

July 2019 NuScale Power Business Update

NuScale Leading the Way in Advanced, Scalable SMR Nuclear Energy

NuScale Power is developing game-changing nuclear technology to produce electricity and process heat for a variety of industrial applications, including desalination for the production of clean water, to improve the quality of life for people around the world. With over 480 patents granted or pending in 20 countries, NuScale innovators are leading the way in advanced scalable SMR technology. At the heart of this technology is NuScale's small modular reactor (SMR). The factory-fabricated advanced nuclear technology brings together traditional components - the reactor vessel, steam generator, and high-pressure steel containment - into a single, simplified module. When coupled to its factory-fabricated power generation equipment, each module can produce 60 megawatts of electricity. A NuScale power plant can house up to 12 of these modules for a total output of 720 MWe (gross). The scalability of the modular design allows customers to increase facility output to match demand. NuScale's SMR builds on proven nuclear technology with a focus on integration and simplification. The end result is an economic, on-demand, carbon-free power solution offering unparalleled safety, flexibility, reliability and resiliency. NuScale has successfully completed nearly \$100M in system and component testing to verify the safety and functionality of their groundbreaking design. In March 2019, the Financial Times said NuScale was "the company that has made the most progress with an alternative approach" to traditional, large-scale nuclear reactor plants.

U.S. NRC Progresses into Phase 4 of Design Certification Review

In April 2018, the U.S. Nuclear Regulatory Commission (NRC) completed the first and most intensive phase of review for NuScale Power's design certification application (DCA). NuScale's is the first and only SMR to ever undergo NRC design certification review. On July 12, 2019, NuScale completed the second and third phases of review of the company's revolutionary SMR design. The development came six weeks ahead of schedule and maintains regulators' timeline for completing its review by September 2020. The entire review is now in Phase 4. The NuScale DCA review is on pace to be the NRC's fastest review ever, demonstrating the simplicity of the design and quality of the application.

Design approval within the targeted 42 months from docketing will support the first NuScale deployment

by the mid-2020s. As the only SMR technology under review by the NRC, we are well ahead of all other companies who may seek NRC approval. Following the completion of the Phase 1 review, the local NBC affiliate in Portland stated NuScale's technology "could change the world and bring billions of dollars to the United States, and the state of Oregon."

Also gaining much media attention was the NRC's approval in 2018 of NuScale's design approach demonstrating how no AC or DC electrical power would be needed to ensure safety. Because it's a requirement of all operating U.S. nuclear plants, this finding is a first for the nuclear industry and greatly increased domestic and foreign interest. As Forbes reported, "This is a big deal. It means the reactor just won't melt down or otherwise cause any of the nightmares people think about when imagining the worse for nuclear power...It just shuts down and cools off."

From a licensing perspective, NuScale signed a service agreement with the Canadian Nuclear Safety Commission (CNSC) to submit an application under the CNSC's vendor design review process in 2019. NuScale will make its first submittal by the end of 2019. NuScale has also been highly engaged in the British Government's SMR assessment and regulatory process review activities over the past few years. The company is well-positioned to see its technology deployed in the UK.

Making Good on Federal Commitments and Establishing a Track Record

In 2013, NuScale Power was selected as the sole winner of the second round of the U.S. Department of Energy's (DOE) competitively-bid, \$226 million, five-year financial assistance award to develop nuclear SMR technology. NuScale has completed the work and met its obligations under this award. In 2015, the DOE awarded an additional \$16.6 million to NuScale Power for the preparation of a Combined License Application (COLA) for NuScale's first customer, the Utah Associated Municipal Power Systems' (UAMPS) Carbon Free Power Project (CFPP). Work under this award continues.

In April 2018, in continued support, the DOE's Office of Nuclear Energy awarded NuScale \$40 million in cost-sharing financial assistance under its "U.S. Industry Opportunities for Advanced Nuclear Technology Development" funding opportunity. The federal award supports early-stage research and development and the industry's acceleration of these technologies to promote U.S. energy independence, energy dominance, electricity grid resiliency, national security, and clean baseload power. E&E News called NuScale "the most high profile of the 13 projects to receive funding this quarter." In December 2018, NuScale completed work under this award, including the on-time or early completion of all project milestones, demonstrating its ongoing commitment to effective program execution. NuScale received a second award in July 2018 from the DOE's Office of Nuclear Energy under the First-of-a-Kind (FOAK) Nuclear Demonstration Readiness Project pathway to support the next phase of the U.S. product realization effort required to bring the NuScale design to market.

