



CF Industries 2022:  
Sustainability in Action



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## A Conversation with CF Industries' President and CEO, Tony Will

**CF Industries has long played a key role in meeting one of the world's most important challenges: feeding a growing population. Today, the Company is advancing its initiatives to help the world meet another challenge: the need for clean energy. Tony Will, CF Industries' President and Chief Executive Officer, explains how our sustainability efforts are driving us towards that goal.**

### What role do CF Industries employees play in the Company's sustainability efforts?

Our 2,700 employees are essential to the progress we are making. For example, our Inclusion Resource Group is an active, employee-led forum for CF Industries employees to get involved and help create a workplace where we all feel included. Employees are welcome to join their local IRG at any time and they have – nearly 20% of our workforce belong today, helping support our inclusion, diversity and equity journey in meaningful ways.

We also empower our team to make a difference in their local communities. In 2021, we implemented a volunteer time off (VTO) program that gives every employee 8 paid hours per year to give back to a cause they support. In 2022, the VTO program supported more than 3,300 hours of volunteer activity by our employees.

### How is CF Industries addressing its carbon footprint?

We are focused on reducing greenhouse gas emissions from our production network. Our committed goals include reducing our carbon emissions intensity by 25% by 2030 and to be net zero carbon by 2050. Initiatives undertaken over the last two years, combined with activities in progress provide us the pathway to achieve our 2030 goal, and put us well on our way toward achieving our 2050 commitment. We start with what we can control within our network.

For example, we have a landmark emissions reduction project with ExxonMobil at our Donaldsonville Complex to capture and permanently sequester 2 million tons of process CO<sub>2</sub> annually that would otherwise be emitted to the atmosphere. This will allow us to bring to market the first significant volumes of blue ammonia. At the same facility, we are installing a 20MW electrolyzer to enable North America's first commercial-scale green ammonia capacity.

Beyond our plant gates, we have taken steps to address our Scope 3 emissions through the first-of-its-kind purchase of natural gas certified to have 90% lower methane emissions intensity – the ratio of methane emissions to natural gas produced – than the industry average. Using certified natural gas reduces the lifecycle greenhouse gas emissions of ammonia production by up to 20%.

### What other decarbonization initiatives are ahead?

In addition to our blue and green ammonia projects at our Donaldsonville Complex, we are progressing potential CCS projects at our Yazoo City and Medicine Hat facilities that will reduce CO<sub>2</sub> emissions and enable further blue ammonia production from our network. We also are exploring technology to capture flue gas CO<sub>2</sub>, which has substantially higher costs than capturing process CO<sub>2</sub>, but is necessary for us to achieve our goal of net-zero emissions by 2050. We also are conducting a front-end engineering and design study with Mitsui & Co., Ltd. for our proposed joint venture to construct an export-oriented blue ammonia facility at our new Blue Point Complex in Louisiana.

In the near-term, leveraging CCS technologies to produce blue ammonia offers a safe, proven, and rapid reduction of significant volumes of CO<sub>2</sub> emissions. CO<sub>2</sub> emitted today remains in the atmosphere for 100 years, so reductions made sooner will be in place longer and therefore have a large cumulative impact to the level of CO<sub>2</sub> in the atmosphere by mid-century. This is why the International Energy Agency has concluded that “reaching net zero will be virtually impossible” without CCS.

### Why are some hard-to-abate industries evaluating ammonia as a source of clean energy?

Other energy-intensive industries, such as power generation and marine shipping, face similar concerns about their respective carbon footprints and have identified ammonia as a clean energy source. This is due to the hydrogen atoms that make up a molecule of ammonia. Hydrogen is widely viewed as a scalable source of clean energy, and ammonia represents an efficient mechanism to both ship and store hydrogen, as well as a clean energy source in its own right as ammonia does not contain or emit carbon.

Our commitment to decarbonize our ammonia production process and the outlook for significant global demand for low-carbon ammonia as a clean energy source has created a unique growth opportunity for our Company. As we decarbonize, we are doing our part while also helping others decarbonize their industries, opening up new sources of demand for ammonia that will enable us to grow profitably while doing good for the environment.

### How is demand for low-carbon ammonia as an energy source developing?

Our clean energy initiatives have positioned CF Industries at the forefront of low-carbon ammonia production to meet demand that is emerging already. In early 2023, we signed a memorandum of understanding (MOU) with JERA Co., Inc., Japan's largest power generator, regarding the long-term supply of up to 500,000 metric tons of clean ammonia per year for their efforts to reduce emissions from their coal-fired power plants. This is the first significant demand to emerge for low-carbon ammonia as an energy source.

We also recently announced an MOU with South Korea's LOTTE CHEMICAL Company that will guide our companies in a joint exploration of clean ammonia production in the U.S. and long-term clean ammonia offtake into South Korea.

Our decarbonization efforts are now powering decarbonization efforts in other hard-to-abate industries, and thus supporting further decarbonization efforts across the economy. It is a virtuous cycle that we believe will accelerate in the years ahead.

### What do you think the legacy of CF Industries will be as the Company realizes its vision to be a global leader providing clean energy for a better world?

Food and energy. Two of the fundamental needs of humankind. CF Industries is playing a critical role in the supply of both, and doing it sustainably for the long-term. It's a special position to be in and we look forward to holding up our end as we progress our decarbonization and clean energy initiatives and provide clean energy to feed and fuel the world sustainably.

# About this Report

CF Industries 2022: Sustainability in Action provides an overview of our Company's sustainability leadership in 2022. The information included illustrates the role CF Industries plays in addressing wide-reaching challenges facing our world, our mission to provide clean energy to feed and fuel the world sustainably, and the progress we are making in the critical areas of environment, safety, workforce, and community.

This report was developed in tandem with our 2022 ESG Report, which details the Company's progress and opportunities within key environmental, social, and governance (ESG) areas. Our ESG Report is written in accordance with the Global Reporting Initiative (GRI) Standards (Comprehensive option), includes a Sustainability Accounting Standards Board (SASB) Index with industry-specific disclosures, and reports in line with Task Force on Climate-related Financial Disclosures (TCFD) guidelines. For additional information on CF Industries' ESG program, please visit [www.cfindustries.com/sustainability](http://www.cfindustries.com/sustainability). For financial information on CF Industries, please see our 2022 Annual Report.



Scan to view 2022 Annual Report.



## Key Takeaways of This Report

-  **CF Industries has made measurable progress across our sustainability agenda.**
-  **Exploring, building, and practicing sustainable operations enhances the positive impact CF Industries has on the world and creates growth opportunities for our Company from helping accelerate the world's transition to clean energy.**
-  **Sustainability not only consists of our robust environmental initiatives, but also relates to what CF Industries is doing to maintain safe and responsible operations, care for our workforce, and grow positive reliable partnerships with nearby communities.**
-  **Our sustainability agenda goes hand-in-hand with our continued evolution as a Company as we work together to fulfill our mission to provide clean energy to feed and fuel the world sustainably.**



# Our Business

## What We Do

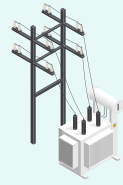
At our core, CF Industries is a producer of ammonia. We use the Haber-Bosch process to fix atmospheric nitrogen with hydrogen from natural gas to produce anhydrous ammonia, whose chemical composition is  $\text{NH}_3$ . For decades, our business has focused on producing and selling ammonia and other ammonia-derived products such as urea and urea ammonium nitrate solution (UAN). The nitrogen content in these products provide energy to crops to increase yields and is essential in the formation of protein within the plant.

Our products are essential to human life. Along with advancements in seed technology and farming practices, the use of nitrogen fertilizer and other nutrients dramatically increased food production in the second half of the 1900s, supporting world population growth and lifting countless people out of hunger. At the same time, fertilizer allows more food to be grown on fewer acres. This reduces the amount of land cleared for agriculture, preserving carbon sequestering forests and important wildlife ecosystems. Our products also play an important role in emissions reduction. For example, we are the world's largest producer of diesel exhaust fluid (DEF). DEF, when combined with selective catalytic reduction technology, reduces nitrogen oxide ( $\text{NO}_x$ ) emissions from diesel trucks by up to 90% and increases fuel efficiency by 3-4%.

Today, ammonia is poised to help humankind in a new way.

Other energy-intensive industries, such as power generation and marine shipping, face concerns about their respective carbon footprints and have identified ammonia as a clean energy source. This is due to the hydrogen atoms that make up a molecule of ammonia. Hydrogen is widely viewed as a scalable source of clean energy, and ammonia represents an efficient mechanism to both ship and store hydrogen, as well as a clean energy source in its own right as ammonia does not emit carbon when used as an energy source. Our commitment to decarbonize our ammonia production process, along with our extensive knowledge and expertise in ammonia production, storage and transportation, positions CF Industries to play an instrumental role in helping others decarbonize their industries, opening up new sources of demand for ammonia that will enable us to grow profitably while doing good for the environment.

## Decarbonizing Hard-to-Abate Industries



### Power Generation

- Increasing end-market interest in co-combustion with ammonia, primarily in Japan and South Korea.
- CF Industries signed a memorandum of understanding (MOU) with JERA, Japan's largest utility, for the long-term supply of up to 500,000 metric tonnes of low-carbon ammonia per year beginning in 2027.



### Ethanol and Sustainable Aviation Fuel (SAF)

- Demand for low-carbon ethanol supporting markets with low-carbon fuel standards (e.g., California) and as a pathway to the production of SAF is gaining significant traction.
- Low-carbon fertilizer can lower the carbon intensity of ethanol by over 10%.



### Hydrogen Transport and Storage

- Ammonia provides greater hydrogen density than compressed gaseous or liquid hydrogen.
- This advantage, along with existing global production and infrastructure, positions ammonia as an ideal transport medium.



