

Enclosure 2 – Non-proprietary version of Blue Energy response to RIS 2020-02

		Licensing process questions for all potential/future applicants	Blue Energy Response
1	(a)	What types of NRC interactions do you plan to seek (e.g., pre-application, focused review, permit, license, design approval, amendment, renewal, certification)? This may be in the form of a white paper; topical report; CP, DC, ESP, LWA, COL, OL, SDA, ML, or LAR.	<p>As outlined in our regulatory engagement plan (REP), which we will submit under separate cover, Blue Energy seeks:</p> <ul style="list-style-type: none"> • Pre-application engagement • NRC review of topical reports • NRC review of a construction permit application • NRC review of an operating license application <p>Blue Energy does not currently have any white papers planned but may consider them as we progress through pre-application engagement.</p>
	(b)	If you plan to request an ESP, will you seek approval of either proposed major features of the emergency plans in accordance with 10 CFR 52.17(b)(2)(i) or with 10 CFR 52.17(b)(2)(ii)?	Not applicable. Blue Energy does not intend to seek an ESP.
2		In which month and year do you expect to submit your applications or other documents?	<p>We have not yet identified the exact months but our expected submittal dates are as follows:</p> <ul style="list-style-type: none"> • Topical reports: starting in Q1, 2025 • Construction permit application: Q3, 2027 • Operating license application: Q2, 2029 <p>We will submit an REP with additional details. If we are able to complete key design activities ahead of schedule, we may submit our Construction Permit Application and Operating License Application</p>

			sooner. We will notify the NRC ahead of any significant schedule changes.
3	(a)	If applicable at this time, is there a designated reference COL applicant?	N/A. We do not intend to seek a COL.
	(b)	In what order would you like the NRC to review the subsequent applications?	N/A
4	(a)	Where will the facility be located?	Our facility will be located in [] ^{c,d}
	(b)	How many units or modules will the design, or a specific facility, contain, if known?	We intend to construct [] ^{a,c,e}
5	(a)	Will you be part of an organized Design Centered Working Group (DCWG) or Technical Working Group (TWG)?	No, we do not intend to be part of a DCWG or TWG.
	(b)	Who are the other members of the DCWG or TWG?	N/A
	(c)	Who will be the primary point of contact for each DCWG or TWG?	N/A
		Technical questions for all potential and future applicants	Blue Energy Response
1	(a)	What type of reactor design will be used?	We intend to use the [] ^{a,c,e}
	(b)	What type of coolant and fuel will be used?	As we intend to use the [] ^{a,c,e} , we will use light water as coolant and [] ^d
2	(a)	What is the current status of the development of the facility design (e.g., conceptual, preliminary, or final)?	The design is currently in the conceptual phase.
2	(b)	Have you established a schedule for completing the design?	Yes. [] ^{a,c,e}
3	(a)	Do you plan to submit white papers or technical and topical reports related to the features of your design or for the resolution of policy or technical issues?	Yes, our regulatory strategy is centered around [] ^{a,c,f} and using topical reports to address any areas where our design differs. For a complete list, please see our REP.
	(b)	Do you have a schedule for submitting such papers or reports?	Yes, please see our REP.

4	(a)	Are you interested in licensing and testing a first-of-a-kind plant under the prototype provisions of 10 CFR 50.43(e)?	No, Blue Energy is not interested in this.
	(b)	If so, to the extent practical, describe milestones, plans, and intended tests.	N/A
5	(a)	Are vendors or consultants assisting you in preparing the application?	Yes.
	(b)	If so, please describe their roles and responsibilities for the design and licensing activities.	Our initial vendors and contractors are: [] ^{a,d,f}
6	(a)	Are the U.S. Department of Energy, national laboratories, universities, or other institutions assisting you in developing the design or preparing the application?	No.
	(b)	If so, please describe their roles and responsibilities for the design and licensing activities.	N/A
7		Have you established a schedule for qualifying fuel and other major systems and components?	[] ^{a,c,d,f}
8	(a)	Have you developed computer codes and models to perform design and licensing analyses?	We have begun developing a 3D CAD model in AutoCAD Inventor. [] ^{a,c,d} has developed a Fluid-Soil-Structure-Interface (FSSI) model in ANSYS to evaluate FSSI, seismic, and settling of the Integrated Monopile System (IMS).
	(b)	Have you established a schedule for completing the design and licensing analyses?	Yes, we have an integrated schedule for our design and licensing activities that we intend to submit with our REP.
9		Describe, to the extent practical, your schedule for defining principal design criteria, licensing-basis events, and other fundamental design and licensing relationships.	We do not intend to develop our own principal design criteria; rather, we intend to leverage the [] ^{a,c,d,f}
10	(a)	Have you developed procedures for the use of thermal fluidic testing facilities and for use of the results of their tests to validate computer models?	No. We intend to reference [] ^{a,c,d,f}
	(b)	Have you established a schedule for completing the thermal fluidic testing?	Not applicable due to [] ^{a,c,d,f}

