



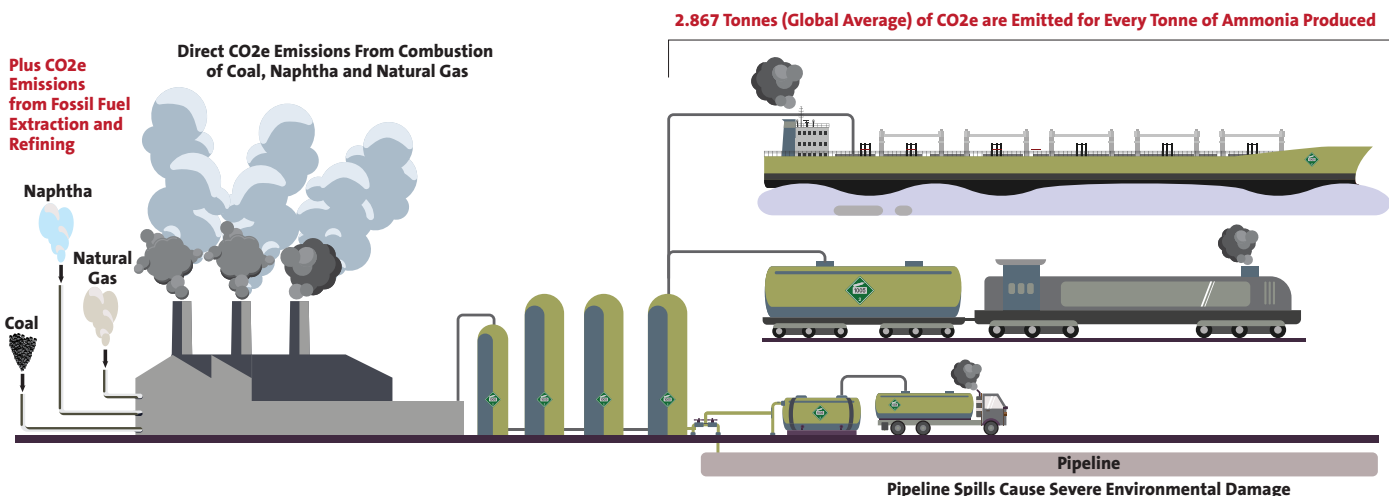
FuelPositive
Fuel For A Mindful World



Fact Sheet - Traditional (Grey) Ammonia

- Traditional ammonia has been used for over 100 years, with 200 million tons consumed world-wide each year.
- Globally, traditional ammonia is a \$70-billion industry.
- 80% of the world's ammonia is used by the agriculture sector as fertilizer, followed by the textile manufacturing and mining sectors.
- Ammonia is a key element in feedstock and chemicals production, cleaning materials, pharmaceutical manufacturing, water treatment and a refrigerant for cooling systems.
- Ammonia is also the most efficient and low-cost way to store and transport hydrogen.
- The production of traditional ammonia contributes heavily to greenhouse gases because fossil fuels are used in its production. In fact, ammonia currently ranks as the second most produced chemical globally, with production accounting for 2% of the world's fossil fuel use. The industry, as a whole, generates over 420 million tons of CO₂ annually, creating a challenging tension between producing much-needed fertilizer to meet our needs for food and reducing carbon emissions.

Direct CO₂e Emissions to Produce One Tonne of Ammonia



¹ Government of Canada, [Common Air Pollutants](#). Found on July 15, 2021.



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- Once it has been produced, ammonia contributes to pollution when it is in a gaseous state and combines with other airborne pollutants produced by power plants and cars, etc. Those handling ammonia must be trained and certified.
- Ammonia is stored in tanks at common temperature ranges without concerns of “boil off” and does not require extreme pressurization – both problems associated with hydrogen. Nor does it cause brittleness with respect to the materials it comes in contact with – another problem associated with hydrogen.
- Today, ammonia is produced in refineries and transported via pipelines, supertankers, long-haul trucking and rail.
- Ammonia is transported on a global scale with over 200 million tons moving around the world on an annual basis.
- **The problem:** The manufacturing of traditional ammonia is one of the most concentrated global contributors to greenhouse gas emissions. We use it because it works, but the pollution caused when it is produced must stop.
- **The solution:** FuelPositive’s green ammonia production system economically provides clean ammonia, without the pollution. Every ton of our green ammonia eliminates over four tons of carbon emissions.

Link to [this section](#) on our website.

Traditional Ammonia Supply Chain

