

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

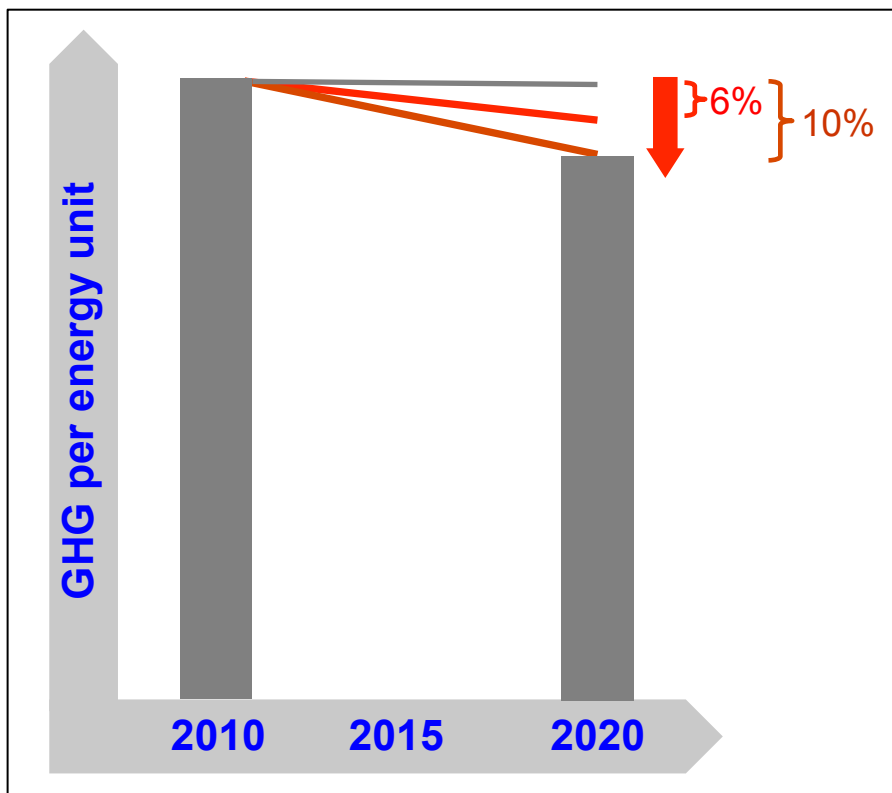
Update ISCC and ISCC PLUS – GHG quota, food, feed and biochemical markets

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

Fuel Quality Directive (FQD) (2009/30/EC)



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

	Energetic biofuels quota	GHG reduction quota	Min. GHG saving requirement based on RED
2009	5,25%	n/a	n/a
2010 - 2014	6,25%	n/a	35%
2015	n/a	3,5% (initially 3%)	35%
2017	n/a	4% (initially 4.5%)	50%
2018	n/a		60% for installations in which production started from 2017 onwards
2020	n/a	6% (initially 7%)	50% (60% for new plants)

- 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





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Accelerating deployment of advanced biofuels in Europe

GO

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Biofuels Research, Demonstration & Deployment			Biofuels 'Value Chain' T	
EBTP Activities	EC Activities	National Activities	Biomass / Feedstocks	Fuels and Conversion

Biofuels Policy and Legislation

A number of directives cover biofuels use in the EU including the **Renewable Energy Directive 2009/28/EC**, the **Fuel Quality Directive** and the **Biofuels Directive 2003**. Relevant communications and links to further information on biofuels legislation are included below.

Recent EC legislation, policies and communciations relating to biofuels

Revision to the Fuel Quality Directive and Renewable Energy Directive

On 28 April 2015, the European Parliament voted to approve **new legislaton, the "iLUC Directive"**, that limits the way Member States can meet the target of 10% for renewables in transport fuels by 2020, bringing to an end many months of debate. There will be a cap of 7% on the contribution of biofuels produced from 'food' crops, and a greater emphasis on the production of advanced biofuels from waste feedstocks. Member States must then include the law in national legislation by 2017, and show how they are going to meet sub-targets for advanced biofuels.

