CF Industries Decarbonization Overview

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CF Industries overview

World's Largest Producer of Ammonia

- CF Industries is the world's largest producer of ammonia, with worldscale manufacturing complexes in the United States, Canada and the United Kingdom
  - We operate 16 ammonia plants with average annual capacities that range from 500,000 tons per year to 1.2 million tons per year
- Average annual gross ammonia production capacity greater than 10 million tons
- Company's Donaldsonville, Louisiana, complex is world's largest ammonia manufacturing facility

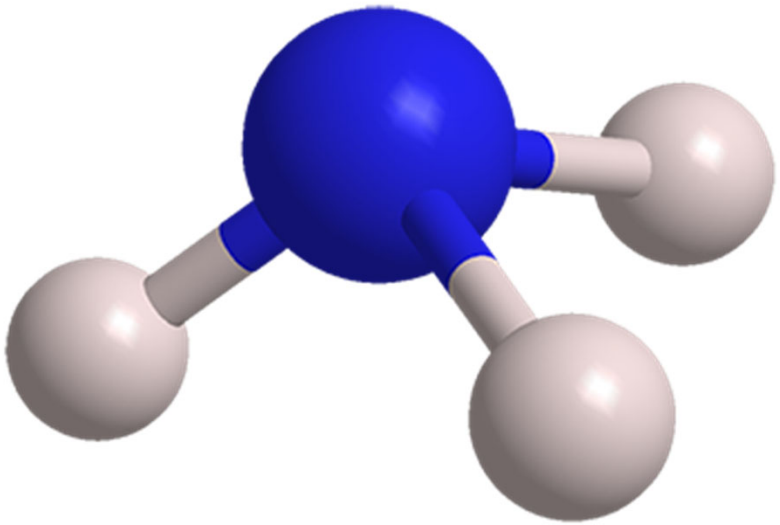
Leading Logistics and Distribution Capabilities

- Company typically ships 18-19 million fertilizer product tons per year
- Leading North American distribution network, operating 23 distribution terminals as well as leasing additional storage capacity from which to serve customers
- 3.2 million tons of product storage capacity
- Able to ship via deepwater vessel, barge, railroad, truck and pipeline
- Capability to ship product to any continent

The CF Team

- Approximately 2,700 employees worldwide
- Our Do It Right culture prioritizes safety above all; our full-year 2022 recordable incident rate was 0.33 incidents per 200,000 labor hours is significantly better than industry benchmarks
- Our focus on safety underpins our strong operational performance – our industry-leading capacity utilization allows us to produce an additional ~1.3 million tons of ammonia annually compared to peers' utilization rates
- CF Industries is also focused on proactive community and broader stakeholder engagement, as well as dedicated product stewardship.

At our core, CF Industries' business is producing ammonia



Ammonia is composed of a nitrogen atom with three smaller hydrogen atoms bonded to it, with the formula NH_3.

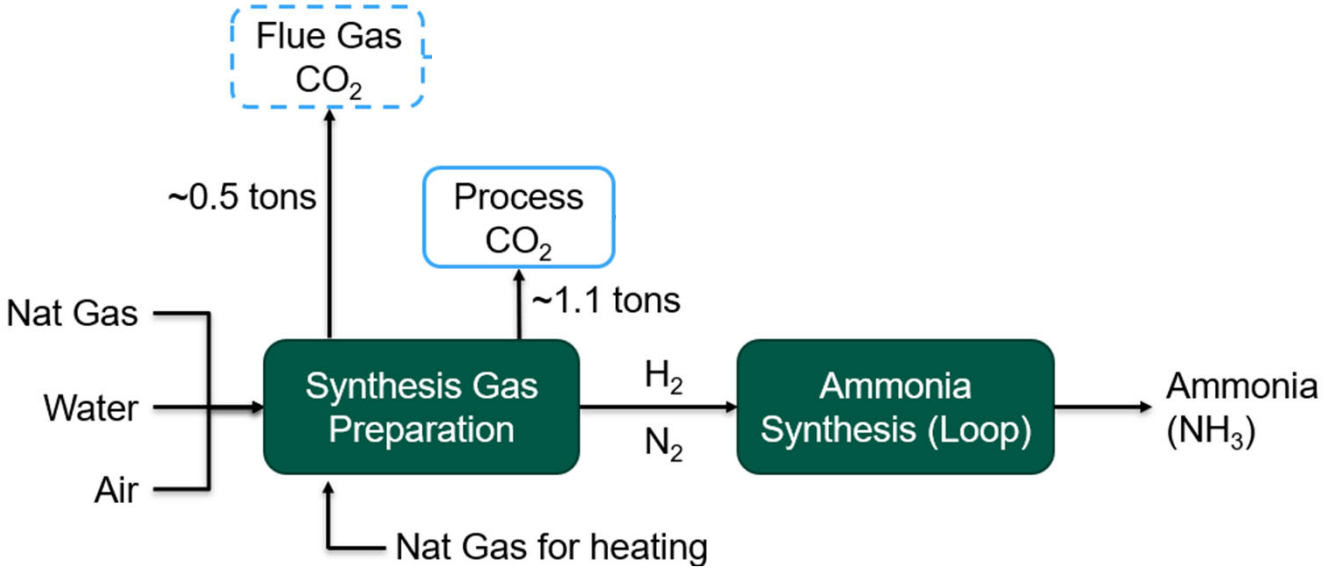
- Ammonia production is a capital- and energy-intensive process
  - It is produced commercially via the catalytic reaction of nitrogen and hydrogen at high temperature and pressure.
  - The process was developed in 1909 by German chemists Fritz Haber and Carl Bosch. Both received the Nobel Prize in Chemistry for their work, but in widely separated years: Haber in 1918 and Bosch in 1931.
  - The fundamental Haber–Bosch process is still in use today
- Ammonia is produced globally in more than 60 countries
  - China is the largest producer (and largely uses coal as its feedstock), followed by Russia, India, and the United States
  - Given significant U.S. industry investment, lower carbon feedstock choice (natural gas instead of coal), and strong capacity utilization, the United States is already among the most efficient and the least-carbon intensive ammonia producers in the world[1]
  - According to the International Energy Agency, ammonia production globally accounts for about 2% of global energy consumption and about 450 Mt CO_2 emissions annually
- Most global ammonia production (~85%) is used directly or indirectly in agriculture; the balance today is used for emissions control and other industrial applications either directly or indirectly from upgraded products
  - CF Industries produces nitrogen-based fertilizers made from ammonia, including urea, urea ammonium nitrate (UAN) and ammonium nitrate
  - The Company also produces other chemicals from ammonia, including diesel exhaust fluid, nitric acid, and aqua ammonia

