Joint ISCC Technical Committee Meeting
North and South America
Miami, June 24, 2015

Update ISCC and ISCC PLUS –
GHG quota, food, feed and biochemical markets

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The FQD implements a decarbonization strategy for transport. Importance of individual GHG calculations will rise further


- 2010
- 2015
- 2020

**Decarbonization strategy for the transport sector**

- **European Union:**
  - FQD requires a 6% GHG reduction per unit of energy from fuel supplied*
    - The importance of the individual GHG performance of biofuels will increase tremendously and will impact prices
    - Individual calculations and audits of individual calculations will increase
    - Fraud potential

* Obtained through the use of biofuels, alternative fuels and reductions in flaring and venting at production sites (additional 4% by CCS, electric vehicles and CDM possible).
The FQD has been implemented in Germany in January 2015. The energetic quota was replaced by a GHG reduction quota

<table>
<thead>
<tr>
<th>Year</th>
<th>Energetic biofuels quota</th>
<th>GHG reduction quota</th>
<th>Min. GHG saving requirement based on RED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>5.25%</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>2010 - 2014</td>
<td>6.25%</td>
<td>n/a</td>
<td>35%</td>
</tr>
<tr>
<td>2015</td>
<td>n/a</td>
<td>3.5% (initially 3%)</td>
<td>35%</td>
</tr>
<tr>
<td>2017</td>
<td>n/a</td>
<td>4% (initially 4.5%)</td>
<td>50%</td>
</tr>
<tr>
<td>2018</td>
<td>n/a</td>
<td>6% (initially 7%)</td>
<td>60% for installations in which production started from 2017 onwards</td>
</tr>
<tr>
<td>2020</td>
<td>n/a</td>
<td>6% (initially 7%)</td>
<td>50% (60% for new plants)</td>
</tr>
</tbody>
</table>

- Germany is the largest biofuel market in the EU
- Germany is the first country that moved to a mandatory GHG reduction quota. This is seen as a technology neutral instrument to promote biofuels
- Biofuels are currently the only option to fulfill the target
- Minimum GHG savings according to RED must still be achieved
On April 28, 2015, European Parliament voted to endorse a compromise with the Council on ILUC

Main points:

- Limiting food/feed crop based biofuels to 7%
- Sub target for advanced biofuels
- MS need to report ILUC GHG emissions
- No ILUC factors for accounting (yet). Possibly after 2017 when science is “updated”
- Multiple counting: advanced biofuels, renewable liquid and gaseous transport fuels of non-biological origin (2x), Electric road vehicles with renewable electricity (5x) and Trains (2.5x)
- Low indirect land use change risk biofuels
- The 10% RE target for 2020 still in place
Growing interest in low / no ILUC renewable fuels

- New biobased feedstocks, eg. wood based, for advanced, low ILUC biofuels
- Co-processing
- Mixed feedstocks (fossil & bio)
- Landfill gas
- Power to liquid
- CO$_2$ capture e.g. for methanol production
State of affairs of sustainability certification in different markets

<table>
<thead>
<tr>
<th>Market</th>
<th>Initiatives and Programs</th>
</tr>
</thead>
</table>
| Energy   | • Mandatory sustainability requirements in the EU biofuels markets already in place since 2010  
• Sustainability requirements for solid biomass (e.g. for wood pellets) under discussion |
| Food     | • Procurement guidelines and zero net deforestation for 2020 by Consumer Goods Forum  
• Company specific programs (e.g. Unilever, McDonalds) |
| Feed     | • European Feed Association (FEFAC) committed to responsibly produced soy; standard being developed, benchmarking of different schemes by ITC  
• Initiatives to foster regional supplies |
| Chemistry| • Government supported initiatives (INRO, GreenDeal) to define sustainability requirement for biobased chemicals  
• Several companies already certified (e.g. SABIC, Braskem, NatureWorks, Neste, Elopak) |
With ISCC PLUS sustainable material can be delivered to other markets e.g. chemical industry, pulp and paper and timber products.
More and more companies use renewable feedstocks and need to prove sustainability of the feedstock

“We are delighted to be playing a key role in helping Elopak come closer to its vision of creating the industry’s most renewable cartons.”

Rob Balk, Segment leader extrusion coating, Sabic

“All raw materials used for our yogurt cups were processed according to the requirements of the ISCC PLUS certificate. These cups are a first step to develop more packing materials based on renewable raw materials...”

Marion Fürst, DANONE GmbH

“Elopak is pleased to introduce the bio-based carton together with FrieslandCampina to the Dutch market. We hope that this introduction will lead to an increase in demand for ISCC PLUS certified bio-based cartons”

Bert Lohuis, Market Area Director Elopak

“This is a key milestone in Elopak’s effort to reduce environmental footprint of our products. We have a vision to deliver products with zero net impact on the environment, and this is an important step towards that goal”

Kristian Hall, Director Environment, Elopak

“Renewable raw materials shall be used and processed as sustainable as possible. Agricultural land and water resources are limited. This is the reason why BASF is an active member of ISCC... and supports producers in their sustainability efforts.”

Christine Stiehl, BASF

“This technology has the potential to revolutionize both the plastics and packaging industry across Europe and around the world”

Marc Vester, Business Leader, Sabic

“The expansion of the green products line (for TetraPak®) reinforces our commitment to adding value through sustainable development for the value chain”

Carlos Fadigas, President, Braskem

Source: foodbev.com, freislandcampina.com, sabic.com, foodproductiondaily.com, tetrapak.com
FrieslandCampina introduced ISCC PLUS certified cartons for fresh milk and butter.

