



17 June 2022

Dear Commission Representative,

RE: SASOL'S COMMENTS ON THE DELEGATED ACT TO ARTICLE 28 OF DIRECTIVE 2018/2001

We attach Sasol's submission in response to the call for comments on the proposed Delegated Act to Article 28 of Directive (EU) 2018/2001 (DA 28). The European Union (EU) is taking a leadership role in climate action which is embodied in Fit for 55. The EU is also playing an active role in decarbonisation efforts within many developing country jurisdictions, one of which being South Africa, with a concerted focus on enabling the just transition.

Sasol commends the EU on this leadership role and in a similar vein, we have put forward a Future Sasol strategy premised on a fossil fuel free vision centred on green hydrogen and being an Energy Champion. As a result, our three core businesses Energy, Chemicals and Sasol ecoFT are driving new proof of concept projects and transforming our existing assets. We aim to enable decarbonisation, socioeconomic upliftment and energy security in the regions where we operate through the myriad opportunities presented by our proprietary Fischer Tropsch (FT) technology and the green hydrogen economy. We have world-scale facilities and can repurpose our existing FT assets at our South African operations in Secunda and Sasolburg from fossil fuels to sustainable inputs¹ to produce renewable fuels,² enabling us to contribute positively to a largely stagnant South African economy. Today we produce ~2.5 mtpa of grey hydrogen for captive use, demonstrating our honed skills in hydrogen production and use. We are also co-owners of the Oryx FT facility in Ras Laffan, Qatar, that can also be repurposed to produce renewable fuels.

Our existing assets are undergoing an ambitious and significant decarbonisation, tempered by the national circumstances where we operate, but nonetheless aiming for net zero by 2050. We currently use fossil fuels to produce a wide range of synthetic fuels and chemicals for the global

¹ Renewable hydrogen, biomass, recycled unavoidable fossil CO₂ and recycled waste carbon.

² Sustainable Aviation Fuels (SAF), Renewable Fuels of Non-Biological Origin (RFNBOs) and Recycled Carbon Fuels (RCFs).

Sasol Limited 1979/003231/06

Sasol Place 50 Katherine Street Sandton 2146 South Africa | Private Bag X10014 Sandton 2196 South Africa
Telephone +27 (0)10 344 5000 | Facsimile +27 (0)11 788 5092 | www.sasol.com

Directors: SA Nkosi (Chairman) FR Grobler (President and Chief Executive Officer) MJ Cuambe (Mozambican) MBN Dube M Flöel (German)
KC Harper (American) VD Kahla (Executive) GMB Kennealy NNA Matyumza MEK Nkeli S Subramoney P Victor (Chief Financial Officer)
S Westwell (British)

Group Company Secretary: M du Toit

market, which we are gradually migrating to more sustainable feedstocks over time. While the end point is 100% sustainable feedstock use, co-processing of both fossil fuels and sustainable feedstocks are necessary in the interim to minimise social and economic impact.

FT is well positioned to be a key technology in the renewable fuels industry and a critical enabler in a net zero world. Unlike conventional fuel production pathways, the FT process is feedstock agnostic which means that our existing assets can be feasibly repurposed. This can also be done at a quicker pace than most greenfield projects as we already have in place the building blocks necessary to process sustainable feedstocks into sustainable fuel and chemical products (i.e. gasification, refining, electrolysers and water processing).

Our chemical facilities in the EU produce fossil-based performance chemicals and have recently introduced circular bio-based materials for the EU market. On the other hand, our Sasol ecoFT business is at the forefront of the renewable fuels industry, developing several new Power-to-X (PtX) projects that will harness our proven FT technology for the production of renewable fuels in the EU. Sasol is uniquely positioned to play a leading role in the renewable fuels industry in support of the Paris Agreement objectives.