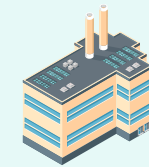
### Maritime Fuel:

- Ammonia as a low-carbon maritime fuel continues to be the leading alternative fuel candidate.
- Blue ammonia is expected to play a large role in supporting the transition to alternative fuels.



### Liquified Petroleum Gas (LPG)

- Commonly used in heating appliances, cooking equipment, and vehicles. In the United States, commercial propane and special-duty propane are main uses.
- While LPG has a lower carbon footprint than gasoline and diesel fuel, ammonia can further reduce emissions.



### Low-Carbon for Industrial

- Low-carbon ammonia for industrial applications gaining interest, especially in Europe, as companies face carbon taxes and look to achieve ESG targets.



### Backup Generators

- Backup power generators currently rely on diesel, which has significant environmental and cost ramifications.
- Ammonia could displace diesel as the power source for backup generators and has already been successfully tested in California.

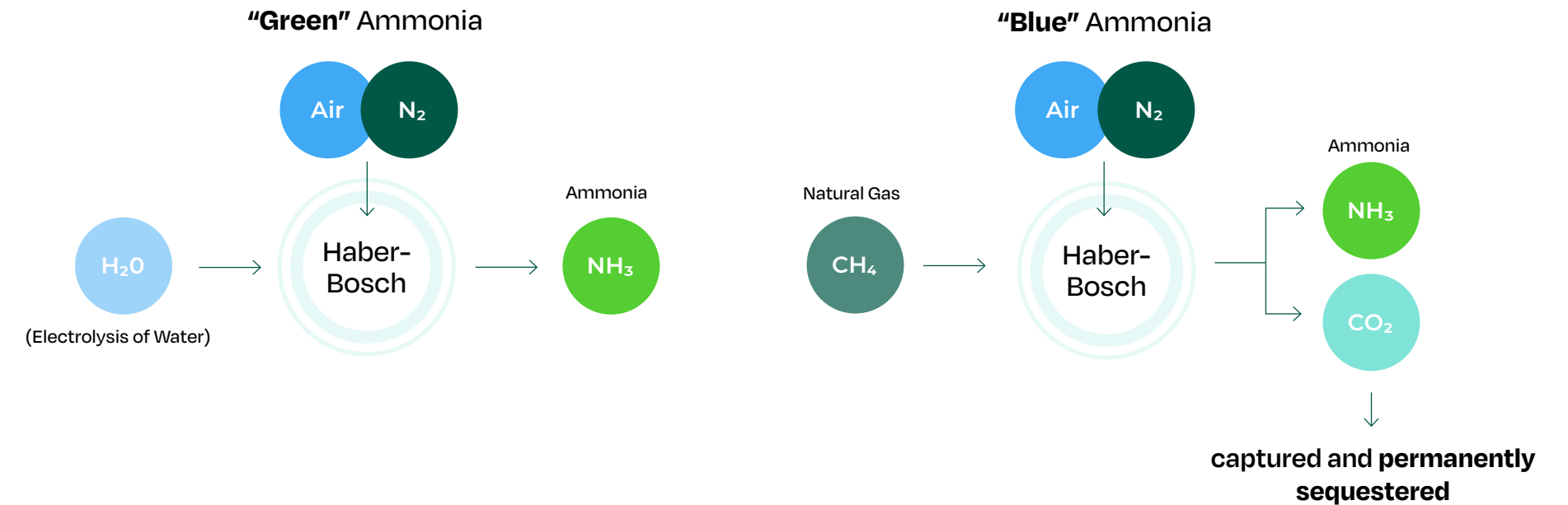


### Traditional Agriculture and Consumer Product Goods (CPG) Applications

- Low-carbon fertilizers provide the least intrusive and most certifiable way to support decarbonization of agricultural inputs.
- CPG companies could look to low-carbon fertilizers to achieve decarbonization goals.

## Pathways to Net-Zero Carbon Ammonia

While ammonia is a carbon-free energy source, conventional ammonia production results in significant carbon emissions due to the use of natural gas in the process. To accelerate the world's transition to clean energy, we must do more than supply ammonia; we must decarbonize our ammonia production value chain.



# Our Core Values

Our Core Values drive everything we do at CF Industries and are the foundation of every employee's experience.

## WE DO IT RIGHT

- We put safety first.
- We are ethical and compliant in our business dealings.
- We are stewards of the environment.
- We foster an inclusive culture, treating each other with respect.



## WE DO IT WELL

- Our operations are productive and efficient.
- We are flexible in order to deliver the best solution.
- We focus on execution and results.



## WE EXECUTE AS A TEAM

- We work as a team for the greater good of the Company.
- We lead courageously and actively seek diverse perspectives, experiences, and ideas.
- Our decisions are made on the basis of data and analysis.



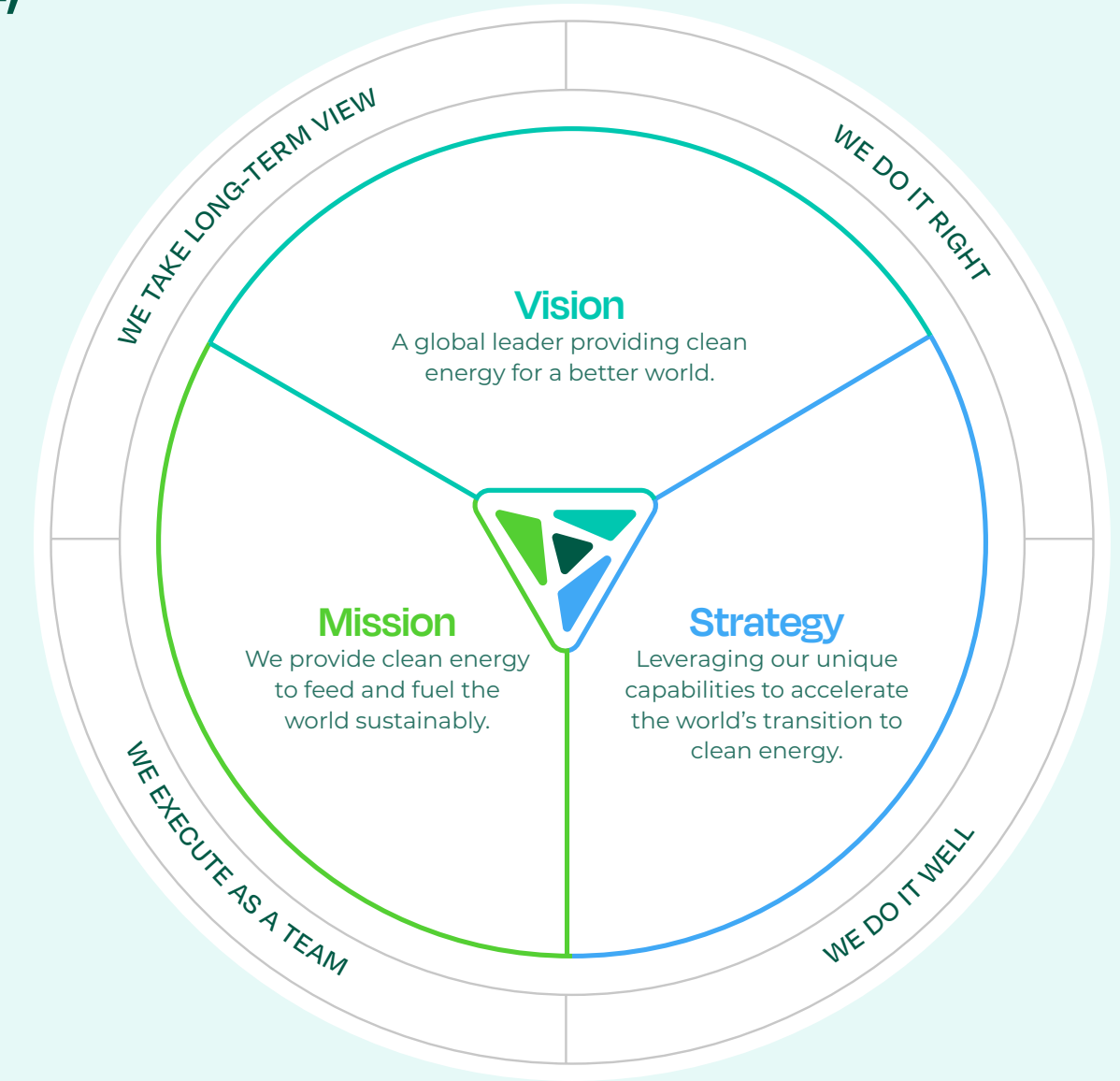
## WE TAKE A LONG-TERM VIEW

- We are an honest and reliable partner.
- We collaborate and cooperate with all stakeholders.
- Our goal is outstanding financial performance.
- We are committed to employee development, building a diverse and inclusive organization for the future.



# Our Mission, Vision, and Strategy

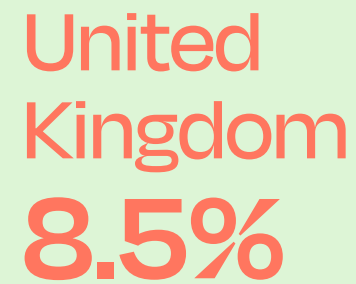
Our Mission, Vision, and Strategy provide the framework, underpinned by our values, for the clean energy initiatives that we are executing across CF Industries. As we aggressively decarbonize our production and distribution network, we will provide clean energy in the form of nitrogen fertilizer to continue to grow the crops that feed the world. Additionally, we will support and accelerate adoption of a broader low-carbon ammonia and hydrogen economy by enabling others to move away from carbon-intensive energy sources.



# Our Team



Operations located in 3 countries:



of our employees based in each country



# Sustainability at CF Industries

## What is Sustainability?

Sustainability is the concept that humans must interact with their broader world in a way that fulfills the needs of today without compromising the needs of future generations. To us, sustainable operations mean reducing our impact on the environment, protecting and empowering our people and communities, and providing products to help the world do the same.