NGOs gave a cautious welcome to the new legislation as a step in the right direction (from their perspective), but remain broadly opposed to any production of biofuels from crops. While acknowledging the need for sustainability, many in reseach and industry view the compromise legislation as a reaction to political lobbying rather than scientific evidence. The arbitrary capping of the conventional biofuels industry could undermine European fuel security, cost 1000s of jobs, and leave Europe trailing behind other parts of the world in developing innovative technologies to tackle emmissions from transport (as outlined below).

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

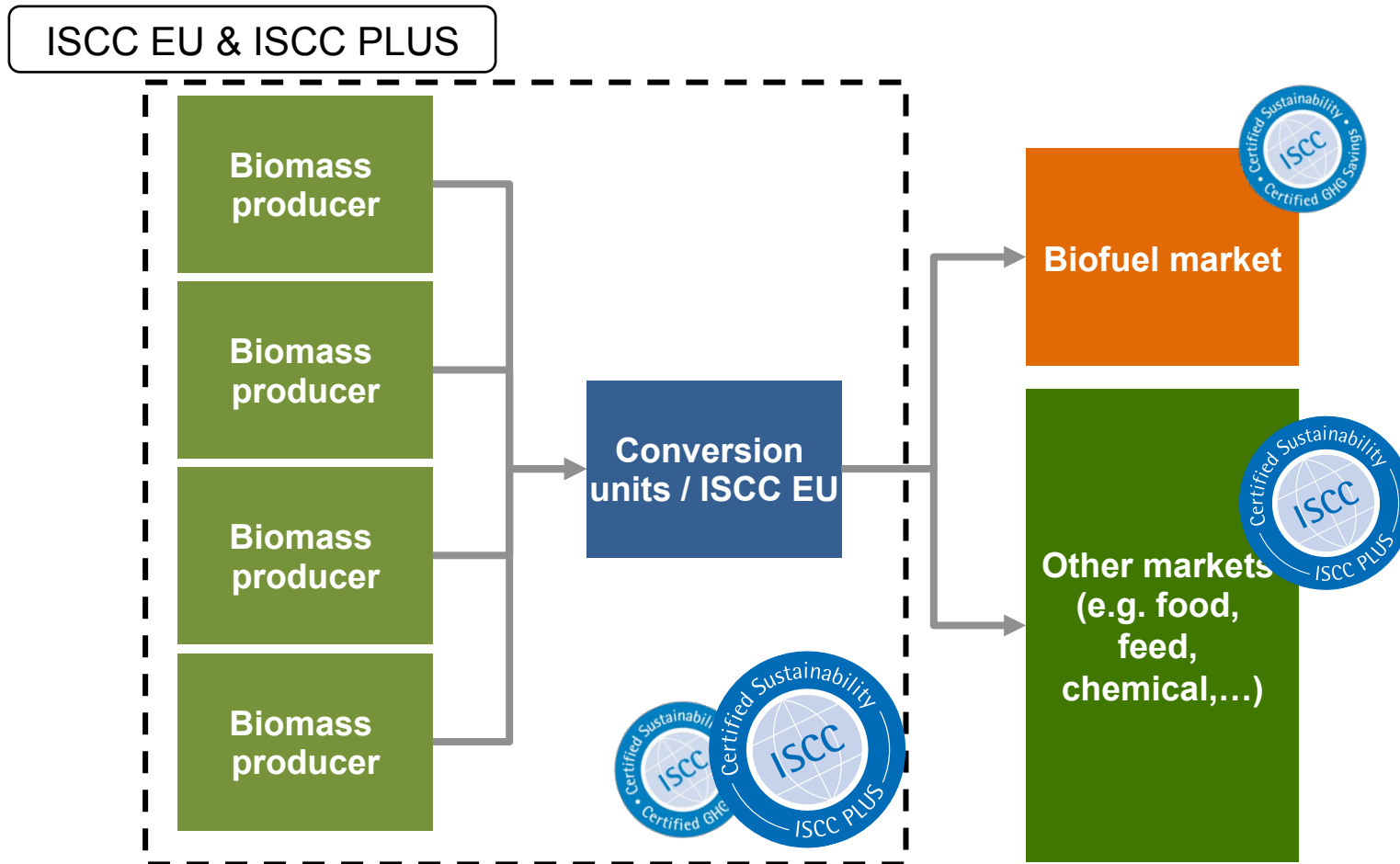
Growing interest in low / no ILUC renewable fuels