Our decarbonisation efforts are concentrated in South Africa where we are the largest corporate taxpayer in the country, directly employing ~25,000 people predominantly in the mining sector and contributing ~4 % to the country's Gross Domestic Product (GDP). South Africa has high levels of poverty, inequality and unemployment which must be accounted for as the economy and industries like Sasol decarbonise operations. Therefore, we are executing a low carbon transition in a phased and appropriately timed manner such that our fossil fuel assets are repurposed as the new low carbon economy evolves. In this way, we aim to protect jobs, create new jobs and contribute to energy security. The importance of the just transition in South Africa has in fact been recognised by the EU/South Africa Political Declaration on the Just Energy Transition.³

In this regard, it is critical that the proposed DA 28 provides a supportive regulatory environment for a just transition in Non-Union countries by recognising the eligibility of renewable fuels co-generated with fossil fuel products in existing FT facilities using a flexible attributional Life Cycle Analysis (LCA) approach. The recognition of fossil CO₂ feedstocks as sustainable carbon sources up to 2035 is encouraging. However, the transition period is too short for the just transition in

³ Refer to https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5768

developing economies such as South Africa and should be extended. Furthermore, it should also include specific recognition for the full spectrum of unavoidable carbon sources.

As it stands, the unintended consequences of the current draft of the DA 28 will prevent existing FT facilities from accessing the EU market, ultimately hindering the just transition. This is in direct contrast to the intent of the Political Declaration on the Just Energy Transition and the climate objectives of Directive (EU) 2018/2001.

It is within this context that Sasol submits our comments. In doing so, we hope that opportunities in developed countries are made accessible to developing economies in a non-discriminatory manner to stimulate investments in nascent sectors and empower businesses to participate in the clean energy transformation.

Our detailed concerns and proposals for consideration are presented in the points below.

1. GHG accounting rules to produce renewable fuels in facilities co-processing fossil fuels and sustainable inputs

Reference in proposed DA 28: Recital (8) and the related Articles 1 and 15 of the Annex.

Concerns: The proposed DA 28 incorporates a standard attributional LCA approach wherein GHG benefits from sustainable inputs must be allocated proportionally across all products from a co-processing facility on either a physical causality, energy or economic basis. The proposed DA is silent on the eligibility of a flexible attributional LCA approach that allows the non-proportional allocation of all GHG benefits to a specified product line.

Comments: Exclusion of a flexible attributional LCA approach restricts the volume of renewable fuels that can be exported to the EU as early as 2024 from Sasol's existing FT assets. Sasol is co-developing a project with our South African partner HYD.RE.GEN and EU partners Linde and Enertrag to commercialise the production of renewable fuels at our Secunda facility within the next 24 months. This involves the installation of 400 MW of new Renewable Energy (RE) and 200MW electrolyser capacity to supply renewable hydrogen which will be co-processed with sustainable carbon and fossil fuels at our Secunda facility to produce 50,000 tpa of renewable fuels.⁴ Maximising the volume of certified renewable fuels produced from the gradual introduction of

⁴ Primarily e-kerosene for the H2Global auction funded by the German Federal Government.

sustainable inputs is critical to realising these ambitions while supporting a just energy transition. This can only be achieved via flexible attribution which will allow the GHG benefits of the renewable, low carbon and recycled fossil fuel inputs to be fully allocated to the renewable fuel product. This is essential to realise the business case for such a complex process that yields multiple synthetic fuels and chemicals.

We are also co-developing a project in Qatar with international partners that aims to produce low carbon aviation fuels for the EU and international markets. This involves the co-processing of recycled fossil CO₂ and fossil inputs in downstream electrified reforming and FT facilities powered by new renewable energy (RE) capacity. This project will also explore the viability of Carbon Capture and Sequestration (CCS). A flexible attributional LCA approach is again key to recognising the eligibility of low carbon fuels co-generated with fossil fuel products in existing FT facilities.

