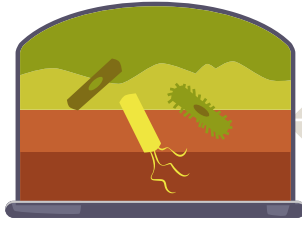
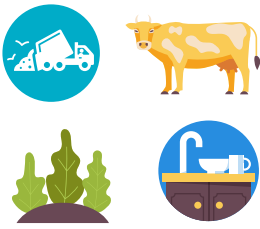


Organic Biomass



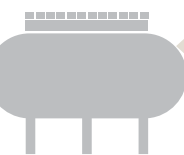
Anaerobic Digester
(raw biogas < 0.5 psig)

TECHNOLOGY SOLUTIONS

Headspace Oxygen Injection
Iron Injection for Bulk H₂S

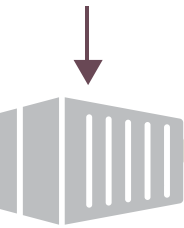


Booster/Blower
(2 - 10 psig)



Heat Exchanger
Chiller
Dessicant / Adsorbent Media

Bulk Water Removal



H₂S Removal

Solid Media Scavengers
Liquid Media Scavengers
Liquid Redox Process
Solvent Adsorption (Amines)
Biodesulfurization



Removal of Contaminants
(VOCs, NMOCs, Siloxanes)

Silica Gel
Activated Carbon
Pressure Swing Adsorption

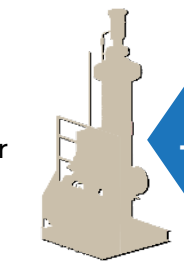


Biogas for Plant Power & Heat



CO₂ Removal
(can also reduce concentrations of N₂ and O₂)

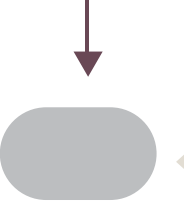
Membranes
Cryogenic Processes
Pressure Swing Adsorption
Amine Scrubber
Water Washing
Solvent Adsorption



O₂ and Water
Removal

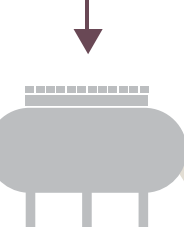
**EcoVapor
Technology**

Catalytic Process
(ZERO2)
Temperature Swing Adsorption
(DryOxo)



N Removal

Pressure Swing Adsorption
Cryogenic Processes
Avoid Injecting Nitrogen



Final Water Removal
(if no DryOxo earlier in chain)

Temperature Swing Adsorption
Glycol Absorption
Deliquescent Dessicant
Pressure Swing Adsorption
Refrigeration



Compression
(100 - 500 psig)

RNG Sales to Gas Utilities
(50 - 1000 psig)

CNG Trailers
(4000 psig)

Vehicle fuel
(3500 psig)

**Biogas to RNG
Upgrading
Technology***

*Despite the variations in the purification process, most biogas to RNG facilities include many of the treatment steps outlined in this diagram. The typical process technologies used in each phase of purification are shown here.