



# CARBON FREE POWER PROJECT UPDATE AUGUST 2022

# Nuscale Design Certification

- NRC recently announced it will issue the final rule that provides a Design Certification for NuScale's technology (for the 50 MWe, 12-pack design)
- This is a key milestone for NuScale and further formalizes the NRC's endorsement of the technology
- Note that the CFPP design is a different configuration than the Design Certification (50 vs. 77 MWe, 12 vs. 6-pack)
- CFPP is building upon the work that was the basis of the 50 MWe Design Certification, but we still have significant licensing effort to go (SDA, COLA)



The screenshot shows a news article from Nuclear Engineering International. The article title is "NRC certifies NuScale SMR for US use" and is dated "1 August 2022". It includes social media sharing icons for Google+, Facebook, Twitter, LinkedIn, and Email, along with a "Print" button. The main text of the article states: "The US Nuclear Regulatory Commission (NRC) has said that it directed staff to issue a final rule that certifies NuScale's small modular reactor (SMR) design for use in the United States. The certification's effective date is 30 days after the NRC publishes the rule in the Federal Register." It further explains that the certification means the design "meets the agency's applicable safety requirements" and that the combined licence application and NRC's safety review would address any remaining safety and environmental issues. A photo shows a large industrial reactor unit with two workers standing next to it. The article concludes by stating that NuScale submitted an application to NRC in December 2016 and that the design uses natural, "passive" processes such as convection and gravity in its operating systems and safety features, while producing up to approximately 600

# NuScale SPD and SDA Update

- Standard Plant Design (SPD) is on track for completion in Q4 2022
- Standard Design Application (SDA) submittal to the NRC is on schedule for a December 2022 submittal
- Licensing Topical Reports (LTR) are being reviewed by the NRC and are on track
  - Emergency Planning Zone LTR planned to receive Advisory Committee on Reactor Safeguards (ACRS) review by end of 2022

# Class 3 Estimate Update

- Class 3 Estimate (-20% / +30%) review and refinement continues
- EPC (Fluor)
  - CFPP visited Fluor Houston office on July 25-27 to kick-off face-to-face, deep-dive review meetings on EPC content
  - CFPP follow-up meetings with Fluor this week on August 16-17 in Houston
  - Focus areas included home office costs, indirect costs, productivities, basis of contingency
  - Conceptual design and budgetary bid processes were methodical and robust
  - Estimate is clearly reflective of Class 3 pedigree

# Class 3 Estimate Update

- OEM (NuScale)
  - Deep dive reviews occurred at NuScale offices August 1-4. Second set of face-to-face reviews likely to occur in late September.
  - Key take-away: ~90% of equipment estimates are supported by vendor estimates
  - Supply chain being refined – will likely include both domestic and international suppliers
  - Key areas of interest:
    - fabrication plan for large vessels
    - large reactor crane
    - FOAK components
    - NPM assembly details
    - vendor oversight approach
    - clarifying responsibilities after NPMs arrive on site

# Class 3 Estimate Update

- Owner's Cost
  - Collective CFPP effort
  - Conceptual designs & estimates complete
  - Gathering commercial estimates
    - Insurance, taxes, bonds/LOC, water acquisition, etc.
  - Captures interfaces between OEM, EPC & M&O
  - Refining home office staffing
  - Planning internal estimate review
- CFPP planning for PMC discussion in Sep-Oct

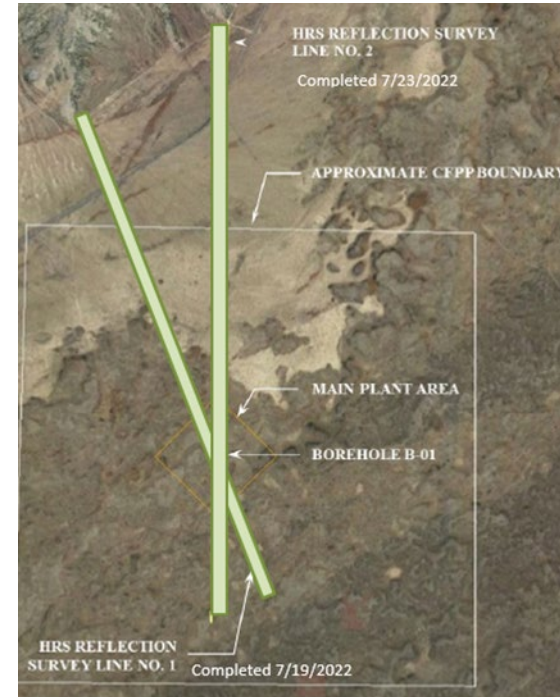
# Combined License Application (COLA) Update

