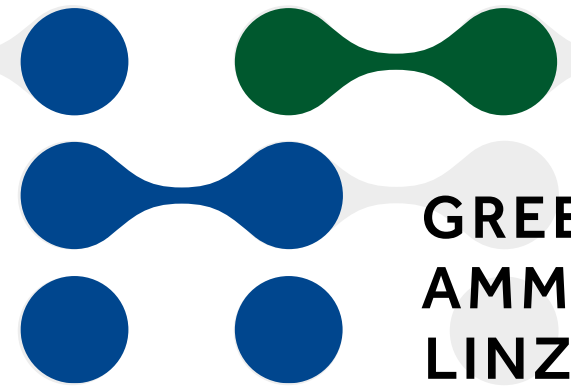


Green Ammonia Linz

M. Unfried
23.1.2025



**GREEN
AMMONIA
LINZ**

Green Ammonia Linz

A decarbonisation partnership of VERBUND and LAT Nitrogen



VERBUND Austria's leading energy utility

Austria's **leading** energy utility and electricity company

Most valuable company at Vienna stock exchange with market cap of **EUR >30bn**

Route length of electricity transmission grid of around **3,400** km

And approximately **900** gas transmission pipeline kilometres

Active RES positions in AT, DE, RO, ES, and AL with capacity additions of **3.8 GW** by 2030

129 VERBUND hydropower plants with over 8,200 MW of maximum electricity capacity

~97% of the total electricity generation stemming from renewables

Verbund at a glance

LAT Nitrogen Austria's leading producer of ammonia, fertilizers and technical nitrogen products

LAT Nitrogen Linz GmbH is a member of **Agrofert Group**

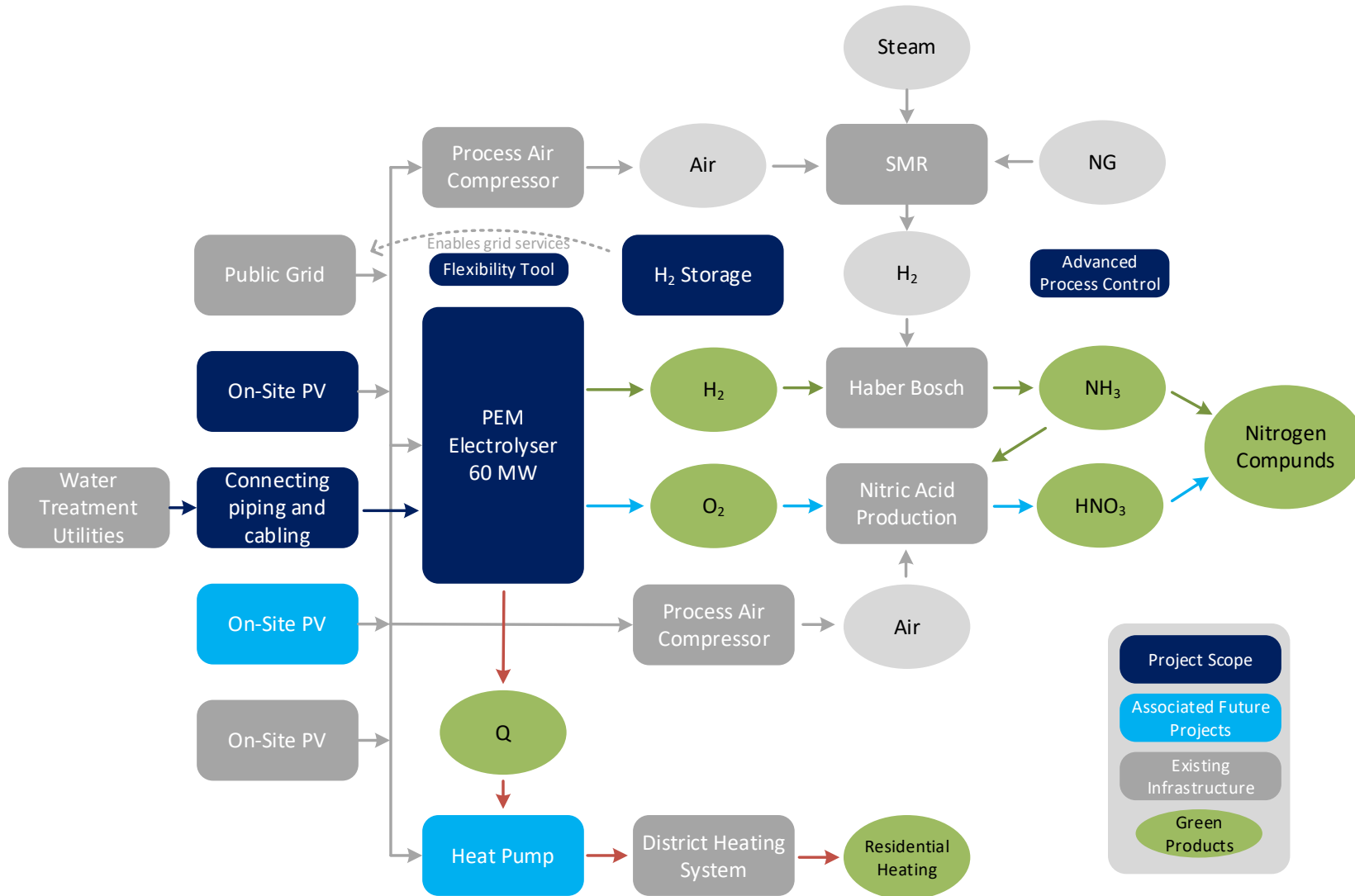
Owns the majority of the **Chemical Park Linz** and supplies utilities and services to industrial customers on site

The largest hydrogen producer and consumer in Austria, with approx. **100,000 tonnes per year of hydrogen**, as an intermediate for ammonia production

Owns and operates **two** ammonia plants, **two** nitric acid plants, **three** fertilizer plants and **two** melamine plants in Linz

Produces more than **500,000 tonnes per year of ammonia** from hydrogen and nitrogen

Green Ammonia Linz



Innovation
 + PEM technology scale-up
 + Innovative business model
 + Integration and side products

Maturity
 + Feasibility Study completed
 + State aid element already secured (IPCEI)

Scalability
 + Concept can serve as industry blueprint

GHG impact
 + Reduction of up to 90,000 t_{CO_2}/a directly
 + Another 30,000 t_{CO_2}/a due to flexible operation
 + relative GHG emission avoidance >100%

Flight through the Plant



Project Status and Outlook



Status: Approaching FID

Basic **Engineering** completed

All required **permits** issued

Main **service and supply contracts** awarded or in negotiation

Bilateral agreements between the partners in finalization

Remaining challenges

Technological novelty - Unproven technology and application

Economics - Competition with imported grey ammonia

- Grey ammonia still decisively more competitive
- Uncertainty regarding green premium

Regulatory framework

- Level of financial support: IPCEI, Innovation Fund, OPEX support
- RFNBO criteria are very stringent → therefore a high share of locally produced renewable electricity is a must
- CO₂ price and CBAM
- Measures for offtake: Quotas, „Leitmärkte“, etc.



Many Thanks!

**GREEN
AMMONIA
LINZ**