

Infra Dig Podcast – NuScale Power and SMRs

Angus Leslie Melville

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As governments around the world look to secure low-carbon baseload energy and nail down security of supply, small modular reactors (SMR) are going to feature increasingly on agendas as they move from drawing board to implementation.

In the latest podcast in the Infra Dig series (lasting a little more than 28 minutes), *IJGlobal* editorial director Angus Leslie Melville speaks to Chris Colbert – Portland, Oregon-based chief strategy officer and CFO at NuScale Power – about his company’s plans in this burgeoning sector.

The first NuScale SMR power plant is planned for Idaho Falls in the US and it will serve as a front-runner for the Carbon Free Power Project (CFPP), an initiative spearheaded by Utah Associated Municipal Power Systems (UAMPS). The VOYGRM SMR is slated to start generating power in Utah in 2029, with the remaining modules coming online for full plant operation by 2030.

UAMPS launched the CFPP in 2015 and that August the US Department of Energy (DOE) awarded \$16.6 million in cost-shared funding to NuScale for the preparation of a combined license application (COLA) with the plant to be built near the Idaho National Laboratory (INL).

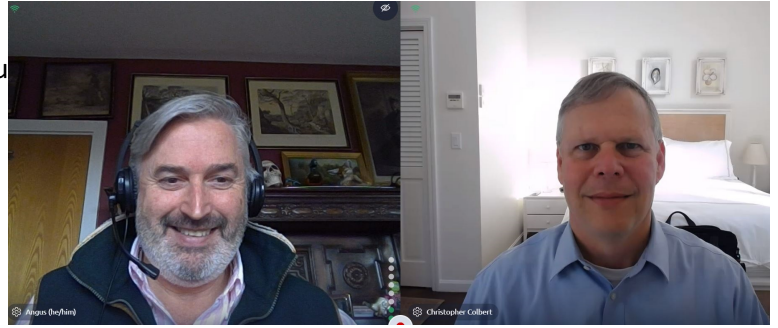
The DOE in October 2020 approved a \$1.355 billion, multi-year cost-share award to UAMPS to fund development and construction of the CFPP.

Bringing it up to date, UAMPS and NuScale in January 2021 executed agreements to help manage and de-risk the development of the CFPP. Fluor Corporation and NuScale – as a subcontractor to Fluor – are developing higher maturity cost estimates and initial project planning work for the licensing, manufacturing, and construction of the CFPP. These agreements are an important step in a deployment plan that is expected to result in the order of NuScale Power Modules by UAMPS this year (2022).

The podcast

In a wide-ranging discussion over the potential for SMR technology, Chris Colbert runs the listener through the units where each one weighs in at 77MW, which can be built out to 12x which amounts to 924MW.

“NuScale is developing an advanced small modular reactor – by definition, anything less than 300MW electric gets you into the club – and we are basing ours on a proven light water reactor technology that has been in broad use and application over the last 50 years,” says Chris (pictured right/right), who has a background in coal- and gas-fired.



“As the name implies, we have made it smaller and modular so we can build them in a factory and then deliver them to the site. When they are ready for installation into the facility, they can begin producing power very quickly after installation.

“It is very much a different kind of mindset in terms of how large, traditional plants are done... but it also has the advantage that – by dint of being smaller and simpler – we are actually much safer as well, and much more flexible in our ability to more than just produce base load electricity.”

And given that NuScale SMRs cost anywhere between \$2 billion and \$3.3 billion, this definitely falls into the world of project finance... a lot more so than the \$20 billion needed for larger plants.

Chris says: “Clearly with a first-of-a-kind plant being done at UAMPS – at the Idaho National Laboratory – that is going to be financed by a combination of Department of Energy cost-share awards for first deployment, but the bulk of it will be financed by the issuance of municipal bonds.

“They are very comfortable with their ability to raise that capital because it will be a municipal bond financing based upon revenues from multiple utilities that are participating in the project overall.

“For that first one, we have a plan for it. For subsequent plants, we are looking at a lot of things overseas and we have engaged with the US export agency US Ex-Im, the US Development Finance Corp has issued letters of interest in several of our projects. So that is providing us with the anchor for that financing going forward.

“Based on our discussions with people in the private sector – within equity – there is a strong level of interest in investing in long-term, carbon-free infrastructure.”

Chris goes on to discuss how developments are bringing nuclear firmly into the realms of project finance and maps out NuScale Power’s plans to drive adoption of its technology around the world.

Infra Dig

This is the seventh podcast in the Infra Dig series. *IJGlobal* has already broadcast:

- [The PPP Risk Game](#) – insurance specialist Warren Beardall talks about project risk
- [The GI Hub Fireside Chat](#) – Global Infrastructure Hub chief executive Marie Lam-Frendo talks about the organisation’s mission
- series of interviews with Dr Tim Stone CBE on nuclear energy:
 - [first episode](#) – Going Nuclear with Dr Tim Stone (an overview)
 - [second episode](#) – Financing Nuclear
 - [third episode](#) – Ukraine, AMRs and energy security
- [Dixon of Energy Green](#) – fireside chat with Ian Dixon on renewable energy and Net Zero ambitions



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