It is noted that flexible attribution is recognised under voluntary certification schemes implemented by reputable sustainability certification bodies already recognised by the EU e.g. the Roundtable on Sustainable Biomaterials (RSB) and the International Sustainability and Carbon Certification (ISCC).⁵ Broader recognition of this approach is also strategically important from a global decarbonisation and energy security perspective, as FT is one of the few viable pathways for the industrial scale production of renewable fuels, and specifically sustainable aviation fuels (SAF). Flexible attribution would allow the EU to benefit from the economies of scale already achieved at existing FT facilities, accelerating the just transition of existing FT facilities towards a zero-carbon end-state and stimulate investments in new PtX facilities. This will specifically contribute towards the EU meeting the blending mandate targets specified in the ReFuelEU Aviation proposal.

Request for consideration: Recital (8) and the related Articles 1 and 15 of the Annex should be revised to include a flexible attributional LCA approach which allows the non-proportional allocation of GHG benefits to a specified product line in FT facilities co-processing fossil fuel and sustainable inputs and yielding multiple co-products.

⁵ Refer to https://energy.ec.europa.eu/topics/renewable-energy/bioenergy/voluntary-schemes_en

Suggested wording:

Recital

(8) Renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels can be produced in various processes, **including the processing of sustainable and non-renewable inputs in a common process**, which may yield a mixture of different types of fuels. The methodology to assess the greenhouse gas emissions savings should therefore be able to derive the actual emission savings from those processes, including processes that yield both renewable liquid and gaseous transport fuels of non-biological origin, ~~and~~ recycled carbon fuels **and non-renewable fuels**. If a mixture of renewable liquid and gaseous transport fuels of non-biological origin, recycled carbon fuels and ~~other non-renewable fuels [with the same physical characteristics is stemming]~~ **stem from the same process, their greenhouse gas emissions intensity should be calculated using an approved attributional Life Cycle Analysis (LCA) approach based either on a flexible or proportionate allocation of greenhouse gas emissions savings [they should be considered having the same greenhouse gas emission intensity]. In the case of Fischer-Tropsch facilities processing sustainable and non-renewable inputs in a common process, the greenhouse gas emissions intensity of the renewable and non-renewable fuels should be determined by an approved flexible attributional LCA approach.**

Article 1

...The greenhouse gas emissions shall be determined by dividing the total emissions of the process concerning each element of the formula by the total amount of fuel stemming from the process and shall be expressed in terms of grams of CO₂ equivalent per MJ of fuel (g CO₂eq/MJ fuel). If a fuel is a mix of renewable liquid and gaseous transport fuels of non-biological origin, recycled carbon fuels and ~~other non-renewable fuels~~, **the greenhouse gas emissions intensity should be calculated using an approved attributional Life Cycle Analysis (LCA) approach based either on a flexible or proportionate allocation of greenhouse gas emissions savings all (fuel) types shall be considered to have the same emission intensity. In the case of Fischer-Tropsch facilities processing sustainable and non-renewable inputs in a common process, the greenhouse gas emission intensity of the renewable and non-renewable fuels should be determined by an approved flexible attributional LCA approach.**

Article 15 (suggested addition)

(g) in the case of Fischer-Tropsch facilities processing sustainable and non-renewable inputs in a common process, and where the process allows to change the ratio of the co-products produced and some co-products are materials not used for fuels, the allocation shall follow an approved flexible attributional LCA approach.

2. Eligibility of carbon sources to produce renewable fuels

Reference in proposed DA 28: Recital (7) and the related Article 11 (a) of the Annex.

Concerns: The proposed DA 28 treats all fossil CO₂ as sustainable and eligible carbon sources up to 2035, provided that the fossil CO₂ is accounted for in an “effective” carbon pricing mechanism and captured from an activity listed under Annex 1 of Directive 2003/87/EC. This approach does not distinguish between avoidable and unavoidable emissions and all fossil CO₂ is considered unsustainable and thus ineligible carbon sources post-2035. The proposed DA 28 also does not provide clarity on the eligibility of fossil CO₂ outside of the EU which fall under national carbon pricing mechanisms.

