The future of fertiliser is electric and local

Securing high level food production in a sustainable environment

N2 Applied is a Norwegian technology company offering modular plasma systems that convert air, water and renewable electricity into nitric acid and nitrate-based fertiliser products.

This enables:

- **On-site production** ("produce where you use") at any suitable scale
- Reduced dependence on **supply chains** and **price volatility**
- **Flexible operation** (fast ramp up/down) to match variable renewable power
- **Low operational footprint**, no fossil input
- **Nitric acid** and **nitrates production** for fertiliser, mining and other industries

Nitric acid can either be a key input in existing processes or a precursor for nitrate-based products. Rapid growth of renewables offers an opportunity for local, electric production. It provides a new opportunity to deal with cost volatility and supply risk related to centralised fossil-based production.

The "*Produce where you use*" principle can reduce cost related to long supply chains and secure access and availability of nitric acid and fertilisers in almost all regions. With our solution we can produce liquid calcium nitrate that can be used in both covered and open cultivation as an effective nitrate-based fertiliser to grow a wide range of crops. It offers a valuable solution for sustainable food production and food security.

N2 Applied shifts the current fossil-based production of ammonia to electric production of nitrates. Our solution is simple, sustainable and safe. It is flexible and intermittent with fast start/stop options and designed for operation in a variable renewable electricity setup.

The production of nitric acid and nitrates can be deployed across fertiliser, mining and other industries. It offers a scalable capex friendly alternative for the fossil-based Haber-Bosch-Ostwald process. The low footprint is also beneficial in the Carbon Border Adjustment Mechanism (CBAM), the European Union regulation that puts a carbon price on imports of certain carbon-intensive goods like fertilisers.

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