Our First Customer is Moving Forward on the Carbon Free Power Project



Utah Associated Municipal Power Systems (UAMPS) is planning to deploy a NuScale 12-module reference plant in Idaho with commercial operation of the first module in 2026. UAMPS has selected a preferred site at the Idaho National Laboratory through a site-use agreement with the DOE. "[The] project to develop the next generation of nuclear reactor at Idaho National Laboratory (INL) is on schedule," reported the Idaho Business Review in February 2019.

UAMPS is a political subdivision of the State of Utah that provides comprehensive wholesale electric-energy, transmission, and other energy services, on a non-profit basis, to community-owned power systems throughout the Intermountain West. Its 46 members include public power utilities in six states: Utah, California, Idaho, Nevada, New Mexico, and Wyoming. The CFPP plant will offer immediate advantages to UAMPS members through safe, carbon-free energy, which will replace retiring coal generating assets. The project will provide high-quality jobs and economic development to the region, and serve as a catalyst for subsequent SMR projects throughout the West. In January 2019, the Idaho State Journal reported NuScale's "project during the construction phase would have a fiscal impact of over \$36 million and employ about 2,000 people."

In December 2017, UAMPS approved distribution of power sales contracts to the 34 UAMPS members considering participation in the CFPP. NuScale has

supported UAMPS throughout the year as it seeks sufficient commitments to move into the next phase of CFPP. On July 17, 2019, UAMPS announced that participating members had executed power sales contracts totaling more than 150 megawatts of subscription in the project, marking a significant milestone for the initiative which maintains its current schedule to begin construction in 2023.

Unprecedented Research Opportunities

In December 2018, UAMPS, the U.S. Department of Energy (DOE) and the Battelle Energy Alliance (BEA, the contractor managing DOE Idaho National Laboratory, INL-DOE) signed a Memorandum of Understanding to lease the first two NuScale Power Modules for DOE use. Through the Joint Use Modular Plant Program, INL-DOE would lease two of the NuScale Power Modules (NPMs) in the 12-module nuclear reactor, giving them an unprecedented opportunity to conduct research within an operating commercial reactor environment. The second NPM will also be used to meet INL-DOE's electricity demand. In response to DOE's participation in the CFPP with their use of the first two NPMs, several UAMPS members who did not participate in the original study are now considering executing Power Sales Contracts, and several non-UAMPS public power utilities and investor-owned utilities are considering participation in the CFPP.

Readying the Facility for Deployment

Supporting Project Development and Building the Supply Chain

NuScale continues to support the Tennessee Valley Authority's (TVA) Early Site Permit application, which seeks NRC approval to deploy an SMR at the Clinch River Site in Tennessee. In a major milestone for NuScale, a July 2018 NRC staff audit report found that an SMR plant at the Clinch River site based on the NuScale SMR design would meet the conditions for a site boundary-sized Emergency Protection Zone (EPZ). In late 2018, the Advisory Committee on Reactor Safeguards also recommended Early Site Permit approval with site boundary EPZ. And in April 2019, NRC staff concluded based on the final environmental impact statement that there would be no reason

that would preclude issuing an early site permit for the Clinch River Nuclear Site. These findings further demonstrate NuScale's exceptionally safe SMR design and ability to reduce overall plant risk. It also shows that – given the enhanced safety features of SMRs like NuScale's – the EPZ need not extend beyond the plant site boundary, making the technologies easier to license and increasing their cost competitiveness.

In September 2018, NuScale entered the manufacturing phase for the country's first SMR by selecting Virginia-based BWX Technologies, Inc. (BWXT) to start the engineering work to manufacture the NuScale Power Module™. The decision follows a rigorous 18-month selection process, with expressed interest from 83 companies based in 10 countries, to determine the best company to refine NuScale's design for manufacturability, assembly, and transportability. It marks the transition from design to reality and represents momentous progress in bringing NuScale's revolutionary advanced nuclear technology to market. BWXT has started work on this first manufacturing phase of NuScale's SMR, which we expect will continue through June 2020. NuScale will contract for the remaining two phases, preparation for fabrication then fabrication, at a later date. BWXT expects to use Pennsylvania-based Precision Custom Components as a component manufacturing contractor on this project.



