



Global Nuclear Fuel

GNF ATF Program

NRC RIC ATF Readiness Session
March 9, 2022

Rich Augi
BWR Fuel Product Director



GNF ATF Program

ARMOR-Coated Zirconium to increase safety

- Continuing to develop coating for future LTAs

IronClad-Advanced Cladding material to provide safety margin

- In reactor testing continues, plan for pre-production prototype

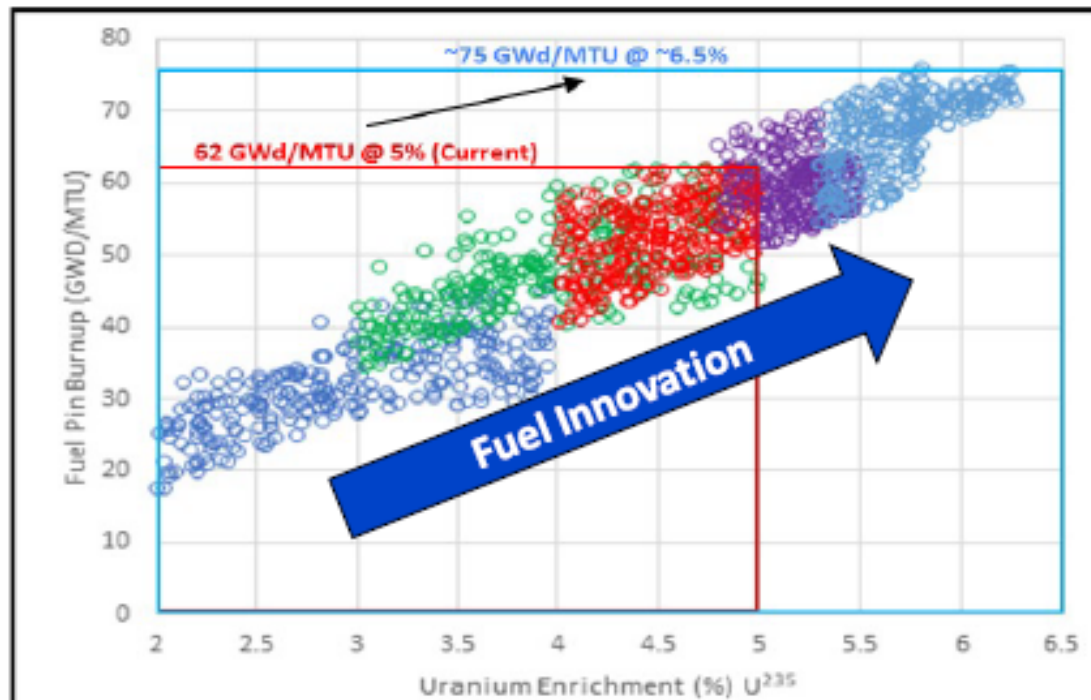
LEU+/HBU-enabling advanced designs

- Factory licensing effort, planned 2022 submittal
- Facility modifications in-progress
- Shipping container licensing, planned 2022 submittal
- Advanced methods licensing, submittals started in 2021



IronClad Producibility at Scale Demonstrated

LEU+ and Higher Burnups Open the Design Box Enables Future Products



Source: U.S. DOE GC-859 "Nuclear Fuel Data Survey" database converted to peak pin burnup using typical peaking factors and extrapolated to higher burnups and enrichments

"About 25 years ago, we increased enrichments from 4.0 to 5.0 percent. I'm not sure we could have predicted how that would impact the future, but I cannot imagine a world that is limited to 4 percent. I expect our future selves will say the same thing about LEU+"

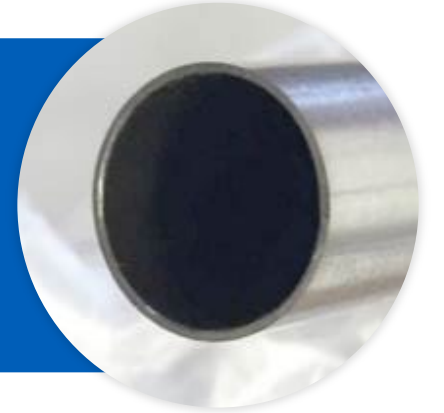
Russ Fawcett, Consulting Engineer Guru and Ultimate Fuel Cycle Think Tank, 2021

ACCIDENT TOLERANT FUEL

Advanced Cladding (ARMOR Coated Zirc, IronClad), Advanced Engineering and Advanced Pellets

When accident severity is decreased with ATF..the burden on safety systems, operators, and emergency response systems can be reduced.

ATF has motivated an engineering adjacency utilizing higher enrichment and higher burnup ..flexible operation &-lower fuel costs can be achieved.



ENHANCED OVERALL SAFETY WHILE ENLARGING THE DESIGN SPACE AND SAVING O&M COSTS IS A GAME CHANGER FOR THE NUCLEAR INDUSTRY!