



ORGANICS RECYCLING IN THE WASHINGTON DC METROPOLITAN REGION

A Presentation to the
Metropolitan Washington Council of
Governments - Recycling Committee
September 16, 2021

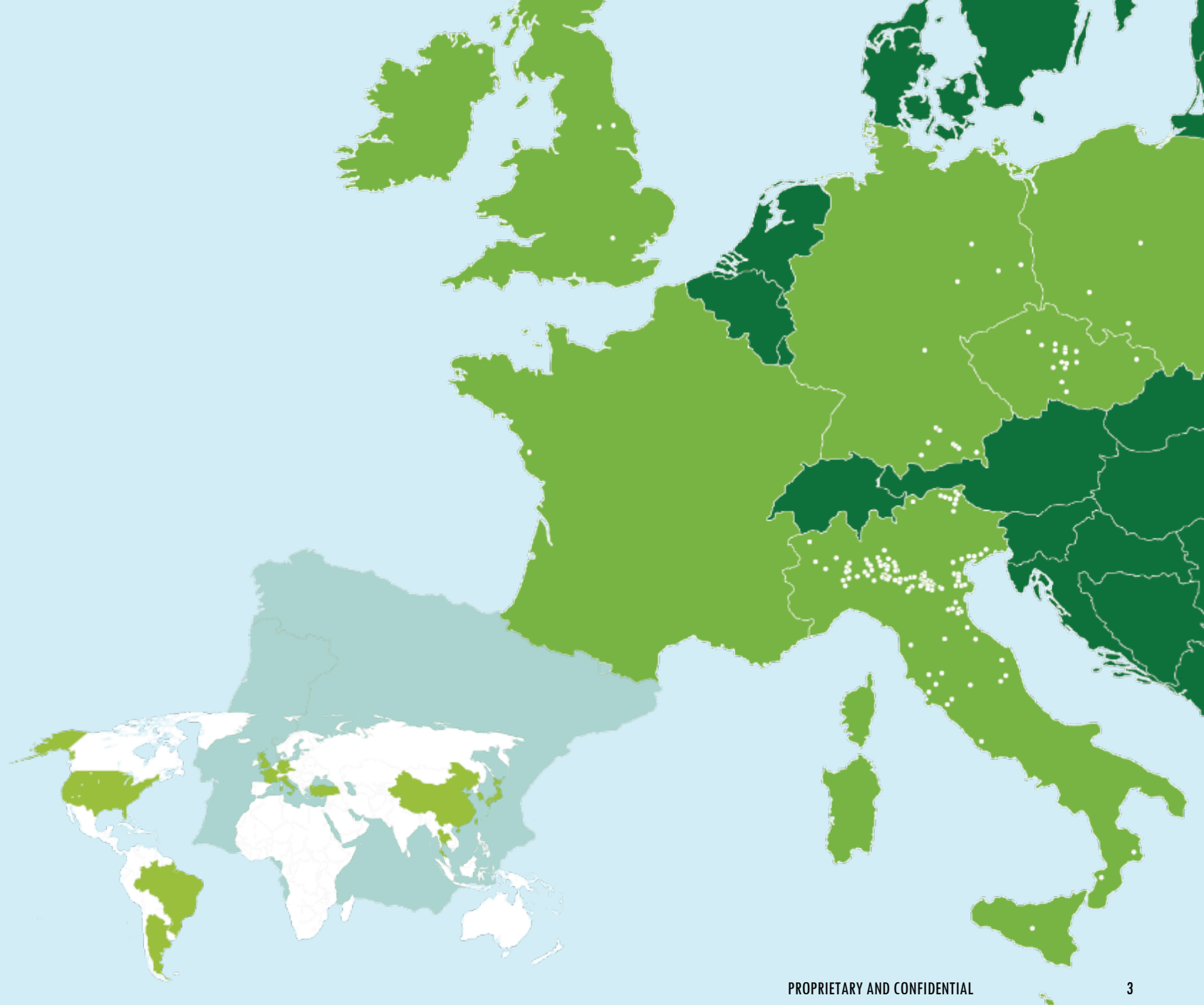
**BIOENERGY
DEVCO**



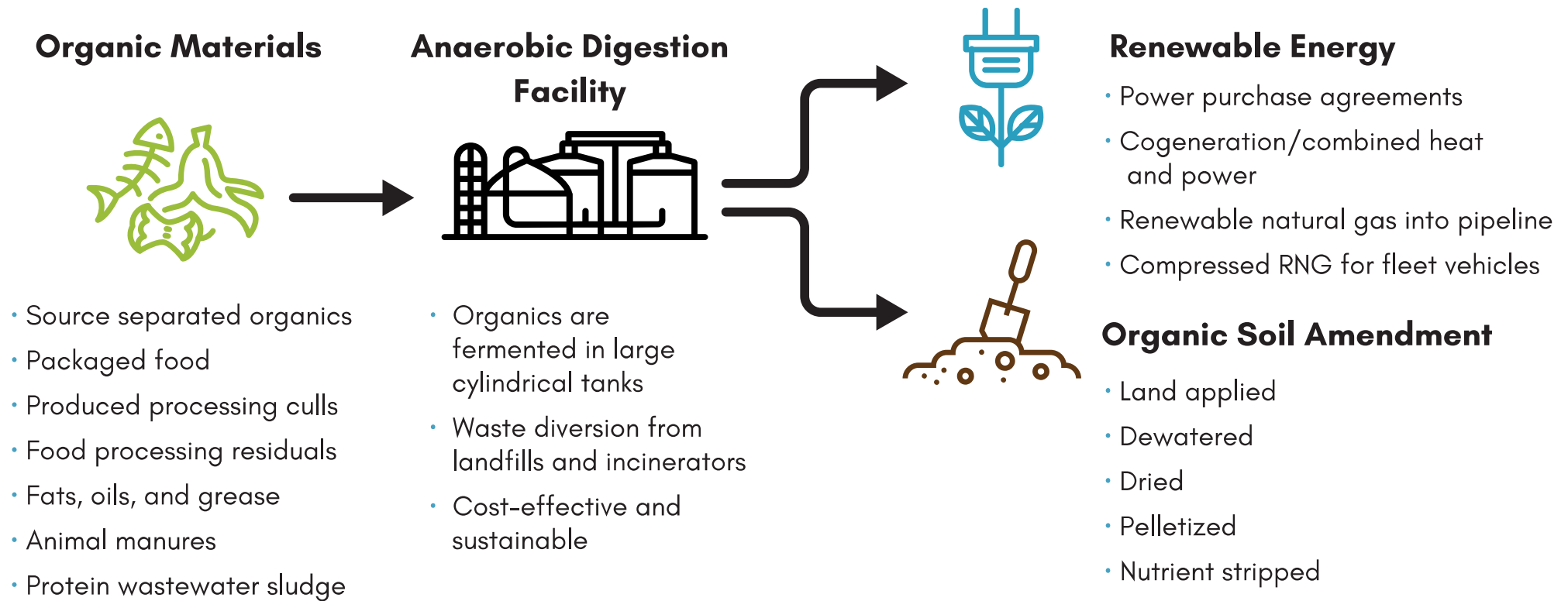
**A GLOBAL LEADER IN THE
FINANCE, DESIGN, BUILD
AND OPERATION OF
ANAEROBIC DIGESTERS**



- 240 modular biogas plants built in Europe, Asia, and North America with continued maintenance and service of 140 plants
- #1 market share in Italy
- Guaranteed and insured performance and interconnection services
- Develop, finance, build, finance, maintain, and operate
- Fully automated, proprietary and patented equipment with associated telemetry
- Lab testing, monitoring and nutrient management support from a dedicated microbiology laboratory with 25 years of performance data



