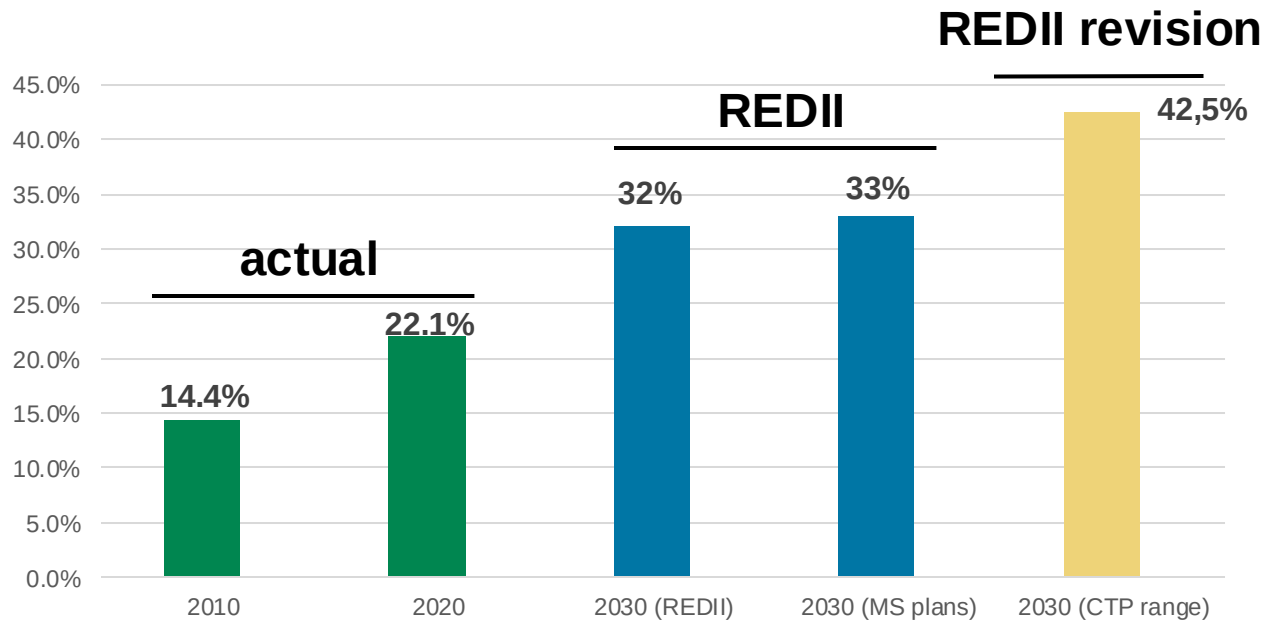
EU Green Deal – Sustainability Regulation and Certification

ISCC Japan Conference, Tokyo, Japan
21 January 2025

EU 2030 renewable energy target:

Target for promotion of renewable energy

	REDII	REDII revision
Overall RES share	**At least 32%** EU binding MS contributions + indicative formula	**At least 42,5%** EU binding MS contributions + indicative formula **+ additional indicative target of 2,5%**



+ New indicative target for the deployment of **innovative technologies: 5% in 2030**

Source: European Commission, 2024

Sectorial targets

To achieve the EU binding target 42.5% by 2030, aspiring to reach 45%

Transport	**-14.5 %** reduction of the GHG intensity of transport fuels or **29 %** energy based **5.5%** combined sub-target for advanced biofuels and RFNBOs with a minimum **1%** for RFNBOs	
Heating & Cooling	1.1 pp annual increase, **binding** Indicative top-ups for each MS **2.2 pp** in district heating, indicative	
Buildings	**49%** RES share in buildings **indicative**	***NEW***
Industry	**1.6 pp** annual increase in industry RES share **indicative** **42 %** sub-target for RFNBOs	***NEW***

Source: European Commission, 2024

Calculation of recycled plastic content in the context of the Single-Use Plastics Directive

The Single-Use Plastics Directive (2019) setting first mandatory recycled content targets on EU-level:

➢ 25% in PET bottles as of 2025

➢ 30% in all SUP beverage bottles as of 2030

Acceptance of chemical recycling and mass balance attribution option being discussed

Source: European Commission, 2024

Green Claims Directive

ISCC PLUS

ISCC CFC

For business-to-consumer environmental claims and labels:

- Science-based substantiation backing up the claims- LCA, trade-offs
- Ex-ante verification of substantiation before claim is communicated
- Transparent communication
- Avoid proliferation of schemes & reinforce trust in existing ones

Source: European Commission, 2024

Green Claims Directive – Timeline & next steps

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Source: European Commission, 2024

ISCC actively contributes to the dialogue on the Carbon Removal Certification Framework Regulation

CLIMATE ACTION | Expert Group Carbon Removals

Activities of the Expert Group

Supports the EC in the definition of the EU Carbon Removal Certification Framework:

- Methodologies for Carbon Farming and Industrial Carbon Removals, consistently with the QU.A.LI.TY criteria

- Permanent Storage

- Certification process and MRV procedure

The QU.A.LI.TY criteria

Quantification

Additionality

Long Term Storage

Sustainability

Carbon Farming

It was the focus of the second meeting of the EGCR (June 2023). It covers:

