## monolith

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The hydrogen to power a green world.

# The deadline the world has set to save itself.

The deadline for a decarbonized planet. How will we get there?

There won't be just one energy source that is the answer. But there will be just one that holds the key. Low-emission hydrogen from Monolith.

Monolith is the leader in the low-emission hydrogen that will provide the high-energy needs of a changing world — but at the affordable cost the world needs to make it work.

# Powering the energy transition.

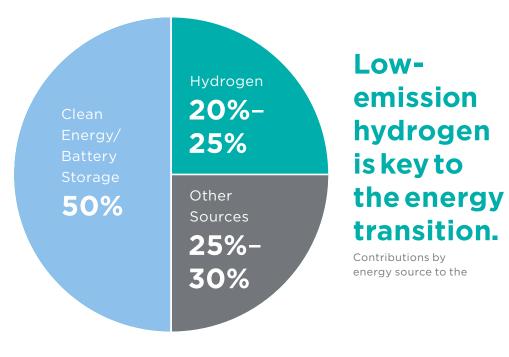
The energy transition to a decarbonized world by 2050 will require high-energy, low-emission solutions working alongside the traditional renewables of wind, solar and battery storage. The key to meeting the world's energy needs, while reducing atmospheric  $CO_2$ , is low-emission, cost-effective hydrogen. Hydrogen offers the energy density for use in trucking, aviation, agriculture and industry.

As the clear leader of this transition, Monolith is producing commercially viable, affordable low-emission hydrogen today. And, as renewable natural gas becomes more available, Monolith will be producing carbon-negative hydrogen.









# Low-emission, cost-effective hydrogen compared to traditional hydrogen:

Methods of producing hydrogen



#### Steam Methane Reforming (SMR)

#### High CO<sub>2</sub>. Low Cost.

While affordable, SMR releases 11 tons of  $CO_2$  into the atmosphere for every 1 ton of hydrogen produced.



#### Electrolysis

#### High Cost. Low CO<sub>2</sub>.

Electrolysis is low-emission but uses 7X the electricity of methane pyrolysis.



#### Methane Pyrolysis

#### Low Cost. Low CO<sub>2</sub>.

Pyrolysis is cost-effective, and requires less water and land usage.

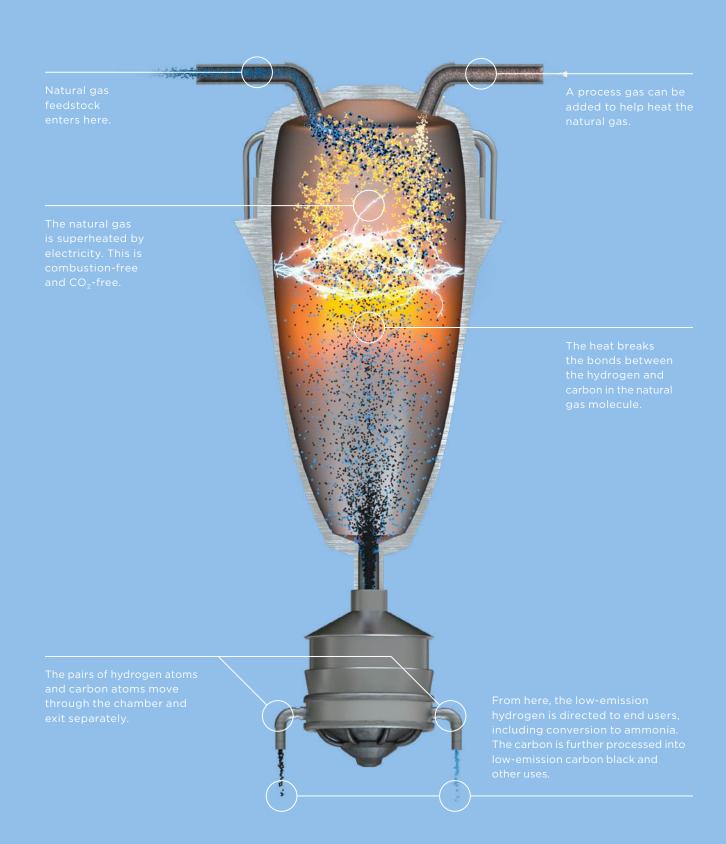
#### **The Monolith Process**

We've made methane pyrolysis work on a commercial scale, cracking the code on cost-effective, low-emission hydrogen. Using 100% clean electricity, methane pyrolysis superheats natural gas molecules, cracking them into pure hydrogen and carbon atoms. Because there is no combustion, no  $CO_2$  is released. Soon, we will be using renewable natural gas as the feedstock, making our process carbon-negative.