Sustainability is about evolving our operations and expanding our customer base to feed and fuel the world sustainably both today and tomorrow. Exploring, building, and practicing sustainable operations enhances the positive impact our Company has on the world, creates growth opportunities for our employees, and positions CF Industries to play a significant role in global decarbonization and energy transition efforts.

**An important part of sustainability at CF Industries is maintaining what has sustained us for more than 75 years. This includes:**



**Empowering a culture of safety excellence that continuously improves our ways of working and protects our people.**



**Ensuring all our employees – those who bring our mission to life every day – feel represented, valued, and supported by their leaders and CF Industries at-large.**



**Treating our customers with integrity and respect and focusing on outstanding execution.**



**Uplifting our communities through proactive community and broad stakeholder engagement as well as dedicated product stewardship.**



# Areas of Focus

CF Industries has defined four key areas of focus – Environment, Safety, Workforce, and Community – as a framework for our sustainability agenda. These focus areas and their corresponding goals were developed with the United Nations' Sustainable Development Goals (UN SDGs) in mind. The UN SDGs are a roadmap for creating global peace and prosperity, which are supported by the nearly 200 countries comprising the UN and many large international companies like CF Industries<sup>1</sup>.

<sup>1</sup> <https://sdgs.un.org/goals>

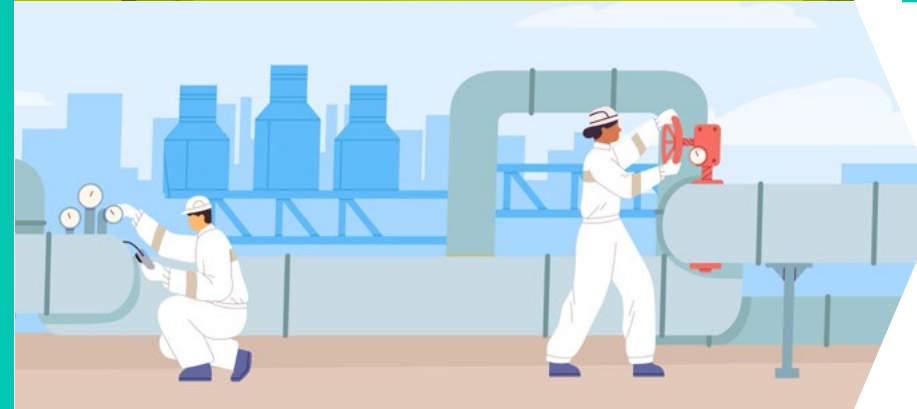
## Environment

Reduce the emissions footprint of our ammonia production value chain.



## Safety

Prioritize safety for our team while exploring innovative, creative ideas to help us do our jobs better.



## Workforce

Invest in our people and strengthen our culture of inclusive leadership, as well as support individual growth opportunities.



## Community

Support the communities where we live and work.



## Goals

CF Industries is committed to decarbonizing our ammonia production network, with an interim goal to reduce total CO<sub>2</sub> equivalent emissions by 25% per ton of product by 2030 and a longer-term goal to achieve net-zero carbon emissions by 2050.

The safety of our team and our operations are of the utmost importance. We embrace and demonstrate safety at every level of our business.

Our team is at its best when everyone is supported, heard, and has equal opportunities to learn and grow.

We believe that being a leader means being a good citizen and supporting local initiatives.

## 2022 Highlights

Landmark carbon capture and sequestration (CCS) agreement with ExxonMobil that is expected to commence in 2025 positions CF Industries to reduce CO<sub>2</sub> emissions by up to **2 million** tons per year – equivalent to removing the greenhouse gas emissions of **228,000** single family homes each year.

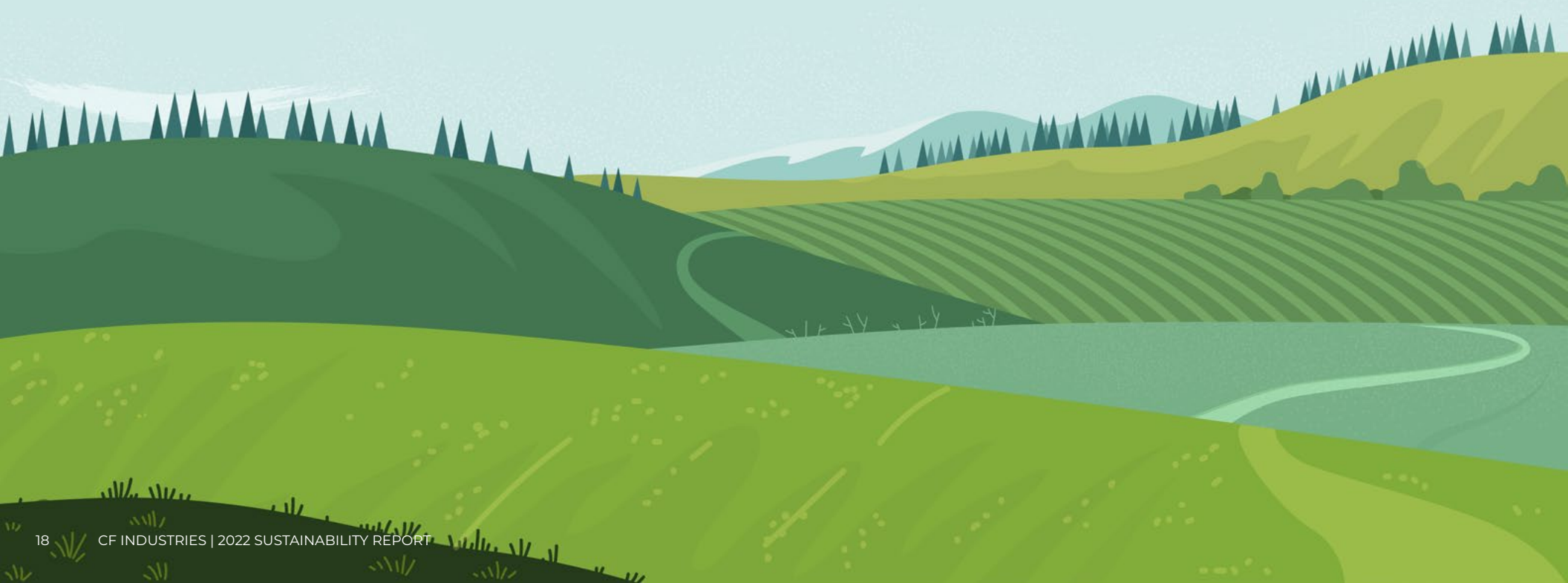
Our year-end recordable incident rate was **0.33** incidents per **200,000** work hours, significantly better than industry averages.

Females and persons of color currently make up **37%** of senior leadership roles, surpassing our goal of at least **30%** by the end of **2025**.

Made over **\$4 million** in charitable donations across our four philanthropic focus areas: environmental sustainability, healthy food access, STEM education and awareness, and local community advancement.

# Environment

Our commitment to environmental stewardship is integral to CF Industries' Do It Right culture. More than just a focus on compliance with permits and regulations, we strive to do more with less, leave the ecosystems from which we draw natural resources as good or healthier than we found them, and invest in proven and practical technologies to safely reduce the impact on the environment from our operations and help other industries do the same. This commitment can be seen across our clean energy initiatives and our focus on biodiversity and nature capital.