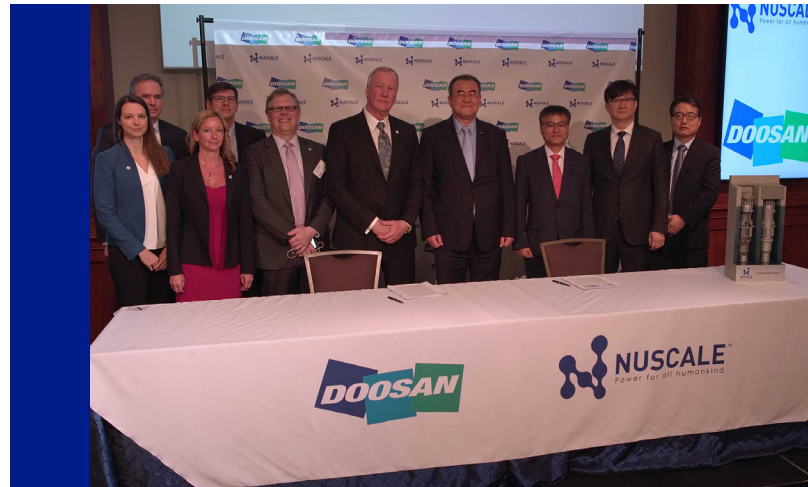
NuScale is working to extend its supply chain network. In 2018, NuScale signed the first contract with Concurrent Technologies Corporation (CTC) as the operator of the newly established Center for Advanced Nuclear Manufacturing (CANM). The contract covers prototyping advanced manufacturing processes for

NuScale's innovative helical coil steam generators. The concept for CANM was endorsed by a working group of the U.S. Nuclear Infrastructure Council as an advanced manufacturing research center. The Center's mission to apply advanced manufacturing approaches to SMR innovations fills an important gap needed to transition research and development to the shop floor, while maintaining cost efficiency and the highest quality standards. The first phase of this contract, prototypic steam generator tube procurement and tube bending demonstration, was successfully executed. Future work is currently being planned in concert with the NuScale NPM supplier, BWXT.

In November 2018, NuScale announced the selection of Minnesota-based PaR Systems, LLC to begin engineering work for the manufacturing of its Reactor Building Crane (RBC), an important element of NuScale's innovative nuclear plant design. The announcement, which followed an intensive selection process involving several major U.S. nuclear crane suppliers, continues to demonstrate NuScale's preparation for its first operational plant in Idaho by the mid-2020s.

In January 2019, NuScale and Ultra Electronics unveiled a new safety display and indication system using field programmable gate array (FPGA) technology that represents the first application of FPGA technology for real time display and monitoring in the U.S. commercial nuclear industry. The display system shows critical safety plant data in high resolution, high fidelity graphics for each of a NuScale plant's 12 power modules, with dedicated displays for each reactor. Building upon the development of the Module Protection System, the safety display and indication system is the next step in how NuScale is re-imagining nuclear instrumentation and control systems in partnership with Ultra's Texas-based subsidiary team.

To further expand our growing supply chain, in April, NuScale announced it had signed an MOU with Doosan Heavy Industries and Construction (DHIC), a division of the Doosan Group. Under the agreement, which closed on July 31, DHIC - a world-renowned nuclear pressure vessel manufacturer - will build a portion of the most critical and complex NPM sub assemblies for the forthcoming UAMPS plant, which is expected to begin operation in 2026. DHIC will also make a cash investment in NuScale. Ed McGinnis, DOE's principal



deputy assistant secretary for nuclear energy, called the announcement a "recognition that the U.S. nuclear reactor community is really taking its position in the global market."

In May, NuScale unveiled a strategic relationship with Sargent & Lundy - a global leader in power engineering - to support deployment of the NPM. As part of the agreement, Sargent & Lundy will become an investor in NuScale and will contribute to development of NuScale's standard plant design in addition to providing architect engineer support as needed. The deal was finalized on July 31.

NuScale has also used its Concept of Operations to inform the design through the performance of Integrated Systems Validation (ISV) tests. This is the first time a U.S. nuclear plant supplier has performed an ISV during the design certification phase, and it will contribute to NuScale's strategy of providing customers with a plant that is designed for operational excellence.

