



Renewable Ammonia Markets/Policies Building Renewable Ammonia Certificate Markets

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M-RETS creates and tracks Renewable Thermal Certificates (RTCs) and Renewable Electricity Certificates (RECs) across North America.



M-RETS RECs are able to contain hourly data information and peak/off-peak and RTC's may include verified carbon intensity data.



M-RETS supports RTC and REC compliance and voluntary markets in one easy to use platform that utilizes the latest software.

Agenda

- M-RETS Background
- Why an ammonia certificate market/tracking system?
- Certificate Structure/Lifecycle
- Market Considerations, Complications, Metrics

Why use a certificate tracking system?

The goal is **simplicity & efficiency** for all parties

Generate.

Streamline credit management and prevent double counting and provide the opportunity to include scientifically validated carbon values to facilitate GHG reduction claims

Compliance.

Provide regulators with an independent, easy to use, and reliable source to verify compliance

Liquidity.

Provide a mechanism to manage holdings, effectuate transactions, and maintain claims

Green Ammonia Certificate Example Structure

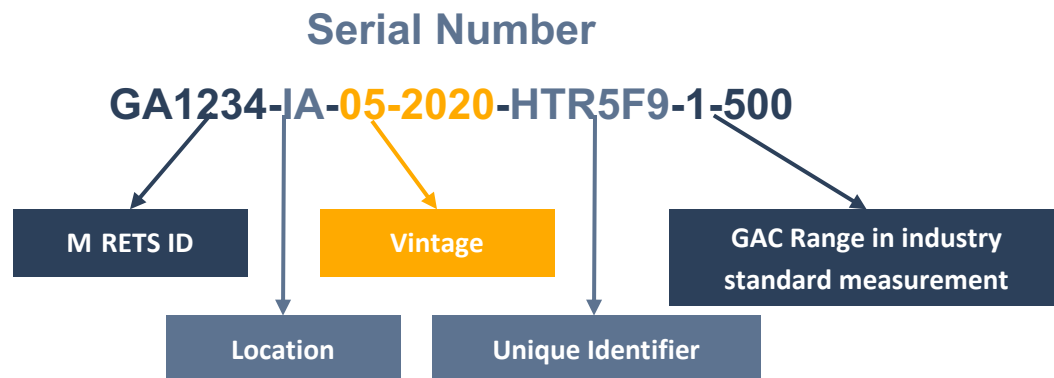
1 Tonne of Renewable Ammonia
1 Green Ammonia Certificate ("GAC")

Certificate Details include:

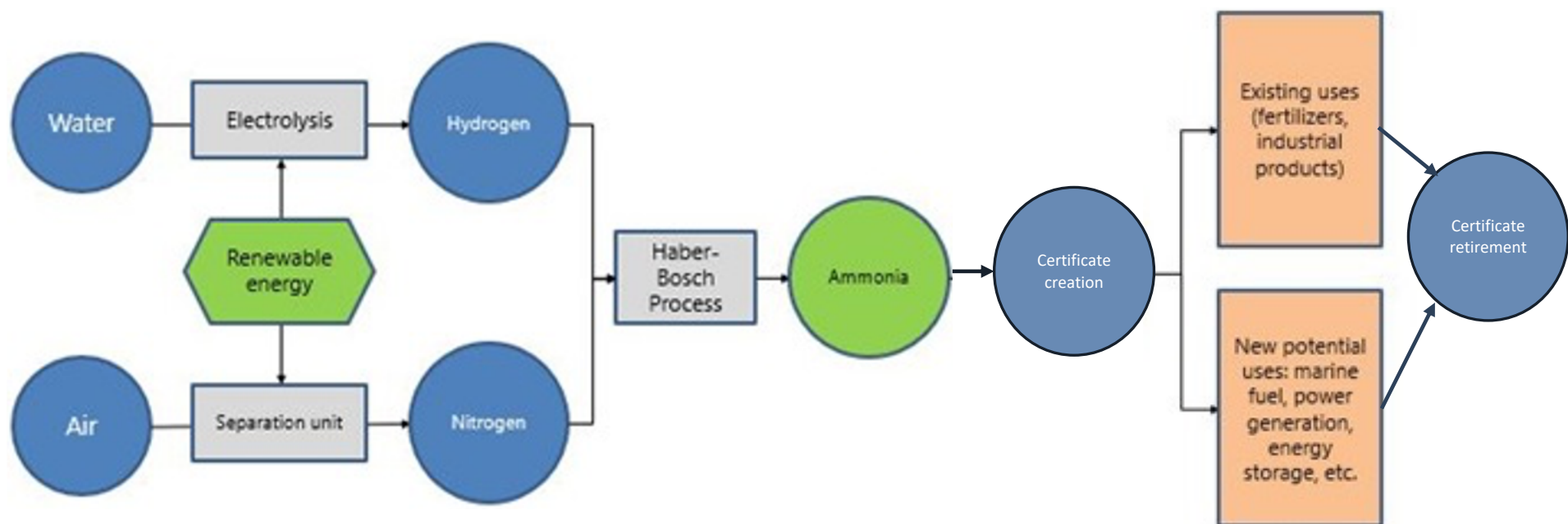
- Serial Number (See example)
- Account
- Project
- Feedstock
(solar/wind/nuclear/hydro/etc.)
- Vintage (date of creation or injection)
- Location (generator or pipeline injection)
- Eligibility (If Applicable)
- Quantity (tonne?)