## Our Environmental Goals



**Reduce total CO<sub>2</sub> equivalent emissions by 25% per ton of product by 2030 (2015 baseline year).**

IN PROGRESS



**Reduce our Scope 3 emissions by 10% by 2030 compared to a 2020 baseline.**

IN PROGRESS



**Achieve net-zero carbon emissions by 2050.**

IN PROGRESS



**Develop integrated water resource management plans to ensure sustainable withdrawals and discharges.**

ACHIEVED







**Develop and prioritize a list of viable greenhouse gas reduction capital projects.**

ACHIEVED

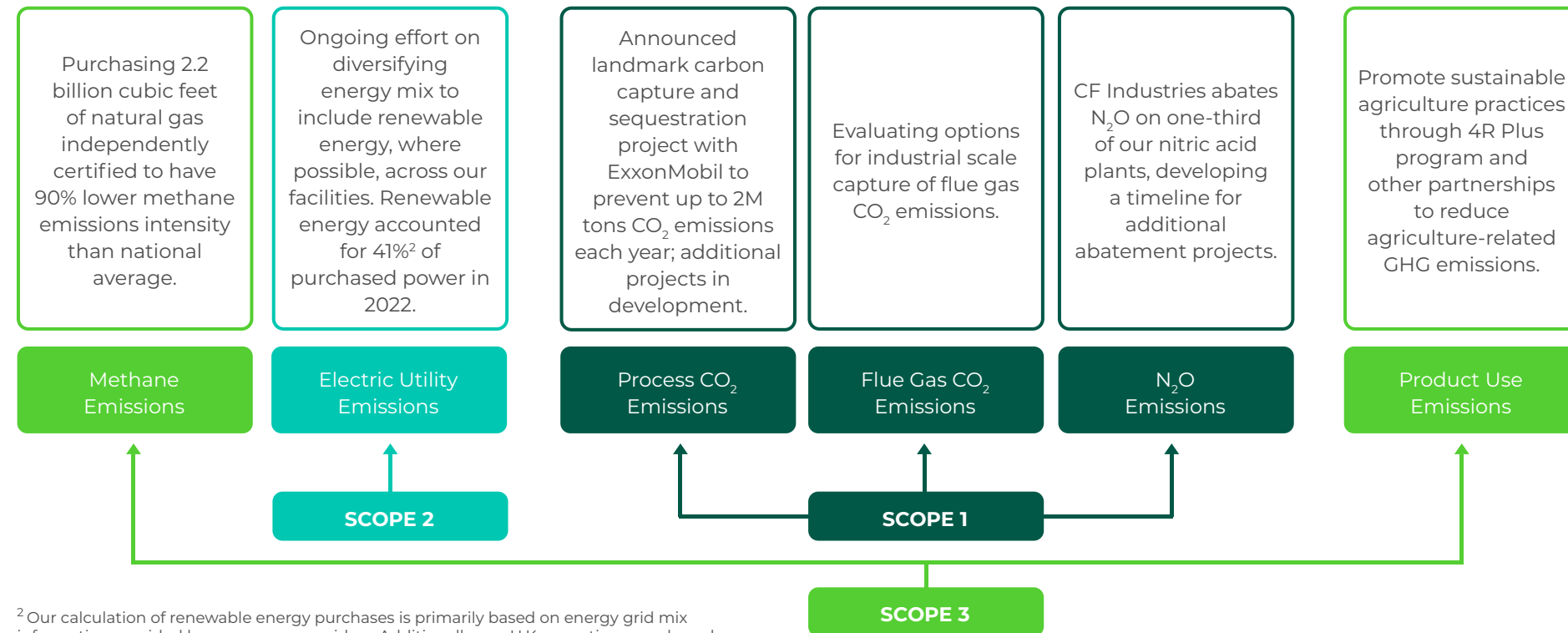
## Clean Energy Initiatives

Since 2020, CF Industries has advanced a series of clean energy initiatives to build on our long track record of environmental stewardship and support our strategy to leverage our unique capabilities to accelerate the world's transition to clean energy. These initiatives can be broadly grouped into four dimensions:

	<p><b>Decarbonizing our existing network to accelerate the availability of low-carbon ammonia.</b></p>		<p><b>Evaluating new low-carbon ammonia capacity growth.</b></p>		<p><b>Forging partnerships to accelerate our timeline and bridge gaps in areas where we do not have expertise.</b></p>		<p><b>Collaborating to build understanding of ammonia's clean energy capability, safety track record, and regulatory environment.</b></p>
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### Decarbonizing CF Industries' Ammonia Production Value Chain

CF Industries has committed to decarbonizing our ammonia production network, with an interim goal to reduce total CO<sub>2</sub> equivalent emissions by 25% per ton of product by 2030 compared to our 2015 baseline and a longer-term goal to achieve net-zero carbon emissions by 2050. Additionally, we are committed to reducing our Scope 3 emissions by 10% by 2030 compared to a 2020 baseline. We have made substantial progress towards these milestones across the ammonia production value chain.



<sup>2</sup> Our calculation of renewable energy purchases is primarily based on energy grid mix information provided by our energy providers. Additionally, our U.K. operations purchased renewable electricity backed by certification (REGO) to cover all their electricity needs.

## Pathway to Reducing CF Industries' Scope 1 Emissions

### What are Scope 1 emissions?

GHG emissions from sources owned or controlled by CF Industries – in this case our own facilities.

CF Industries generates Scope 1 emissions from the ammonia production process through the use of natural gas as a raw material, which generates process CO<sub>2</sub>, and the combustion of natural gas, which generates flue gas CO<sub>2</sub>. This results in approximately 1.6 tons of CO<sub>2</sub> emissions for every ton of ammonia produced. A portion of the process CO<sub>2</sub> byproduct is used in the production of granular urea or sold to industrial gas companies. Currently, the remaining process and flue gas CO<sub>2</sub> is emitted to the atmosphere. Additionally, we generate Scope 1 emissions from production of nitric acid by the oxidation of ammonia, which results in N<sub>2</sub>O emissions, another greenhouse gas (GHG).

We regularly engage stakeholders about this challenge and the pathway we have established to make significant reductions in carbon intensity and carbon emissions. Our two primary Scope 1 emissions reduction goals are to reduce our total CO<sub>2</sub> equivalent (CO<sub>2</sub>e) emissions by 25% per ton of product by 2030 (2015 baseline year) and reach net-zero CO<sub>2</sub> emissions by 2050.

## Maximize Efficiency to Reduce Emissions Intensity

Core to our business operations is our longstanding investment in maximizing the efficiency of our production plants to support lower carbon emissions intensity (CO<sub>2</sub> equivalent emissions per metric ton of ammonia produced).

We do this in three ways:



We use natural gas as a feedstock for ammonia production, which results in one-third of the CO<sub>2</sub> emissions compared to the use of coal.



Since 2012, we have invested more than \$10 billion in our locations to improve production safety, efficiency, and reliability.



Our capacity utilization is among the highest in our industry and has, over the last five years, been 10 percentage points better than our peers in North America. This allows us to produce more product tons for the same inputs.

With this focus, our 2022 carbon emissions intensity was 1.92 t CO<sub>2</sub>e/t NH<sub>3</sub>, 16% lower than our 2015 baseline year.

## Leverage Carbon Capture and Sequestration Technologies

CF Industries is pursuing carbon capture and sequestration (CCS) projects that will accelerate progress towards our decarbonization goals. CCS is the process of capturing CO<sub>2</sub> before it is emitted in order to safely and permanently sequester it in proven and secure storage areas deep underground, typically a mile below surface.

CF Industries' initial CCS efforts have focused on process CO<sub>2</sub> emissions, which occur because of the ammonia production process and are already captured at our facilities. We are also evaluating flue gas capture and sequestration opportunities. Flue gas CO<sub>2</sub> emissions occur as a result of the combustion of natural gas to power the production process and are not captured today.

CCS allows companies like CF Industries to prevent large-scale CO<sub>2</sub> emissions on a much quicker timeline than any other technology – an outcome critical to the world's climate goals. That's why the International Energy Agency has concluded that "reaching net zero will be virtually impossible" without CCS<sup>3</sup>.

CCS requires three steps:



CCS is heavily regulated and requires both state and federal permits, which are only provided after extensive review and analysis to ensure safety and permanence. Surface and subsurface monitoring are performed before, during, and after the CO<sub>2</sub> is injected to ensure it is contained and not impacting groundwater.

<sup>3</sup> <https://www.iea.org/reports/ccus-in-clean-energy-transitions>

Case Study:

# CF Industries' Landmark CCS Project

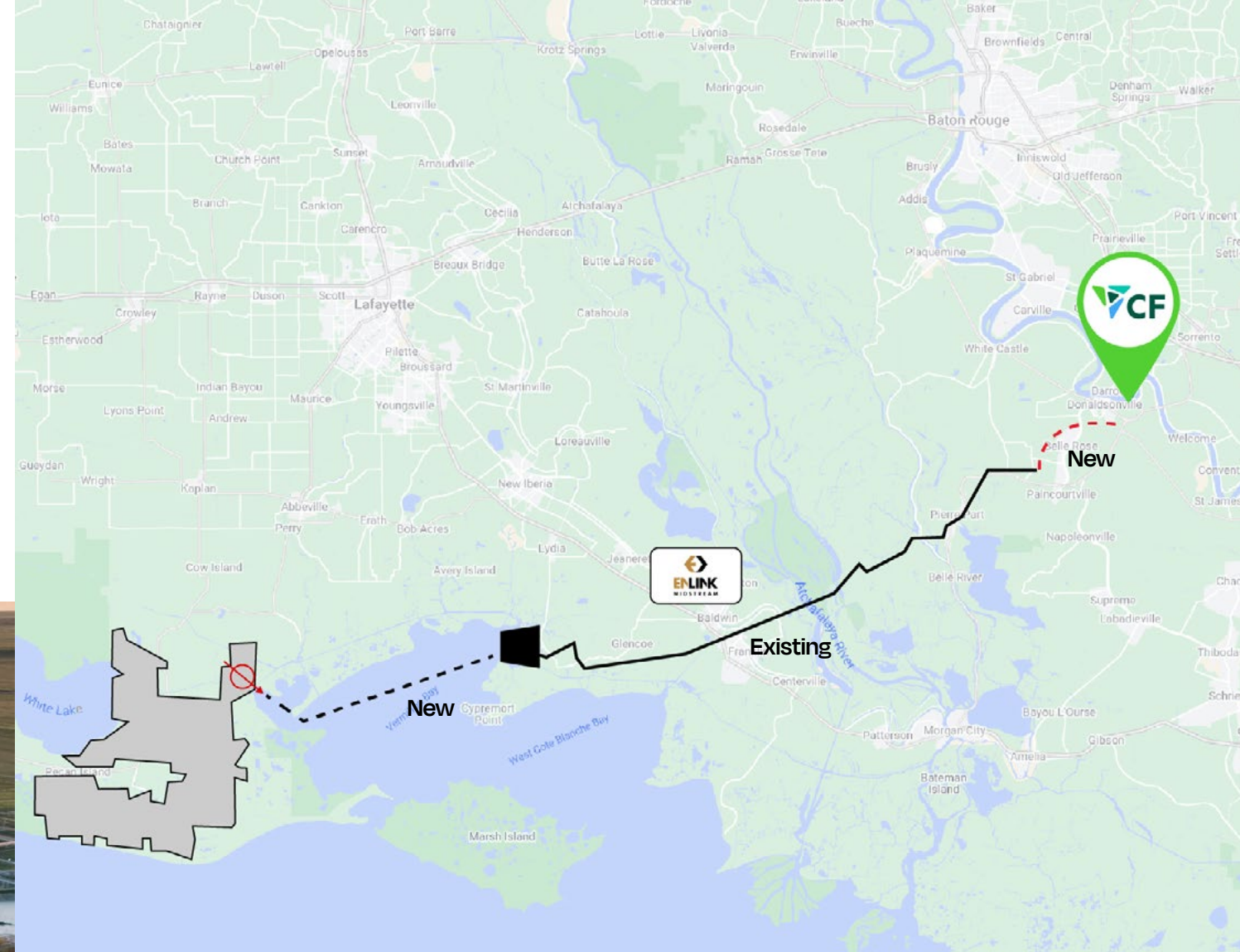
In October, CF Industries announced that it had entered the largest-of-its-kind commercial agreement with ExxonMobil to capture and permanently store up to 2 million metric tons of process CO<sub>2</sub> emissions annually from our Donaldsonville Complex in Louisiana. Sequestration is expected to begin in 2025.

