal of the revised ARC-100 Regulatory Engagement Plan

Reference: ARC/NRC-PM001 dated March 28, 2022

This letter transmits a revision of the ARC-100 Regulatory Engagement Plan (REP). The REP provides NRC staff information and outlines plans for a licensing path going forward and future interactions with the NRC during pre-application activities associated with the ARC-100 Sodium-Cooled Fast Reactor.

The attached enclosure provides the ARC-100 revised REP. If you have any questions or need any additional information, please contact me at riotti@arc-cleantech.com or (732) 890-3602 or Raymond Burski, ARC-100 Licensing Director at rburski@arc-cleantech.com or (504) 909-6436.

Sincerely,

Robert Iotti

Robert Iotti

ARC 100 Project Manager
ARC Clean Energy

Enclosures: ARC-100 Regulatory Engagement Plan, Revision 1

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ARC 20 Project

Regulatory Engagement Plan

December 2025

Rev. 1.0

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Abstract

Very significant gains are being made by the U.S. Nuclear Regulatory Commission (NRC) in Advanced Reactor Licensing, and in engagement with DOE's- Advanced Reactor Demonstration Program (ARDP). The current suite of NRC processes and requirements remains focused on light water reactor technology, and increasingly quite specifically considers other technologies. The ARC-100 licensing approach must address the changing regulatory environment and develop acceptance criteria that implement this change in a way that derives maximum advantage for a reactor that is inherently safe. Early engagement with the NRC, before entering the actual licensing process, is key to explaining and gaining acceptance for a design that utilizes inherent safety characteristics and seismic isolation to achieve, with potentially greater simplicity, the same objectives that have historically required complex safety systems. To facilitate these discussions with the NRC and gain early review and acceptance of key features of the design, ARC-100 has prepared and plans to prepare a limited number of "white papers" and eventually "topical reports", dedicated to the unique regulatory positions that warrant change to more accurately address the requirements necessary for an inherently safe reactor with diverse and redundant passive heat removal systems. The preparation of "White Papers" is adopted instead of Topical Reports, because the ARDP contract with the Department of Energy does not provide sufficient time or funding for a license application, and implicitly for the preparation of "Topical Reports". The execution of this Regulatory Engagement Plan will enable ARC Clean Technology, LLC to determine the best design options to carry forward through the formal licensing process.

This Plan is considered an internal document to ARC Clean Technology, LLC, as it describes our various regulatory positions and licensing strategies. Over the next few years, as the ARC-100 design progresses through the preliminary and subsequent design stages, a specific preferred licensing option will be selected, and a detailed Licensing Strategic Plan will be fully developed, based on the preferred licensing option selected and customer preferences.

Document No. ARC 20-LIC-REP Revision 1	ARC Clean Technology, LLC ARC 20 Regulatory Engagement Plan

Revision History

Revision	Section(s) or Page(s)	Description of Change
0	All	Initial Issue
1	All	Revised to reflect Part 53 licensing process

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I. Introduction

A. Overview of the Plan

ARC Clean Technology, LLC (ARC) believes that early and effective regulatory engagement with the Nuclear Regulatory Commission (NRC) is a critical element to the success of the ARC-100[1] planning and deployment process. The primary intent of this Regulatory Engagement Plan (REP) is to reduce regulatory uncertainty by establishing agreements as early in the regulatory process as possible. Effectively managing communications in the pre-application phase with appropriate NRC management, as well as NRC project and technical lead personnel, helps to assure that the proper level of detail will eventually be submitted in the formal license application.

[1] *ARC 100 is the facility that is being designed under DOE Contract ARDP-20-23796, Award No. DE-NE 0009223, herein called the Project) whereas ARC Clean Technology, LLC (ARC) is the Company that leads the effort.*

In prior discussions with the NRC in 2020 and 2021, the agency had suggested that a series of white papers and topical reports would be a good mechanism to use for meaningful dialogue on our conceptual design. Accordingly, ARC included the preparation of several white papers and potentially also topical reports in our ARC-20 Project Execution Plan. The white papers served to augment the series of early pre-licensing application engagement meetings that started in the Fall of 2022. Refer to Sections I.B and I.C. Given today's environment, it is expected that these pre-application engagement meetings will continue and most all be virtual, relying primarily on Microsoft Teams Meetings, which is the NRC venue of choice.