Using methane pyrolysis at the largest facility of its kind in the world, Monolith is the leading producer of low-emission hydrogen and the low-emission carbon black and ammonia that disrupt unsustainable industries.



### **How Methane Pyrolysis Works**





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Hydrogen

Monolith's methane pyrolysis solution makes low-emission hydrogen real, affordable and at scale. Right now, at our facility in Hallam, Nebraska, we're producing low-emission hydrogen at a commercial scale. With the completion of our expanded facility, Monolith will be operating at a global scale, producing carbon-zero hydrogen to serve the high-energy/low-emission needs of a number of industries.



Agriculture



**Aviation Fuel** 



**Marine Fuel** 



**Energy Storage** 



**Chemical Production** 



**Diesel Fuel** 



Steel Manufacturing



Trucking

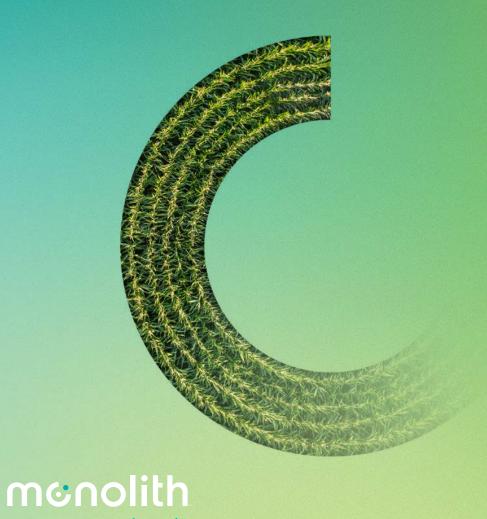


**Industrial** 



Carbon black is an essential material found in countless everyday products, including tires, rubber goods, inks and plastics. The conventional process to create carbon black releases large amounts of greenhouse gases into the atmosphere. Through Monolith's methane pyrolysis technology, we create low-emission, environmentally sustainable carbon black — preventing 2.2 tons of CO<sub>2</sub> from being released for every ton of carbon black produced compared to traditional manufacturing processes.

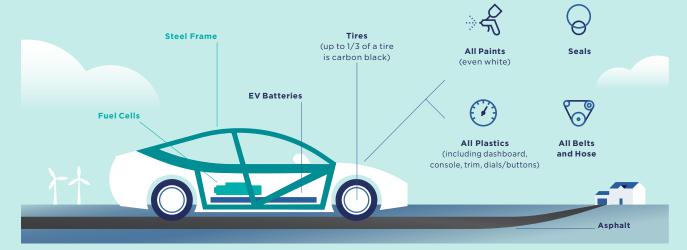
Monolith carbon black offers performance that is the same or better than traditionally made carbon black — while enabling manufacturers to meet their sustainability goals and the demand for environmentally responsible products.



Traditional ammonia production is one of the most pollution-filled industrial processes known today — accounting for more than one percent of the world's total greenhouse gas emissions (equal to those of the United Kingdom). Using methane pyrolysis powered by 100% clean electricity, Monolith will create the carbon-free anhydrous ammonia needed for the fertilizer to grow the world's food, without the release of CO<sub>2</sub>.

Monolith's carbon-free ammonia will help feed a growing world population that will reach 9.7 billion by 2050. No longer will the world need to trade food for CO<sub>2</sub> emissions.