Comments: Treating all fossil CO₂ emissions as equal and thus unsustainable after 2035 does not consider the differentiated nature of industrial processes, hard-to-abate and unavoidable emissions in the industrial sector. Fossil CO₂ from energy generation can be considered avoidable even in the short-term as renewable energy technologies are commercially viable at scale. This contrasts with most other industrial sectors where fossil CO₂ emissions stem from inherent carbon released in the industrial process, rather than the combustion of fossil fuels for energy. Emissions from most industrial sectors are therefore produced as an unintended consequence of a production process, with no technically feasible or commercially viable mitigation options. This includes fossil CO₂ emissions from cement, steel and FT operations which are today considered hard-to-abate. For example, in Sasol’s Secunda facility, the primary sources of non-energy or process CO₂ emissions are related to the preparation of synthesis gas from coal and subsequent conversion to hydrocarbons through the FT process. These emissions are considered hard-to-abate (in other words unavoidable) as they are produced as an inherent by-product of the FT process chemistry and in the absence of any other commercially viable means to generate the volumes of synthesis gas required for Secunda. The Roundtable on Sustainable

Biomaterials (RSB) have conducted an independent assessment of the Secunda process and concur that these process emissions can in principle be classified as unavoidable based on the nature of these emissions.

The capture and utilisation of avoidable fossil CO₂ from energy generation thus poses a materially high risk for fossil lock-in than unavoidable fossil CO₂. Utilisation of unavoidable fossil CO₂ supports the decarbonisation and transformation of industrial sectors and the growth of the PtX industry, which requires access to readily available and cost-effective carbon sources. All fossil CO₂ emissions are therefore not equal and cannot be treated equally given the occurrence of hard-to-abate or unavoidable emissions in some critical industrial sectors.

Sasol submits that the proposed DA 28 should differentiate between avoidable and unavoidable emissions based on the difference between fossil CO₂ from energy generation (avoidable) and fossil CO₂ from hard-to-abate industrial processes (unavoidable). By implication, unavoidable fossil CO₂ should be considered as an eligible carbon source to produce renewable fuels post-2035. Any potential phase out period for unavoidable fossil CO₂ should closely align with the EU's 2050 Net Zero target, however **at a minimum a transition period of 2040 is recommended to ensure much needed new investments are attracted that will have a material impact on climate change and achieve reasonable return on investment.**

By following this approach unavoidable fossil CO₂, which would otherwise have been emitted to the atmosphere would be utilised, in the absence of Direct Air Capture (DAC) being economically viable. This will support the continued and incentivised just transition of existing FT facilities, preserving and creating new jobs, and will stimulate investments in new PtX projects which generally have an investment time horizon of greater than 15 years. Sasol intends to use unavoidable fossil CO₂ from our Secunda FT facility, in South Africa, as a sustainable carbon feedstock for the Hyshift project with HYD.RE.GEN, Linde and Enertrag.

In addition, our Sasol ecoFT business is developing several new projects in the EU that will use unavoidable CO₂ from the cement industry. The first of these projects is a joint venture with CEMEX and Enertrag that supports the transformation of the cement sector while producing renewable fuels, specifically SAF and naphtha. This will involve the phased development of a new PtX facility in Rüdersdorf, Germany, where renewable hydrogen will initially be produced on-site and combined with unavoidable cement fossil CO₂ to produce 15,000 tpa of renewable fuels and naphtha. In subsequent phases of the project, renewable hydrogen will be sourced via pipeline

from the ENERTRAG-IPCEI project "Electrolysis Corridor East Germany" which has an electrolysis capacity of 210MW to produce 35,000 tpa of renewable fuels and naphtha.