- New biobased feedstocks, eg. wood based, for advanced, low ILUC biofuels
- Co-processing
- Mixed feedstocks (fossil & bio)
- Landfill gas
- Power to liquid
- CO₂ capture e.g. for methanol production

State of affairs of sustainability certification in different markets

<p>Energy</p> 	<ul style="list-style-type: none">• 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
<p>Food</p> 	<ul style="list-style-type: none">• Procurement guidelines and zero net deforestation for 2020 by Consumer Goods Forum• Company specific programs (e.g. Unilever, McDonalds)
<p>Feed</p> 	<ul style="list-style-type: none">• European Feed Association (FEFAC) committed to responsibly produced soy; standard being developed, benchmarking of different schemes by ITC• Initiatives to foster regional supplies
<p>Chemistry</p> 	<ul style="list-style-type: none">• 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 proof 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, Sabc

“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 FrieslandCampnia 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, Sabc

“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

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")

...the cartons are *the Greenest Pure-Pak®* ever, produced by Elopak who replaced all non-renewable materials with renewable alternatives

Elopak launches beverage cartons featuring renewable polyethylene

Published on: 03.12.2014



Elopak has announced today the launch of beverage cartons featuring certified renewable polyethylene (PE). A wide range of Elopak cartons featuring renewable PE will be commercially available in the coming months, making Elopak the first company to offer beverage cartons with renewable coating to the European market. As an industry first, Elopak uses second generation renewable PE, made of European-sourced biomass not in competition with food supply.

Elopak aims to replace all fossil-based raw materials with renewable alternatives as part of its ambitious Future Proofed Packaging Strategy. "This is a key milestone in Elopak's efforts to reduce the 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", says Elopak's CEO Niels Petter Wright.

With this move, Elopak is working in partnership with key customers wanting to boost the



Picture: ISCC PLUS Logo on beverage carton

Sabiq is also ISCC PLUS certified producing renewable polyolefins for bioplastics

SABIC launches first portfolio of certified renewable polyolefins

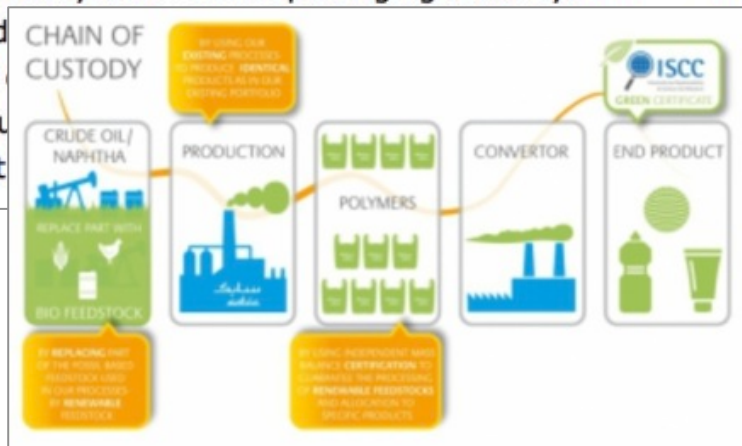
15.05.2014

Sabiq 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 Sabiq customers, especially those in the packaging industry.



