

## New Lattice Confinement Fusion Power Reactors May Eliminate 95% of SNF

Chapman Nuclear, Inc. is a third generation nuclear company focused on power generation, shielding, and construction. For over 70 years, our family has served as champions and good stewards for the nuclear industry while on the cutting edge of innovation.



*Chapman Nuclear CEO –  
John Eric Chapman*

Chapman Nuclear is spearheading research and development efforts in fusion technology for the energy sector, leveraging cutting-edge, yet proven, advancements in lattice confinement to achieve sustainable and reliable fusion reactors. One of the Company's flagship initiatives is our partnership with Astral Neutronics, Ltd. to bring this practical fusion methodology to the commercial power sector.

Currently, Chapman Nuclear is funded in part by Contensol, Inc. which has brought several industrial patents to market over the past decade.

By utilizing the new lattice confinement approach to fusion, Chapman Nuclear reactors can use the heat generated from nuclear reactions to aid in the pre-processing of natural gas into hydrogen.

Central to the Chapman Nuclear mission is the commitment to sustainability and safety in nuclear fusion technology. Chapman Nuclear is creating sustainable sub-critical fusion reactors which are inherently safe. Chapman Nuclear Reactors ("CNRs") have no risk of super-criticality events as they rely on self-limiting processes and contain only small amounts of fuel at any given time.

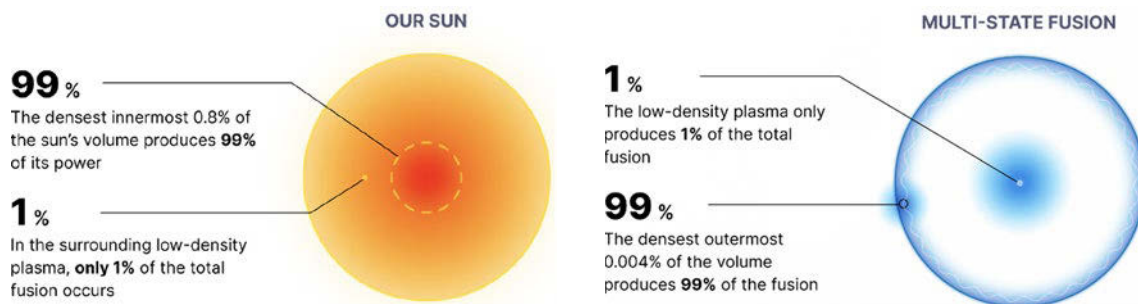
Avoiding the marketability issues associated with conventional fusion reactors, Chapman Nuclear aims to quickly bring readily available technology and fuels into power production.

We believe the goal of any power company should be to bring the most affordable and reliable energy to its consumers, without exception. With this objective in mind, Chapman Nuclear has successfully accelerated innovation and scaled operations through its collaborations and partnerships with companies, organizations, governments, and research institutions throughout the world.



*Astral Neutronics CEO Talmon Firestone,  
Dr. Tom Wallace-Smith, and Dr. Mahmoud Bakr  
in the Winfrith Laboratory.*

Lattice Confinement Fusion (“LCF”), recently proven by NASA, creates an abundant and reliable number of fusion neutrons which can be used to burn fissile fuel, transmute waste, or create medical isotopes.

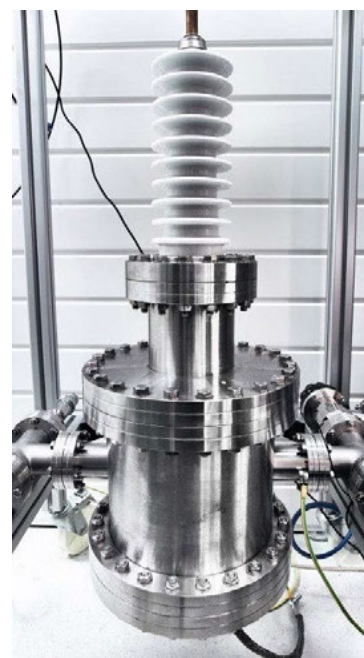


Unlike other forms of fusion, LCF is readily available and relatively inexpensive to build and operate. LCF reactors have the longest lasting fuel supply and can operate for years without refuelling. The feasibility, reliability, and longevity of this energy production method sets it apart from every other method in the market.

LCF reactors are already being deployed for medical isotope production in the UK and more are scheduled to be built in the USA over the next few years.

Rather than using these fusion neutrons to create medical isotopes, Chapman Nuclear is pioneering the design and construction of a hybrid fission and fusion reactors to eliminate waste and provide rapidly deployable microgrid systems.

CNRs can effectively eliminate 95% of the Spent Nuclear Fuel (“SNF”) compared to a traditional fissile nuclear reactor. Utilizing fusion neutrons to shine onto fissile fuel creates heat. This heat can be used for a variety of processes—most importantly: splitting methane into carbon and hydrogen. Rather than using this heat to create steam for electricity, Chapman Nuclear’s approach is to use the heat generated to create hydrogen! When hydrogen serves as the bulk of the electricity production, much less thermal energy is required from the nuclear side of a plant. This, in turn, can greatly reduce the SNF created per kW-hr.



*Astral Neutronics patented LCF neutron generator*

Chapman Nuclear is actively seeking suppliers, methane producers, and other corporate partnerships to deploy its fleet of CNRs. Our goal is to start the planning and construction of one plant per U.S. state by 2030.

Chapman Nuclear wishes to congratulate Dr. Hashemian on his new appointment as ANS vice president/president-elect and thank him for giving Chapman Nuclear’s founder, John Chapman, his first job in the industry while still in college at the University of Tennessee. Without Dr. Hashemian’s support and guidance, Chapman Nuclear may never have come to fruition.