



# Destination Zero

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Clean Transportation

Renewable Fuels Summit

## MISSION

Making people's lives  
better by powering a more  
**prosperous world**

## VISION

Innovating for our  
customers to **power their  
success**

# Our Story

## A HISTORY ROOTED IN INNOVATION

Our story began in 1919 when Clessie Cummins and W.G. Irwin saw the potential and power of a simple diesel engine.

Cummins has continued that innovation to address key challenges across our industry like the durability and fuel economy of on-highway trucks, reducing emissions in all parts of the world and now innovating for lower carbon technologies.

Innovation is what we've done before and will continue to do for the next 100 years.

Our key capabilities accelerate toward Destination Zero

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**11,000** Of the brightest innovators

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**1.2M** Engines manufactured through Q3 2021\*

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**190** Countries and territories

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**55** Global technical centers

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**\$1B** Annually spent on research and technology

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**10,600** Cummins certified dealer locations

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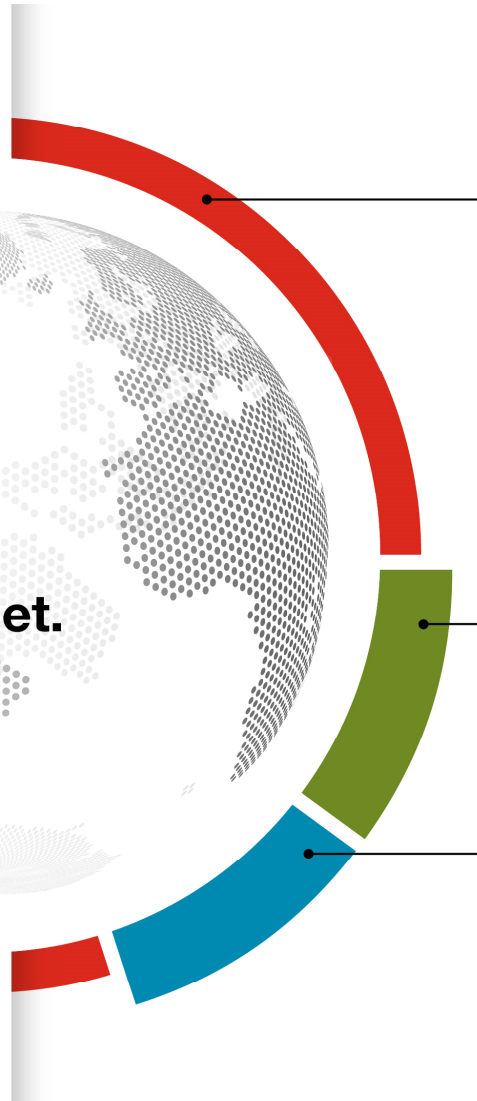
*\*Approximate through September 2021 and will be updated to reflect the full-year once available. Other statistics are updated as of 2021.*

Public

Cummins

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**Making people's lives  
better by powering a  
more prosperous world  
requires a healthier planet.**



## **PLANET** 2050

Leveraging our unique skills, experiences, and stakeholder relationships, we are committed to addressing climate change and air emissions, using natural resources in the most sustainable way, and ensuring our communities are better because of our presence in them. We have quantifiable goals for 2030 and visionary longer-term aspirations for 2050.

### **DESTINATION ZERO**

Our strategy to go further, faster to reduce the greenhouse gas and air quality impacts of our products in a way that is best for our customers and all stakeholders.

### **CUMMINS WATER WORKS**

Our initiative to address the global water crisis by strengthening communities through access to sustainable water.

# Our commitment requires changes to our products

*2030 GOALS: DOING OUR PART TO ADDRESS CLIMATE CHANGE AND AIR EMISSIONS*

**25%**

Reduction in scope 3 absolute lifetime GHG emissions from newly-sold products

**55<sub>MMT</sub>**

million metric tons reduced from scope 3 GHG emissions from products in the field

**50%**

Reduction in absolute GHG emissions from facilities and operations

# Emissions simplified



## CRITERIA AIR EMISSIONS

- Particulate matter (PM) and other emissions like nitrogen oxides (NOx)
- Contribute to smog and negative public health outcomes
- Close to zero with today's technologies, but NOx can be lowered further



## GREENHOUSE GASES (GHG)

- Carbon dioxide (CO<sub>2</sub>), methane, nitrous oxide, and others
- Trapped heat contributes to climate change
- Constraints in what can be achieved with fossil fuels
- For most of our applications, no well-to-wheels zero carbon solutions exist today