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first



s 'Chemistry that Matter', in which materials that meet the growing pact the food chain. SABIC is the 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 individuals are united in the association which is steering the entire ISCC voluntary certification operation

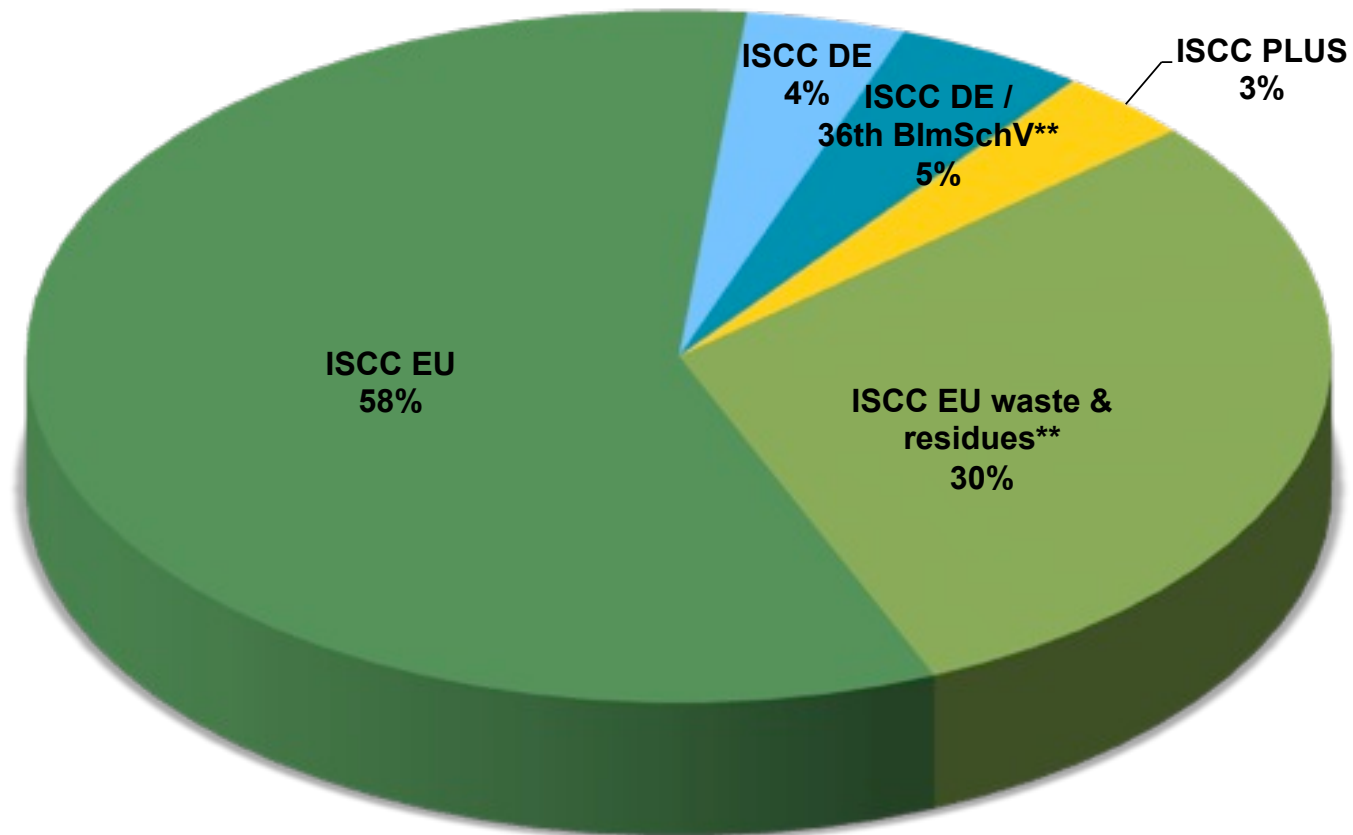
Member - Selection



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 losing market relevance, ISCC PLUS is gaining importance

