

**THE PRODUCTION AND DELIVERY OF INERTIAL FUSION ENERGY  
POWER PLANT FUEL: THE CRYOGENIC TARGET\***

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The High Average Laser Program (HAPL), based at the Naval Research Laboratory (NRL) in Washington, D.C., is pursuing an injected, all-systems approach to Inertial Fusion Energy (IFE) with lasers. Various systems that would be involved in an IFE power plant, such as the Laser drivers, cryogenic target design, target production, target delivery into the vacuum vessel chamber, chamber design, and chamber materials to name a few, are all being developed in parallel at various laboratories, universities, and companies across the U.S. While all such systems in an IFE power plant are essential, at the heart of the energy production is the fuel, the cryogenic target. The emphasis at General Atomics is the development of cryogenic targets within physics specifications, the mass production of targets, and the delivery of the targets to the center of the vacuum vessel chamber within tight tolerances.

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