	(c)	Have you established a schedule for the construction of testing facilities?	Not applicable due to [] ^{a,c,d,f}
11	(a)	Have you identified system and component suppliers (including fuel suppliers), manufacturing processes, and other major factors that could influence design decisions?	Yes. [] ^{a,c,d,f} will be used to manufacture the inner sleeve and safety-related nuclear auxiliary systems.
	(b)	Have you established a schedule for identifying suppliers and key contractors?	Yes, all suppliers and key contractors are [] ^{a,c,d,f}
12		Do you have a quality assurance program or a schedule to develop one?	We recognize the need to develop an Appendix B compliant Quality Assurance Program and we plan to submit our Quality Assurance Program Description (QAPD) to the NRC in 2025.
13	(a)	Have you developed the probabilistic risk assessment (PRA) models needed to support your applications, including the information needed to support risk-informed licensing approaches (for Chapter 19)?	No. As we intend to submit a construction permit application under 10 CFR 50, we do not have near term plans to develop a probabilistic risk assessment.
	(b)	Do you plan to use the PRA for any risk-informed applications (e.g., risk-informed technical specifications, risk-informed inservice inspections, risk-informed, categorization and treatment, risk-informed inservice testing)?	We are currently exploring the potential use of risk-informed applications but we do not have any near term plans to request their use.
	(c)	Do you plan to use the PRA models in the development of the design?	Yes, in the sense that our design is based on [] ^{a,c,d,f} , which was informed by the use of PRA models.
	(d)	At what level will the PRA be prepared, and at what point during the application process will it be submitted?	As a Part 50 applicant, we do not intend to submit a PRA to the NRC.
14		Have you developed the plans for the construction and use of a control-room simulator?	[] ^{a,c,d,f}
15	(a)	Do you have a staffing plan?	Yes, we have a staffing plan.
	(b)	What is your current staffing level for the execution and testing of the reactor design?	It is important to note that our concept [] ^{a,c,d,f}

			Including in-house and contracted resources, Engineering and Licensing staff will be [] ^{c,d} .
	(c)	Do you plan to increase staffing?	Licensing and engineering staff will continue to increase through 2025 and 2026 with addition of in-house and contracted staff. Hiring will be focused on the unique aspects of the Blue Energy design as compared to [] ^{a,c,d} . As the focus shifts from design to procurement, construction, commissioning and operations the hiring focus will shift accordingly.
16	(a)	Which systems, structures, and components, including fuel, do you foresee will be fabricated off site and delivered for the manufacturing, fabrication, and site construction of a completed operational nuclear power plant?	A key feature of our design is that large portions of the NSSS, auxiliary/supporting systems and BOP will be fabricated offsite. Similarly, we anticipate that the IMS will be fabricated offsite and delivered to the site via water.
	(b)	What is intended to be assembled and constructed on site versus at a remote facility?	The switchyard and administration building(s) will be built on site.
	(c)	In addition, and as applicable, provide the construction plans and schedules for the fabrication of large components and modules of the applicable SMR or non-LWR designs when available.	Please see attached Level I schedule.

ATTACHMENT 1: DRAFT LEVEL 1 SCHEDULE

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]b,c,d