

### Topic Area 3 Q&A

Q: Will this area be interested in TRISO fuel particle separation and recycling?

A: Yes, if you have new innovative ideas. If you just regurgitate the old TRISO fuel recycling process, it may not rank high on the list. If you have a process of pyroprocessing you want to use for TRISO, we work on that. This would also include kernels as well as the graphite. Especially the recycle of the graphite because we would not want to dispose that of as waste and secondly the material inside the kernels. Overall objective is trying to recycle as much as possible and reuse as much as possible. We can reduce the burden of repository.

Q: If proposing an idea on the fuel technology, but will greatly benefit the fuel cycle, should it be sent under Topic Area 3 or Topic Area 4 scope?

A: If there is a reuse part, how to reuse the recycled material, go to the fuel part. If it's just a separation, that's under Topic Area 3. Also, if it's a fuel fabrication that would be Topic Area 4. If it's spent fuel, used fuel for recycle, that could fall under Topic Area 3 if it's focusing on separations chemistry. If you have a good idea, please submit and we will decide on how to bin it into the right Topic Area.

Q: For vapor separation using fluorination or chlorination there will be halide salt was leftover. Any interest to separation and handle the salt waste after separation?

A: Yes, if that is part of the separation. The process will have to consider all primary and secondary waste and we all need to minimize the total amount of both the geological waste, low level waste, intermediate waste. We need to consider those. If you are developing a different waste form, it would be a different area.

Q: For TA3 and TA4 scopes, would purely modeling and simulation work be considered? How would the efforts be properly balanced between experimental and computational work in these scopes?

A: If doing computer modeling and simulation for separation, if you want to do that just for separation, fuel recycling separation part, you are welcome to submit into topic area 3. There is some modeling computation in a different area. It is more of a generic code development, not for our specific application. Encourage people to go look at past NEUP and SBIR projects in the molten salt area on modeling structure and the chemistry of molten salts. Some things have already been done. We want to build on what we already have. We encourage people to submit new ideas and proposals.

Q: Is there any preference for proposals budgeting up to the ceiling of \$1M? We are interested in smaller proposal like \$300,000 but seem like most past awards budget up to the ceiling amount.

A: You are welcome to have smaller budget if you think it is enough to support what is being proposed. Higher budgets could be a project with multiple institutions, a bigger work scope and tasks, number of players involved. All applications are going to be

evaluated on the same criteria for technical merit and there really is no right answer when it comes to the ceiling or a smaller project. Both types have been funded in the past based on technical merit, not necessarily on the level of funding.

Q: Can you elaborate a bit more on the focus of the NE office in contrast to the effort from ARPA-E query program with significant efforts on chemical reprocessing separation of used fuels?

A: There is not much difference, technically. We are both working on our own recycling area. ARPA-E focuses on waste management, but they also focus on process. The difference is, NE supports smaller projects. ARPA-E supports more commercialization. It must have a commercialization part. Our program is developing the baseload of different types of separation technologies, and we progress and continue year in and year out. ARPA-E has one shot and one call. We make an effort not to duplicate efforts and support new ideas that lead to advancement.