

# GAME CHANGER

THE BEST WAY TO MEET CALIFORNIA'S 2030 AND 2050 EMISSIONS REDUCTION GOALS TODAY:  
NEAR-ZERO HEAVY-DUTY NATURAL GAS TRUCKS FUELED BY RENEWABLE NATURAL GAS (RNG)

NEAR ZERO EMISSIONS  
NATURAL GAS ENGINE

> 90% reduction  
in NOx (smog-forming) emissions

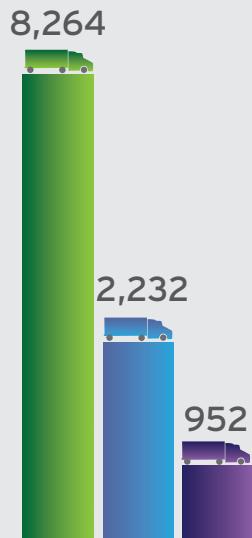


RENEWABLE NATURAL GAS  
AS TRANSPORTATION FUEL

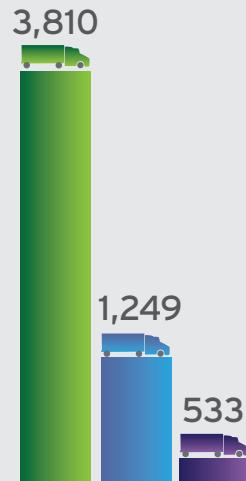
> 80% reduction  
in greenhouse gas emissions

## HOW MUCH CAN \$500 MILLION DO FOR OUR AIR AND ENVIRONMENT?

Number of Trucks Incentivized

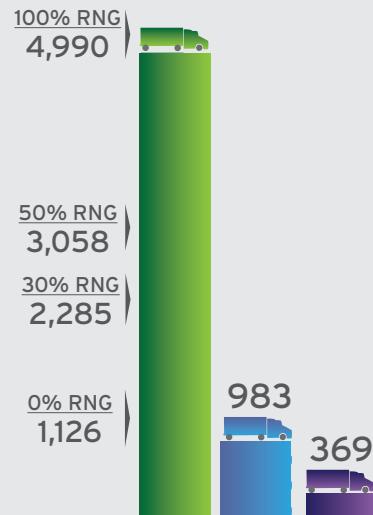


Smog-Forming  
Emissions Reductions\*



\*Compared to Baseline Diesel (weighted tons)

Greenhouse Gas (GHG) Reductions<sup>+</sup>



+Compared to Baseline Diesel (thousand MT CO2e)

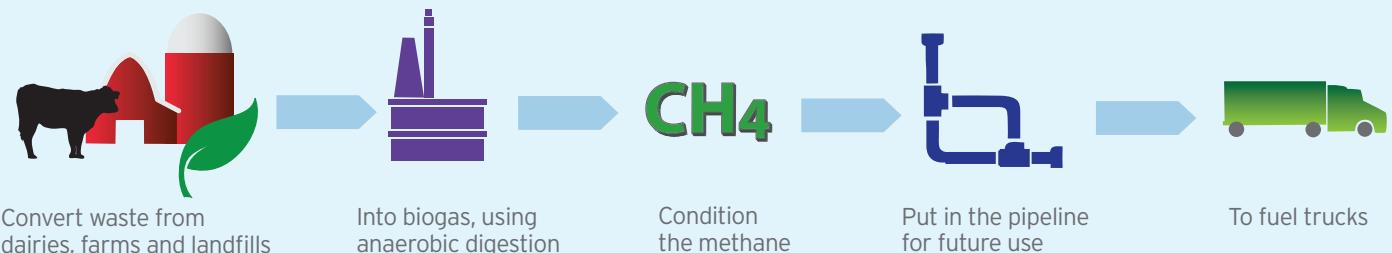
 Natural Gas Vehicle (NGV)  
Commercially available in 2016

 Electric HD Truck CA Grid  
California Air Resources Board projects commercial availability in 2030<sup>†</sup>

<sup>†</sup>ARB Technology Assessments 2015

For more information, visit [NGVGameChanger.com](http://NGVGameChanger.com)

## CREATING RENEWABLE NATURAL GAS



## Renewable Natural Gas is 13X More Cost-Effective Than Fuel Cell Trucks

### Cost-Effectiveness of GHG Emissions Reductions Per Metric Ton CO<sub>2</sub>e

*This technology is available to help meet California's goals TODAY!*

**\$100** RNG NEAR-ZERO

**\$444** COMPRESSED NATURAL GAS NEAR-ZERO

*This technology will not be commercially available until 2030.<sup>†</sup>*

**\$509** ELECTRIC HD TUCK CA GRID

**\$1354** FUEL CELL HD TRUCK 33% RENEWABLE HYDROGEN

<sup>†</sup>ARB Technology Assessments 2015

**NGVs  
FUELED  
BY RNG**

**REDUCE NOx  
REDUCE GHG EMISSIONS  
INCREASE DEMAND FOR RNG**

Compared to electric vehicle technologies, which can at best provide zero carbon emissions, RNG sourced from dairy, food and green waste is **carbon-negative – removing more carbon from the atmosphere than it produces**.

One dairy-sourced RNG fueled truck has **6X the greenhouse gas benefit** of one plug-in electric vehicle.

Many fleets have already embraced RNG. In fact, according to the California Air Resource Board's latest Low Carbon Fuel Standard report, **more than half of the natural gas used in California vehicles is RNG**.

California has an opportunity to put organic waste to beneficial use, meet waste reduction goals and reduce GHG emissions by converting this waste to **carbon-negative RNG for transportation fuel**.

Putting more clean heavy-duty natural gas trucks on California's roads is the fastest and most cost-effective means to **accelerate RNG production**.

For more information, visit [NGVGameChanger.com](http://NGVGameChanger.com)