

# Roles of Carbon Capture and Sequestration in SAF pathways

## Pennsylvania State University

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### Research Approach:

- Review and synthesis of relevant literature, case studies, federal guidance surrounding CCS (e.g. EPA Class VI permitting requirements), etc.
- Work with ASCENT 01 team and Fuels Task Group to meet research questions/needs across projects
- Compile unique opportunities/challenges for CCS and GCS (geologic CO<sub>2</sub> storage) in the context of SAFs, based on expertise and understanding of the CCS industry

### Objective:

The primary objective of this task is to ascertain opportunities and challenges for integrating carbon capture and sequestration (CCS) with sustainable aviation fuel supply chains, including existing CCS pathways that could be utilized in conjunction with Alternative Jet Fuels.

### Project Benefits:

Integrating CCS with AJF/SAF production pathways can further lower life cycle carbon footprints, and provide a permanent and traceable (high accountability) means of CO<sub>2</sub> emission reductions in the aviation sector.

### Major Accomplishments (to date):

- Working with ASCENT-01 team, Fuels Task Group to identify current needs and refine project scope
- Literature review of feasibility studies integrating CCS into SAF supply chains

### Future Work / Schedule:

- Currently working on white paper of CCS risks and opportunities for integration into SAF supply chains (geologic/technical and policy aspects)
- Provide insight/expertise to project team on problems related to CCS