*[1]As recently found by the Climate Leadership Council, U.S. ammonia production is already at least 24% less carbon-intensive than the global average. The U.S. Carbon Advantage in Chemicals Manufacturing', Climate Leadership Council, September 2022, accessed at https://clcouncil.org/reports/chemicals_advantage.pdf; see also U.S. Energy Information Administration (EIA), **Natural Gas Weekly Update** at 1, accessed at https://www.eia.gov/naturalgas/weekly/archivenew_ngwu/2021/04_01/.*

Realizing clean energy opportunity requires decarbonization of ammonia production process

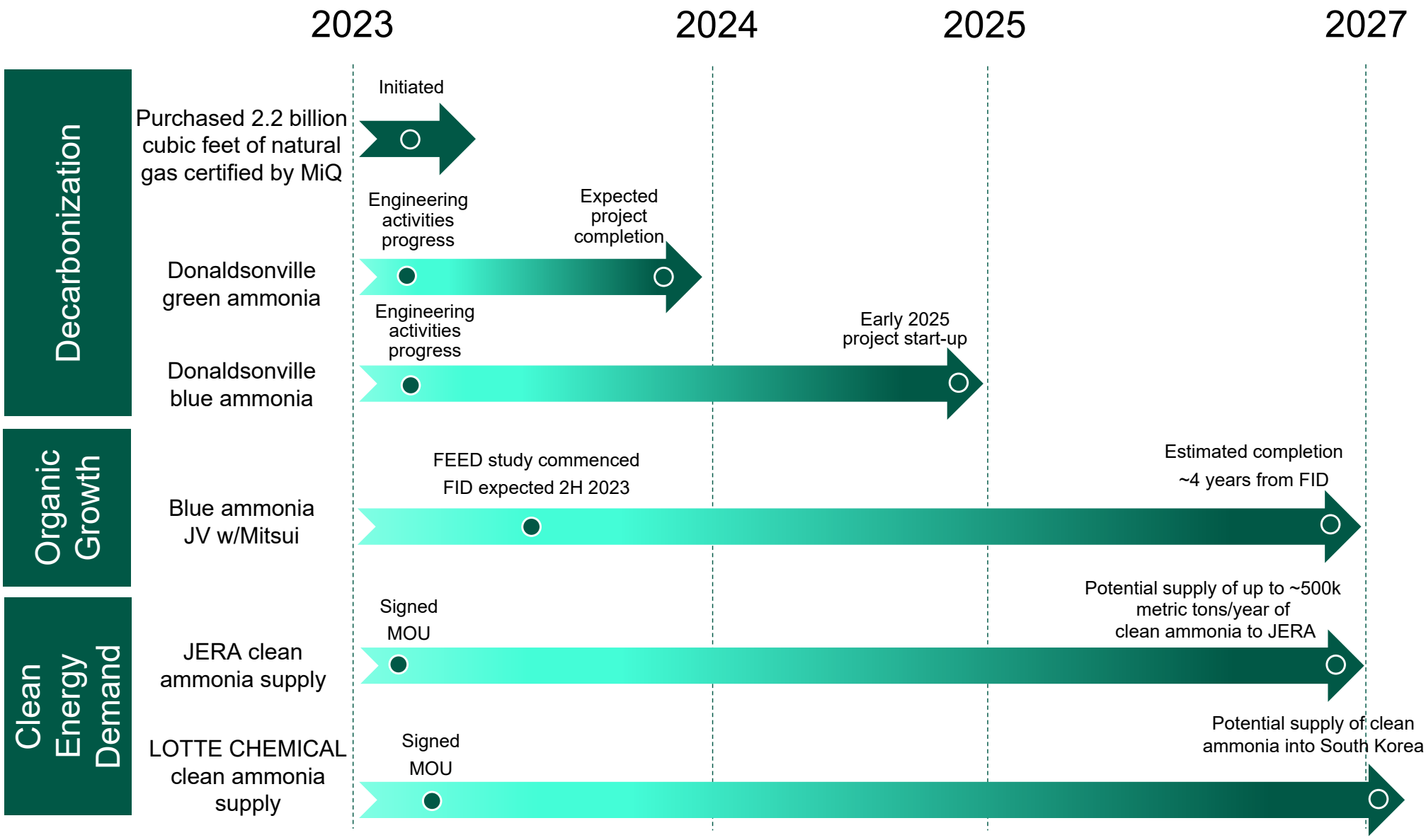
Conventional Haber-Bosch process has significant carbon footprint

