

Summary Abstract for Public Release

Applicant: SkyNRG Americas

Principal Investigator: John Plaza, CEO

Project Title: Project LOTUS: Landfill Off-gas To Ultra-low carbon intensity SAF

Major Partners: LanzaTech, Inc.; Linde, Inc; LanzaJet, Inc.; Energy Vision, Pacific Northwest National Laboratory, Argonne National Laboratory

Project Objectives

Construction and operation of the first landfill gas to sustainable aviation fuel commercial demonstration facility.

Project Description

SkyNRG Americas, Project Developer, and its commercialization partner, LanzaTech, will design, engineer, build, and operate a unique demonstration-scale facility that will convert raw landfill gas (LFG) into sustainable aviation fuel (SAF). In Phase 1 the team will verify the technology readiness level and complete a -15/+30 cost estimate. In Phase 2 the team will continue engineering and site construction leading to a 5 million gallon per year name plate capacity demonstration site.

Project Impacts

The aviation sector is challenged by commitments to reduce GHG emissions in the face of continued dramatic growth. The goals can only be met by sustainably aviation fuel (SAF). The U.S. uses 26 billion gallons of jet fuel but produces less than 4 million gallons of SAF. Project LOTUS (Landfill Off-gas To Ultra-low carbon intensity SAF) will provide a new regional supply chain for producing SAF while reducing methane emissions and improving air quality. The resultant fuel is high quality, low soot forming, and sustainably derived, reducing greenhouse gas emissions by up to 110%. DOE funding will accelerate commercial roll out of SAF production from LFG by reducing the technical and financial risks for future integrated commercial plants.