These early engagement meetings (Phase 1) initially focused on our desired objectives, who we are, an introduction of key ARC and ARC 20 project team members, the history of the ARC-100 project, and a summary description of the facility. Meetings then progressed to a discussion of the extensive operating experience gained by the EBR-II, the ARC-100's inherent passive safety characteristics, its diverse and redundant decay heat removal capacity, and the simplicity of operation. As the design progressed, subsequent meetings (Phase 2) addressed the key elements of the ARC-100 Plant Facility Requirements Document (PRD) and the more detailed design information presented in the various Chapters of the Overall Plant Design Description (OPDD). During these meetings, a number of white papers were submitted, and the NRC responded with comments and suggestions. The meetings with the submittal of white papers are expected to continue throughout the duration of the ARDP contract. In this revision of the Regulatory Engagement Plan, we provide the NRC with a tentative schedule for additional white papers submittal.

In Section II, an NRC communications plan is described. Initially, the plan had focused heavily on the near term pre-licensing engagement with the NRC. The plan had also identified the desire for an alignment of the ARC executive and senior management with the NRC hierarchical organization. Unfortunately, that alignment has not occurred to date, and remains a goal to be achieved in the future. The purpose of the Regulatory Engagement plan remains one of effectively managing and aligning our communications protocol with NRC Commissioners, appropriate NRC Management, and the NRC Senior Project Manager. In the future, ARDP contract permitting,

periodic "drop-in" meetings will be scheduled with NRC Management, in close coordination with the designated NRC Senior Project Manager.

Initially, at the early stage of the design process, ARC believed it was premature to select a viable licensing option for eventual submittal of the ARC-100 License Application. Section III of this plan provides a listing of the licensing options that were under consideration. After three years of engagement, however, ARC determined that the best option for the ARC 100 reactor is to follow the approach that will eventually be approved under 10 CFR 53.

This selection is "final" in the sense that it is ARC's preferred licensing option, even though 10 CFR 53 has not yet received full approval. Section IV of this plan provides a summary description of the Licensing Strategic Plan, which will be ultimately developed in detail. The strategic plan will identify applicable regulatory requirements and our extent of conformance with each, along with regulatory justification for the licensing positions to be taken. The strategic plan will describe the licensing strategies for detailed development of the ARC-100 NRC License Application.

Finally, ARC notes that the present design of the ARC-100 has been developed to be generally compliant with U.S. and Canadian regulations and their respective licensing requirements, in addition to IAEA safety standards. Reliance on NRC requirements and guidance documents, and Canadian Nuclear Safety Commission (CNSC) regulatory requirements and regulatory documents has been historically used by the ARC Project team to inform the advanced-conceptual and preliminary design.

B. NRC Early Engagement – Phase 1

Starting later in 2022, ARC began a series of pre-application meetings with the NRC. With the exception of the first face-to-face introductory meeting, the meetings have all been virtual meetings (i.e., Microsoft Teams Meetings). Agreed upon schedule dates for these meetings were established soon after contract award (Dec. 23, 2021), following the DOE kick-off meeting scheduled within 60 days of the award. A listing of the meetings, their date of occurrence, and topics for discussion is provided below:

<u>Initial Meeting</u>

- Who we are
- Alignment of ARC desired outcomes with NRC management
- Evolution of the ARC-100 design efforts to date, including recent work in Canada and the UK
- ARC 20 Project description of the scope of work, organizational structure, key project team members, and introduction of key personnel and their collective experiences
- Present a tentative schedule for follow-up meetings and planned deliverables to the NRC
- Establish agreed upon communication protocols, including key points of contact
- Familiarize NRC with the ARC-100 inherent safety features and plant design characteristics
- Review the extensive EBR-II operating and testing experience
- Present the results of the safety analyses performed to date

- Describe the Project execution strategy and management plan, including the engineering/design approach, quality management/quality assurance requirements in place, etc.
- Alignment of ARC expectations with the NRC review process for technical papers and topical reports