Ensuring Cost-Effective Resiliency

At the American Nuclear Society (ANS) Annual Meeting in June 2018, NuScale Co-founder and Chief Technology Officer Dr. Jose Reyes presented results of a collection of landmark NuScale resiliency studies proving NuScale's SMR design is more resilient than any currently operating reactor. The findings indicate the design's impressive resilience to a variety of



events, including loss of off-site power. The studies also demonstrated the design's ability to provide first responder power. NuScale also successfully completed its electromagnetic pulses (EMP)/Geomagnetic Disturbance (GMD) study showing a new level of resilience to Electromagnetic Pulse events, leading Forbes to write that NuScale "has made their reactor resistant to EMP and most other reactor designs should follow." The set of resilience features offered by the NuScale design represent a major advancement in both nuclear and non-nuclear power generation; essential to climate adaptation and energy security.

Also in June 2018, NuScale Power announced its SMR can generate 20 percent more power than originally planned. Advanced testing and modeling tools helped NuScale identify optimization opportunities and increased power generation. Increasing the power generating capacity of a 12-module NuScale SMR plant by 20 percent, with very minimal change in capital costs, lowers the cost of the facility on a per kilowatt basis from an expected \$5,000 to approximately \$4,200. It also lowers NuScale's levelized cost of electricity by up to 18 percent, making it even more competitive with other electricity generation sources.

In December 2018, Renewable and Sustainable Energy Reviews published a new study that found "strong evidence" that SMRs can be economically competitive while yielding significant benefits in terms of reducing carbon emissions, which continued to highlight NuScale's cost-effective resiliency. The study found that total capitalized cost of a 12-module NuScale plant brings savings of nearly \$4 billion over the reference plant, and that NuScale's SMR design yields lower costs per kW with increased safety features, reduced construction times, and lower associated financing costs.

Supporting Climate Goals

NuScale's power plants emit little to no greenhouse gas during operation and life cycle. Given recent legislative developments, like the California law requiring 100% zero-carbon electricity by 2045, SMRs will have a key role to play in achieving these goals. This view is supported by an MIT study released in September 2018, which shows that combatting climate change will be difficult and expensive if nuclear energy is not included in the energy mix, and that without nuclear energy, deep decarbonization goals

will be significantly more expensive to achieve. The MIT study lauds the importance of advanced nuclear technology and notes that "the SMR design being offered by NuScale Power is the most mature concept in this technology space."

Meeting the Needs of an Emerging Global Market

NuScale estimates the global SMR market to be more than \$100 billion by 2035, based on best-case estimates by the Nuclear Energy Agency. In addition to focusing on other business development in the U.S., there are promising opportunities internationally. Publicity surrounding the advanced state of the NuScale plant design has resulted in more potential customers reaching out to NuScale. As a result, NuScale is exploring opportunities in the United Kingdom, Canada, Eastern Europe, Southeast Asia, Africa, and the Middle East.

In November 2018, NuScale announced a memorandum of understanding (MOU) with Ontario Power Generation Inc., Ontario's public electricity generator, who has agreed to support NuScale in its vendor design review (VDR) with the Canadian Nuclear Safety Commission. "The agreement brings NuScale a strong ally in its efforts to bring its technology to market fruition in Canada," Nuclear Street wrote. Later that month, NuScale also announced an MOU with Bruce Power L.P., Canada's first private nuclear generator, to develop a business case to introduce NuScale's SMR to the Canadian market. "Although NuScale's first customer is in the United States, the company anticipates the global demand for its product will have a positive economic impact on the country and will bring many new jobs to Oregon," the DOE Science News Source wrote. "NuScale already supports more than 400 families in Oregon, all working toward the goal of producing clean energy to power a brighter future for the world," the DOE Science News Source exclaimed.

In January 2019, NuScale also announced that it had signed an MOU with the Jordan Atomic Energy Commission (JAEC) to evaluate NuScale's SMR nuclear power plant for use in Jordan. "NuScale is at the forefront of U.S. SMR Technology," said H.E. Dr. Khaled Toukan, JAEC Chairman. "We look forward to this collaboration to assess the viability and potential for

deployment of NuScale SMR Technology in Jordan.”

In March 2019, NuScale announced a similar agreement with Societatea Nationala Nuclearelectrica SA – Romania’s leading nuclear energy provider – to



explore applications for NuScale’s SMR technology as a long-term energy solution for Romania. Energy Secretary Rick Perry lauded the agreement, saying DOE was “enthusiastic about the possibilities for the future and being on the cutting edge of nuclear

generation technology.”

