

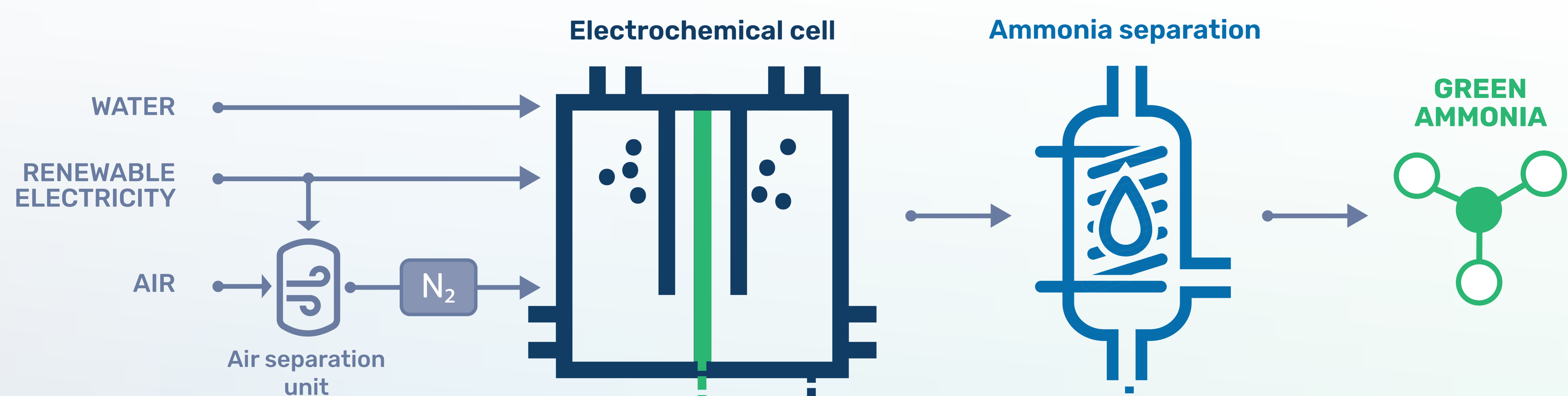
Project: Capital Cost Reduction in Electrochemical Ammonia Synthesis



Jupiter Ionics has developed breakthrough technology to produce green ammonia at any scale.

Hydrogen is sourced from water and combined with nitrogen atoms from the air to form ammonia (NH₃).

The process emits no CO₂ when using renewable electricity, resulting in green ammonia.



PROGRAM 1

Intra-cell membrane

Aim: Use cheaper and/or less material. Currently trialling coated/multi-layered membranes and novel materials.

PROGRAM 2

Cell + Electrolyte Engineering

Aim: Reduce pressure and/or simplify materials. Developing novel electrolyte chemistries and device architecture to improve nitrogen throughput.

PROGRAM 3

Ammonia Separation

Aim: Simplify or reduce size. Multiple ways to further optimise membrane separation and simplify system design.

PROJECT TIMELINE

YEAR 1

Exploration of potential solutions and proof of concept.

YEAR 2

Validation of preferred technology solutions in small scale prototypes.

YEAR 3

Demonstration of selected technologies at production-ready scales.

YEARS 4-5

Incorporate technology into multi-kW scale ammonia production systems.

Commercialisation Phase

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