C. NRC Engagement – Subsequent Meetings

A series of meetings, listed in Enclosure 1, focused on a more detailed description of the facility, its inherent passive safety characteristics, diverse and redundant decay heat removal capacity, simplicity of operation, and its known and demonstrated technology. As a part of these later meetings, the Project team briefed the NRC on the series of white papers submitted to the NRC for their review. NRC's understanding and feedback provided in response to the presentation and the white papers have helped ARC reach critical design and licensing decisions, specifically the decision to pursue the license application under 10 CFR 53. Additional future meetings, including " as needed" on specific topics, are listed in Enclosure 1, Section A Regulatory Engagement.

II. Communications

A. Objectives

Communication protocols are needed to effectively manage and enhance communications with appropriate NRC Management, project management, and technical lead personnel.

In addition to the periodic communication anticipated between the ARC Licensing Manager and the NRC Senior Project Manager, alignment of other key ARC executives and senior managers with NRC Management personnel is considered a prerequisite for maintaining the visibility (and credibility) of ARC Clean Technology, LLC before the agency. These communication protocols were discussed and agreed to during our initial NRC engagement meeting.

At the appropriate time, "drop-in" non-public meetings between a prospective applicant and NRC senior executives (including the Commissioners) as well as the NRC project management team. Such meetings typically are for general exchange of information on non-technical topics such as planning for future interactions, scheduling discussions, etc., and not directly related to a regulatory action or decision. Limited discussion of technical issues can occur, but typically it will be in the context of the status of review or identification of topics for separate discussion. Accordingly, these meetings are usually closed to the public.

B. NRC Key Project Management Contacts

Chief, Advanced Reactor Licensing Branch (NRR/DANU/UAL1)

Chief, Advanced Reactor Licensing Branch, (NRR/DANU/UAL2)

Senior Project Manager for ARC-100 project (NRR/DANU/UAL1) (Primary Contact)

In 2022, The Senior Project Manager was briefed regarding ARC's desire to have early information exchanges, In addition, to facilitate understanding of the ARC-100 facility, and to assist in better understanding our near term plans, ARC provided a copy of our formal response to NRC Regulatory Issue Summary 2020-02, *Process for Scheduling and Allocating Resources for Fiscal Years 2023-2025 for the Review of New License Applications for Light Water and Non-Light Water Reactors.*

The ARC SVP Project Management (also the Project Director) and the Project Licensing Manager will maintain timely communication with the NRC Project Manager. "Drop-in" visits (via Teams Meetings or teleconferences) will be held as necessary over the course of the pre-licensing engagement meetings and the review of the white papers and topical reports. In addition, the ARC Licensing Manager and the NRC Senior Project Manager will arrange for periodic telephone calls to maintain an ongoing dialogue regarding the progress being made by the ARC 20 Team and the status of the NRC's review of information being provided.

III License Application Process for the ARC 100

A. Owing to the early design stage of the facility, most NRC licensing options were considered viable. Options considered were the two-step process prescribed under 10 CFR Part 50, the Standard Design Certification (10 CFR 52 Subpart B), the Standard Design Approval (10 CFR 52 Subpart E), and the Licensing Modernization Project (LMP)/Advanced Reactor Content of Application Project.

B. Two Step CP/OL Process (10 CFR Part 50)

   One significant advantage of the 10 CFR Part 50 process is that it supports beginning the licensing process early, and, in close consultation with the Customer, starting construction much faster in the design process (at the preliminary design stage) than would be required by 10 CFR Part 52. Also, the design can continue through construction, and the final design, incorporating changes made after the CP was issued, would be captured in the OL application. While offering many advantages, the two-step licensing approach does introduce some regulatory uncertainty if the NRC imposes additional requirements as a condition of receiving an OL. This approach also provides less finality before making a significant financial investment in plant construction.

