



**a. What is the innovation and why is it innovative?**

Compressed Natural Gas-powered Ready Mix Concrete trucks. They are innovative because Ozinga introduced the first factory-dedicated CNG concrete trucks to the state of Illinois. The impact has been seen in the city of Chicago and its surrounding suburbs. Heavy-Duty vehicles running solely on compressed natural gas (CNG) offer significant carbon emissions reductions—up to 90% less than those produced by heavy-duty diesel vehicles. Further the CNG concrete trucks reduce green house gas emissions by 23% and operate up to 90% quieter than traditional diesel trucks. While improving greatly reducing pollution, the CNG trucks also reduce fuel costs by up to 40% and require less maintenance. Since 98% of natural gas used in the U.S. comes from North America we are able reduce our dependence on imported oil as an added benefit.

**b. What did it change or replace?**

Factory-dedicated CNG trucks replace traditional diesel-fueled concrete trucks that are going out of service. Retrofit CNG trucks change traditional diesel-fueled concrete trucks by converting the engine and fuel system to run on compressed natural gas.

**c. Where and when did it originate, how has it been used, and how is it expected to be used in the future?**

The first 13 CNG-powered Ready Mix trucks were introduced between October and December of 2011. Those trucks began operating from Ozinga's Chicago location, where the clean-running trucks would have the greatest impact and adhere to strict emissions standards. Those operating in the suburbs have the advantage of running more quietly than a diesel truck, up to 6 decibels quieter at full torque and up to 10 decibels quieter while idling.

Since then, Ozinga has added more dedicated CNG trucks to locations in Illinois and Indiana, with 50 CNG trucks on the road now. They have also retrofit front-discharge concrete trucks to run on CNG, and will have over 100 CNG vehicles operational by the end of summer 2013.

Ozinga has also pledged to replace or convert their entire fleet to CNG by the year 2020.

In addition to improving their own fleet, Ozinga has begun construction of CNG fueling stations around Chicago, with two already in service and more planned for completion later this year. Ozinga hopes to promote clean energy by expanding the nation's alternative fuel infrastructure and making CNG more available to other fleets in the area.

**d. If the nomination is for an innovative project, specifically identify each of its innovations.**

- i. Introduction of the first dedicated CNG Concrete Mixer Truck in Midwest and largest CNG mixer fleet in the U.S.
- ii. CNG-powered trucks have drastically less carbon emissions than traditional fuel (diesel)
- iii. CNG fueling system burns cleaner, quieter, requires less maintenance, and reduces costs
- iv. Expanding alternative fuel infrastructure through construction of area CNG fueling stations



REAR-DISCHARGE CNG CONCRETE MIXER

With 85 years of proven service in transportation and logistics, Ozinga has established itself as a trusted leader in innovative technology. Significantly reducing emission while realizing great savings in fuel costs, Ozinga has successfully introduced natural gas to the construction industry as a clean, affordable, abundant, and American fuel source.

UP TO <b>40%</b> FUEL SAVINGS	<b>90%</b> REDUCTION IN CARBON	REDUCES GREEN HOUSE GASSES BY <b>23%</b>	<b>98%</b> AMERICAN	ENERGY INDEPENDENT BY <b>2020</b>
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FRONT-DISCHARGE CNG CONCRETE MIXER (RETROFIT)

Ozinga is dedicated to natural gas long-term and has pledged to convert its entire fleet of 500 Ready Mix trucks and support vehicles to CNG by the year 2020.