Carbon Pathways (If Applicable)

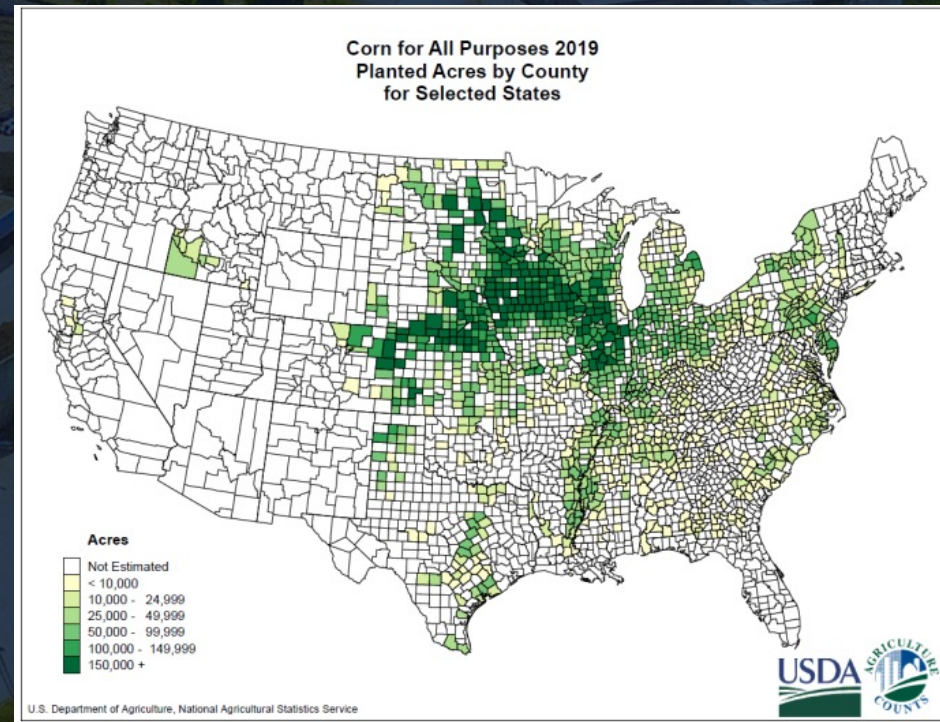
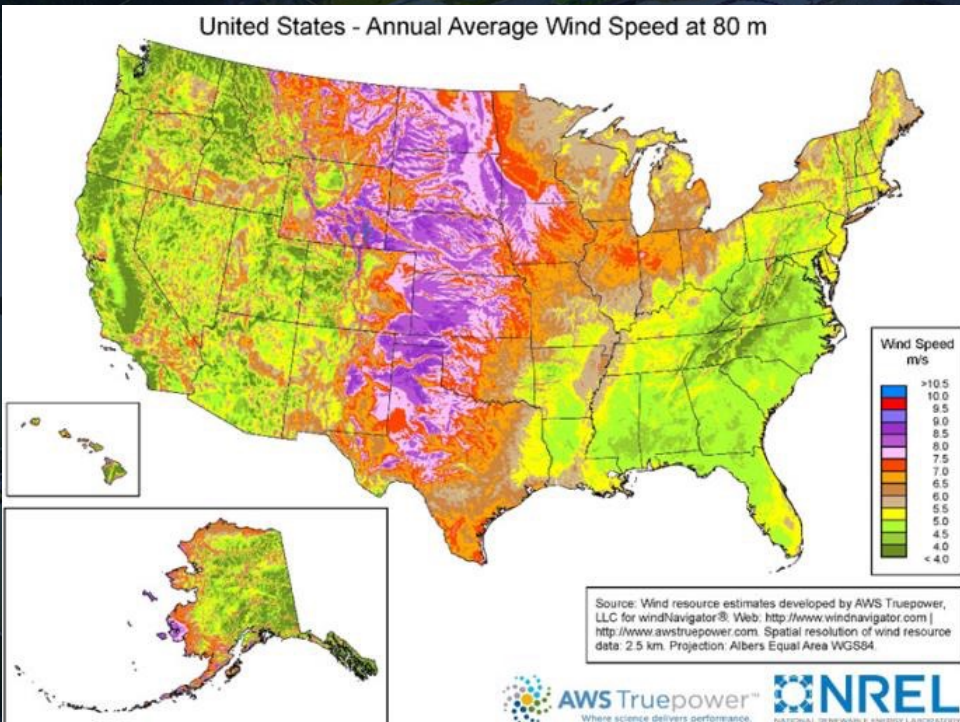
IRE Verification (If Applicable)



Renewable Ammonia Certificate Lifecycle



North American Market



- US wind resource is synergistic with Midwest corn production and nitrogen fertilizer demand – inherently distributed

Important Metrics/Considerations

- First North American commercial deliveries likely in 2023-2024
- Volume – Short tons in rural areas but global market is metric tons
- Data quality and regulation





THANK YOU

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