The NRC has issued (RG 1.233 "Guidance for a Technology-Inclusive, Risk-Informed, and Performance-Based Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors" which endorses NEI 18-04 Rev.1 and RG 1.253 "Guidance for a Technology-Inclusive Content-Of-Application Methodology to Inform the Licensing Basis and Content of Applications for Licenses, Certifications, and Approvals for Non-Light-Water Reactors", which endorses NEI 21-07 and continues to develop guidance for the safety review of non-LWR designs. The Advanced Reactor

Content of Applications Project (ARCAP) document will reference existing guidance that may be applicable to non-LWR designs and recently developed non-LWR guidance for specific areas of review. The ARCAP encompasses the industry-led Technology-Inclusive Content of Application Project (TICAP). The ARCAP guidance is intended for use by an advanced reactor applicant for a combined license, construction permit, operating license, design certification, standard design approval, or manufacturing license. These projects build on the outcome of the Licensing Modernization Project (LMP), which provides guidance that focuses on identifying licensing basis events; categorizing and establishing performance criteria for structures, systems, and components; and evaluating defense in depth for advanced reactor designs.

ARCAP guidance is being developed independently of the Standard Review Plan (SRP) for light water reactors. Because ARCAP guidance is envisioned to use a license application structure different than that prescribed by the SRP, the NRC is developing "Advanced Reactor Construction Permit Guidance" for applications that choose to follow this approach.

Further, the NRC is currently pursuing the alignment of requirements in 10 CFR Parts 50 and 52 through rulemaking. The goal of the 10 CFR Part 53 rulemaking effort is to develop the regulatory infrastructure to support the licensing of advanced nuclear reactors. The term "advanced nuclear reactor", for purposes of this rulemaking, means a nuclear fission or fusion reactor with significant improvements compared to commercial nuclear reactors operating on the date of enactment of the Energy Act of 2020 or under construction as of January 2019. This rulemaking would revise the NRC's regulations by adding a risk-informed, technology-inclusive regulatory framework for advanced nuclear reactors, in response to a growing interest in possible licensing and deployment of advanced nuclear reactors and the related requirements of the Nuclear Energy Innovation and Modernization Act (NEIMA; Public Law 115-439) as amended by the Energy Act of 2020. The rule language for 10 CFR Part 53 is currently under development, and in parallel, an Interim Staff Guidance (ISG) document is being prepared by the NRC, which will be subject to change based on the outcome of this rulemaking.

Key documents related to the Part 53 rulemaking, including preliminary proposed rule language and stakeholder comments, can be found at Regulations.gov under Docket ID NRC-2019-0062.

The ISG is intended to facilitate the review of advanced reactor content of application guidance that will eventually apply to 10 CFR Part 53. Portions of the ISG may also be used to support non-light water reactors (non-LWRs), stationary micro reactors and small modular LWRs submitting applications for a construction permit (CP) or operating license (OL) under 10 CFR Part 50, for a combined license (COL) under 10 CFR Part 52 or for a design certification (DC) under 10 CFR Part 52.

With the issuance of the draft 10 CFR 53 rule for comment, ARC has reviewed the draft rule and has determined that ARC will pursue the 10 CFR 53 licensing path forward.

IV Licensing Strategic Plan

With the selection of the Part 53 rule for the license application option, ARC has prepared a preliminary Licensing Strategic Plan. This Plan will identify the applicable regulatory

requirements and the licensing strategies associated with each requirement. The Plan will also describe the licensing strategy for development of the NRC License Application for the ARC-100 facility. For each of the Safety Analysis Report (SAR) sections/subsections, as presently defined in RG 1.253 and NEI 21-07 a schedule has been established and will be refined over time, defining and controlling the engineering/design/analysis, procurement, and testing work products necessary for preparation of the PSAR and later the FSAR (refer to FOAK report). Key assumptions are also included within the description of each major SAR section.

A. Overview

In January 2022, ARC Clean Energy, LLC, developed a Regulatory Engagement Plan outlining various regulatory positions and licensing strategies for an ARC-100 advanced nuclear plant. It was noted at the time that, as the ARC-100 design progressed through the preliminary design stage, a preferred licensing option would be selected. Subsequently, a detailed Licensing Strategic Plan would be developed, based on the selection of the preferred licensing option.