# Well-to-wheels emissions

DECARBONIZING THE TOTAL CHAIN OF EMISSIONS IS ESSENTIAL



Removing coal,  
oil, natural gas  
or raw materials  
from the earth

*Transportation  
and distribution*



Refining or  
processing into  
a usable power  
source

*Transportation  
and distribution*



In-use  
emissions

# Reducing well-to-wheels emissions

BY INNOVATION OF THE ENERGY SOURCES AND THE POWER SOLUTIONS

## ENERGY SOURCES



Innovate and scale low carbon fuels



Decarbonize and improve resiliency of the grid



Develop and mature the green hydrogen economy

## POWER SOLUTIONS



Increase adoption of fuel cell, battery electric and hybrids



Reduce GHGs from internal combustion engines

# Addressing a wide range of applications



HEAVY-DUTY  
TRUCK



MEDIUM-DUTY  
TRUCK



BUS



OIL AND GAS



FIRE AND  
EMERGENCY



CONSTRUCTION



MARINE



MINING



POWER  
GENERATION



DEFENSE

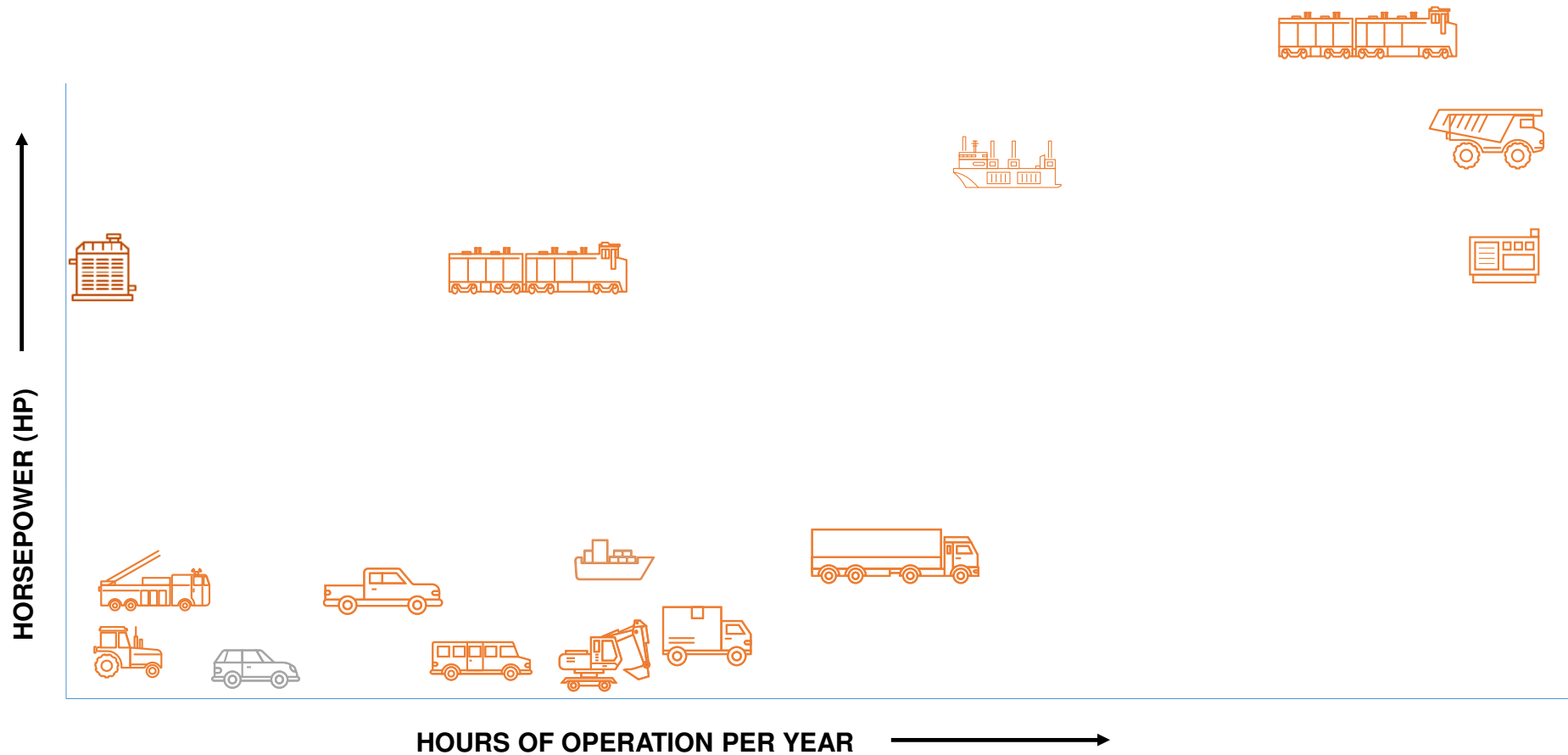


AGRICULTURE



RAIL

# Challenge is greater for diverse applications



# Destination Zero



**Lower  
emissions today**



**Reduce well-to-  
wheels emissions**



**Drive wide-scale  
customer adoption**



# Reaching Destination Zero

CO<sub>2</sub> emissions

100%  
90%  
80%  
70%  
60%  
50%  
40%  
30%  
20%  
10%  
0%

2021

2030

2040

2050

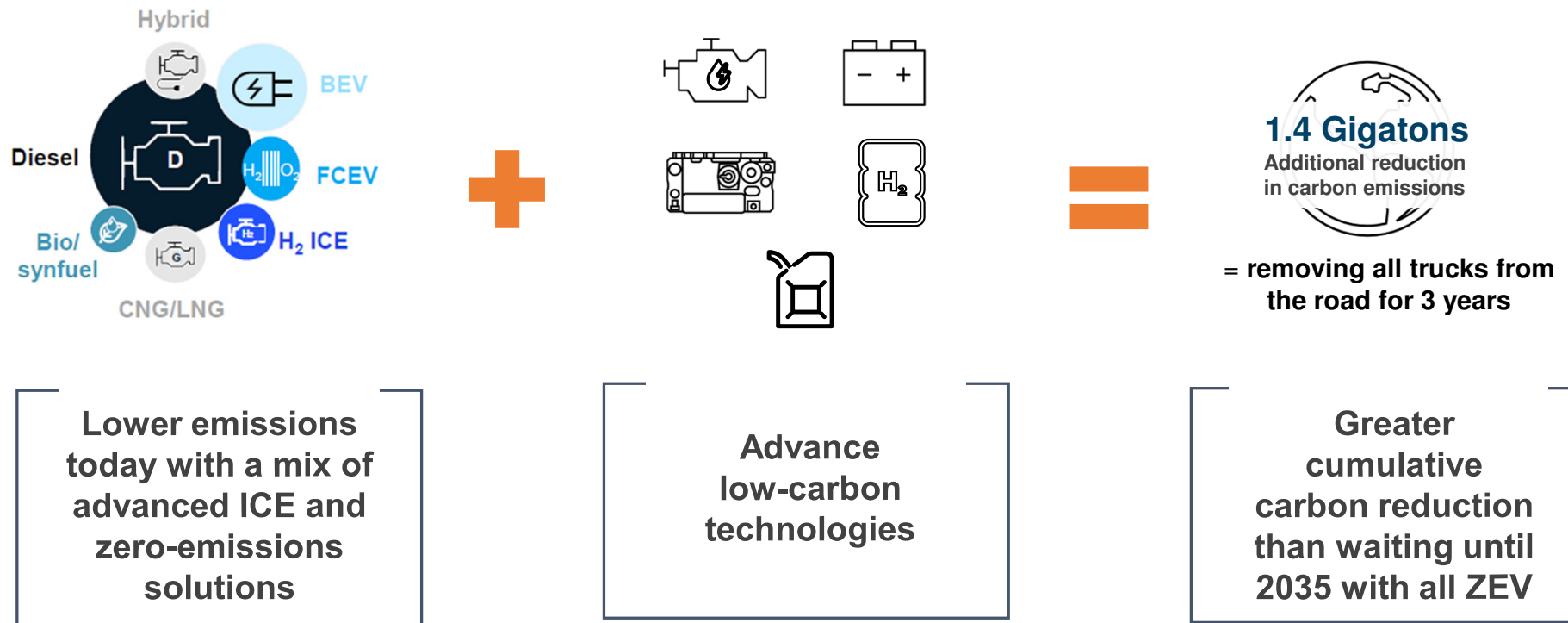
- Advancing our solutions**
