Enclosure 1 – Non-Proprietary version of Blue Energy Pre-Submittal Meeting Slides for the Resequencing Balance-of-Plant and Nuclear Island Construction for Blue Energy Deployments Topical Report


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BOP Resequencing Topical Report

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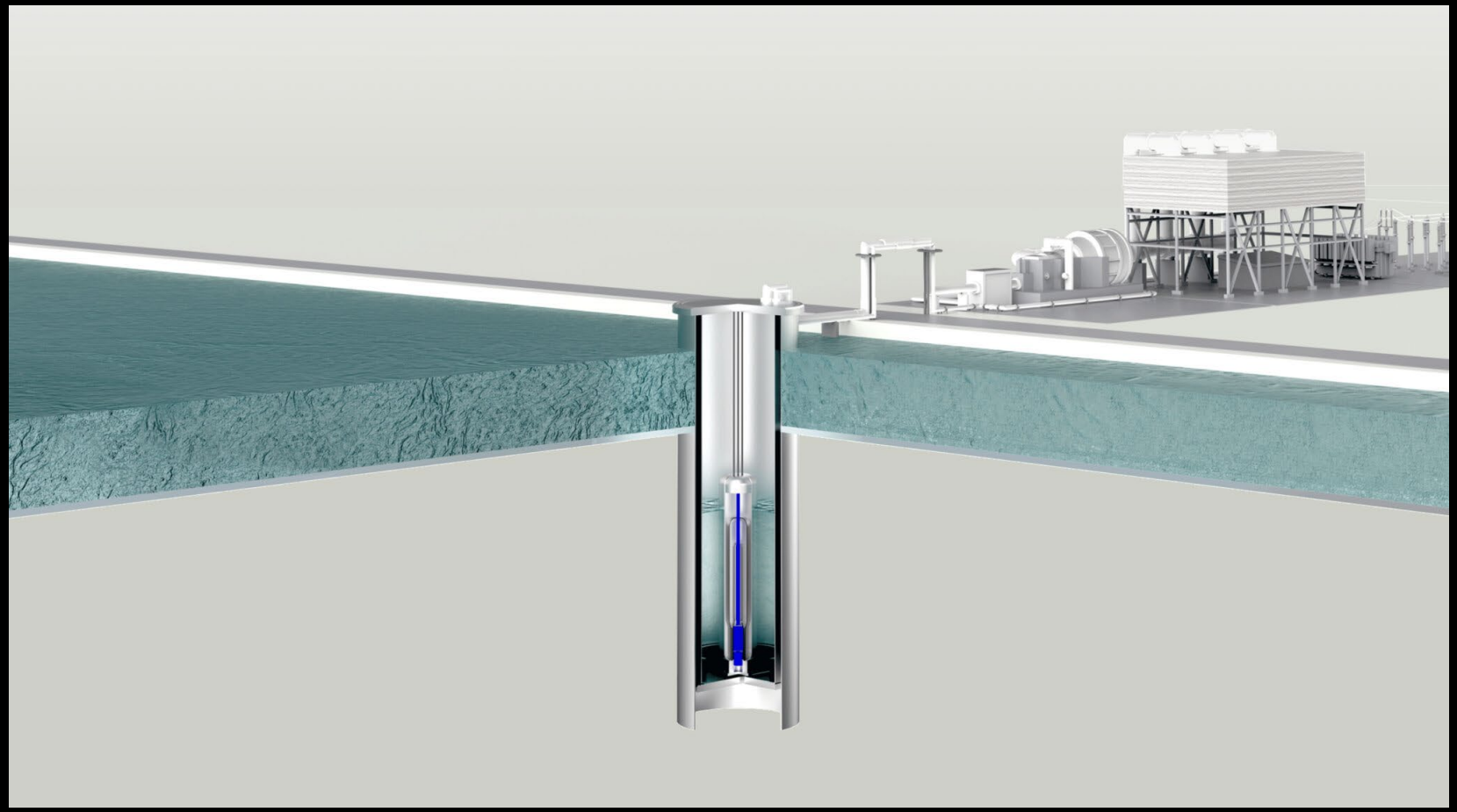
What do we mean by BOP Resequencing, and why does it matter?

- 10 CFR 50.10(a)(1) provides the definition of what constitutes construction and therefore requires prior NRC approval.
- If Blue Energy can demonstrate the BOP is separated from the NI, and does not fall under the 10 CFR 50.10(a)(1) criteria for construction, the BOP can be built prior to issuance of a Construction Permit.
  - Will apply to definition of construction in 10 CFR 51.4 as well.
- It is **not** a request to relax all NRC regulations or requirements applicable to the BOP.
  - The purpose of this topical report is to provide the methodology to allow Blue Energy to fabricate and install certain BOP SSCs prior to receipt of a Construction Permit or Limited Work Authorization.
  - If needed, specific exemptions will be requested pursuant to 10 CFR 50.12.

Our Strategy for BOP Resequencing

- Blue Energy specific design features intrinsically support separation.
  - Use of the Integrated Monopile System.
- NI-BOP Interface:
  - Physically separate;
  - Functionally separate; and
  - Programmatically separate.
- Combination of features and plant technology are used to demonstrate safe plant operations.
  - Separation of BOP SSCs also enhances plant safety and defense-in-depth.

NI and BOP Location



Key Design Requirements

- NI SSCs shall be exclusively relied upon to mitigate design basis accidents or transients.
- NI and BOP SSCs shall be clearly and programmatically separate.
- BOP SSCs shall not be credited for any safety-related functions to prevent or mitigate design basis transients and accidents, but may be considered for beyond design basis events and in probabilistic risk assessments.
  - BOP SSCs shall not be necessary for meeting security regulations, fire protection regulations, nor emergency planning/preparedness requirements.
- Failure or errant/intentional actuation of a BOP SSC shall not impair the NI's response to safely shutdown the reactor and maintain it in a safe shutdown state, nor result in a reactor trip of actuation of a safety-related SSC.

Methodology for Evaluating the Applicability of Construction Definition

- The site on which the NI will be built will have an environmental review performed by the NRC.
  - E.G. via an approved ESP, LWA, construction permit, or combined operating license.
- The facility design will meet the requirements defined in Section 2.0 of the topical report.
- Each criterion in 10 CFR 50.10(a)(1) will be evaluated to determine whether BOP SSCs meet any of the criteria.

Conclusion

- The topical report provides a methodology to determine BOP SSCs do not meet criteria for activities constituting construction per 10 CFR 50.10(a)(1).
  - If activities are not construction per 50.10(a)(1), they should not be construction as per 10 CFR 51.4.
  - If BOP SSCs meet any 10 CFR 50.10(a)(1) criterion, a specific exemption may be requested pursuant to 10 CFR 50.12.
- Successful implementation of the methodology allows for fabrication and installation of BOP SSCs prior to NRC authorization (e.g. via construction permit).
- Blue Energy will detail implementation of the methodology in a future licensing submittal to the NRC.