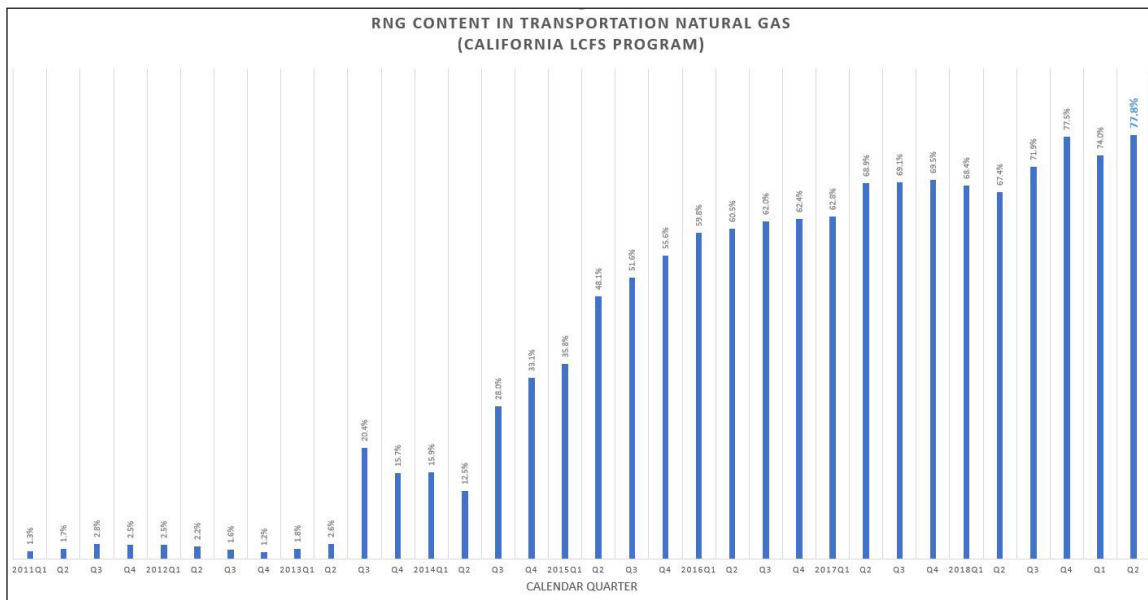




Key Points: Macro Level:

- The California LCFS program has fundamentally transformed the market for renewable natural gas (RNG) in the state of California.
- The LCFS program provides lucrative incentives to utilize low carbon RNG in the California NGV market in lieu of traditional fossil natural gas.
 - LCFS credit values can reduce the cost of RNG by \$9 to \$75/MMBTU
 - Fleets operating on fossil CNG and LNG can seamlessly switch to RNG without any cost penalties, and in some cases, with cost savings.
- The market for RNG in California has transformed dramatically over the last 10 years, with approximately 78% of the total California NGV market now using RNG as its primary fuel source.
- An increasing number of in-state RNG sources are starting to come on line.
 - In-state RNG sources are now being aggressively developed throughout California, including anaerobic digesters, landfill gas capture projects, and dairy manure digesters. In addition to their extremely positive environmental and energy-security advantages, these projects provide significant economic benefits at the local level in terms of construction investment, construction jobs and permanent job creation.



- RNG projects help to address a number of other important societal and policy goals, including:
 - organic waste landfill diversion goals of 75% to 100% at a lower cost than alternative disposal methods;
 - reducing short-lived climate pollutants (e.g. methane and black carbon) by capturing methane sources that would otherwise be vented or flared to atmosphere, and using this low-carbon RNG to displace diesel fuel in medium and heavy-duty vehicle applications; and,
 - producing low-carbon renewable fuels at the local level and therefore increasing the diversity of transportation fuel supply.

Local Level Case Study: CR&R

- CR&R is developing a state-of-the-art anaerobic digester facility that will divert up to 320,000 tons of waste from landfills and produce 4 million DGE of fuel per year. This low-carbon fuel is used to refuel 400 of CR&R's fleet of refuse collection vehicles, which then go out to collect more organic waste for the company's digester. This is tremendous example of a circular economy where waste and energy needs are being simultaneously met at the local level, while also significantly reducing environmental emissions. CR&R's investment in this project is approximately \$100M, which is a significant investment in an economically depressed part of Southern California. RNG produced in excess of CR&R's 400 truck fueling needs is injected into the Southern California Gas Company's natural gas distribution infrastructure, where it is then transported to other users looking to produce lower carbon energy for their operations.



“This is big time. It’s a 21st century facility that is recycling 100 percent of our organic waste, and it’s right here in our town,” says Perris Mayor Michael Vargas. “It plays into our efforts to be sustainable as a city.”

Local Level Case Study: Dairy Digesters

- As of Q1 2020, there are 107 dairy digester projects that are in various stages of development that have been funded by the California Department of Food and Agriculture Dairy Digester Research and Development Program. California has invested \$183.5 million in these digesters, with private investment being approximately 200% of this amount. These digesters will primarily be producing ultra-low carbon RNG for the LCFS.
- CalGren is one of the project developers working to bring on-line a network of dairy biogas production throughout Central California; the produced RNG will be used in the production of low-carbon ethanol and injected into the local utility pipeline infrastructure for sale as a transportation fuel. CalGren operates 10 dairy digesters at this time, with many more under development.