Adapting proven fuel technology for SMR operations

AREVA and NuScale Power, LLC have worked together to develop the fuel needed to power the NuScale Small Modular Reactor (SMR). Off-the-shelf components have been utilized to allow full reliance on existing operating experience to minimize fuel performance uncertainties.

Robust HTP™ Technology

The HTP™ spacer grid technology is an ideal platform for an SMR operating with natural circulation flow. It combines low pressure drop with robust mechanical strength and seismic resilience to assure reliable fuel performance in this new reactor type. Over 20,000 HTP™ fuel assemblies have been delivered to a wide range of PWRs in 11 countries.

Features and Benefits

- Robust and proven structural components
- HTP™ strong and resilient spacer grids
- M5® high performance fuel rod cladding
- Low pressure drop for natural circulation

The NuScale SMR will utilize a core of 37 fuel bundles

The fuel uses an established 17x17 fuel rod array with 24 guide tubes
All components of the fuel assembly are already in reload use for PWRs

Fuel Rod Assembly

Top Nozzle Assembly

HTP™ Spacer Grid

HMP™ Spacer Grid

Bottom Nozzle Assembly

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