The Licensing Strategic Plan outlines steps for preparing and submitting applications to the Nuclear Regulatory Commission (NRC) for review and approval related to siting, construction, and operation of an ARC-100 advanced reactor.

B. Strategic Planning Framework

Mission, Vision, and Values

The foundation of the ARC-100 Licensing Strategic Plan rests on a clear articulation of the organization's mission, vision, and core values. The ***mission***: to design and build a safe and ultimately economical reactor with very long refueling interval to maximize fuel utilization, with potential for minimal waste generation; the ***vision***: to create a reactor that is extremely safe, has a capacity factor over 90% or better, is simple to operate, is proliferation resistant, and ultimately can recycle its own fuel, minimizing the need for repository space; and the ***core values***: the guiding principle for decision-making, to maintain a proper balance of safety and reliability across all plant systems, using the simplest systems. These elements ensure that all strategic activities are aligned with the overarching goals for ARC-100.

C. Goals and Objectives

ARC-100 has established specific safety and reliability goals to guide its design and operations:

1. Enhance safety and reliability by reducing forced outages, improving worker safety, and lowering routine emissions.
2. Develop new design features to greatly reduce both the likelihood and severity of core damage accidents, compared to earlier reactors.
3. Simplify plant design features and reduce the number of safety systems needed to mitigate the consequences of severe plant conditions, thereby reducing reliance on off-site emergency response.

D. Technology Overview

The ARC-100 reactor design is built on the advanced technology developed by Advanced Reactor Concepts LLC. This design leverages proven sodium-cooled fast reactor technology originally established by the US Department of Energy. ARC-100 incorporates decades of operating, technical, and safety experience from a global fleet of 20 fast neutron reactors, accruing over 450 reactor-years of operating history since the 1950s. By combining lessons learned from previous sodium-cooled fast reactors with modern design enhancements, the ARC-100 is positioned to meet the evolving expectations of both industry and the public for safe, reliable nuclear power generation, contributing to a net-zero economy. The ARC-100 reactor delivers 100 megawatts of reliable electrical power, which is adequate to supply approximately 75,000 households, depending on the specific site or region served and the population that could potentially be affected by accident analysis.

E. Situational Analysis

Strategic planning for ARC-100 includes an in-depth situational analysis, assessing both internal and external factors that impact the organization. This process has involved conducting a SWOT analysis—identifying strengths, weaknesses, opportunities, and threats—as well as other market analyses to inform strategic decision-making.

Among the many strengths are:

- Proven Design The design foundation of the ARC-100 is rooted in the United States Department of Energy's Experimental Breeder Reactor-II (EBR-II) program, which operated for over 30 years from 1964 to 1994.
- Enhanced Safety The inherent safety features and passive decay heat removal systems enable the ARC-100 reactor to transition to a safe state without operator intervention; safety features rely on the laws of physics – the ultimate backup safety system.
- Sustainability The ARC-100 operates on a 20-year refueling cycle that maximizes fuel utilization and can significantly reduce the quantity of long-term waste, particularly if recycling of the fuel is allowed.
- Scalability: The ARC-100 is a scalable small modular reactor–several units can be grouped together to create larger generation hubs.

The current weaknesses: an inadequate project delivery team, the absence of a site on which to build the facility, and the weak financial resources of the present organization dictate that the licensing strategy be one that allows for the correction of these weaknesses in a time sufficient to support a licensing submittal.

On the other hand, there are aspects of the inherently safe design that provide opportunities that can greatly facilitate the advanced reactor licensing process. And threats, common to the commercial nuclear power industry, include technical, security, environmental, and regulatory uncertainties.

F. Action Plans

To achieve these goals, ARC-100 has defined and implemented licensing action plans that break down strategic objectives into specific initiatives and projects to obtain NRC approval for an Operating License (OL). Responsibilities, timelines, and required resources are assigned to ensure effective execution and are documented in the FOAK Report.

G. Monitoring and Adaptation

Progress against goals and objectives will be closely monitored. The strategic plan will remain flexible, allowing for adaptation based on performance metrics and changing regulatory environment factors.

