ISCC Certification Approach for Japan

Dr Norbert Schmitz, Managing Director, ISCC System GmbH
7th ISCC Regional Stakeholder Committee North America, Las Vegas, 27 November 2018
01
Requirements for biofuels in Japan

02
ISCC certification approach for Japan
New biofuel mandate in Japan for 2018 – 2022 (I)

- ISCC PLUS is recognised by the Japanese government to verify compliance with sustainability requirements for biofuels
- The recognition was announced by METI (Japanese Ministry of Trade and Industry) in the framework of presenting the new biofuel mandate for Japan for 2018 – 2022
- Most important changes in the new mandate:
  - GHG emission reduction target for ethanol raised from 50% to 55%
  - Markets opened for U.S. corn-based ethanol (previously, only Brazilian sugarcane-based ETBE and ethanol allowed)
  - Rationale is to lower the overall sourcing costs and improve energy security of Japan
New biofuel mandate in Japan for 2018 – 2022 (II)

- **Overall target volume: 500 million litres/year** as crude oil equivalent (equals approx. 820 million litres ethanol/year)
  - Target volume remains unchanged to previous mandate
  - In 2017, Japan imported 814 million liters of ethanol for the transport sector (727 million liters were imported as ETBE, 87 million liters ethanol were used in domestic ETBE production)
  - In 2017, all imported ethanol or ETBE was produced from Brazilian sugar cane (under old biofuel mandate)
Specific provisions for deliveries of ethanol to Japan – Sustainability requirements

Sustainability criteria

- Exclusion of land use change
- Application of mass balance approach and traceability in supply chains
  - As means to prove compliance certification, such as ISCC, can be applied
- Effects on food competition and biodiversity
  - For compliance other methods than certification can be applied, e.g. contractual agreements
Specific provisions for deliveries of ethanol to Japan – GHG saving targets.
Japan provides default values for ethanol from the U.S. and Brazil

**General GHG savings**
- At least 55% in (average) in comparison to fossil fuel
- Fossil fuel comparator (gasoline) is 84.11 gCO₂eq/MJ
- To achieve the minimum 55% GHG reduction (in weighted average) **up to 44%** of the Japanese demand can be covered by corn-based ethanol from the U.S.

**Default values for U.S. corn ethanol**
- Cover the whole supply chain
- Default value for **U.S. ethanol** (corn): **43.15 gCO₂eq/MJ**
- GHG reduction of **48.7%**
- Default values for **land use change**:
  - 230.8 gCO₂eq/MJ (LUC from forest)
  - 44.8 gCO₂eq/MJ (LUC from grassland)

**Default values for Brazil sugar cane ethanol**
- Cover the whole supply chain
- Default value for **Brazilian ethanol** (sugar cane): **33.61 gCO₂eq/MJ**
- GHG reduction of **60%**
- Default values for **land use change**:
  - 248.7 gCO₂eq/MJ (LUC from forest)
  - 0 gCO₂eq/MJ (LUC from grassland)
ISCC certification approach for Japan
ISCC certification approach for Japan

- ISCC has set up a guidance document for deliveries of biofuels to Japan
- Key points of the guidance document:
  - Certification of whole supply chain under ISCC PLUS
  - GHG default values provided by Japan to be applied
  - Specific statements on sustainability declarations
- Options for ISCC EU certified operators:
  - Operators along the supply chain certified under ISCC EU can easily obtain an additional ISCC PLUS certificate
  - The certification body can issue the ISCC PLUS certificate on the basis of the existing ISCC EU audit documentation of the respective scopes
Certification of whole supply chain under ISCC PLUS. Example corn ethanol supply chain – LUC has to be excluded

1. Protection of biodiversity
2. Preservation of carbon sinks
3. Good agricultural practices
4. Human and social rights
5. GHG emissions

* Covered under certification of country elevator
Certification requirements for individual supply chain elements. Example corn ethanol

**Certification requirements for country elevators:**
- Verification of supply base (self-declarations, plausibility check of amount of supplied corn)
- Risk assessment of production areas (farms)
- Audits of farms (sample based)
- GHG: Application of default values provided in Japanese biofuels mandate

**Certification requirements for processing, blending and trader/storage**
- Management system
- Traceability and mass balance: Verification of incoming/outgoing materials, plausibility checks (no “double-accounting”), correct handling and forwarding of information on incoming/outgoing sustainability declarations

**Additional requirements for ethanol plants:**
- GHG: Application of default values provided in Japanese biofuels mandate
- Verification of conversion factors and periodic production plans
Provisions of GHG information – Japanese default values can simply be applied

- Economic operators should apply the default values as provided in the Japanese mandate
- It is not necessary to include the ISCC PLUS add-on “GHG Emission Requirements”
  - Actual calculation of GHG emissions is generally permitted, however each actual calculation would require individual approval by METI
- The default values can be used for the respective production pathways if emissions from land use change are zero
  - The cut-off date 1st January 2008 according to ISCC Principle 1 applies for ISCC certification
- Sustainability declarations: Explicit statement required, that emissions from land use change (e_l) are zero
Overview of information required on ISCC sustainability declarations

<table>
<thead>
<tr>
<th>General information for sustainability declarations</th>
<th>Specific information: corn and corn based ethanol</th>
<th>Specific information: sugar cane and sugar cane based ethanol</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Name and address of the supplier</td>
<td>▪ Quantity of sustainable material (in metric tons or m3 at 15° C)</td>
<td>▪ Quantity of sustainable material (in metric tons or m3 at 15° C)</td>
</tr>
<tr>
<td>▪ ISCC PLUS Certificate number of supplier</td>
<td>▪ Outgoing sustainable material, indicating the raw material:</td>
<td>▪ Outgoing sustainable material, indicating the raw material:</td>
</tr>
<tr>
<td>▪ Name and address of the recipient</td>
<td>• “Corn” (in case of deliveries of raw material)</td>
<td>• “Sugar cane” (in case of deliveries of raw material)</td>
</tr>
<tr>
<td>▪ Related contract number of delivery</td>
<td>• “Ethanol from corn” (in case of deliveries of ethanol)</td>
<td>• “Ethanol from sugar cane” (in case of deliveries of ethanol)</td>
</tr>
<tr>
<td>▪ Unique number of sustainability declaration (no formal requirement for layout of the number)</td>
<td>▪ Country of origin of raw material:</td>
<td>▪ Country of origin of raw material:</td>
</tr>
<tr>
<td>▪ Date of physical dispatch of the sustainable material (i.e. the date when the material physically leaves the site of the supplier)</td>
<td>• United States</td>
<td>• Brazil</td>
</tr>
<tr>
<td>▪ Date of issuance of sustainability declaration</td>
<td>▪ Statement: “Use of Japanese default value for U.S. ethanol (corn)”</td>
<td>▪ Statement: “Use of Japanese default value for Brazilian ethanol (sugar cane)”</td>
</tr>
<tr>
<td></td>
<td>▪ Statement: $e_I = 0$ (zero)</td>
<td>▪ Statement: $e_I = 0$ (zero)</td>
</tr>
</tbody>
</table>
ISCC in the USA: 76 ISCC certificates have been issued for ethanol plants
Many thanks for your attention!

Dr Norbert Schmitz, Managing Director, ISCC System GmbH
Hohenzollernring 72, 50672 Cologne, Germany
Email: schmitz@iscc-system.org