- Typical modern steam methane reforming (SMR) ammonia plant results produces approximately 2 tons of carbon dioxide produced for every 1 ton of ammonia



- Two types of CO_2 from ammonia production process
  - Process CO_2 – approximately 2/3rds of CO_2 emissions consists of high purity (90-95%) process CO_2
    - CF Industries captures 100% of the process CO_2 it generates
    - Portion used in production of granular urea, as steam or sold to industrial gas companies
    - Remaining portion emitted to atmosphere
  - Flue gas CO_2 – approximately 1/3rd of CO_2 emissions are low purity (8-10%) combustion/flue gas CO_2

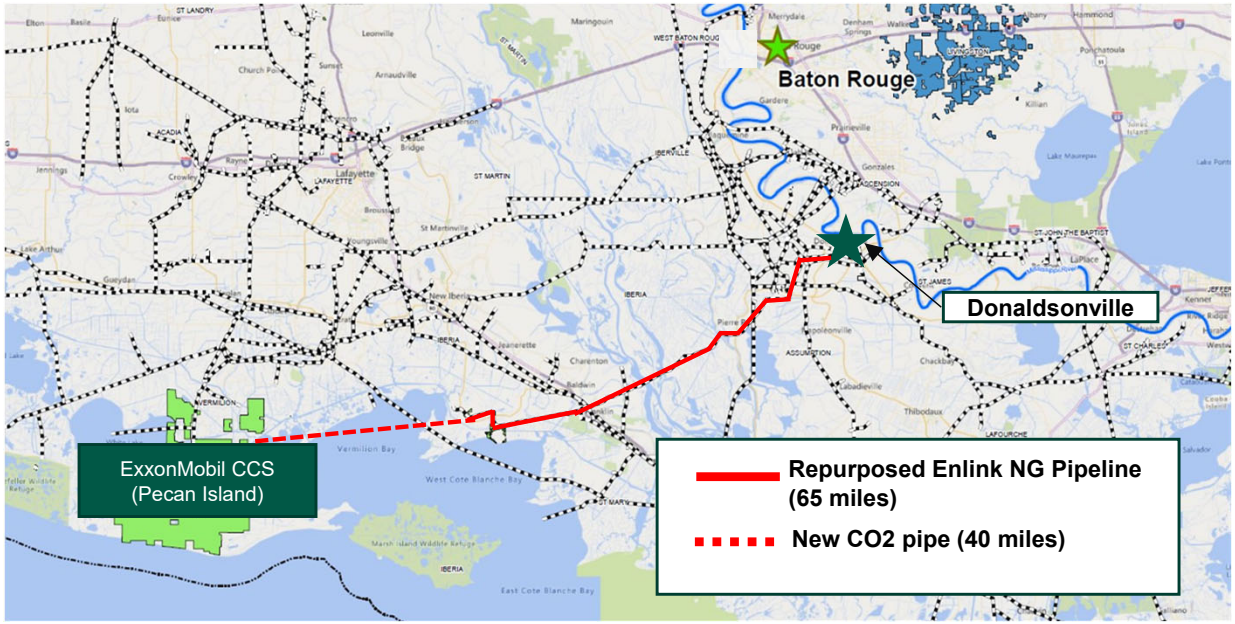
Significant progress to support our commitment to a Clean Energy Economy



CF and ExxonMobil have executed largest-of-its-kind commercial agreement for CO_2 offtake from Donaldsonville

CF Industries	EnLink	ExxonMobil				
CO_2 Capture Facility →	CO_2 Dehydration and Compression Facility →	Existing Pipelines for CO_2 Transport →	Class VI Permit Approval →	CO_2 Sequestration →	CO_2 Monitor and Verification	

ExxonMobil Transportation and Storage Facilities



Next Steps

- CF engineering team is progressing detailed engineering for compression and dehydration equipment
- Technical teams from CF and ExxonMobil are collaborating on pipeline interconnection to Donaldsonville
- Enlink is securing rights-of-way for new pipeline and starting permit process for pipeline conversion to CO_2 service
- ExxonMobil is working on Class VI permit and staying closely engaged with communities in Vermilion Parish and along pipeline route

CF Industries' manufacturing network

Site locations are dispersed, requiring separate CCUS solutions