



**CR&R Anaerobic Digestion Facility**  
**Renewable Fuel from Organic Waste Recycling**  
***Sustain OC – Annual Conference - October 19, 2017***

***Clarke Pauley - Vice President, Organics & Biogas Division***

## CR&R Environmental Services – Company Snapshot

- Over 50 Municipal Contracts
- 12 Processing Contracts
- 900 Trucks – 350+ CNG Vehicles
- 1,500 Employees
- 3 Million Customers served
- 25,000 businesses served
- 10 Solid Waste Service Centers
- 5 Transfer Stations / MRFs
- 2 Landfills
- Over 500,000 tons recycled/year



# ANAEROBIC DIGESTION FACILITY, Perris, CA



ANAEROBIC DIGESTION TECHNOLOGY

BIOGAS UPGRADING TECHNOLOGY

CONSTRUCTION MANAGEMENT

RELIABLE NATURAL GAS DISTRIBUTION

PROJECT ENGINEER

**EISENMANN**

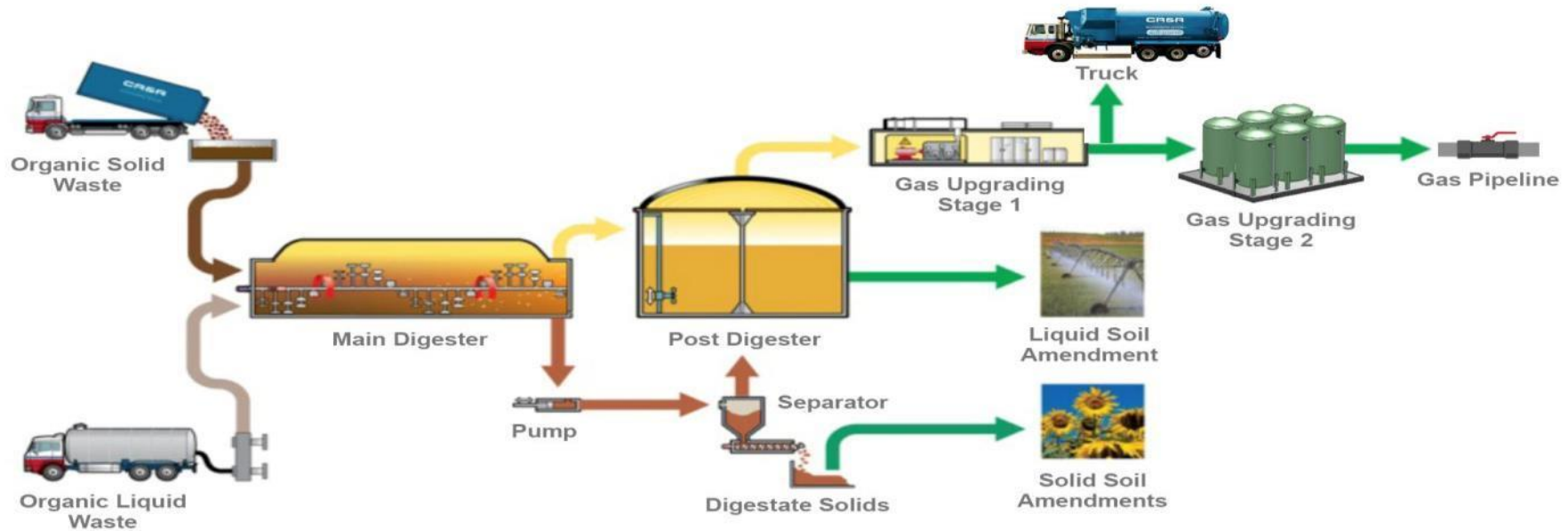


**Greentane**

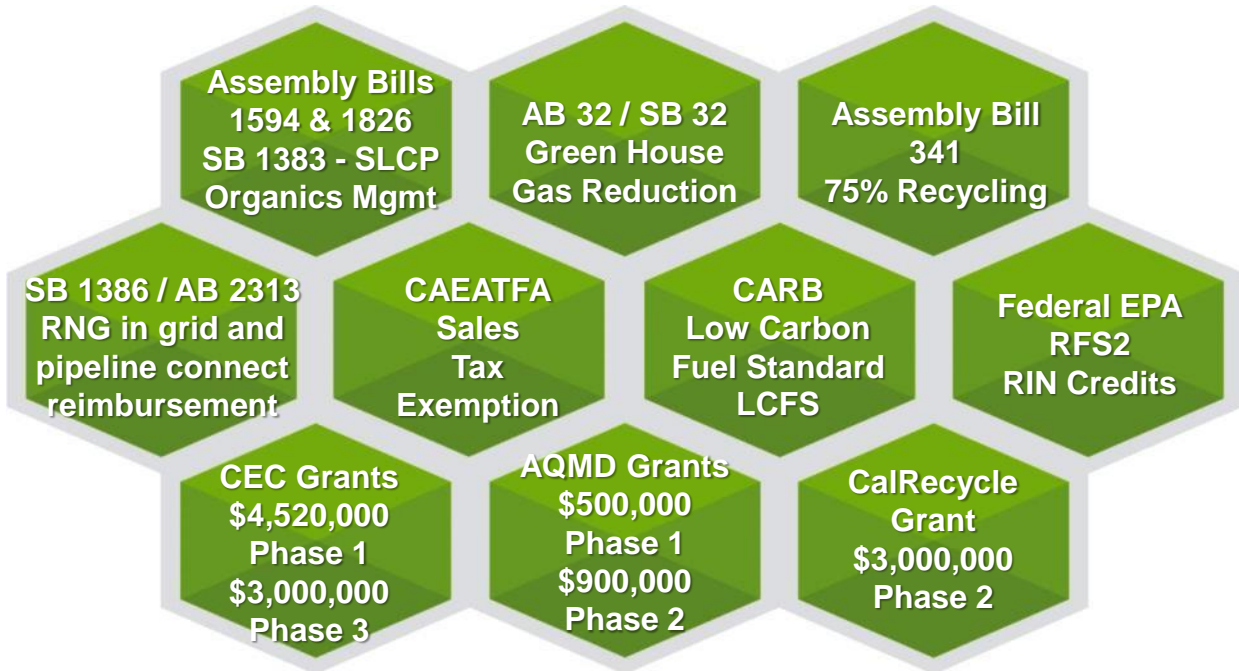




# ANAEROBIC DIGESTION - FLOW CHART



# FINANCIAL/REGULATORY DRIVERS





## **CR&R Anaerobic Digestion Facility**

- Phase 1 - Operational**
- Phase 2 - Commissioning November 2018**

## ANAEROBIC DIGESTION PROJECT OVERVIEW



Our process runs 24/7 – 365 days/year and is fully automated.



Our process provides maximum flexibility – waste mix, solids and liquids, different temperatures. Four different mixes and temperatures can be run simultaneously.