As NuScale prepares for commercialization of our SMR design, we are also continuing to develop new private sector partnerships to leverage emerging technologies and accelerate innovation in our own products. To that end, in May, NuScale announced the signing of an MOU with Enfission, LLC, a joint venture of Lightbridge Corp. and Framatome, to explore the use of next-generation nuclear fuel technology in NuScale’s small modular reactors. While NuScale’s plant design is already the most resilient nuclear reactor in the world, Lightbridge’s Fuel™ could spur improvements in core design, performance, and leveled costs of electricity.

availability of production tax credits to benefit future SMR Projects, sponsored commercial nuclear trade missions, approved budgets strongly supportive of SMRs, and extended availability of the nuclear loan guarantee program. In September 2018, the Nuclear Energy Innovation Capabilities Act, a bill supporting advanced nuclear energy technologies, was passed by Congress, another sign of continued support for advanced nuclear technology. More recently, in October, Congress passed the Better Utilization of Investment Leading to Development (or BUILD Act), a bipartisan bill creating a new U.S. development agency—the U.S. International Development Finance Corporation (USIDFC). The Act will help increase U.S. company’s competitiveness overseas. Additionally, in March 2019, Sens. Lisa Murkowski (R-AK) and Joe Manchin (D-WV) introduced the Nuclear Energy Leadership Act (NELA), legislation that will ensure that the United States remains a global leader in clean, advanced nuclear technology, fostering closer collaboration between the federal government, our national labs, and private industry to accelerate innovation. The bill was introduced by Reps. Elaine Luria (D-VA) and Denver Riggleman (R-VA) in the House in June 2019. NuScale continues to work to secure the benefits of these policies, legislation, and federal funding to help achieve our objectives.

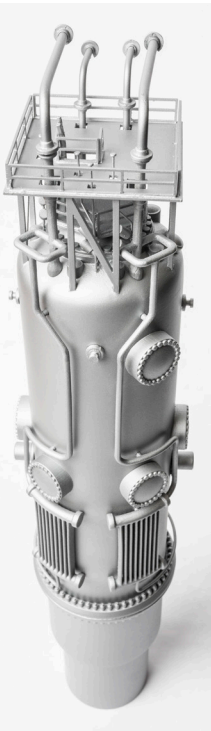
NuScale’s Work Benefitting the Industry

NuScale’s pioneering work creates benefits beyond the company’s bottom line, so investments in NuScale are already helping to advance the industry as a whole. Benefits to multiple industries as a result of NuScale’s efforts include:

- *Other companies are already reaping the benefits of NuScale’s Highly Integrated Protection System (HIPS) Platform.* NuScale co-developed HIPS, an instrumentation and control protection system platform, with technology company Rock Creek Innovations. Rock Creek, as the co-developer of HIPS, has been selected by Wisconsin-based Shine Medical Technologies to implement HIPS technology at its medical isotope production facility. For NuScale, HIPS was developed as part of the technology submitted in our DCA for our advanced nuclear reactor.

Continued U.S. Government Support

The combination of the economic benefits of export job creation and support for advancing national security U.S. non-proliferation objectives, meets the Administration’s policy of maintaining U.S. commercial nuclear energy dominance. NuScale also has strong bipartisan and bicameral support in the U.S. Congress. In early 2018, the federal government extended the



- *NuScale advises the Nuclear Energy Institute’s advanced reactors working group (ARWG) and the WNA’s CORDEL SMR Task Force (chaired by NuScale) by sharing lessons learned from the DCA licensing status. Both these organizations help streamline the design review processes of other advanced technologies. NuScale’s Regulatory Affairs team shares its experience with 50 members of the ARWG, including advanced reactor vendors, NEI, DOE, national labs, Platts, and the NRC. Attendees agreed that many of the NuScale licensing actions and accomplishments are directly applicable to non-LWR designs.*
- *NuScale is also working with TVA in a joint effort to support NRC rulemaking in site security. A consequence-based approach that takes advantage of the inherent safety of the NuScale*

design has the potential to significantly reduce security staffing and related requirements as compared to existing plant designs.

Rebranding for the Future

In July 2018, NuScale rolled out new branding which exemplifies who we are, what we do, and why we do it. Our new slogan, “Changing the Power that Changes the World,” is a testament to our mission to improve the quality of life for humankind by continuously improving nuclear power. Please take a moment to watch our video, which also can be found on our redesigned website.