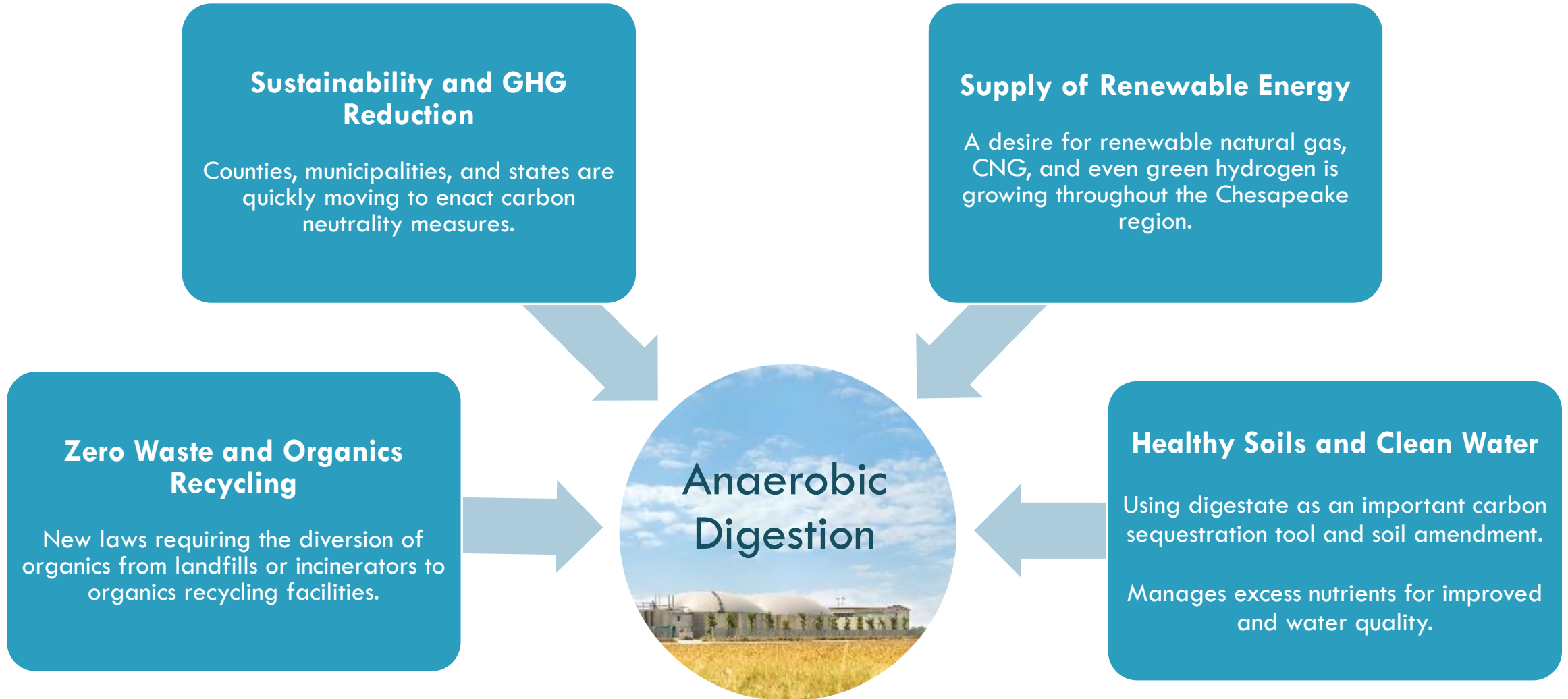
WHAT IS ANAEROBIC DIGESTION?