The system will generate enough renewable natural gas to run our entire fleet of CNG vehicles, with a surplus, entirely from our collected green and food wastes.



Our process is fully enclosed with zero untreated emissions and has a very high energy conversion rate due to its design and controls.



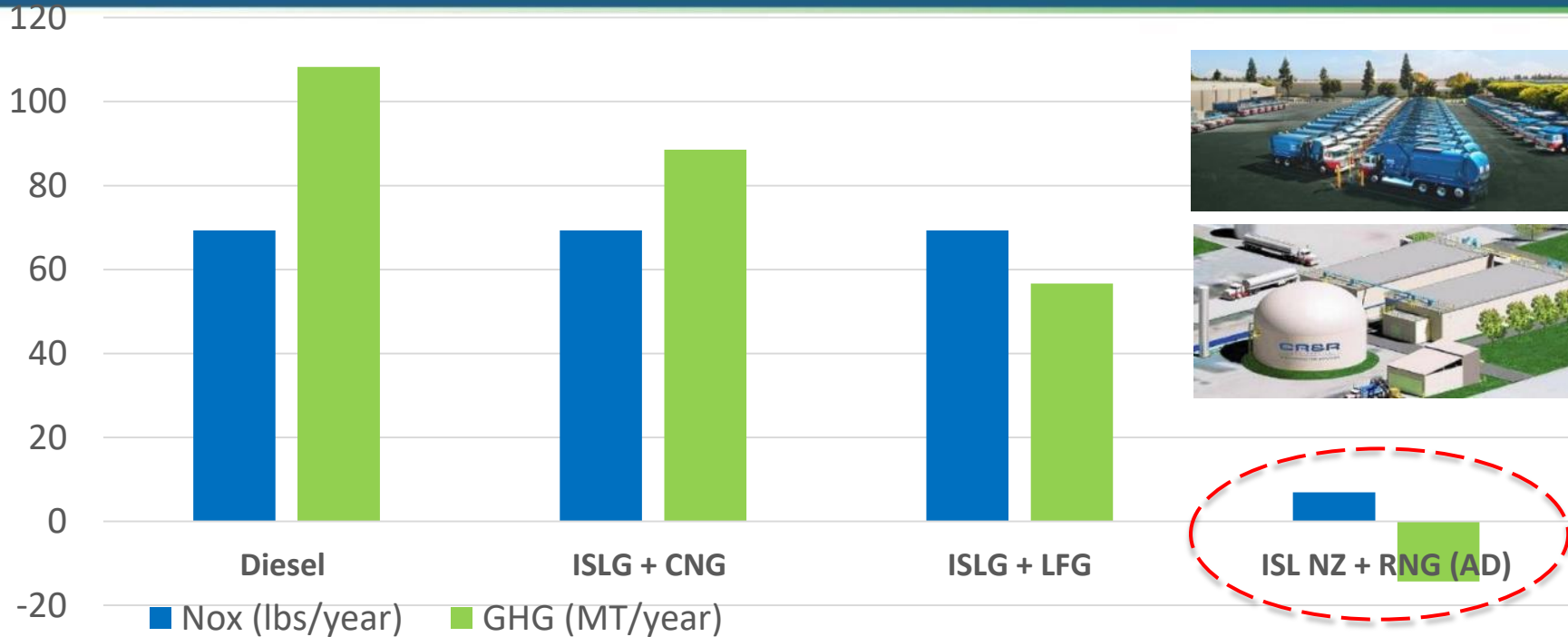
The plant will handle 335,000 tons per year, generate 4 million gallons per year (DGE) of RNG, and create about 250,000 tons of soil products per year.



Fleet-wide goal of 100 percent RNG vehicles by 2020



# REFUSE TRUCK EMISSION COMPARISON



Natural Gas Trucks Have ZERO Diesel PM Emissions



### **CNG/RNG Filling Station**

- Time fill station for CNG trucks
- System capable of fuelling CR&R's entire fleet of CNG vehicles with carbon **negative** R-CNG



## **Pipeline Interconnect**

- SoCalGas Point of Receipt
- 1 mile of off site pipeline to connect to the grid



## Phase 1 and 2

- Greenlane Biogas Conditioning System
- Capable of producing over 2 million diesel gallon equivalents of RNG per year





## All Phases

- Organics Receiving Building
- Dedicated organics tipping floor and sorting facility to provide clean feed-stock



### **All Phases**

- Organics Receiving Building
- Completely automated feed system

# CR&R

INCORPORATED

environmental services

the face of a greener generation 



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