

Topic Area 1 Office Hours Q&A

Q: It was mentioned that fundamental understanding of salt properties and materials performance is of interest to the MSR program. What opportunities exist in this space for universities? There is a current IRP in that area and a lot of work is being done at other national labs.

A: You're correct, there's a lot of ongoing work in this area, but the MSR concept is probably the least technically mature of all the concepts that we're working on so there's still a lot of work to be done. For example, we've been collecting fundamental salt properties, thermophysical properties of salts for many years now and we still have gaps in those areas. We would be interested in any innovative methods of measuring those properties or measuring those properties themselves. As you know, the environment in the molten salt reactor is pretty harsh, so other things that we've been looking at is salt material compatibility as well as compatibility with graphite. In summary, there is a lot of ongoing work in that area, but there's still a lot of work to be done to reduce the technical risk for these reactors. You are encouraged to familiarize yourself with the work that's being done so that you don't propose anything duplicative, and hopefully that will help spark some innovative ideas as well.

Q: As a follow up, is the interest more for modeling the salts, or experimental measurements and uncertainty quantification, or is there also interest in seeing how those salts properties would impact reactor performance?

A: All of the above would be of interest to us, there's a lot of work remaining to be done on molten salt reactors and any of those activities would potentially help reduce those risk for MSRs.

Q: Is improvement on corrosion resistance of structural materials of interest in this topic area?

A: Yes, that would be of interest in this topic area. We do have ongoing work on this topic, so you are encouraged to familiarize yourself with what we're doing in that space so you don't propose anything duplicative, but anything that would be new, innovative, or complementary would be of interest.