#### **Automotive**



#### Home

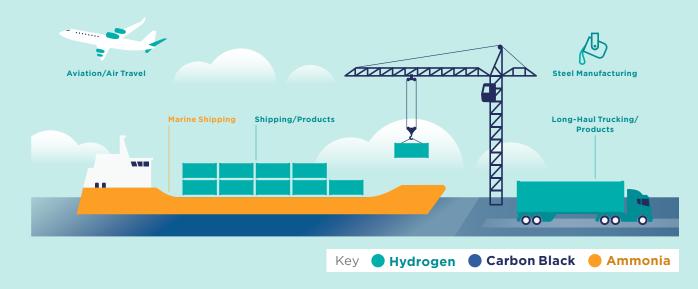


# How Monolith impacts our lives.

#### Office



#### **Shipping/Transportation**



Creating a green, carbon-zero world by 2050 begins with making small changes to your life today. From everyday products to global energy and agricultural solutions, the countless ways that Monolith's products and processes can add sustainability to your everyday life are truly astounding. Here is just a glimpse.



## **Powered by Our Values**

We have staked our claim to a bold mission — to be the world leader in producing cost-effective, low-emission hydrogen and low-emission materials, which will transform the environmental future of the planet. But our success will be fueled by the culture and values that drive us every day. We begin with these founding principles:



**Environmentally Transformative** 



**Economically Sustainable** 



Technologically Advantaged





#### **Committed to ESG**

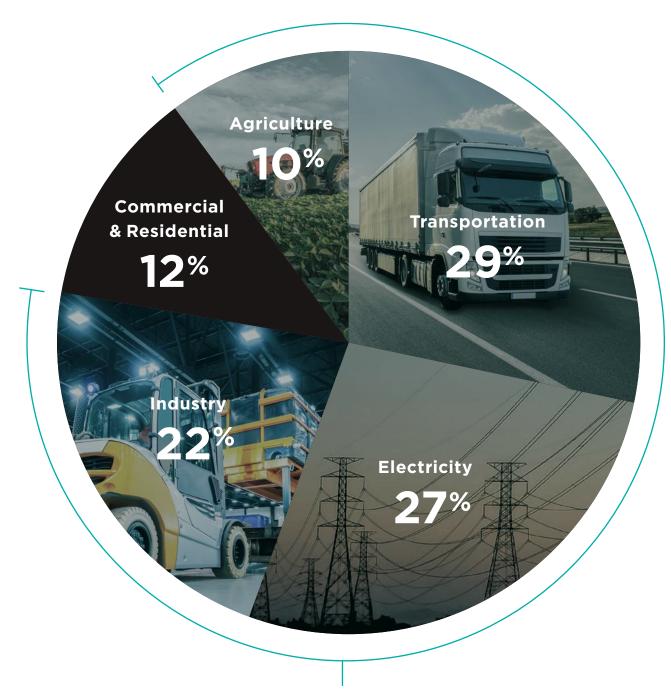
Profit and loss. Market trends. Sales forecasts. These are all important measures of a business. But they only scratch the surface of a company's real value. At Monolith, we believe that maintaining or exceeding global environmental, social and governance (ESG) standards is not only good for the planet, but it's also good for business.

Monolith has set forth a vision for a company that will grow to become the social model for peer companies across our industry and around the world. This will be led by a vision of diversity and inclusion across a broad spectrum of ethnic, gender, age, religious, sexual-orientation and disability groups. We know we are a better, stronger company when we have a diverse range of perspectives, ideas and leaders to move us into the future.

When it comes to diversity and inclusion, we expect nothing less from the members of our supply chain, partners and vendors who choose to do business with Monolith. Also, we expect them to adhere to our high standards when it comes to employee relations and safety, as well as fair labor, procurement, anti-corruption and related practices.

From the company's inception, Monolith's governance policies have been some of the best in the industry. They begin at the top, with the split chairperson and CEO positions and a board that includes experienced, independent directors. The compensation comparisons between the highest and lowest-paid employees at Monolith fall well within any reasonable equity standard.

What are the real stakes? Even beyond the goals of 2050, the world stands at a critical crossroads—between sustainability for generations to come or staying mired in the status quo. Monolith is proud to be one of the key answers that will put the world on the right path, affordably and realistically. In fact, through our low-emission hydrogen and other materials, Monolith provides the low-emission, sustainable solution for more than 85% of the highest greenhouse-gas emitting sectors of our economy. That's making real change. And we're already making it happen today.



Monolith's solution addresses more than 85% of the highest CO<sub>2</sub>—emitting end markets.