uranium enrichment technologies-Centrus's American Centrifuge, which is producing small quantities of high-assay low-enriched uranium for power reactors, and ORNL's DUECE, which the NNSA hopes could supply the low-enriched uranium it needs for a supply of tritium and the high-enriched uranium it needs to fuel naval reactors.

Enriched uranium can be used for nuclear power and all its societal benefits, as well as for nuclear weapons, and U.S. policy and international agreements require that any uranium used for weapons purposes—including the LEU used to produce tritium to maintain the nation's nuclear deterrent-be "unobligated," or free of peaceful use restrictions. That requires that U.S.-origin uranium be enriched domestically, using technology developed in the United States.

Previously, that unobligated uranium was enriched using the gaseous diffusion technology first deployed in Oak Ridge, Tenn., during the Manhattan Project. The Paducah gaseous diffusion plant was the last of its kind, built in Kentucky in 1952 and shut down in 2013 after years of supplying uranium for national security needs and commercial nuclear power plants. It has yet to be replaced with a more efficient technology developed in the United States.

ORNL has developed and managed DUECE for the NNSA's Domestic Uranium Enrichment (DUE) program since 2016. The scope of work for the Domestic Uranium Enrichment Pilot Plant Options Study is "to ensure future national security production capability by leveraging the pilot plant for future HEU production use and

Continued





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