DE-FOA-0003408 TEOSYNTE SBIR/STTR FOA FAQ

QUESTIONS CAN BE SENT TO ARPA-E-CO@HQ.DOE.GOV

FIRST DEADLINE FOR QUESTIONS: 5 PM ET, AUGUST 2, 2024

SECOND DEADLINE FOR QUESTIONS: TBD

QUESTIONS AND ANSWERS

PLEASE REFER TO THE GENERAL FAQS SECTION OF ARPA-E'S WEBSITE (HTTP://ARPA-E.ENERGY.GOV/?Q=FAQ/GENERAL-QUESTIONS) FOR ANSWERS TO MANY GENERAL QUESTIONS ABOUT ARPA-E AND ARPA-E'S FUNDING OPPORTUNITY ANNOUNCEMENTS. ADDITIONAL QUESTIONS SPECIFIC TO THIS FOA ONLY ARE INCLUDED BELOW. PLEASE REVIEW ALL EXISTING GENERAL FAQS AND FOA-SPECIFIC QUESTIONS BEFORE SUBMITTING NEW QUESTIONS TO ARPA-E.

I. Concept Paper Phase Questions:

Q1. I JUST READ THE FOA AND I HAD A COUPLE OF QUESTIONS ON SUBMISSIONS THAT WOULD NOT BE OF INTEREST: "TECHNOLOGIES TO PERFORM N_2 FIXATION *IN PLANTA*".

1. **MAY I ASK WHY *IN PLANTA* NITROGEN FIXATION IS EXCLUDED? A NITROGEN FIXING PLANT WOULD BE A TREMENDOUS BREAKTHROUGH WITH FAR REACHING CONSEQUENCES AND WOULD BE IN LINE WITH THE OVERALL ASK.**
2. **IF I UNDERSTAND THE FOA CORRECTLY, THE OVERALL AIM IS TO REDUCE N_2O EMISSIONS FOR ETHANOL PRODUCTION. SINCE YEAST IS PRIMARILY USED FOR ETHANOL PRODUCTION (E.G. USING CORN AS FEED), A NITROGEN FIXING YEAST WOULD GREATLY REDUCE THE AMOUNT OF NITROGEN CONSUMED FROM THE FEEDSTOCK USED, ALLOWING A HIGHER NITROGEN CONTENT FOR SILAGE (N COMING FROM YEAST AND THE FEED STOCK). THIS WOULD GREATLY REDUCE N_2O EMISSIONS AS LESS CORN (AND HENCE LESS FERTILIZER) WOULD BE NEEDED WHEN CONSIDERING THE FULL CYCLE. WOULD SUCH A TECHNOLOGY STILL BE SUITABLE, PERHAPS FOR CATEGORY D?**

ANSWER:

1. The decision to exclude in planta N2 fixation was based on a technoeconomic evaluation of the pathways to lower N fertilizer application and N_2O emissions.

2. As described, this proposal would increase N content in yeast-processed, corn-derived material, and thus would require the agronomic practice of reapplying that material to corn-growing fields. As stated in Section III.C.3 of the FOA, development or testing of exclusively agronomic practices that reduce N application are specifically not of interest for this program.