April 30, 2015

FrieslandCampina and Elopak are setting the standard with new bio-based milk carton

FrieslandCampina plans to introduce a new bio-based beverage carton over the next 1.5 years, starting with fresh milk and buttermilk from Campina in June 2015. For the production of the cap and the coating certified organic waste material is purchased. The paper in the carton was already renewable and this innovation makes it the most sustainable beverage carton ever. The CO2 footprint of this bio-based milk carton is 20% lower than the current carton. This is a scoop on the Dutch market.

Picture: Berndt Kodden (FrieslandCampina) hands the first bio-based milk carton to Jacqueline Cramer (former minister of Environment in the Netherlands and head of the “Cramer Commission”)

Source: freislandcampina.com
...the cartons are the Greenest Pure-Pak® ever, produced by Elopak who replaced all non-renewable materials with renewable alternatives.
Sabic is also ISCC PLUS certified producing renewable polyolefins for bioplastics

SABIC launches first portfolio of certified renewable polyolefins
15.05.2014

Sabic has launched its first portfolio of renewable polyolefins, certified under the ISCC Plus certification scheme, which requires strict traceability with a chain of custody based on a mass balance system.

The portfolio, which includes renewable polyethylenes (PE) and polypropylenes (PP), responds to the increasing demand for sustainable materials from Sabic customers, especially those in the packaging industry.

To complement its existing portfolio, Sabic launched its ‘Chemistry that Matter’, in which materials that meet the growing demand to protect the food chain. SABIC is the first company to launch a renewable second generation PP & PE.

SABIC to launch portfolio of renewable polyolefins
ISCC was involved in the development of GRAS as a one stop solution to offer relevant information for sustainability certification.
About 80 organisations and indivuals are united in the association which is steering the entire ISCC voluntary certification operation.
ISCC is applied on a global scale in 100 countries by more than 3,300 companies
88% of all certificates are issued in the ISCC EU system. The DE system is loosing market relevance, ISCC PLUS is gaining importance.

* Shares of valid certificates as of 18 June 2015
**Certificates exclusively or partly dealing with waste&residues
Development of ISCC certificates issued since 2010 (cumulative)

Number of ISCC certificates issued

<table>
<thead>
<tr>
<th>Month</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2010</td>
<td>3</td>
</tr>
<tr>
<td>June 2011</td>
<td>403</td>
</tr>
<tr>
<td>June 2012</td>
<td>1457</td>
</tr>
<tr>
<td>June 2013</td>
<td>3239</td>
</tr>
<tr>
<td>June 2014</td>
<td>6035</td>
</tr>
<tr>
<td>June 2015</td>
<td>8813</td>
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Numbers as of 18 June 2015

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Development of ISCC certificates issued since 2010 (cumulative)

Number of ISCC PLUS certificates issued*

<table>
<thead>
<tr>
<th>Month</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2012</td>
<td>7</td>
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<tr>
<td>June 2013</td>
<td>31</td>
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<tr>
<td>June 2014</td>
<td>74</td>
</tr>
<tr>
<td>June 2015</td>
<td>184</td>
</tr>
</tbody>
</table>

*Numbers as of 18 June 2015
ISCC supports companies and initiatives to ensure sustainable and deforestation free food, feed and biochemical supply chains

- **Unilever**: ISCC PLUS (with Add-ons Environmental Management and Biodiversity and Classified Chemicals) fully recognized. ISCC PLUS is considered fully equivalent to the Unilever Sustainable Agriculture Code

- **Sustainable Agriculture Initiative**: ISCC supports the Sustainable Agriculture Initiative, SAI.

- **Consumer Goods Forum**: ISCC is one of the recommended standards to prove the compliance with the criteria set by the Consumer Goods Forum (currently for soy)

- **IDH**: ISCC cooperates with the sustainable trade initiative (IDH)

- **Forum Sustainable Palm Oil**: ISCC PLUS is one of the recognized standards in the German forum

- **INRO**: ISCC is recognized by the German Initiative for sustainable supply of raw materials for the industrial use of biomass (INRO)

- **Green Deal**: ISCC is a partner of Green Deal – the Dutch initiative to set up sustainability criteria for biobased polymer products

- **Declaration of Abu Dhabi**: ISCC is one of the first signatories of the Abu Dhabi declaration initiated by GlobalGAP, International Trade Center and SAI
Discussion in the TC meeting - conclusions and follow ups

- How to implement “highly biodiverse grassland” definition of the EC in different regions
- Zerto vs. zero net deforestation and payment scheme for environmental services
- How to market ISCC in the voluntary areas (ISCC PLUS)? Who is willing to join this?
- Create positive case studies, e.g. combination of ISCC PLUS and GRAS
- Target multinational companies having sustainability metrics already in place
- Learn from experiences of other standards
- Work on losing “European image” of ISCC, e.g. by integrating GRAS. Promoting the global image
- Participation of ISCC and its stakeholders in the CARB process. ISCC to prepare to fulfill CARB requirements
- Hook ISCC on to new regulatory programs, e.g. circular economy in Europe or CARB in California as best way to grow. Be a reliable partner to regulators
- Work on low iLUC risk biofuels. What does it mean? How can ISCC integrate this as a module?
- ISCC to continue addressing innovative renewable fuels, new feedstock, non-bio renewable fuels, etc.
- How can ISCC integrate different systems to reduce efforts for farmers and elevators, e.g. via combined audits, integration of checklists etc. Draw conclusions from the project of Alberta Barley and Wheat Commissions