



ISCC Certification

Processing Unit Case Study

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ISCC Certification Case Study: Ethanol Processing Unit



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- transport fuel (RED II) – ISCC EU
- industrial chemicals – ISCC PLUS
- aviation fuel or precursor - CORSIA

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- Typical certification scope:
- Processing Unit
- First Gathering Point
 - ◆ Farms

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- Processing Unit:
- Input material – Corn / maize
- Output materials
 - ◆ Bioethanol (corn)
 - ◆ Technical corn oil
 - ◆ Distillers' grains
 - ◆ Syrup
 - ◆ CO₂

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- Processing Unit GHGs:
- Corn cultivation emissions
- Processing energy input
 - ◆ Electricity
 - ◆ Natural gas
 - ◆ Credits for renewable electricity
- Chemical inputs
- CO₂
 - ◆ Carbon Capture & Replacement
 - ◆ Carbon Capture & Storage

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■ Conversion Factor

- ◆ How many tons of feedstock input are required to produce a ton of output?

■ Allocation Factor

- ◆ What fraction of the processing emissions are related to each of the outputs, based on energy content?

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■ Mass Balance

- Incoming quantities of ISCC materials relate to outgoing ISCC products through the conversion factor.
- Outgoing product has a specific GHG value and sustainability characteristics.

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- First Gathering Point:
- Supplying farms can be audited under the certification of the FGP.
- Every farm must demonstrate compliance with LUC requirements.
- Individual farms can be audited on a sample basis.

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- First Gathering Point:
- Farms must supply data to calculate GHG emissions of cultivation:
 - ◆ Area planted & harvested yield
 - ◆ On farm energy use
 - ◆ Seeds
 - ◆ Fertilizers
 - ◆ Plant protection products
 - ◆ Transportation
- CORSIA includes default ILUC value

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■ First Gathering Point:

■ Farm audit checklist includes:

- ◆ Protection of biodiversity
- ◆ Soil health
- ◆ Responsible use of nutrients
- ◆ Responsible use of pesticides
- ◆ Social protection for farm workers
- ◆ Food security

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- North American farms have a long history of investment in technology that increases yield through optimization of land and responsible use of inputs.
- Increasing focus on conservation in recent decades.
- Commodity infrastructure relies on fungibility for low-cost distribution.
- Chain of custody certification can be achieved when markets exist to reward the effort.