- Agriculture on mineral soil

- Forestry

- Peatland

Industrial Carbon Removals

It was the focus on the third technical meeting of the EGCR (Oct. 2023). It covers:

- Industrial capture of carbon (Direct Air Capture – DAC and Bioenergy with Carbon Capture – BECCS)

- Link with the CCS directive

ISCC International Sustainability & Carbon Certification

USA Updates

Steffen Mueller; PhD
Principal Economist
University of Illinois Chicago
Energy Resources Center

January 20, 2025
Tokyo, Japan

UIC ENERGY RESOURCES CENTER

January 15, 2025

US Department of Energy and US Treasury and US Department of Energy Release: Significant LCA Updates and New Models Released for Biofuels and Sustainable Aviation Fuels

Significant LCA Updates and New Models Released for SAF and Climate Smart Agriculture

January 15, 2025: United States Treasury, Department of Energy (DOE) and Department of Agricluture (USDA) released the following models and rules.

- Updated Life Cycle Modeling for Biofuels and SAF: 45ZCF-GREET model for 45Z Tax Credit; Link to User Manual
- USDA Technical Guidelines for Climate-Smart Agriculture Crops Used as Biofuel Feedstocks
- Life Cycle Calculator tool to incorporate Climate Smart Agriculture into Emissions Calculations

Updated induced Land Use (iLUC) Values under 45Z for US Domestic SAF: Significant Lower iLUC Estimates

Guidelines To Determine Life Cycle Greenhouse Gas Emissions of Clean Transportation Fuel Production Pathways Using 45ZCF-GREET; Released January 2025

U.S. Department of ENERGY | Office of Energy Efficiency & Renewable Energy

"New GTAP-BIO modeling runs were performed to serve as the basis for estimating indirect emissions for the pathways in 45ZCF-GREET that include indirect effects, such as soy oil and canola oil HEFA; soy and canola biodiesel; and corn, sorghum and sugarcane ethanol. These modeling runs were performed on U.S. corn, U.S. soybeans, U.S. sorghum, and U.S. and Canadian canola/rapeseed, and Brazilian sugarcane."

Table 9b. Adjusted Indirect Effects for the Clean Fuel Pathways in 45ZCF-GREET (for illustrative purposes only).

Results are estimated in grams CO_2e per megajoule of SAF using sample yields for each pathway.

45Z Clean Fuel(s) – Pathway	Feedstock	Total	ILUC	Livestock	Other Crops
Ethanol - Fermentation	U.S. Corn Starch	4.58	5.75	-1.58	0.41
Ethanol - Fermentation	Brazilian Sugarcane	3.70	13.10	-6.09	-3.31
Ethanol - Fermentation	U.S. Sorghum Grain	4.61	7.42	-2.00	-0.81
Biodiesel - Transesterification	U.S. Soybean Oil	12.35	12.58	-0.54	0.31
Renewable Diesel, SAF - HEFA	U.S. Soybean Oil	13.62	13.84	-0.54	0.32
Biodiesel - Transesterification	U.S./Canadian Canola/Rapeseed Oil	16.48	15.02	-0.88	2.33
Renewable Diesel, SAF - HEFA	U.S./Canadian Canola/Rapeseed Oil	18.18	16.53	-0.90	2.55

UIC

Biofuel Verification and Certification Requirements: US Domestic SAF Production; New 45Z LCA Model Framework

Repeatedly Referencing ISCC Sustainability Certification Approach regarding auditing and supply chain verification:

- "Taking a square root of suppliers to determine the minimum sample size aligns with industry accepted standards in current use, such as the "**ISCC CORSIA certification program for SAF."**
- "The rule defines the following terms relevant to the biofuels supply chain: "farm," "first point of aggregation," "intermediary entity," and "biofuel refiner." […]. As outlined in subparts D and E of 7 CFR part 2100, recordkeeping and verification standards differ among farms, first points of aggregation, intermediary entities, and refiners. **This approach was informed by the International Sustainability and Carbon Certification (ISCC) standards** for verifying entities within the SAF production supply chain for the Carbon Offsetting Reduction Scheme for International Aviation (CORSIA)."

Selected LCA Result wit New Models: Corn Ethanol to Jet Pathway under 45Z for US Domestic SAF

ETJ produced with aggressive CSA practices you can see how important ag is to reduce SAF ETJ LCA from 59.7 to 39.4 gCO2/MJ (note: assumes incoming ethanol of 43 gCO_2e/MJ) = **Over 50% GHG Savings Possible relative to Petroleum based Fuels**

- Lower, updated SAF iLUC Values included
- Updated SAF biorefinery efficiencies included

45X model Corn Ethanol to SAF with and without CSA from Ag		
Life Cycle Stage	Corn Ethanol to SAF (g CO2e/MJ)	Corn Ethanol to SAF (g CO2e/MJ) with CSA (cover crop, no till, N-inhibitors
Total LCA Results	58.68	39.39
Feedstock (including I-Effects)	42.61	23.32
Fuel	14.79	14.79
Feedstock Transportation	0.89	0.89
Fuel Transportation	0.39	0.39
Fuel Production	59941200 Gallons	59941200 Gallons

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International Sustainability & Carbon Certification

Thank you!

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