



Thorium Molten-Salt Reactor Program Receives Legislative Attention

Last week, the House of Representatives released a markup of the [2022 ENERGY AND WATER DEVELOPMENT AND RELATED AGENCIES APPROPRIATIONS BILL](#), which contained an extremely exciting paragraph buried deep within. The bill itself contains wide ranging topics dealing with energy and water policies and how much to spend on each. The paragraph that has us excited outlines a provision to report on the current state of any domestic Thorium Fueled Molten-Salt Reactor (TMSR) program and for suggestions and considerations be made available to Congress to determine how to proceed with developing a TMSR program. Interestingly, the draft also mentions the U-233 supply, a matter of great interest for anyone concerned with the future of nuclear energy and nuclear medicine in the U.S.



The section that promotes thorium molten-salt reactors is as follows verbatim:

"Thorium Molten-Salt Reactor Program.—*The Committee is aware of both interest in and concerns with thorium molten-salt reactors (TMSR). The Department is directed to provide to the Committee not later than 90 days after enactment of this Act a report indicating whether the Department is working with any other nations to develop TMSR programs. The report should also include suggestions and considerations for Congress regarding the development of a domestic TMSR program, including the potential benefits and challenges of the technology, necessary infrastructure investments, fuel cycle considerations, proliferation issues, and the potential for using the federal U-233 supply and any resulting impacts to cleanup milestones or costs of cleanup or security activities related to the supply."*

Overall, this mention shows that our past efforts have been successful in bringing legislative attention to Thorium and MSR as a real and effective means to reducing climate change through the lowering of greenhouse gas emissions. Some of our congressional staffer outreach has paid dividends as we also saw in the [Energy Act of 2020](#).

Although this is a step forward, a mere mention to perform a study in a markup of a House bill does not mean we are anywhere near a successful outcome on any metric. We, as a group, need to show our support for this to our political leaders and decision makers. We need to let them know we want to see this through to real reactors making carbon free energy.

In related news concerning our stockpile of U-233, please watch this excellent video done by Gordon McDowell on the oft criticized and poorly run U-233 downblending program. This critical supply is necessary to maintain and utilize if we want to lead the world in nuclear medicines, advanced materials and of course, Next Generation Nuclear Fuels. Energy Secretary Granholm and the decision makers within the DoE-NE need to reverse the short-sighted and costly plan to destroy this critical resource.



Dr. Kun Chen working with ThorCon, Releases Webinar Series

ThorCon has been working with the Indonesian government to add reliable electric power to the grid. In 2019, the Ministry of Energy successfully completed a study of the safety, economics, and grid impact of the 500 MW prototype ThorConIsle. Just last week, Dr. Chen and ThorCon have released a 3 part webinar series on YouTube detailing the Technology Design, Safety, Neutronics, and Thermohydraulics of their design. This series is a tremendous resource and gets into deep detail on MSR design and development. You can watch the first three webinars of the complete series here ([Webinar #1](#), [Webinar #2](#), [Webinar #3](#)) or the introductory video embedded below. More videos will be posted as Dr. Chen and ThorCon move forward with the series.

Inside the Can	
Output	557 MWth
Fuel	NaF-B _e F ₂ -ZrF ₄ -UF ₄ -ThF ₄
Enrichment	19.75%
Moderator	Graphite
Structure	Stainless Steel
Outlet T	704 C
Inlet T	576 C
Fuel Boiling T	~1400 C
Fuel Liquidus T	~500 C
Operating Time	4 years

Labels in diagram: Pump and Header Tank, Offgas Recuperator, Pot, Can, Freeze Valve, Cold Wat, Heat Exchanger, Thorium Tank, Makeup Fuel Tank, Pot Suspension, Fuel Salt Drain Tank.

PROF. DR. KUN CHEN
CHIEF NUCLEAR OFFICER

Inside The ThorCon Can | by Prof. Dr. Kun Chen

Thanks to all the support from members new and old, we strive to promote Thorium as the Fuel of the Future.

John Kutsch
Executive Director

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