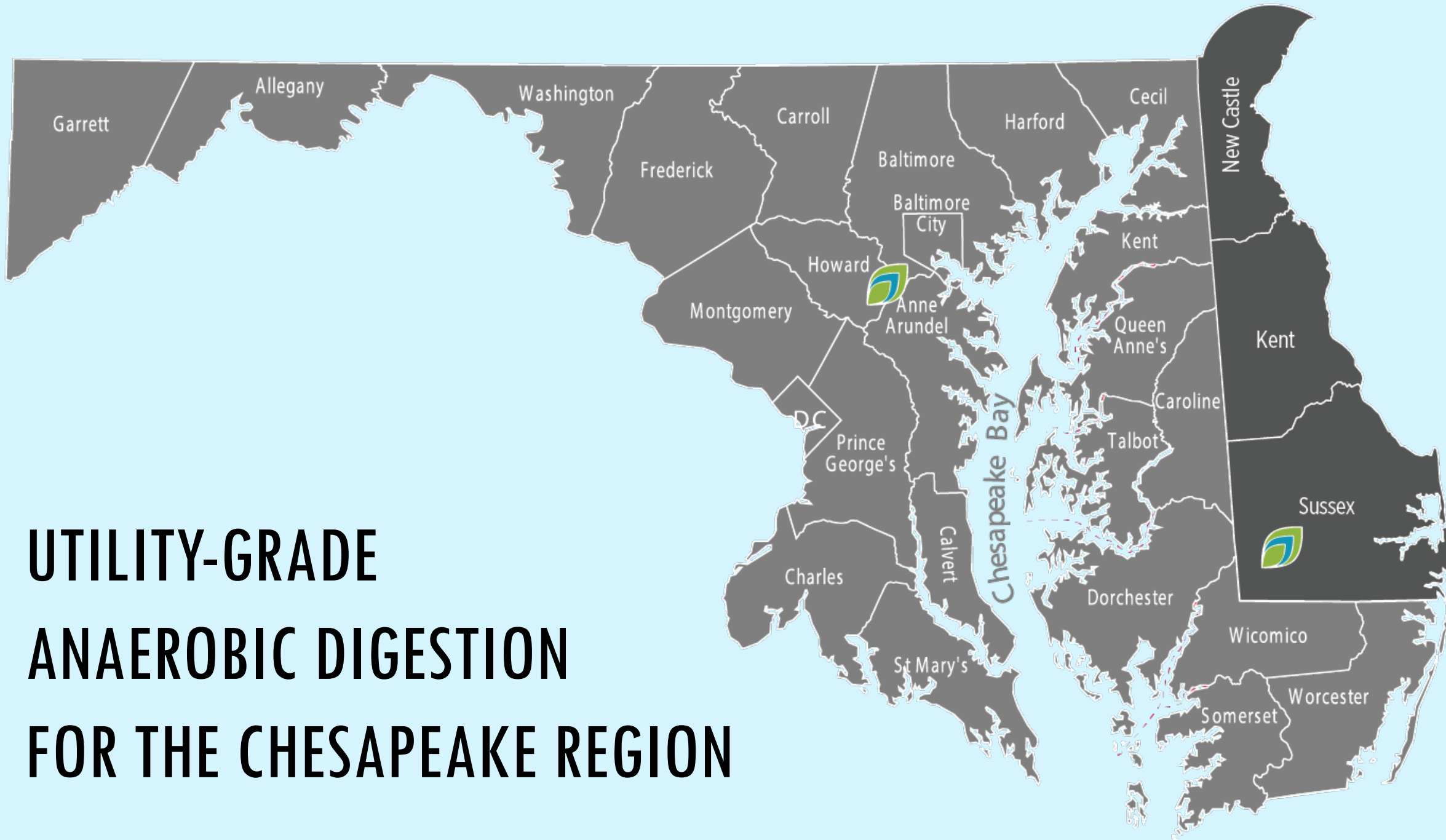


South Milford, UK

WHY ANAEROBIC DIGESTION?