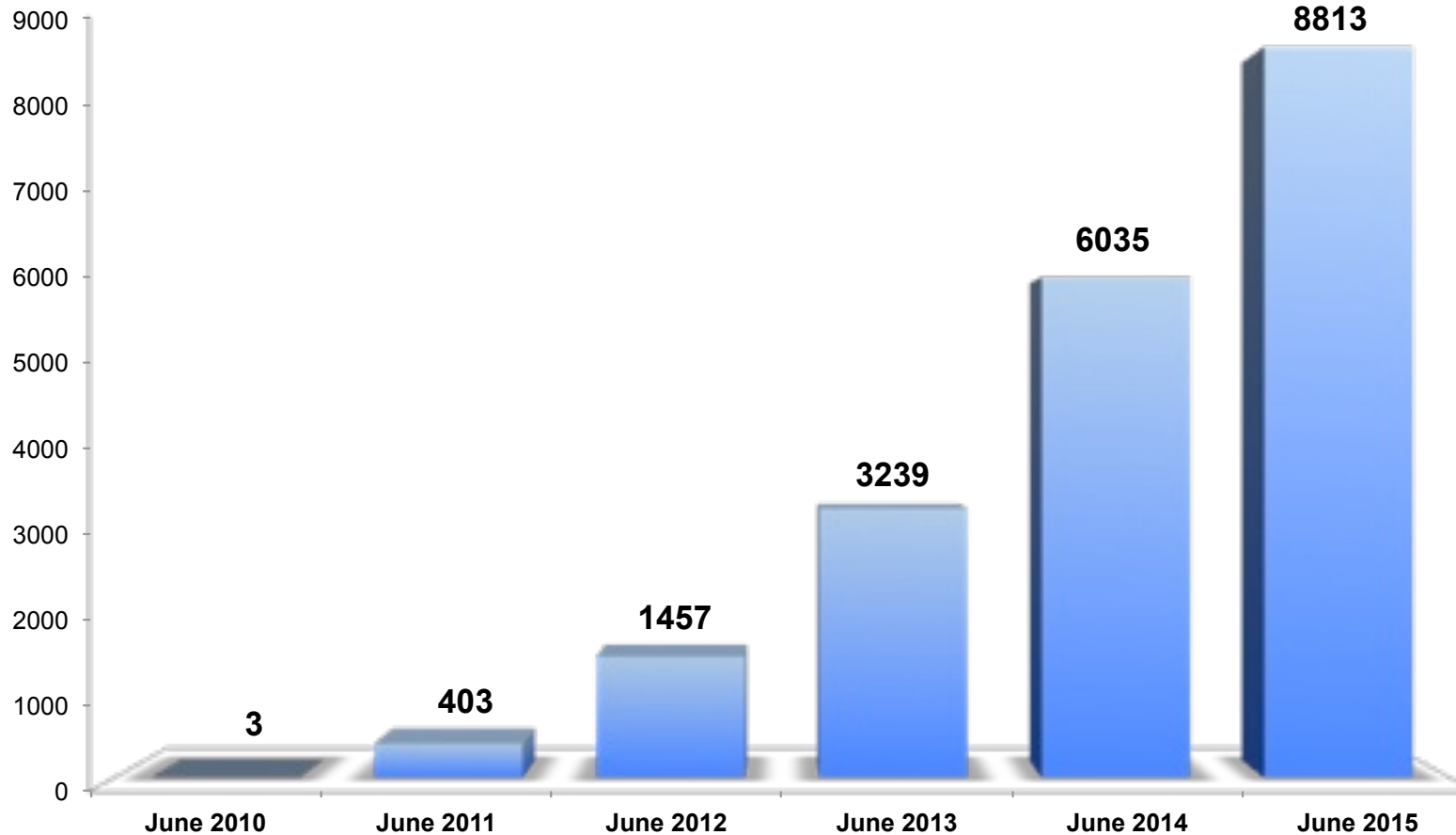


* Shares of valid certificates as of 18 June 2015

**Certificates exclusively or partly dealing with waste&residues

Development of ISCC certificates issued since 2010 (cumulative)

