

AEA CERTIFICATION PROJECT UPDATE

NOVEMBER 2022



AMMONIA ENERGY
ASSOCIATION

Overview

If Low-Carbon Ammonia is to be recognised in the marketplace, a process is needed to clearly communicate and validate low-carbon claims.....CERTIFICATION!

- *Ongoing AEA project to develop a Low-Carbon Ammonia Certification Scheme.*
- *Progress:*
 1. *Design Principles – consultation 2021, member development 2022 – largely agreed.*
 2. *Methodology – Hinicio contracted to support AEA in developing methodology.*
 3. *Methodology testing and scheme development – to follow.*

Purpose

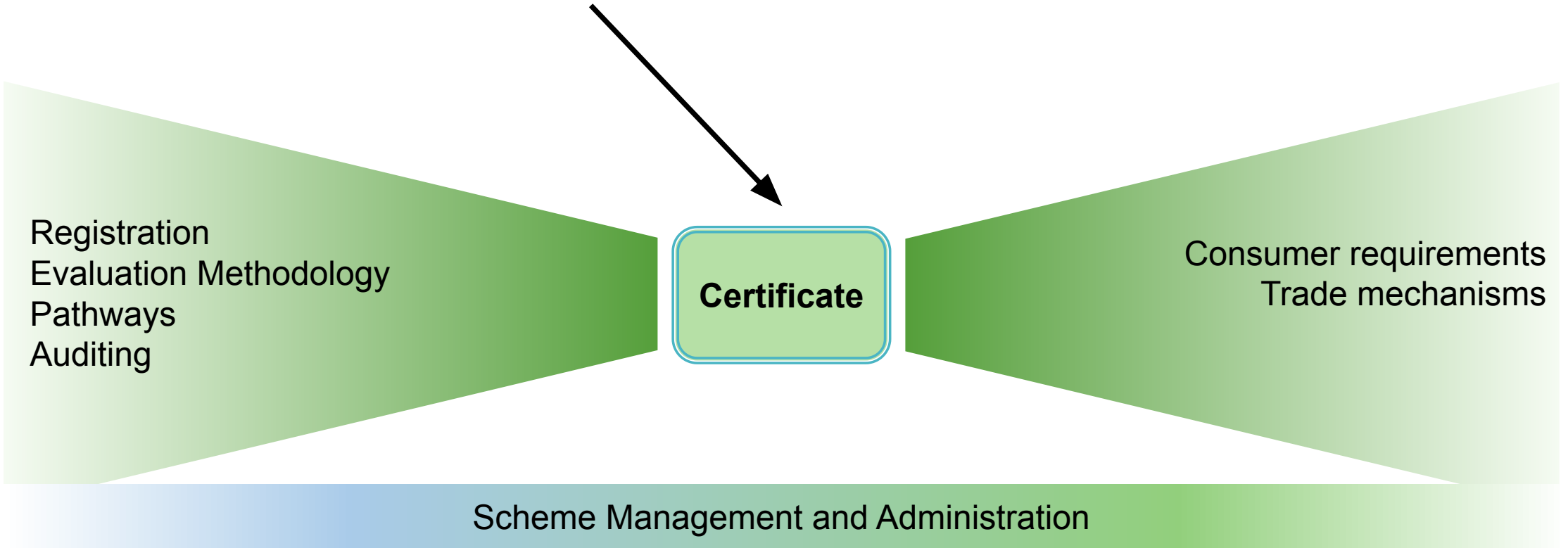
AEA Certification scheme is intended to:

- *enable global trade between producers and consumers.*
- *support differentiation in the marketplace for ammonia produced with differing carbon intensity (footprint).*
- *be recognised as a robust system, and, where practical, to be acceptable across jurisdictions.*
- *be sufficiently flexible and pragmatic for market development.*

Starting Point

What does the certificate communicate?

Well-to-Gate carbon intensity (or footprint) of ammonia product, as metric tonnes CO₂e per metric tonne ammonia, with relevant supporting attributes (for example, process route, origin).



Principles

- *The AEA methodology will be technology agnostic – it will seek to recognise the carbon intensity of any form of ammonia production.*
- *Pathways (production routes) for low-carbon ammonia will be defined within the AEA scheme design.*
- *Priority pathways selected are Steam-Methane Reforming, Water-Electrolysis and Methane Pyrolysis.*
- *The pathways will include potential low-carbon modifications and hybrid arrangements.*

Certification Process:



Principles

AEA Certification scheme will:

- *Support the ISO 14067 principles of Relevance, Completeness, Consistency, Coherence, Accuracy and Transparency.*
- *Define the methodology for carbon intensity, with ISO standards as the starting point.*
- *Define proportionate requirements for data collection and verification.*

Within the design phase, AEA members will:

- *Consider chain of custody mechanism(s) and allowed flexibility.*
- *Consider labelling options and whether the AEA scheme will include a labelling option.*