Summary of the Statement of
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Subcommittee on Reactor and Fuel Cycle Technology

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As it has done for decades, the U.S. nuclear industry has the potential to lead in the innovation of the next generation of nuclear technologies – new technologies to enrich uranium; to generate safe, clean, reliable electricity; and to recycle used nuclear fuel.

GE Hitachi Nuclear Energy, a global alliance formed by GE and Hitachi, is prepared to offer these new technologies to customers around the world. However, as is often the case in the nuclear industry, government policy is the key to success.

In order to meet the demands of the predicted worldwide growth in the nuclear industry, we believe that the U.S. should adopt a national policy to **recycle** used nuclear fuel.

Full recycling takes used nuclear fuel and separates the usable uranium and transuranics using a molten salt bath and electricity. The recovered uranium and transuranics are then used as fuel for Generation IV reactors, thereby generating electricity from nuclear waste. The remaining fission product wastes are placed into ceramic and metal alloy, which require safe storage for just a few hundred years. Because no pure plutonium is extracted, the proliferation risks are minimized.

This process is preferred to other solutions for several reasons including, 1) reducing the required storage time to 300-500 years; 2) extracting greater than 93 percent of the available energy from uranium ore (as compared to the one percent currently extracted and the two percent extracted in reprocessing); 3) minimizing proliferation concerns by not separating plutonium from the other actinides; and 4) eliminating the need for government support after commercialization

By recommending adoption of advanced recycling technology, the Blue Ribbon Commission can help ensure U.S. technological leadership and enhanced energy security – and help address the difficult policy challenge of nuclear fuel management in an intelligent, pragmatic way. It will also enable the development of a new segment of the industry that the U.S. can export around the globe to promote the safe handling of commercial nuclear material.