- The COLA Project remains on schedule and slightly under budget
  - Cumulative progress at the end of July is 32.8% and aligns with the Re-baseline Plan.
  - Overall project Schedule Performance Index (SPI) is 1.01, and Cost Performance Index (CPI) is 1.05
- The COLA Review Process started in late July
  - The Certrec process for COLA Section/Chapters/Parts review in progress
  - CFPP and Xcel is reviewing the COLA in parallel with the Fluor Team

# CFPP Field Activities

July – Early August Field Activities:

- Team completed Seismic Reflection Surveys - 7/23/2022
- Performed monitoring well sampling on all 10 wells
- **All geological field investigations completed**
  - Environmental monitoring continues
    - Met Tower and Ground Water



Seismic Reflection Survey Lines Completed



Seismic Reflection Hammer Rig Activity



Well Sampling Activities



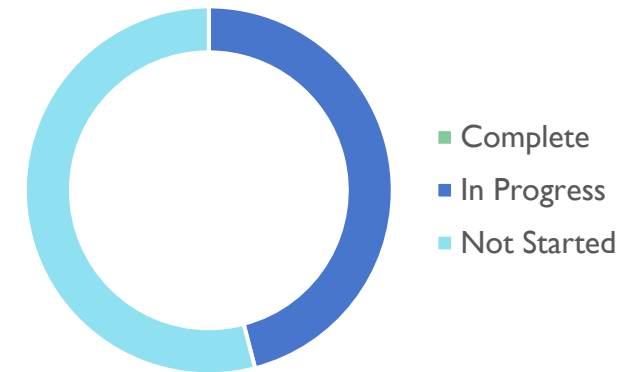
# XNES Operations Update

- Xcel Nuclear Energy Services (XNES) is continuing to add subject matter experts as required in the areas of operations, training, security, outage planning and emergency planning
- XNES is continuing to develop Operating Costs for the Class 3 Estimate
- Ready to Operate Plan (RTOP) – In XENS internal reviews – expect to issue this month
- Training Program Pathway (INPO or NRC)
  - Continuing XENS internal reviews
  - Will align with CFPP prior to any outside engagement

# Contracts Update

- OEM Contract – Progressing well through virtual meetings, with face-to-face meeting in Portland last week of August
- EPC Contract – Structured similarly to OEM Contract, so OEM negotiations support EPC Contract as well; will be finalized after OEM Contract
- M&O Contract – Progressing with regular ongoing engagement
- Integration Agreement – CFPP prepared draft under review by NuScale and Fluor
- Contract Exhibits and Attachments – Nearly 50% of contract exhibits are in draft development and review.

## All Exhibits



# International Visits

- Japan Bank for International Cooperation Visit - Aug 4
  - Visited CFPP Site – Observed Bore Holes & Overall Site
  - JBIC is a NuScale Investor
  - 7 JBIC representatives, plus other advisors
- ČEZ Group Visit to UAMPS/CFPP in SLC – Aug 18
  - 10 Representatives Planned
  - Czech Republic Utility Conglomerate – MOU with NuScale
    - Conglomerate of 96 companies, 72 of them in the Czech Republic
    - Core business: Generation, Distribution, Trade In, and Sales of Electricity and Heat
    - Currently operates the Dukovny and Temelin nuclear sites in the Czech Republic
    - Interested in building SMR on the Temelin site and then subsequently duplicate that deployment at 2-3 coal sites
- SNN - Romanian Visit to UAMPS/CFPP in SLC - Aug 31
  - Societatea Nationala Nuclearelectrica SA (SNN) – State owned Romanian nuclear energy company
  - Teaming Agreement with NuScale to Evaluate and Deploy SMR
  - Currently operate 2 nuclear plants at Cernavodă



Discussion of CFPP Site Characterization with JBIC