



## MUNICIPAL SOLID WASTE INITIATIVE

# ANAEROBIC DIGESTION (AD) – PROJECT SCREENING TOOL

The municipal solid waste sector is a significant source of air pollutants, including the short-lived climate pollutants methane and black carbon as well as other noxious pollutants, like nitrogen oxides (NO<sub>x</sub>) and sulfur oxides (SO<sub>x</sub>). Anaerobic digesters (AD) provide a number of environmental, economic, and public health benefits such as methane mitigation, organic waste diversion, odor reduction, and pathogen destruction. Municipalities can use AD systems to take advantage of these potential benefits.

The Climate and Clean Air Coalition Municipal Solid Waste Initiative (Waste Initiative) developed the Anaerobic Digestion – Project Screening Tool (AD-PST) to assist stakeholders in assessing the potential feasibility of an AD project. The tool estimates how much biogas and digestate a proposed AD system could generate and evaluates the end use options for the resulting biogas and digestate.

### INPUTS AND OUTPUTS

The tool requires minimal waste-related data inputs (e.g., wet or dry system, waste composition, and AD system temperature). In addition, the tool provides defaults users can overwrite with more project-specific information.

Based on these inputs, the tool provides the following outputs:

- A recommended bioreactor type and design information (such as minimum reactor volume and solids retention time)
- Biogas composition
- Annual biogas and digestate production
- Example applications for each potentially feasible project type (e.g., electricity production, natural gas production, cooking gas potential, and home heating potential).

### ACCESSING THE AD PROJECT SCREENING TOOL

The tool is available to download from the Waste Initiative's Knowledge Platform: <http://www.waste.ccacoalition.org/document/anaerobic-digester-project-screening-tool>.

#### KEY FEATURES

- MS Excel-based
- Free and readily available
- Highly automated to reduce user burden
- Based on best-available methods and data

#### ABOUT THE COALITION

The Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (Coalition) is a voluntary global partnership of governments, intergovernmental organizations, business, scientific institutions and civil society committed to catalysing concrete, substantial action to reduce SLCPs (including methane, black carbon and many hydrofluorocarbons). The Coalition works through collaborative initiatives to raise awareness, mobilise resources, and lead transformative actions in key emitting sectors.

#### MORE INFORMATION

[www.waste.ccacoalition.org](http://www.waste.ccacoalition.org)

[www.ccacoalition.org/en/initiatives/waste](http://www.ccacoalition.org/en/initiatives/waste)

 [ccac\\_secretariat@unep.org](mailto:ccac_secretariat@unep.org)

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**CLIMATE &  
CLEAN AIR  
COALITION**  
TO REDUCE SHORT-LIVED  
CLIMATE POLLUTANTS