UTILITY-GRADE ANAEROBIC DIGESTION FOR THE CHESAPEAKE REGION





MARYLAND FOOD CENTER ANAEROBIC DIGESTER

Location: Maryland Food Center, 7900
Oceano Avenue, Jessup, MD

Feedstocks: 120,000 tons/year liquid
and solid food waste

Gas Production: 295,000 mmBTU/year

Digesate Production: 20,000 tpy @ 25%
solids

Development Stage: Construction



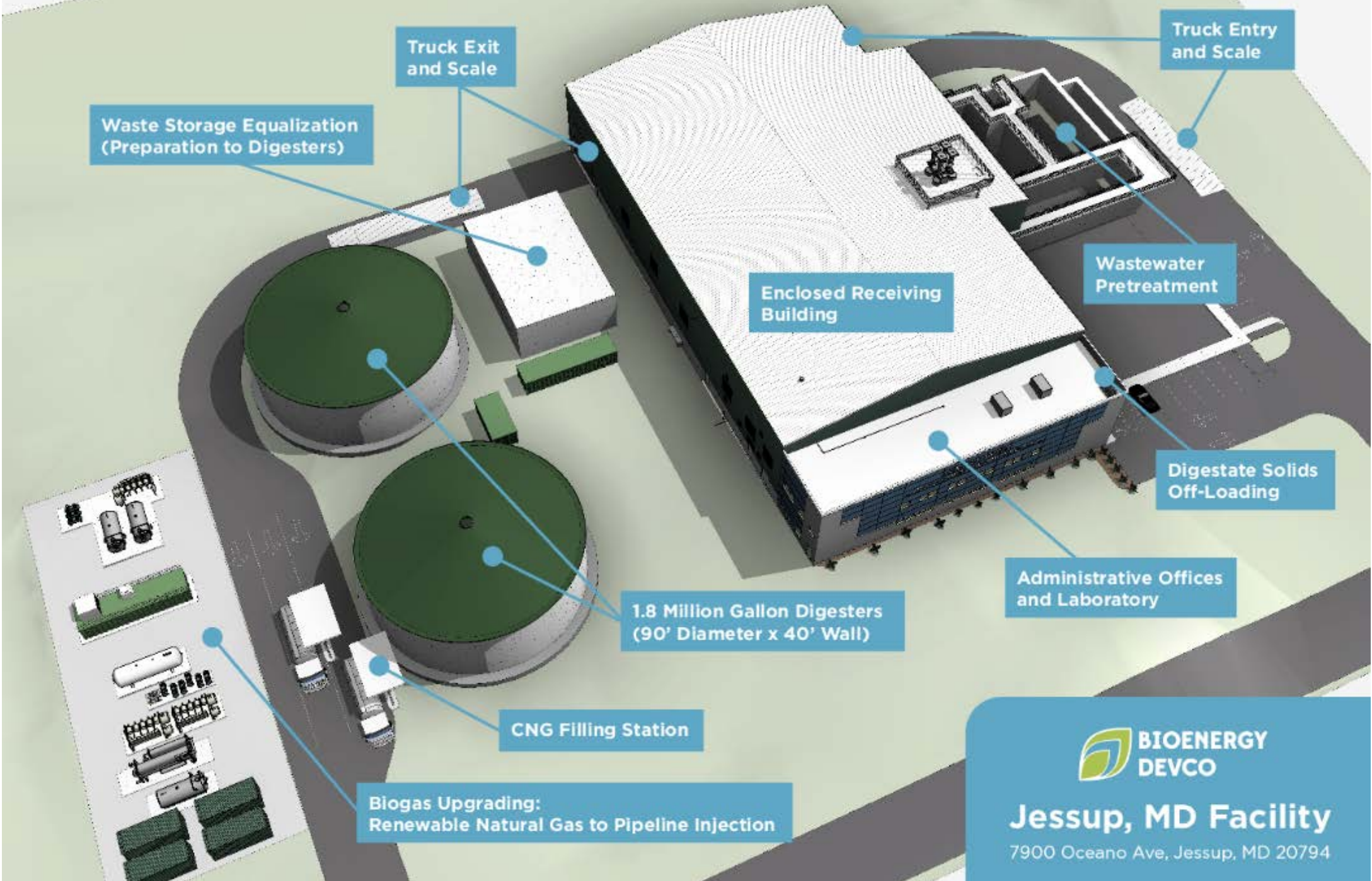


**BIOENERGY
DEVCO**

**MARYLAND'S PREMIER
ORGANICS RECYCLING FACILITY**

www.bioenergydevco.com





Waste Storage Equalization
(Preparation to Digesters)