Also, the proposed DA 28 does not provide any clarity on what constitutes an "effective" carbon pricing system. This creates uncertainty on the eligibility of unavoidable fossil CO₂ for non-Union countries and places undue burden on countries to prove effectiveness of their carbon pricing systems, or worse, for the EU to determine the measure of effectiveness. It has also been suggested that this might be linked to the Carbon Border Adjustment Mechanism (CBAM) and the expectation would be for certificates to be purchased by importers. This will greatly add to the already high cost of production for emerging economies participating in the global green hydrogen supply, hindering the just transition in places like South Africa. **This scenario is not supported.** Further discussions are required on this important issue and in the interim, it is suggested that the term "effective" be deleted.

Sasol contends that all unavoidable fossil CO₂ captured in a location with an implemented carbon pricing system should be considered eligible to produce renewable fuels. This further mitigates the discriminatory scenario whereby Directive 2003/87/EC does not consider industrial activities outside of the EU that may fall under national carbon pricing systems, but are not listed as eligible activities under Annex 1 of Directive 2003/87/EC.

Request for consideration: Recital (7) and the related Article 11 (a) of the Annex should be revised to differentiate between avoidable and unavoidable emissions. Unavoidable fossil CO₂ should be considered as an eligible carbon source to produce renewable fuels post-2035. The term "effective" should be deleted and all unavoidable fossil CO₂ captured in a location with an implemented carbon pricing system should suffice as a requirement.

Suggested wording:

Recital

~~(7) The origin of carbon used for the production of renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels is not relevant for determining emission savings of such fuels in the short to medium term, as plenty of carbon sources are available and can be captured without hindering the progress of~~

~~decarbonisation.~~ **In the short to medium-term avoidable and unavoidable CO₂ emissions are considered eligible carbon sources for the production of renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels. Avoidable CO₂ emissions are those that stem from the combustion of fossil fuels for energy generation, and unavoidable CO₂ emissions are those that stem as an inherent by-product of the industrial process.** In the long-term, the use of these renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels produced using ~~non-sustainable~~ **avoidable** carbon is not compatible with climate neutrality as the use of carbon from ~~non-sustainable~~ **avoidable** processes entails a continued use of non-sustainable fuels and the related emissions. Capturing of emissions from ~~non-sustainable~~ **avoidable** sources should therefore only be considered as avoiding emissions until 2035. **Unavoidable CO₂ emissions continue to be considered eligible carbon sources post 2035, in support of climate neutrality.**

Article 11

(a) ~~The~~ **Unavoidable and avoidable** CO₂ has been captured from an activity listed under Annex I of Directive 2003/87/EC and has been taken into account upstream in an ~~effective~~ **implemented** carbon pricing **system** and is incorporated in the chemical composition of the fuel before 2036. **Unavoidable CO₂ that has been taken into account upstream in an implemented carbon pricing system can be incorporated in the chemical composition of the fuel after 2036, or;**

3. Fossil fuel comparator

Reference in proposed DA 28: Recital (9).

Concerns: The justification of the use of a fossil fuel comparator value of 94 gCO₂eq/MJ is unclear and potentially inappropriate.

Comments: The basis and reference for the fossil fuel comparator provided in Annex V (19) of Directive 2018/2001 is not provided. It is unclear if it has been derived from the multiple fuel production pathways available in potential emerging economy participants. The comparator should consider all potential pathways in both EU and non-Union countries otherwise it may result in undue penalties for renewable fuel producers primed as export partners to the EU.

Request for consideration: Further clarification as to the justification for the fossil comparator is requested. It is suggested that an appropriate benchmark be developed taking a global view of all reference fossil fuel technologies into consideration.

We strongly encourage adoption of these proposals to unlock the potential for renewable hydrogen in non-European Union countries and facilitate cross-border projects. Sasol is happy to avail ourselves at your earliest convenience should there be any queries regarding this submission

Yours sincerely,



Shamini Harrington

Vice President: Climate Change