At full rates, CF Industries will reduce its total Scope 1 Emissions by more than 10% through this one project. Five additional manufacturing facilities are well-positioned to add CCS technologies, creating an opportunity for additional significant reductions in Scope 1 emissions in the future.



## Project Summary

- CO<sub>2</sub> captured from CF Industries
- Transportation provided by EnLink Midstream
- Geologic storage in Vermilion Parish
  - 125,000 acres owned by EM since 1958
- 2 injection wells (EPA Class VI)
- Real-time monitoring of CO<sub>2</sub>
- Expected 2025 startup



### Louisiana Governor John Bel Edwards Commends Donaldsonville CCS Project

“[The] announcement of this unprecedented, large-scale, low-carbon partnership is a key milestone on Louisiana’s path toward a brighter future for our climate, our economy, and our people. The collaboration and innovation to bring carbon capture and storage technology forward at this scale reaffirms our state’s ability to grow our economy without sacrificing our long-term emission-reduction goals to net-zero by 2050.”

## Building Expertise in Green Ammonia Production

Construction of North America’s first commercial scale green ammonia production capacity began at our Donaldsonville Complex in late 2021. We are installing a state-of-the-art electrolysis system at Donaldsonville to generate carbon-free hydrogen from water that will then be supplied to an existing ammonia plant to produce green ammonia. Completion of the project, which will enable CF Industries to produce approximately 20,000 tons per year of green ammonia, is expected near the end of 2023.

## Roadmap to Further N<sub>2</sub>O Abatement

Today, N<sub>2</sub>O abatement is in place at approximately one-third of our nitric acid plants. In 2021, we developed a list of viable GHG Scope 1 emissions reduction capital projects from opportunities recognized by each manufacturing and distribution location. We’ve identified 40 projects, which includes N<sub>2</sub>O abatement opportunities, that can help us reach our emissions reduction goals. We are currently developing a roadmap and timeline for the implementation of these projects.

## What are Scope 2 emissions?

GHG emissions from electric utility companies that supply power to CF Industries’ facilities. We measure these emissions based on the average emissions intensity of electricity grids where CF Industries’ facilities procure or consume energy.

## Scope 2 Emissions Opportunities

Scope 2 emissions represent approximately 1% of GHG emissions in CF Industries’ ammonia production value chain. While small compared to overall emissions, we believe there is opportunity to reduce our Scope 2 emissions.

In 2022, 41%<sup>4</sup> of our total electricity consumed was from renewable energy sources. We continue to explore procuring additional renewable energy to further decrease our Scope 2 emissions.

<sup>4</sup> Our calculation of renewable energy purchases is primarily based on energy grid mix information provided by our energy providers. Additionally, our U.K. operations purchased renewable electricity backed by certification (REGO) to cover all their electricity needs.

## What are Scope 3 emissions?

GHG emissions that arise from our suppliers sourcing our raw materials or customers using our products. These emissions occur outside the direct control of the Company.

## Addressing Scope 3 Emissions

Scope 3 emissions represent approximately 75% of GHG emissions in CF Industries’ ammonia production value chain, and largely occur at the beginning and end of the ammonia life cycle.

## Upstream Scope 3 Emissions

At the outset of the ammonia production value chain, methane leakage throughout the natural gas supply chain is a significant contributor to the lifecycle carbon intensity of ammonia production and one of the two largest sources of our Scope 3 emissions. As part of our commitment to reduce Scope 3 emissions by 10% by 2030 and to reduce the lifecycle carbon intensity of ammonia production, we have taken an industry-leading step by entering into an agreement with bp for the supply of 2.2 billion cubic feet of natural gas independently certified to have 90% lower methane emissions intensity than the industry average.

The natural gas is certified using not-for-profit MiQ’s methane standard, which leverages independent third-party auditors to monitor, address, and grade the natural gas used in ammonia production. CF Industries will use the highest level of certified gas available, or ‘A’ grade, which – when compared to industry production averages – lowers the methane emissions associated with the natural gas purchased by around 90%. This is the first known purchase of certified gas by an industrial company for use in its ammonia production processes.

## MiQ CEO on CF Industries’ Use of Certified Natural Gas to Reduce Scope 3 Emissions



“CF Industries is the first industrial giant to use MiQ-independently certified natural gas to significantly reduce Scope 3 emissions from its production processes,” said Georges Tijbosch, CEO, MiQ. “We’ve seen multiple utilities across the U.S. purchase independently certified gas to reduce their emissions, and this key commitment by CF Industries should be a trigger for other natural gas users in hard-to-abate industries to prioritize the minimization of their supply chain emissions through certification.”

CF Industries intends to use the certified natural gas purchase agreement to confirm that its systems can track the certified gas through the ammonia production process. Following the purchase agreement, we plan to evaluate further certified gas purchases as part of our Scope 3 emissions reduction efforts.

## Downstream Scope 3 Emissions

Most of CF Industries' Scope 3 emissions come downstream from our production and are associated with crop nutrient application through on-farm use of our products. Increasing widespread adoption of practices to promote sustainable usage of our products is a longstanding goal for CF Industries. Over time, we have worked with multiple partners to educate the agricultural supply chain about advancing nutrient stewardship practices. This remains an area of significant importance for CF Industries and we believe that it is essential to continue to find ways to further educate and incentivize improved nutrient stewardship, including by improving the agricultural sector's ability to accurately measure farm-level emissions from fertilizer use, which can open additional opportunities to advance practices to reduce those emissions.

In 2022, we partnered with the International Fertilizer Association (IFA) and industry peers to promote the development and dissemination of an important new examination of how to further reduce fertilizer emissions. Published by IFA and Systemiq, the report titled "Reducing Emissions from Fertilizer Use" documents how GHG emissions from global mineral nitrogen fertilizer use can be reduced by 70% by 2050<sup>5</sup>. We are working with our partners across the agricultural value chain to highlight these practices and promote action to make progress on this important goal.

<sup>5</sup> [https://www.linkedin.com/feed/update/urn:li:activity:7018883603275108352/?updateEntityUrn=urn%3A%3Afs\\_feedUpdate%3A%28V2%2Curn%3A%3Aactivity%3A7018883603275108352%29](https://www.linkedin.com/feed/update/urn:li:activity:7018883603275108352/?updateEntityUrn=urn%3A%3Afs_feedUpdate%3A%28V2%2Curn%3A%3Aactivity%3A7018883603275108352%29)

**“I applaud the International Fertilizer Association for taking on this critical work. Farmers need support to reduce emissions from fertilizer use. For solutions to this important challenge to be durable and widely adopted, they need to be flexible and farmer-centric, so we can help mitigate emissions, all while supporting food security. Increasing the use of enhanced efficiency fertilizers, in particular, can help reduce nitrous oxide emissions while matching crop nutrient requirements.”**



**U.S. Special Presidential Envoy for Climate John Kerry Endorses Report Presidential Envoy for Climate**

## Low-Carbon Ammonia Growth

CF Industries believes that new low-carbon ammonia capacity will be required to meet the significant demand that is expected to emerge in the coming years. As part of our commitment to disciplined investments in clean energy, we have partnered with global leaders to evaluate greenfield blue ammonia capacity.

Confirming that significant global demand for low-carbon ammonia will develop in the relative near-term, JERA Co., Inc. (JERA), Japan's largest energy generator, selected CF Industries as a supplier of low-carbon ammonia for the world's first commercial scale ammonia co-firing operations. We expect to provide up to 500,000 metric tonnes of low-carbon ammonia per year beginning in 2027. That ammonia will be co-fired with coal at JERA's Hekinan Thermal Power Station to reduce CO<sub>2</sub> emissions from the facility. Additionally, in February 2023, we signed an MOU with LOTTE CHEMICAL, a global chemicals company that is the primary importer of ammonia to South Korea. The MOU will guide our companies in a joint exploration of clean ammonia production and long-term clean ammonia offtake into South Korea.

Additionally, in November 2022, CF Industries and Mitsui initiated a front-end engineering and design (FEED) study for our proposed joint venture to construct an export-oriented greenfield low-carbon ammonia facility in Ascension Parish, Louisiana.

CF Industries and Mitsui signed an agreement with thyssenkrupp Uhde to conduct the FEED study. In the third quarter of 2022, we acquired land for our Blue Point Complex on the west bank of Ascension Parish, Louisiana, where the proposed facility would be constructed should all companies agree to move forward. With Mitsui, we expect to make a final investment decision on the proposed facility in the second half of 2023. Construction and commissioning of a new world-scale capacity ammonia plant typically takes approximately four years from that point.

**“We are pleased to work together with CF Industries on this significant journey towards decarbonizing the industry, and I am confident that CF Industries' reliable operational capabilities that formed its track record for safe and efficient production as the world's largest ammonia producer will profoundly contribute to JERA's structuring of the clean fuel ammonia value chain.”**

**JERA Corporate Vice President Yukio Kani Reflects on Recent Decarbonization Partnership Project with CF Industries**











## Collaborations

As we continue to advance our clean energy strategy, we have made – and will continue to make – meaningful alliances with other companies and organizations that share our Vision. We believe in the power of partnership and diverse perspectives as the world works towards decarbonization, together.

In addition to these partnerships and projects, CF Industries plays a leading role in the development of key industry reports, programs, and discussions that provide meaningful data and a foundation for action to accelerate the clean energy transition. For example, we supported the Mission Possible Partnership’s research on the growth potential of zero-carbon ammonia<sup>6</sup>, the creation of the International Fertilizer Association’s (IFA) Sustainable Fertilizer Academy<sup>7</sup>, and the Climate Leadership Council’s (CLC) analysis of the United States’ carbon efficiency advantage in the chemicals industry<sup>8</sup>. We are also working with partners, such as the World Business Council for Sustainable Development (WBCSD), to achieve science-based targets for decarbonizing the nitrogen fertilizer sector.