Truck Exit
and Scale

Truck Entry
and Scale

Enclosed Receiving
Building

Wastewater
Pretreatment

Digestate Solids
Off-Loading

Administrative Offices
and Laboratory

1.8 Million Gallon Digesters
(90' Diameter x 40' Wall)

CNG Filling Station

Biogas Upgrading:
Renewable Natural Gas to Pipeline Injection

 **BIOENERGY
DEVCO**

Jessup, MD Facility

7900 Oceano Ave, Jessup, MD 20794

ADVANTAGES OF THE MFCA ANAEROBIC DIGESTER

Proximity to Clients

The Maryland Food Center AD is in the geographic center of the Washington DC / Baltimore metropolitan region in the heart of food processing and distribution.

Tolerance for Contamination

State-of-the-art de-packaging equipment allows for contamination found in typical SSO.

Convenience

24-hour operations and easy in-and-out layout increases hauling efficiency.

Organics Diversion

Maryland has passed organics diversion legislation requiring the recycling of organic waste. DC is developing and implementing plan for organics recycling.

ORGANIC WASTE LEGISLATION

Maryland HB 264 / SB 483

Organics Recycling and Waste Diversion

Requires any entity that:

- a) generates that generates at least 2 tons of “food residuals” each week beginning in 2023, scaling up to one ton each week in 2024; and
 - b) that is within 30-mile radius of an organic recycling facility to divert their organic waste from landfills and incinerators.
- Fully passed and has become law June 2021, effective October 2021, enforced 2023.

Washington D.C Zero Waste Bill

D.C. passed a zero-waste bill in April 2021 with provisions to encourage organics recycling. Commercial food waste requirements to take effect for retail food stores of at least 10,000 sq. ft. and colleges/universities with at least 2,000 residential students. Mayor will submit comprehensive Organics Management Plan to council in by January 1, 2023.



The screenshot shows a news article from WASTEDIVE. The header includes the WASTEDIVE logo and navigation links for 'Deep Dive', 'Library', 'Events', and 'Topics'. The article is marked as a 'BRIEF'. The main headline reads 'Maryland governor allows organics diversion mandate to become law'. Below the headline, it states 'Published April 14, 2021' and 'Updated June 1 2021, 9:07 a.m. EDT'. The author is identified as Cole Rosengren, Senior Editor, with a profile picture and social media icons for LinkedIn, Facebook, Twitter, Email, and Print. The article features a photograph of a cityscape with a prominent domed building, likely the Maryland State Capitol. The photo credit at the bottom reads 'Mark Wilson via Getty Images'.