H. ARC-100 Licensing Path Forward

It was initially determined that the two-step licensing methodology outlined in 10 CFR 50 was the best option for the ARC-100 advanced reactor project. Nonetheless, the 10 CFR 52 single-step, combined license, covering both construction and operation, was also considered. However, it became evident that the Part 52 path, even augmented by the License Modernization Project (LMP), would not lend itself to fully exploit the inherent safety characteristics of the ARC-100 advanced reactor.

Therefore, the decision was made to proceed with licensing pursuant to 10 CFR 53, and the plan and schedule documented in the FOAK Report. The Initial Probabilistic Risk Assessment (PRA) results have increasingly demonstrated that a strategy prioritizing risk-informed, performance-based design decisions—intended to achieve the desired balance of safety and reliability—is optimal for the ARC-100. In conjunction with a projected timeline in which the application for a construction license would be submitted, but not before mid-2028. The Part 53 process also offers the advantage of leveraging insights from other licensing applications for similar technologies and remaining adaptable to any revisions to the current 10 CFR 53 draft that may arise during this period.

I. SRM-SECY-23-0021

On March 4, 2024, the Commission issued SRM-SECY-23-0021, approving, in part, the NRC staff's draft proposed rule for 10 CFR 53 Risk-Informed, Technology-Inclusive Regulatory Framework for Advanced Reactors with exceptions and clarifications to be addressed before publishing the proposed rule in the *Federal Register* for public comment. The proposed rule would offer a voluntary, performance-based alternative regulatory framework for licensing future commercial nuclear plants. In the context of this proposed rulemaking, future commercial nuclear plants, including non-light-water reactors (non-LWRs) and LWRs, would have the option to be licensed under Part 53.

J. Key Aspects of 10 CFR 53

The 10 CFR 53 framework is relevant to the ARC-100 advanced design due to the following:

- Risk-informed and performance-based: The framework shifts from a prescriptive, design-specific approach to one that is focused on performance outcomes, allowing for greater flexibility. It uses risk insights to determine what is needed to ensure safety.
- Technology-inclusive: 10 CFR 53 is designed to be "technology-neutral," meaning it is applicable to a variety of advanced reactor technologies, not just traditional large light-water reactors. This is intended to reduce the need for exemptions and make the licensing process more efficient.
- Flexibility and predictability: The rule aims to balance the need for predictability for investors with the flexibility to accommodate diverse technologies by setting higher-level safety goals and allowing applicants to propose different methods for meeting them.
- Waste and operational requirements: The rule includes specific requirements for waste management, with provisions for Radiation Protection Programs and control of radioactive effluents. It also addresses operational aspects to ensure safety.
- Legislative mandate: The development of 10 CFR 53 was directed by the Nuclear Energy Innovation and Modernization Act (NEIMA) of 2019 and the Advance Act, which requires the NRC to create this new regulatory pathway.
- Addresses novel concepts: The rule is designed to address novel operational concepts for advanced reactors and may place different emphasis on human actions compared to existing rules for large reactors.

K. 10 CFR 53 Alternatives

The proposed 10 CFR 53 rule allows for several licensing pathways, each with varying application content and requirements, including: Early Site Permit (ESP), Standard Design Approval (SDA), Construction Permit (CP), Operating License (OL), Combined License (COL), and Manufacturing License (ML). Limited Work Authorizations (LWA) and Standard Design Certifications (SDC) are also potential pathways.

Applicants may seek applications for a number of different categories of permits, certifications, design approvals, or licenses allowed by 10 CFR 53. Further, an applicant may combine several applications in one application for different forms of licenses under the regulations in Part 53, and the Commission may combine in a single license the activities of an applicant that would otherwise be licensed separately.

The applications currently considered relevant to the ARC-100 design are:

- Limited Work Authorization,
- Construction Permit, and
- Operating License.

L. 10 CFR Part 53 Content

The proposed rule is organized into distinct subparts. Subpart H: Licensing, Certifications, and Approvals is most relevant to this strategic plan. The requirements for Subpart H will be assessed in relation to the OL application for ARC-100.