-  **JERA MOU for Supply of up to 500,000 metric tonnes of clean ammonia**  
(Hekinan Power Plant, Japan)
-  **Proposed Joint Venture with Mitsui & Co. for a greenfield blue ammonia plant**  
(Ascension Parish, LA)
-  **Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping**  
(Copenhagen, Denmark)
-  **LOTTE CHEMICAL MOU for U.S.-Based Clean Ammonia Project and Clean Ammonia Offtake**  
(South Korea)
-  **CCS Project with ExxonMobil**  
(Donaldsonville Complex, Louisiana)
-  **CCS Project (announced)**  
(Yazoo City Complex, Mississippi)
-  **HALO Hydrogen Hub**  
(Verdigris Complex, Oklahoma)
-  **SE Alberta Hydrogen Task Force**  
(Medicine Hat Complex, Canada)
-  **Net Zero Teesside**  
(Billingham Complex, United Kingdom)
-  **Ontario’s Hydrogen Hub in Sarnia-Lambton**  
(Courtright Complex, Canada)
-  **Itochu Corporation Joint Study Framework on Ammonia as an Alternative Marine Fuel**  
(Singapore)

<sup>6</sup> <https://missionpossiblepartnership.org/wp-content/uploads/2022/09/Making-1.5-Aligned-Ammonia-possible.pdf>

<sup>7</sup> <https://ifa-sfa.org/>

<sup>8</sup> <https://clccouncil.org/original-content/the-u-s-carbon-advantage-in-chemicals-manufacturing/>



## Nature

CF Industries' business is not possible without healthy ecosystems, which is why we always strive to do more with less and leave the ecosystems from which we draw natural resources as good or healthier than when we found them.



### Water

- The water we withdraw does not come from water-stressed locations as verified by cross-referencing our facility locations against the World Resource Institute's Aqueduct Water Risk Atlas.
- Leveraging an efficient water management program and partnering with local water utilities results in recycling every gallon of water withdrawn approximately 30 times.
- Returning water to its source as clean or cleaner than when extracted.



### Land

- Supplying nitrogen fertilizer decreases the amount of land needed to grow food by approximately 30%, preventing deforestation that could increase global emissions by 10%<sup>9</sup>.
- Serving as a founding member of 4R Plus Program and long-time supporter of nutrient stewardship, healthy soils, and land conservation organizations that keep crop nutrients on farmland and out of adjacent water bodies, helping to protect biodiversity<sup>10</sup>.



### Climate

- Investing in ongoing projects that will reduce carbon emissions by up to 2 million tons per year, with start-up expected in 2025.
- Becoming the first major industrial consumer to purchase certified gas that has 90% lower methane intensity than national average and could significantly reduce Scope 3 emissions.



### Operations

- Striving for all CF Industries locations to earn the International Fertilizer Association's (IFA) Protect & Sustain Certification by 2030, which covers the quality, environmental, health, and safety aspects of the ISO 9001 and ISO 14001. In 2022, the Port Neal Complex became our third location to earn certification.
- Assessing the ESG programs of our suppliers on an annual basis to improve supply chain resiliency and ensure that we work with suppliers who share our commitment to key sustainability topics.

## Employee Spotlight



## Kerry Labourdette

### Sustainability and EHS Analyst

As a sustainability and Environmental, Health, and Safety (EHS) analyst, Kerry Labourdette lives and breathes sustainability. For the past year in this new role, Kerry has been responsible for CF Industries' environmental sustainability data collection and analysis. She reviews and analyzes our sustainability processes on a regular basis, enabling us to advance on our goals and seamlessly embed sustainability into all decisions.

While sustainability has an inherent focus on the environment, the way Kerry and CF Industries define and approach sustainability is much broader and more inclusive.

"The great thing about sustainability is it's not just one thing. People tend to focus on the environmental aspect, but it also involves diversity, safety, and corporate integrity," Kerry said. "Our approach engages people across the business and doesn't put the onus on one department to ensure the success of our achieving of ESG goals."

However, how we bring sustainability into all aspects of CF Industries is not the only thing that sets us apart. CF Industries' unique societal role puts us in a position to make a big difference for ourselves and our customers.

"CF Industries helps support two key pillars in society: food and fuel. Industries like ours play a critical role in providing food security, safe jobs, and now, clean energy," Kerry said. "Sustainability is critical for CF Industries to be able to provide for our customers, as we always have, and continue to help preserve their future by reducing our environmental impact where we can and helping our customers to do the same."

Kerry's efforts are just one of the many ways CF Industries is moving the needle on ESG. With each step we take to be a more sustainable and efficient company, we are rising to the occasion of being a leader in the world's energy transition, which isn't going unnoticed.

**"We recognize there's a need to adapt our business to meet the demands of our customers and to continue to provide for our communities," Kerry said. "We're doing that every day by making improvements to our operations, our company culture, and our ESG goals and targets. We recognize that if we want to be a leader in our industry, we must be a leader in sustainability as well."**

In 2022, we worked with third parties to assess CF Industries' potential biodiversity impacts and find meaningful ways for the fertilizer industry to have a positive impact in this space. As biodiversity opportunities and initiatives continue to emerge globally, CF Industries will continue to engage with our association partners and other stakeholders to stay abreast of what standards will play an important role in the future. Internally, CF Industries evaluates its operations against emerging standards and frameworks, such as the Taskforce on Nature-related Financial Disclosures (TNFD), so that we are prepared when final guidance is published.

<sup>9</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4025000/>

<sup>10</sup> <https://nutrientstewardship.org/partners/cf-industries/>

# Safety

Safety is embedded into our culture and values, and we prioritize developing creative, innovative processes to further improve our ways of working. Conducting our business in a safe manner is a top responsibility for all CF Industries team members.



# Our Safety Goals



**Achieve annual aggregated safety grades > 80% for at least 95% of all employees at manufacturing and distribution sites.**

ACHIEVED IN 2022; ONGOING GOAL



**Close management of changes in current year within 90 days of pre-startup safety review.**

ACHIEVED IN 2022; ONGOING GOAL



**Complete safety critical equipment inspections per schedule.**

ACHIEVED IN 2022; ONGOING GOAL

## A Culture of Safety Excellence

We empower all employees to promote a culture of Environmental, Health, and Safety (EHS) excellence where everyone is engaged, empowered, and innovative. This philosophy cultivates a workplace that prioritizes the safety and health of our employees, contractors, customers, partners, and communities. This culture of EHS excellence is documented in our Values and Code of Corporate Conduct.

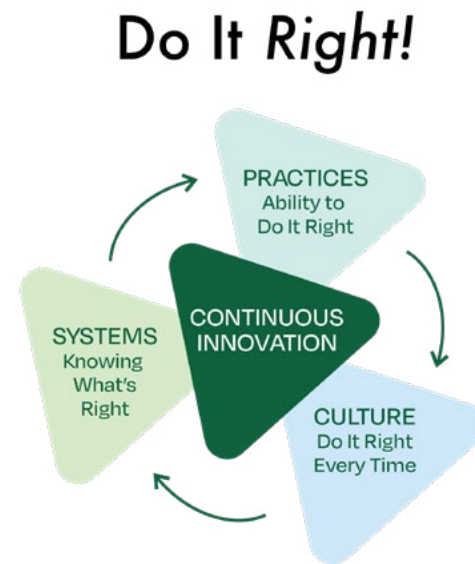
### Our Commitment to Safety

METRIC	Industry Average (2021) <small>(As reported by BLS for fertilizer manufacturing)</small>	CF Industries (2022)
<b>Recordable Incident Rate</b>	<b>2.1 per 200,000 work hours</b>	<b>0.33 per 200,000 work hours</b>
<b>DART Incident Rate</b>	<b>1.1 per 200,000 work hours</b>	<b>0.22 per 200,000 work hours</b>
<b>Lost Time Incident Rate</b>	<b>0.7 per 200,000 work hours</b>	<b>0.04 per 200,000 work hours</b>

## What Do It Right Means

At CF Industries, our practices, systems, and Do It Right culture work together to achieve continuous innovation, driving our business and strategy forward each day. The safety of CF Industries' employees and those who work in and live near our locations is our top priority. We equip our team with the proper safety knowledge and procedures to maintain a culture that encourages employees to prioritize safety every time they come to work.

We also plan and prepare for a wide range of business continuity risks. At each location, we have established a Crisis and Emergency Response Council to develop specific plans for applicable risks, including risks from the impacts of climate change. As an example, every site has a flood plan for its operations, which were developed in partnership with a third-party expert consultant, considering items such as mitigation for critical equipment and how to manage water (e.g., treatment, removal) during a flood. The creation of these plans has led to improvements at our sites, such as the diversion of runoff around the plant and equipment elevation or relocation. One of the many topics the councils are considering in 2023 and beyond is how elevated water levels might impact operations and subsequent response plans. Flood risks and other physical impacts from climate change are being further evaluated as part of the ongoing climate scenario analysis.



## Training Opportunities

We train and certify compliance with the Environmental, Health, Safety, and Security Policy for all employees to further embed Do It Right into our everyday operations. The EHS training we provide employees touches on regulatory topics, safety practices and procedures, hazard awareness, emergency response, human factors, employee health, workplace violence prevention, equipment safety, and safety leadership.

We view our contractors as part of our CF Industries' community and hold them to the same safety standards as employees. We conduct tailored training to ensure our safety expectations are clearly communicated to all contractors. For example, we hold safety training bootcamps prior to a turnaround or large onsite projects. These bootcamps engage all contractors who will work on the project, walking them through the specific activities so they understand how to operate safely and work as a team. Each individual contractor is provided with a field safety guide to help them remember and follow the location's safety practices.

