

FuelPositive Carbon-free Ammonia (NH3)

- FuelPositive's Carbon-free NH3 represents a viable transition to the hydrogen economy.
- Carbon-free NH3 is produced by taking air, water and sustainable electricity and converting that into a non-polluting chemical (\$20 billion of existing \$70 billion annual market), fertilizer (\$56 billion of \$70 billion annual market) and fuel (an emerging market).
- Agriculture is the largest consumer of traditional ammonia today – a heavy polluter. By installing carbon-free ammonia systems built by Fuel-Positive on farms around the world that have access to sustainable electricity, we will see an immediate and dramatic decline in the amount of carbon emissions and other pollutants related to agriculture.
- Ammonia can be used as a fossil fuel replacement in gasoline, diesel and other fossil fuel burning engines and turbines This could transform the transportation sector.
 - When Carbon-free NH3 is used to replace fossil fuels like gasoline and diesel, the resultant emission from combustion is water.
- Carbon-free NH3 can be used in the production of fuel for fuel cells (both hydrogen and ammonia fuel cells) and for grid storage for renewables using excess generation capacity, especially in off-peak periods, to produce our carbon free ammonia as a means of storage, to feed back

- pure ammonia turbine-generated electricity into the grid during demand periods.
- FuelPositive's lead product, Carbon-Free Ammonia (NH3), has the potential to economically replace fossil fuels over the next decade, dramatically reducing carbon emissions to levels surpassing our commitments to the Paris Agreement on Climate Change – years before the deadlines we've set.
- Carbon-free NH3 requires no new infrastructure.
 We can easily adapt what's already in place for traditional ammonia and fossil fuels.
- FuelPositive's Carbon-free NH3 will provide the end user in Canada with up to 5 carbon credits per ton of NH3 when used to replace fossil fuels and up to 2.5 carbon credits per ton of NH3 when used as fertilizer (varies per country).

Produced where you need it – In situ

- Our carbon-free NH3 can be produced where it is needed.
 - The production of Carbon-free NH3 is scalable it can be produced for both small- and largescale applications.
- As long as there is a sustainable source of electricity, a FuelPositive Carbon-free NH3 system can produce carbon-free NH3 around the clock at any location, providing fuel for ammonia-burning generators to meet virtually any energy requirement.



FuelPositive Carbon-free Ammonia (NH3) Page 2

- By building transportable systems using shipping container configurations, FuelPositive's production systems can be set up on Site:
 - Small stand-alone systems for transportation companies or small farms
 - Larger agricultural systems for significant farming enterprises
 - Large grid storage systems for the biggest wind, solar or geothermal electricity generation operations
- FuelPositive is working with National Compressed Air Canada to build commercial prototype systems, scheduled for completion toward the end of 2021.
 - The production units are built for easy transport and deployment (e.g., 20-foot and 40-foot shipping container platforms).
- Pilot projects in the agriculture and transportation sectors are planned to begin in Q1 2022.
 - Transportation fleet operators will produce their own fuel, on their sites where their vehicles normally refuel.
 - Farms will produce their own fuel for their vehicles and machinery – and they will produce their own ammonia fertilizer to safely store and carry essential nitrogen into the soil.

What is sustainable electricity?

- Electricity is sustainable when it can be generated while not depleting resources or damaging the environment through carbon emissions.
- Sustainable electricity includes hydroelectric, wind, solar, waste biomass and geothermal power.
- Canada has among the lowest Carbon Intensity electricity supplies (the amount of carbon per unit of energy consumed) in the world, given its hydroelectric generation capacity and other renewable generation sources. ¹

Intellectual Property Protection

- FuelPositive's core technology Carbon-free NH3 – was developed by Dr. Ibrahim Dincer and his team at Ontario Tech University. Dr. Dincer is a recognized world leader in hydrogen and ammonia technologies.
 - The core technology patent has been filed.
 - The patent also includes a number of other technology initiatives related to the core technology that will be built upon further and appropriately protected.

https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/environment/hydrogen/NRCan_Hydrogen-Strategy-Canada-na-en-v3.pdf