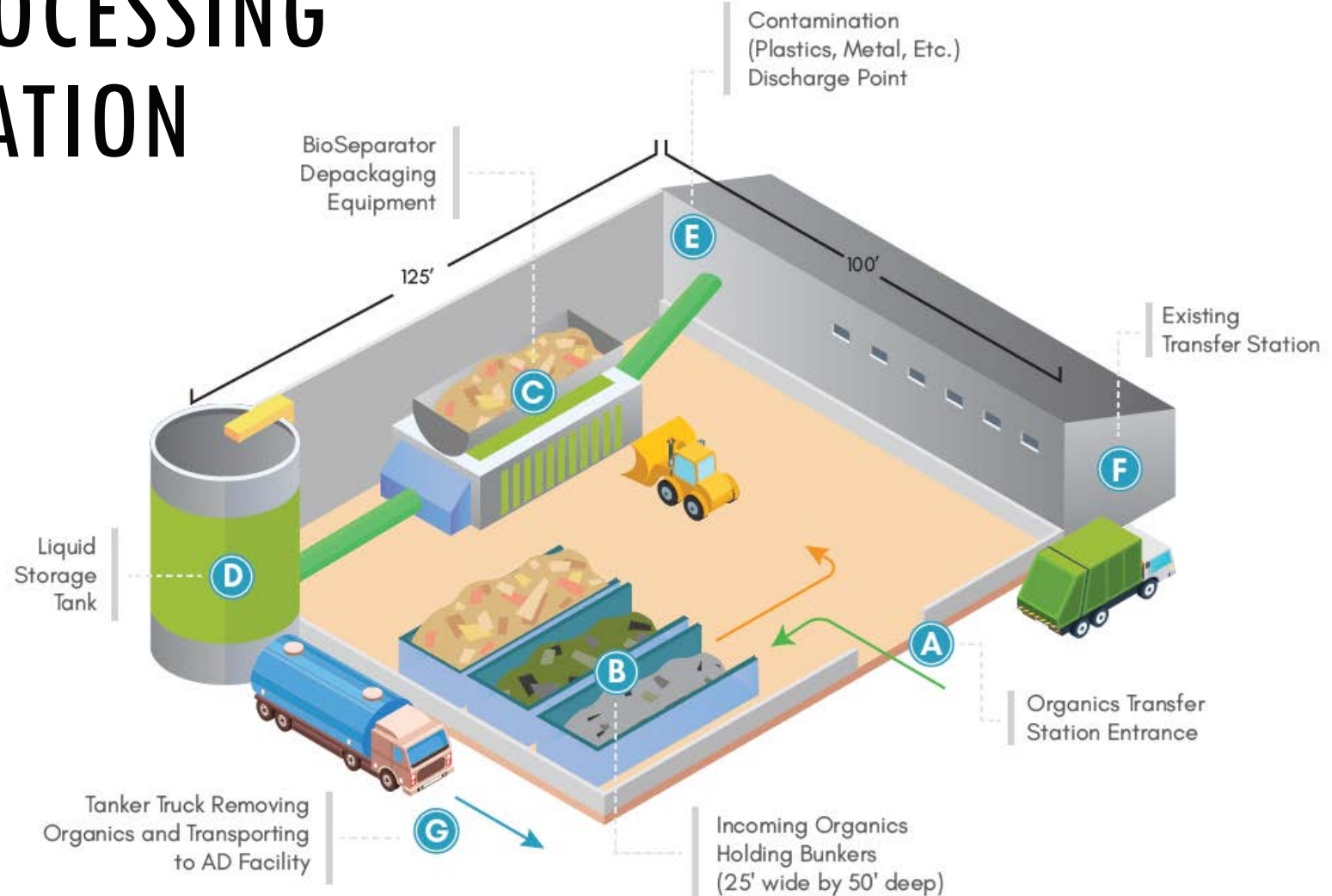
ORGANICS PRE-PROCESSING AND TRANSFER STATION

Approximately 12,500 ft² facility that receives 15,000 to 25,000 tons per year of source separated organics collected from local sources and exports clean food slurry to digester.