We recently created the Contractor Executive Engagement Program to invite contractor executives to our job sites to explain safety protocols and the safety assessment process to help them understand the value of safety at CF Industries and how they contribute to our safety culture. This program builds relationships with contractors and ensures they prioritize safety in everything they do.



# Wilson Award

## for Safety Excellence

Each year, employees across CF Industries implement impactful safety innovations and improvements. These are invaluable contributions to our organization as they not only improve our ways of working but promote the safety of our team and communities.

We recognize these innovations with the Wilson Award for Safety Excellence. Each location nominates initiatives and finalists are chosen by a cross-functional selection committee. Our Senior Leadership Team selects the winner based on impact to safety performance and culture, transferability to other sites, ability to be sustained and further improved, and demonstration of our Core Values.

Our 2022 winner was our Yazoo City Complex. Yazoo City adapted and installed forced draft pilot ignitors for ammonia plant boilers to provide a consistent and reliable ignition and pilot flame. Firing up the boilers is one of the first steps in ammonia plant start up, and without it the plant cannot operate. The forced draft pilot provides immediate ignition and a stable pilot light every time to reduce unsafe conditions at a very critical time in plant startup.



Scan to learn more about  
the 2022 Wilson Award.

# Workforce

Success at CF Industries starts with our talented team and culture we have worked hard to build. We strive to organize our global workforce around a collaborative spirit that delivers steady progress against ambitious goals while lifting up every member of our team.



# Our Workforce Goals



Implement a program to create additional pathways to long-term professional growth for traditionally underrepresented employee groups with the ultimate goal of increasing the hiring and promotion of minority and female candidates.

IN PROGRESS



Increase representation of females and persons of color in senior leadership roles (director level and above) to at least 30% by the end of 2025.

ACHIEVED



All employees complete training on inclusion, diversity, and equity matters.

ACHIEVED IN 2022; ONGOING GOAL

## CF Industries focuses support for our workforce across three core areas:



**Inclusion, Diversity and Equity (ID&E)**



**Benefits and Engagement**



**Professional Training and Development**

Our efforts in each area are designed to empower our team and promote an inclusive culture. In other words, to Do It Right and be our best.



## Commitment to ID&E

Physical, mental, and emotional safety are a top priority at CF Industries. Our approach to safety has expanded to include the personal well-being of all individuals and communities who touch our business, which is ultimately improved by creating a workplace that prioritizes ID&E. With this in mind, we prioritize sharing ideas that come from ID&E initiatives, which we believe builds a stronger culture and makes us a more successful business.

### Key ID&E Initiatives in 2022



**January**

Launched our first Inclusion Resource Group (IRG), with 17% of employees joining in the first full calendar year. We successfully integrated the IRG into our recruitment efforts and New Hire Integration program.



**April**

Launched a new mentoring program called Mentoring@CF, with the aim of developing and retaining diverse talent. Employees spent over 1,100 hours since the program's inception mentoring one another.



**November**

Reached 37% of leadership roles (director level and above) held by women and persons of color, surpassing our 30% by 2025 goal.

### The Benefits of Working at CF Industries



**Healthcare:**

High-quality, affordable healthcare benefits, including medical, dental, and vision coverage, as well as access to occupational, primary, and preventive healthcare through our onsite clinics.



**Financial:**

Retirement savings benefits including 401(k), life and disability insurance programs, and financial coaching programs for all employees.



**Lifestyle:**

Tools and resources to help employees meet their physical, financial, emotional, and work-related goals, including paid time off programs for vacation, sick time, scheduled and floating holidays, and volunteering. In 2022, we expanded our paid parental leave policy to four weeks to increase bonding time between little ones and new parents.

Scan to learn more about ID&E at CF Industries, check out our [2022 ID&E report](#).





## Professional Training and Development

Just as our team is committed to growing our Company and making it stronger, our culture encourages and enables our team to continue learning and developing as professionals.

LinkedIn Learning courses are available for all employees to sharpen their skills. Our most popular 2022 courses included Excel Essentials, Being a Good Mentor or Mentee, Project Management Foundations, and Writing Business Emails. In fact, we surpassed our internal goal of reaching 40% employee participation for this program.

Along with LinkedIn Learning, our Core Curriculum remains a staple of talent development. Core Curriculum features a series of courses on our business, values, culture, and people. In 2022, our Core Curriculum was embedded into the individual onboarding process for new employees, allowing the materials to be delivered over time and based on their individual progress throughout their first six months at CF Industries.

**In April, we launched Mentoring@CF, a program designed to help employees grow professionally, network within the Company, and develop or share their skills. With over 180 mentor-mentee pairings, CF Industries team members are actively learning from one another, gaining experience as leaders, and receiving recognition for their knowledge. Because of its success, we plan to roll the program out more broadly across the Company soon.**

Additionally, CF Industries is a proud sponsor of Women in Agribusiness, National Association for EHS&S Management, Society of Women Engineers, and Society of Hispanic Professionals conferences, all of which advance equitable professional development opportunities for our team.

## Employee Spotlight



# Amanda Pascavage

## Vice President, Ammonia

In 2021, we formed the Inclusion Council to continue to advance our ID&E commitments and celebrate inclusion at CF Industries. This Council is made up of passionate change agents and champions of our inclusion and diversity strategy, like Amanda Pascavage, Vice President, Product Management, Ammonia. Amanda partners with colleagues on the Inclusion Council to generate support for improving diversity and inclusion and communicating the value that it brings to our organization and team.

Since its inception, the Council has secured commitment from executive sponsors and senior leadership, while also developing grass-roots employee involvement and engagement on ID&E.

“My role on the council is to ensure that this initiative continues to evolve and grow,” Amanda said. “Council members come from varied backgrounds and differing roles at CF Industries, providing an opportunity for many different perspectives to uplift the organization. Education and Skill Development, Representation, and Belonging are our three main priorities.”

**“Whether leading in inclusion and diversity efforts or sustainability and clean energy initiatives, our Company is taking an active role in fundamentally changing how we support our employees and influence the world around us,” Amanda said. “I’m excited by the possibilities presented when we strive to be better and have a positive impact, and I think CF is very well positioned to do so in the coming years. Each person in the organization plays a vital role in advancing our efforts. It is an exciting time to be part of CF Industries.”**

Although Amanda is proud of the progress the Council has made, she recognizes that speaking up for and advocating for oneself are critical for career advancement.

“A difference maker is someone from whom you can seek advice, mentorship, and guidance as well as someone who is willing to invest time in your success and growth,” Amanda said. “Scout out what I call ‘singular brave decisions.’ It’s far too common for women and others to second guess themselves: ‘Should I speak up?’ ‘Should I take this risk?’ I encourage everyone to look for their own moments to voice their thoughts and take that chance.”

CF Industries is committed to exploring all aspects of ID&E, providing opportunities to all of our people and ensuring everyone feels valued and included. Amanda recognizes that the Inclusion Council is just one of the many positives currently taking place at CF Industries.

# Community

We are proud of the role that we play in improving food security through the production of nitrogen fertilizer and providing clean energy for the world. There is another role that we play that is just as important: being a good neighbor.



# Our Community Goals



**Implement a Volunteer Time Off (“VTO”) program by the end of 2021 that provides employees with paid time off to volunteer in their communities with organizations that are part of the Company’s giving campaign, with the ultimate goal of achieving 25% employee participation by 2025.**

IN PROGRESS



**Increase engagement and support with local communities and expand the corporate giving philosophy to include environmental sustainability, food access and security, STEM education, and first responders.**

IN PROGRESS



## How We Give Back

We have evolved our philanthropy strategy to target volunteer and financial resources across four philanthropic focus areas that support our Company's values and align with the business.



Scan here to check out our 2022 ID&E Report to learn more about how CF Industries supports our communities and other philanthropic efforts.



## Environmental Sustainability

Protecting and caring for the lands and natural resources that feed and fuel our communities.



## Healthy Food Access

Improving access to nutritious, affordable foods that members of all communities – including low-income communities and communities of color – need to grow and thrive.



## STEM Education and Awareness

Helping people of different backgrounds across all ages, sexual orientations, gender identities, races, ethnicities, and religions access education and career development in the areas that support sustainability efforts and our clean energy future.



## Local Community Advancement

Making a difference in local communities where CF Industries employees live and work while addressing the needs of marginalized cultural groups and supporting first responders.

## 2022 Highlights

CF Industries is a founding member of the International Fertilizer Association's (IFA) Sustainability Academy that seeks to help the fertilizer industry as a whole accelerate its sustainability transformation by creating an easily accessible training. This enables employees throughout the fertilizer industry to better understand and take action to accelerate their own company's sustainability journey<sup>11</sup>.

Through our partnership with One Acre Fund, CF Industries helps provide financing, distribution, and training to approximately 1.3 million smallholder farmers (less than 5 acres) in Sub-Saharan Africa. Since partnering, CF Industries has helped One Acre Fund farmers plant over 1 million new trees each year.

**Donaldsonville:** Assisted in teaching introductory process technology at Donaldsonville High School to give students a head-start on the skills they will need to work in Louisiana's vibrant chemical industry.

**Woodward:** Facilitated interactive STEM classes at local schools, which demonstrated the principles of chemical reaction, thermal energy, electricity, and state of matter changes due to temperature fluctuations.

**Verdigris:** Donated over \$90,000 to local schools to support and develop STEM programs.

**Port Neal:** Conducted STEM learning activities about water filtration and the use of Missouri River water in the fertilizer manufacturing process with the fifth-grade science class at Sergeant Bluff-Luton Elementary School.

In October 2022, CF Industries invested \$1 million in Smart Start Ascension, a new public-private partnership initiative designed to reshape early childhood education in Ascension Parish public schools. The educational programming will provide a foundation for development of early childhood education, including exposure to STEM educational programming, art, music, and athletic activities.