- Drive reductions in NOx and CO<sub>2</sub> in ICE
  - Create a technology-forcing regulatory environment
  - Build scale in new technologies
  - Build renewable grid infrastructure

- Many solutions competing segment by segment**
- Increase in applications where new technology is preferred
  - Renewable grid build out progressing
  - New fuel infrastructure deployed

- Zero emissions solutions broadly available**
- Renewable and resilient grid in place
  - Mature Hydrogen infrastructure
  - Deployment of new zero and low carbon technologies

*Driving factors: energy source decarbonization and infrastructure investment, regulatory advancements, and customer pull*

# We can lower emissions faster



# *Accelerating toward* Destination Zero

Cummins will continue to innovate and invest as we advance along the path to zero, but we can't do it alone.

Action is required today

Progress requires partnership

Technology leadership is critical

## ENERGY SOURCES



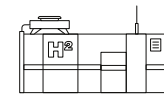
LOW CARBON  
FUELS



GREEN HYDROGEN  
ECONOMY

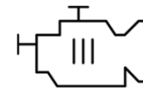


DECARBONIZED  
GRID

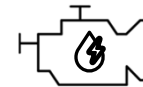


STORAGE

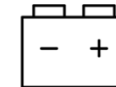
## POWER SOLUTIONS



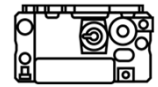
ADVANCED  
ENGINES



HYBRID



BATTERY  
ELECTRIC



FUEL CELL  
ELECTRIC