credibility of the U.K. supply chain to support programs and leverage greater commercial exploitation of domestic and global nuclear markets.

Cost reduction: Seek to reduce the costs of the future nuclear life cycle.

Collaboration: Increase engagement with key international partnerships and seek to leverage synergies with bilateral and multilateral programs.

The following provides further details on some of the work under the AFCP on advanced fuels and advanced fuel recycling.

Advanced fuels

Advanced fuels development focuses on making safer and more economic fuels for current and future reactors, which is crucial if the United Kingdom is to retain an indigenous fuel manufacture capability. However, it is recognized that new fuel development is a significant undertaking in terms of time and cost. The route to market is over 10 years in duration and costs in the tens of millions. Therefore, the United Kingdom is investing now to ensure that the fuels of the future are available to underpin U.K. nuclear ambitions. It is also recognized that international collaboration is essential to support and enable fuel development and manufacture in the United Kingdom.

The current U.K. AFCP focuses on three fuel types: accident tolerant (or advanced technology) fuels (ATF), coated particle fuels, and fast reactor fuels.

■ *Accident tolerant fuels*: To develop fuels with improved safety, performance, and efficiency. Innovation is focused on developing, fabricating, and irradiating test fuel and cladding toward commercial products.

ATFs are now being defined as fuels that combine accident tolerance, i.e., improved behavior during a severe accident (design basis and beyond design basis), with properties that reduce the number of fuel failures and increase the reactor's capacity factor.

The ATF program in the United Kingdom has been aligned with the Westinghouse EnCore ATF products through its subsidiary Springfields Fuels Limited, as it is the only fuel vendor with an operational fuel manufacturing site in the United Kingdom. Westinghouse and its network of partners have developed EnCore fuel with support from the U.S. Department of Energy's Accident Tolerant Fuel Program. Through U.K. government investment in the AFCP, the United Kingdom is able to align with the Westinghouse program, which provides significant leverage on the U.K. public investment.

The ATF program is focusing on three areas:

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