<sup>11</sup> <https://ifa-sfa.org/>

## Employee Spotlight



# Jackie McCreary

## Community Relations Manger

Supporting our local communities is an essential part of achieving success as a business. This is why we have team members like Jackie McCreary, the Community Relations Manager at our Donaldsonville site, to help take care of and connect with our neighbors in Ascension Parish, Louisiana.

In her role, Jackie oversees all community engagement activities for Donaldsonville, including directing investments and volunteer resources where they are most needed and growing relationships with key stakeholders in the community.

Our flagship Donaldsonville Complex has called Ascension Parish home for nearly 60 years. Over the years, we have been dedicated to giving back and making meaningful, long-term impacts by supporting critical pillars of the Ascension Parish community, from local emergency responders to organizations working to help those that are food insecure to local education.

“CF Industries maintains a strong volunteer presence in Ascension Parish Schools,” Jackie said. “We adopted five Donaldsonville public schools through the Ascension Parish

Schools’ Partner-in-Education Program. This partnership has helped us make connections and provide employee mentors for students who are interested in STEM careers.”

This past year, CF Industries also pledged an investment of \$1 million in the Ascension Parish Early Childhood Development Center to demonstrate our commitment to this community. This grant is just one of the many ways we show how CF Industries views our communities as extended family and prioritizes their wellbeing.

“Family takes care of family. At CF Industries, we understand that our neighbors rely on us to maintain safe and transparent operations,” Jackie said. “I work with our neighbors to maintain an open line of communication and get to know those who live near our facilities. I do my best to listen to concerns, provide updates on issues of importance, respond to community needs, and address any concerns our neighbors may have.”

Jackie’s efforts also tie directly to advancing our clean energy strategy and bringing communities into the conversation as to how we can work together to support one another.

**“When folks learn what we do at CF Industries, they begin to understand how important our mission is,” Jackie said. “This is why we continuously visit with, listen to, and educate our neighbors and stakeholders on the technologies we use and how they not only help us reach our ESG goals, but also how they fit into our safe practices, environmental stewardship, and commitment to help the State of Louisiana reach its climate goals.”**

## Our Next Great Evolution

More than 75 years ago, CF Industries was founded to ensure farmers in the United States had a reliable source of fertilizer, which was then in short supply. For the first nine years of our existence, we did not even manufacture fertilizer – we only procured it. But as the needs of our customers evolved, CF Industries evolved too. We have grown to become the world’s largest producer of ammonia and a critical supplier of derivative nitrogen fertilizer and industrial products that enable better lives for billions of people.

Standing still has never been a part of our DNA, and today we find ourselves in the midst of our next great evolution. It is driven by a new challenge to provide hard-to-abate industries a reliable source of clean energy. Underpinned by our own commitments and progress toward decarbonizing our manufacturing network, CF Industries is at the forefront of low-carbon ammonia supply that we believe will accelerate the clean energy transition to enable better lives for billions of people.

We are meeting this new challenge in much the same way that we have met previous challenges: putting safety first, operating reliably, and collaborating with all our stakeholders. We will continue to empower our employees and to be a Company where each member of our team feels valued and is given opportunities to grow and contribute. Alongside this focus, we will play an integral role in our local communities through economic activity, volunteerism, and philanthropy.

We are thankful for the support of our employees, communities, industry partners, and other stakeholders as we continue to advance our clean energy initiatives and sustainability goals. We have set ambitious short-term and long-term objectives, and we remain confident in our ability to achieve them thanks to your support. To learn more about all of our sustainability goals, please review the Appendix.



# Appendix

## Complete List of Environmental, Social and Governance Goals

For more information on our progress across our ESG goals, please see our 2022 ESG Report.

### Energy, Emissions & Climate Change

GOALS	GOAL STATUS	HIGHLIGHTS
Reduce total CO <sub>2</sub> equivalent emissions by 25% per ton of product by 2030 (2015 baseline year).	IN PROGRESS	Carbon emissions intensity was 16% lower in 2022 compared to 2015 baseline.
Reduce Scope 3 emissions by 10% by 2030 (2020 baseline year).	IN PROGRESS	We purchased 2.2BCF of natural gas certified to have 90% lower methane emissions intensity, taking the initial step to reduce Scope 3 emissions; this is the first, known certified natural gas purchase for use in industrial manufacturing.
Achieve net-zero carbon emissions by 2050.	IN PROGRESS	We are on track to reduce carbon emissions by up to 2 million tons annually beginning in 2025.
Develop and prioritize a list of viable greenhouse gas reduction capital projects.	ACHIEVED	We identified 40 projects to provide a roadmap for achieving decarbonization over time.
During 2021, identify and evaluate a list of viable water reuse/reduction projects.	ACHIEVED	In 2021, we developed a list of viable water reuse/reduction projects within the three water actions of sourcing, withdrawal, and discharge, which informed our water management efforts in 2022 and will continue to do so moving forward.
Develop integrated water resource management plans to ensure sustainable withdrawals and discharges.	ACHIEVED	We developed three sustainable tools to responsibly source water, recycle water and return water to its source.
Begin to report and disclose Company data in accordance with the Task Force on Climate-related Financial Disclosures (TCFD) framework for climate related risks and opportunities, in addition to the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB).	ACHIEVED	We currently report and disclose company data against TCFD, SASB, and GRI.

### Our Workplace and Communities

GOALS	GOAL STATUS	HIGHLIGHTS
Create additional pathways to long-term professional growth for traditionally underrepresented employee groups by the end of 2021 with the ultimate goal of increasing the hiring and promotion of underrepresented groups.	IN PROGRESS	We built on our work with the Multiple Pathways Initiative by implementing skills-based job descriptions and streamlining our recruiting process.
Implement a Volunteer Time Off ("VTO") program by the end of 2021 that provides employees with paid time off to volunteer in their communities with organizations that are part of the Company's giving campaign, with the ultimate goal of achieving 25% employee participation by 2025.	IN PROGRESS	We implemented the VTO program in 2021. In 2022, we reached 9% employee participation, resulting in logging over 3,300 hours of volunteer activity.
Increase engagement and support with local communities and expand the corporate giving philosophy to include environmental sustainability, food access and security, STEM education, and first responders.	IN PROGRESS	We continue to develop expanded community and philanthropic efforts.
Increase representation of females and persons of color in senior leadership roles (director level and above) to at least 30% by 2025.	ACHIEVED	Females and persons of color make up 37% of senior leadership roles (director and above).
Achieve annual aggregated safety grades >80% for at least 95% of all employees at manufacturing and distribution sites.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.
Close management of changes in current year within 90 days of pre-startup review.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.
Complete safety critical equipment inspections per schedule.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.

## Food Security & Product Stewardship

GOALS	GOAL STATUS	HIGHLIGHTS
Receive the IFA “Protect & Sustain” certification (or equivalent environmental/product stewardship certification) for 100% of our manufacturing sites by 2030.	IN PROGRESS	Our Port Neal site received the IFA “Protect & Sustain” certification in 2022, joining our corporate headquarters and Yazoo City facility that were previously certified.
Expand partnerships to achieve 60 million acres of farmland using sustainable practices by 2030.	IN PROGRESS	We are on track to meet our goal of 60 million acres by 2030.
Reach 90,000 farmers with 4R Plus program by 2023.	ACHIEVED	We continue to work with partners to educate the agricultural supply chain about advancing nutrient stewardship practices. s in Iowa.

## Ethics and Governance

GOALS	GOAL STATUS	HIGHLIGHTS
Engage suppliers and service providers that annually represent 50% of the Company’s total procurement and supply chain expenditures and assess their ESG performance and commitment.	IN PROGRESS	In 2022, our EcoVadis program engaged suppliers and service providers representing 48% of our total procurement and supply chain expenditures.
Train and certify compliance with the Environmental, Health, Safety, and Security Policy for all employees annually.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.
Train on inclusion, diversity, and equity matters for all employees annually.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.
Train and certify compliance with the Code of Corporate Conduct for all employees annually.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.
Train and certify compliance with the Anti-corruption Compliance Policy for all employees annually.	ACHIEVED IN 2022; ONGOING GOAL	This goal is an ongoing, annual goal. We achieved this goal in 2022.

## Forward-Looking Statements

All statements in this *CF Industries 2022: Sustainability in Action* by CF Industries Holdings, Inc. (together with its subsidiaries, the “Company”), other than those relating to historical facts, are forward-looking statements. Forward-looking statements can generally be identified by their use of terms such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “will” or “would” and similar terms and phrases, including references to assumptions. Forward-looking statements are not guarantees of future performance and are subject to a number of assumptions, risks and uncertainties, many of which are beyond the Company’s control, which could cause actual results to differ materially from such statements. These statements may include, but are not limited to, statements about strategic plans and management’s expectations with respect to the production of green and blue (low-carbon) ammonia, the development of carbon capture and sequestration projects, the transition to and growth of a clean energy economy, greenhouse gas reduction targets, projected capital expenditures, statements about future financial and operating results, and other items described in *CF Industries 2022: Sustainability in Action*.

More detailed information about factors that may affect the Company’s performance and could cause actual results to differ materially from those in any forward-looking statements may be found in CF Industries Holdings, Inc.’s filings with the Securities and Exchange Commission, including CF Industries Holdings, Inc.’s most recent annual and quarterly reports on Form 10-K and Form 10-Q, which are available in the Investor Relations section of the Company’s web site. It is not possible to predict or identify all risks and uncertainties that might affect the accuracy of our forward-looking statements and, consequently, our descriptions of such risks and uncertainties should not be considered exhaustive. There is no guarantee that any of the events, plans or goals anticipated by these forward-looking statements will occur, and if any of the events do occur, there is no guarantee what effect they will have on our business, results of operations, cash flows, financial condition and future prospects. Forward-looking statements are given only as of the date of this communication and the Company disclaims any obligation to update or revise the forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.