M. Next Steps

A Safety Analysis Report (SAR) will be prepared in accordance with the proposed 10 CFR Part 53 and associated guidance documents to document the technical and programmatic evidence demonstrating that the ARC-100 advanced nuclear reactor design satisfies all relevant safety criteria and performance objectives. The SAR serves as the principal resource for the NRC's independent determination of reasonable assurance regarding public health and safety, which is required for issuance of an Operating License (OL). The next steps for the ARC-100 are to develop the organization, obtain sufficient funding, and select a suitable site, as described in the FOAK Report.

Enclosure 1 (Revised)

A. Regulatory Engagement - Revised Content and Proposed Meeting Dates

1.1 Past Meetings

1st Meeting April 2023

Quality Program, Design Approach, Project Execution [*ARC Quality Assurance Program Description, Project Execution Plan*]

SSC Classification [*ARC Structures, Systems and Components Classification Approach and Report*]

White Paper on SSC classification as RTNSS

Fuel [*Fuel Qualification Program Plan; Fuel* System *Design Description Document* (SDD)]

Core [*Core SDD*]

Reactor Vessel, Guard Vessel, and Internals [*RVDV SDD*]

Primary System [*Primary Heat Transport SDD*],

Reactivity Control [*Reactivity Control and Drive System SDD*]

Heat Removal Systems [*Direct Reactor Auxiliary Cooling System (DRACS); Reactor Vessel Auxiliary Cooling System (RVACS) SDD*]

R&D Management Program [*Same name report*]

2nd Meeting October 2023

Fuel Handling Systems and Safeguards [*Fuel Handling Systems SDD*]

Instrumentation and Control (Reactor Protection Systems) [*I&C SDD*]

Electrical [*Electrical SDD; EM Pumps Variable Frequency Drives; Pump Coast down provisions technical report*]

Power Conversion System [*Power Conversion System SDD*]

Purification Systems [*Primary and Intermediate sodium purification SDD; Cover gas purification SDD*]

3rd Meeting April 2024

Probabilistic Safety Analysis [*Technical Information Report*]

Deterministic Safety Analyses [*Updated Technical Information Report*]

Functional Containment [*Technical Information Report*

4th Meeting November 2024

Structures

- Seismic Isolation [*Technical Information Report*]
- Aircraft Impact

Flexibility to operate ARC-100 at 200Mwe (545MWth) [*Technical Information Report*]

Other systems and structures

- Fire protection [*Fire Protection SDD*]
- HVAC [*Safety and non-Safety HVAC SDD*]
- Security

5th Meeting May 2025

- Water Systems [*Various SDDs*]
- Power Conversion System
- Sodium and cover gas processing systems
- Decommissioning program plan
- Fuel Qualification White Paper
- PSA Updates

6th Meeting July 2025

- Additional Information on Fuel Qualification

1.2 Future Meetings

Monthly meetings on future NRC submittals - *Meeting** dates and Information material [in brackets]to be made available to the NRC approximately 15days before the meetings.*

**Propose all meetings via Video

B. Scheduled White Papers (WP), Technical (TCR), and Topical (TPR) Reports

Type	Topic	Proposed Submittal Date	Status
WP	Spent fuel storage in main reactor vessel (safety, security and safeguards advantages)	June 30, 2023	Completed
WP	Fuel Qualification by Design and First of a Kind (FOAK) Confirmation Program	Sept. 4, 2023	Completed
WP	Regulatory Treatment of Non-Safety Systems	April 4, 2023	Completed
TCR	Technical Report on Alternate Shutdown (Not Rods) System (revised)	May 15, 2024 January 29, 2025	Awaiting response

C. Future NRC Submittals (post December 2025)

Type	Topic	Proposed Submittal Date
Topical Report	QA Program	December 25
Technical Report	Seismic Isolation System Qualification	Jan 26
White paper	Periodic Update White Paper of Fuel Qualification Report	Monthly starting January
Technical Report	LBE Report	January
Technical Reports	SSC Report	January
Technical Report	Probabilistic Safety Assessment	January
Technical Report	Deterministic Safety Analysis	January
White paper	Revised RTNSS White Paper	January
Technical Report	FOAK Report	February