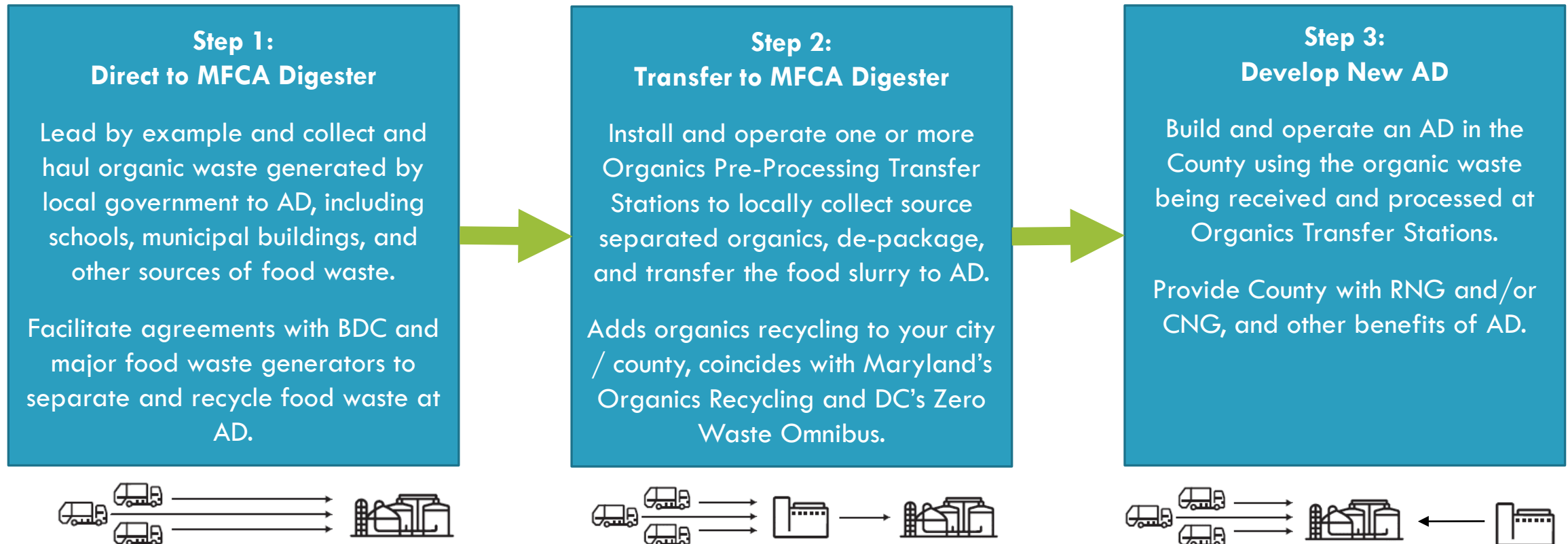
Allows municipalities to expand organics recycling infrastructure without large cost or commitment of waste required for AD.

Ideally located at existing MSW disposal site and residuals removed from SSO are conveyed to MSW tipping floor.

Reduces transportation costs and truck traffic, and improves operational efficiency of collecting and hauling food waste.



A PUBLIC-PRIVATE PARTNERSHIP OPPORTUNITY FOR EXPANDING ORGANICS RECYCLING





BIOENERGY INNOVATION CENTER

Location: Former Perdue AgriRecycle Facility,
Seaford, DE

Feedstocks: Up to 210,000 tons/year of
excess organics from the poultry industry
such as DAF sludge and litter

Compost Production, Current: 20,000 tons/year

Digestate Production, Future: 40,000 tons/year

Gas Production: 410,000 mmBTU/year

Development Stage: Construction



PERDUE PARTNERSHIP



“With Bioenergy, we have found a partner that enables us to be more sustainable, create cost-savings, and help produce renewable energy while continuing to address soil health and nutrient management in the environmentally sensitive Chesapeake Bay watershed.”

Perdue CEO, Randy Day

Perdue’s Challenges

- Waste disposal costs were high and unpredictable
- Disposing of waste contributed to pollution in the Delmarva Peninsula from protein processing, may have been forced to relocate
- Relied on land application of wastes, subject to increasing legislative oversight

Bioenergy Solution

- Anaerobic digestion provides an environmentally sustainable solution
- Provides a fixed cost solution and visibility into waste costs for term of agreement

REQUESTS AND NEXT STEPS

- Tour the Maryland Food Center Anaerobic Digester construction site, and encourage others to do so.
- Invite BDC to present about our facilities to others in the MWCOG network, or within other civic, business, and policy organizations.
- Include BDC in climate planning related to waste reduction and renewable natural gas production.
- Introduce BDC to waste generators in the area who are looking for solutions that meet state and federal requirements.





For More Information Or To Schedule a Tour:

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