**National Laboratory Gasification Consortium: Introductory Webinar Chat Questions**

*Thank you for attending the National Laboratory Gasification Consortium (NLGC) Introductory Webinar on August 21, 2025. See below for written responses to questions that were raised in the chat during the webinar that we did not have time to address.*

**Chat Question:** How can researchers at the universities and research institutes help and contribute in this effort?

**Response:** We welcome university and research institute participation in the NLGC. Participation in the webinars and meetings hosted by the NLGC is the best place to start. As the NLGC progresses in step with the Office of Fossil Energy gasification program, there will likely be other ways to couple to university and research institute programs.

**Chat Question:** Will these databases be publicly available?

**Response:** Yes, making the NLGC databases and other outcomes available to the public is a primary objective of the NLGC. We anticipate initial database releases to the public in 2026.

**Chat Question:** What technique will you use to get the internal particle temperature?

**Response:** This is an excellent question. Measuring internal particle temperature is very difficult. The address the challenge of measuring true internal particle temperature, the NLGC is taking an approach that couples modeling and experiments at different scales to validate our kinetics and overall understanding of feedstock conversion. Studies will be conducted on both fine ground feedstocks as well as particle scale feedstocks. Intrinsic kinetics will be measured on the fine ground feedstocks; then, application of those kinetics will be validated on particle scale models and experiments that capture the mass and heat transfer effects. In this manner, we intend to validate our kinetics and capture mass and heat transfer accurately. A long term goal of the NLGC is to validate the kinetics and approach with pilot scale gasifier results. In addition to the multi-scale modeling and experimental approach, the NLGC will also conduct experiments to measure intra-particle temperatures by inserting a fine diameter thermocouple into feedstock particles during experiments conducted on the single particle experiments. In this manner, we intend to capture specific data relevant to heat transfer effects.

**Chat Question:** What are the mechanisms for industry stakeholder involvement?

**Response:** There will be several avenues for industry stakeholder involvement including:

(1) Receipt and review of NLGC outcomes and results via webinars, publications, conference presentations, and outcomes shared at Office of Fossil Energy review meetings.
(2) Participation in workshops and other events hosted or co-hosted by the NLGC to foster identification of gasification challenges and strategic research directions to address those challenges.
(3) Direct discussions with NLGC tasks on specific areas of interest. The NLGC is very interested in periodic discussions with industry to strengthen the value of our research outcomes.
(4) Utilization of NLGC databases and associated analysis and kinetics results. The NLGC will share these outcomes publicly.
(5) Collaboration on NLGC research and development activities. Specifically, we have targeted areas in each task where we are interested in collaborating with industry partners. We encourage direct discussions with tasks on those interests, and if interested, please reach out to NLGC@ornl.gov with questions and to facilitate engagement with tasks.

**Chat Question:** On syngas cleaning - why are there no work plans on working with commercial data (say coal to FT process)? This could be relevant when we are talking about blended feedstocks like coal and biomass.

**Response:** This is a good question and comment. The NLGC will include multiple feedstocks in our R&D program including blended feedstocks. While a lot of R&D in the NLGC will focus on obtaining kinetics and other critical data and information on expanding feedstocks for abundant energy such as municipal solid waste and biomass, coal and traditional feedstocks will definitely be part of the program. The NLGC is interested in including commercial data from coal and FT processes in our program and linking these more mature technologies and data sources with the expanding feedstock data to facilitate resilient operations of blended feedstocks.

*For additional questions or information, contact the NLGC at NLGC@ornl.gov*