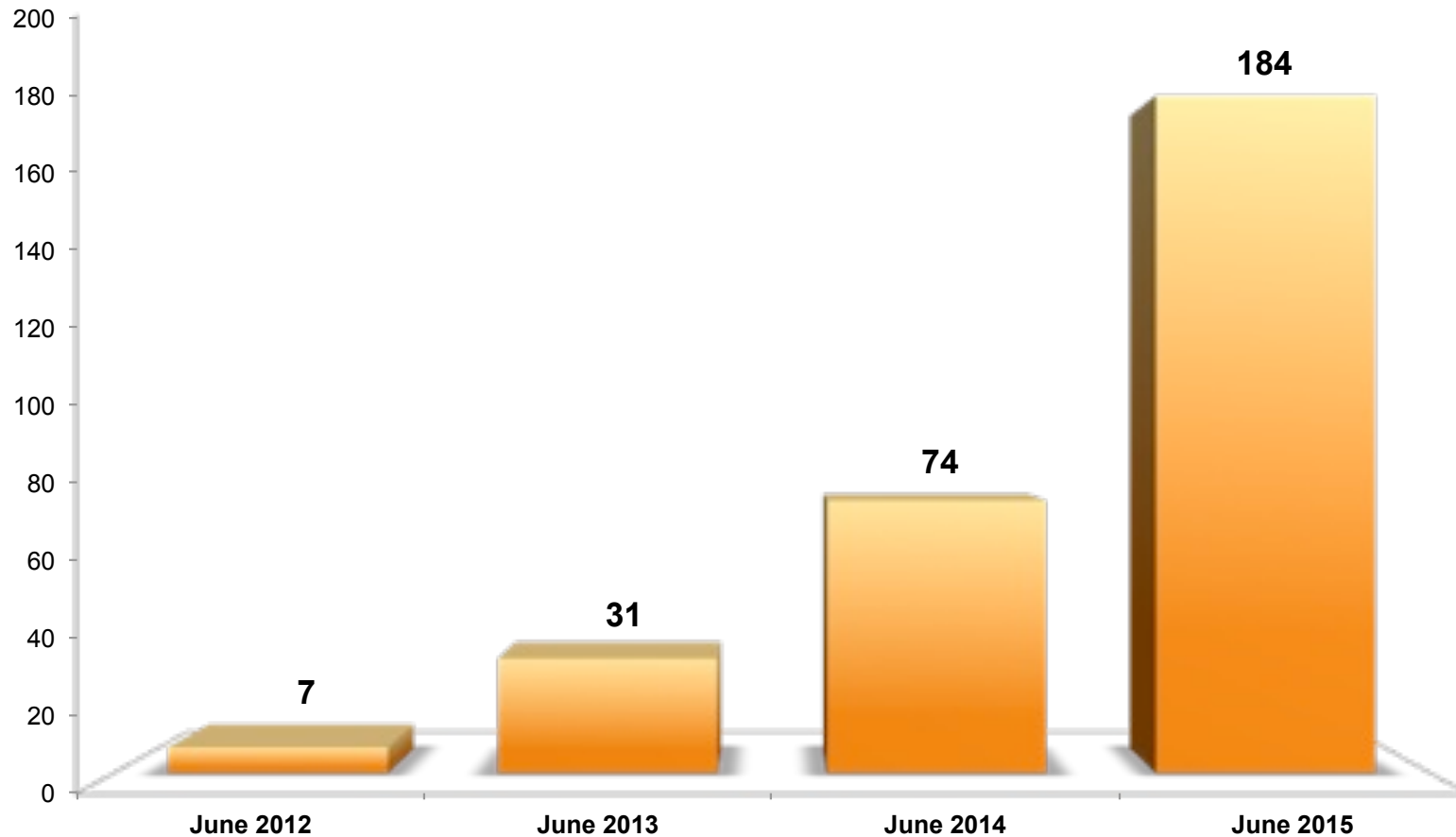
Number of ISCC certificates issued



Numbers as of 18 June 2015

Development of ISCC certificates issued since 2010 (cumulative)

Number of ISCC PLUS certificates issued*



*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 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