

## Development of the LIFE Concept and Commercial Delivery Plan – A Systems Perspective

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### With Guest Lecturer Mr. Tom Anklam

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The National Ignition Facility (NIF), the world's largest and most energetic laser system, is now fully operational at Lawrence Livermore National Laboratory. The NIF's 192 beams deliver 1.8-megajoule, 500-terawatt, ultraviolet laser light in highly reproducible and precisely controlled conditions. This capability represents over 60 times more energy than any previous laser system. In this talk, we discuss recent work on the development of a commercialization roadmap to deliver laser inertial fusion energy (LIFE) to the marketplace. This requires a systems approach that addresses economic, financial, concept of operations, supply chain and regulatory issues as well as meeting the technology challenges. We will describe how systems analysis tools are being used to perform design tradeoff and optimization studies and will describe how structured engagements with a very broad group of stakeholders is key to development of top level power plant requirements.



Mr. Tom Anklam

### Abridged Biography:

Tom Anklam is Deputy Director for Laser Inertial Fusion Energy (LIFE) at Lawrence Livermore National Laboratory. In his role, Mr. Anklam leads the development of the LIFE systems design concept and has overall responsibility for the development of LIFE commercialization plan. Prior to this, Mr. Anklam led technology development for the Atomic Vapor Laser Isotope Separation Program. He played a lead role in establishing the Stockpile Surveillance Program at LLNL and received two Defense Programs Awards of Excellence for work in this area. Most recently, Mr. Anklam served as the Laboratory's Chief Mechanical Engineer where he was responsible for the Laboratory's engineering standards and practices, as well as workforce development for the Laboratory's 600-plus engineers. His degrees are in nuclear and mechanical engineering and he is a National Security Fellow at the Bush School of Government and Public Service.

