RNG-Related Updates to LMOP Resources



The U.S. EPA Landfill Methane Outreach Program (LMOP) is pleased to share information about **updated resources** that may be helpful to those either **planning to develop a landfill gas (LFG)-to-renewable natural gas (RNG) project** or wanting to quantify estimated **environmental and energy benefits** of an existing RNG project.

LFG Energy Benefits Calculator

LMOP has published a refreshed version of the program's popular <u>LFG Energy Benefits Calculator</u>. Historically, this Microsoft Excel-based tool has focused on LFG electricity and direct-use (medium-Btu) projects. With this latest update, the Calculator **now includes RNG projects**. New input options and calculations allow users to estimate direct methane reductions and avoided carbon dioxide emissions, as well as environmental and energy benefit equivalencies, for an RNG project for the first time.

After entering the LFG flow rate for an RNG project, users can select whether the RNG is **injected into a natural gas pipeline or used locally for vehicle fuel**. Pipeline-injection projects have the additional choice as to whether the RNG will be used down the line for vehicle fuel or in non-transportation uses of natural gas. The user can also select what **percentage of the power for the RNG conversion process** is from grid electricity versus another source, as well as enter the project's overall **methane recovery rate**.

We also added a ReadMe tab to the Calculator to provide information about the tool's purpose and scope and reformatted all the tabs for a more user-friendly experience.

Project Development Handbook and Overview of RNG

Earlier this year, LMOP published updates to two documents, the <u>LFG Energy Project Development Handbook</u> and <u>An Overview of RNG from Biogas</u>, to reflect more current information related to technologies for upgrading biogas into RNG.

In the Handbook's Chapter 3, we added content to section "3.4 Conversion to RNG" that discusses **options for nitrogen removal from biogas**. We also made minor edits to differentiate raw biogas, product gas and tail gas.

Similarly, but with more detail, we **added content to section "7.3 N₂ Removal Technologies"** in the Overview of RNG document. We also made clarifying edits for the different gas stages.

We appreciate the input and feedback from LMOP Partners that informed these updates.

Please reach out to us with any questions or comments on these updates via our Contact Us webform.

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