EXPRESSION OF PRINCIPLES
Dated 13 October 2023

As entered into between:

1. the **Minister of Economic Affairs and Climate Policy**, acting as administrative body (*bestuursorgaan*) and as representative of the State of the Netherlands, represented by Mrs. M.A.M. Adriaansens;

2. the **State Secretary of Infrastructure and Water Management**, acting as administrative body (*bestuursorgaan*) and as representative of the State of the Netherlands, represented by Mrs. V.L.W.A. Heijnen;

3. **Lyondell Chemie Nederland B.V.**, with its registered office in Rotterdam, The Netherlands and its office address at Delftseplein 27E, 3013AA, Rotterdam, hereinafter referred to as "LCN", represented by Ronald van Klaveren and Christopher Cain under power of attorney granted by the management board of LCN;

4. **LyondellBasell Covestro Manufacturing Maasvlakte V.O.F,** with its registered office in Rotterdam, The Netherlands and its office address at Delftseplein 27E, 3013AA, Rotterdam, hereinafter referred to as "Maasvlakte VOF", represented by Ronald van Klaveren and Christopher Cain under power of attorney granted by Stephan Reeker in his capacity of managing director of Lyondell Chemie (POSM) B.V., being the managing partner of Lyondell PO-11 C.V., being one of the managing partners of LyondellBasell Covestro Manufacturing Maasvlakte V.O.F.

regarding cooperation to reduce Greenhouse gas emissions in the Netherlands

Parties, 1, 2, 3 and 4 hereafter individually also referred to as "Party" and jointly referred to as the "Parties".
Parties 1 and 2 hereafter individually as well as jointly referred to as the "State";
Parties 3 and 4 hereafter jointly referred to as "LYB NL"

WHEREAS:

Legal and policy framework for CO_2 reduction

1. Additional efforts for reduction of Greenhouse gas emissions are required for the Netherlands to achieve the goals of The Paris Agreement, the European Climate Law, the Dutch Climate Law (*Klimaatwet*) and the Dutch Coalition Agreement (*Coalitieakkoord*).
2. The Dutch Coalition Agreement as presented on 15 December 2021, increases the national CO_2 reduction target to at least 55% in 2030 versus 1990 baseline, and the Government aims for 60% CO_2 reduction in 2030, and for climate neutrality in 2050 and for establishing a green economy that is climate neutral, fossil free and circular.
3. For the industry, as laid down in the 26 April 2023 letter about the additional climate policies[1] (hereafter: "Kamerbrief Voorjaarsbesluitvorming Klimaat"), the proposed target is reduction of CO_2-emissions to a maximum of 29.6 million tons (hereafter: Mton) in 2030. This target has been adjusted to 29,1 Mton with the 'Augustusbesluitvorming' (Kamerbrief Kabinetsaanpak Klimaatbeleid van 19 september 2023, Kamerstuk 32813 nr. 1291).
4. The Government has presented a national roadmap[2] to accelerate the transition in the Dutch industry towards a climate neutral, fossil free and circular economy. Parties acknowledge that their cooperation will take place in the context of the developing policy around accelerating the transition in the industry.

Tailor-Made Approach ("Maatwerkaanpak")

4. The Government aims to facilitate the climate transition of the industry in the Netherlands with, amongst other instruments, a tailor-made approach for the 10-20 largest emitters of CO_2 in the industry sector. As set out in among others the letter informing Parliament on the tailor-made approach[3] (hereafter: "*Zomerbrief"*), and the letter informing Parliament on the progress of the tailor-made approach[4] (hereafter: "*Voortgangsbrief"*) the aim of the tailor-made approach is to support these companies, based on mutual commitments, in achieving additional and accelerated CO_2 reduction before 2030 and having a sustainable future in the Netherlands. Furthermore, where possible, the aim is to contribute and meet now and in the long-term other sustainability challenges in the Netherlands.
5. Where needed, the Government, as stipulated in the Dutch Climate Policy Programme, intends to support, the largest industrial emitters, in their endeavours to contribute to additional CO_2 reduction, while taking into account European principles regarding state aid and a level playing field on the internal market and aiming for an international level playing field.
6. In the Zomerbrief and the Voortgangsbrief the Minister of Economic Affairs and Climate Policy explained the structure of the discussions with the 10-20 largest emitters for a tailor-made approach. The structure will be along the following lines:
    i. First, discussions will be held to see whether parties can come to an expression of principles ("EoP"), in which they express their intention to further discuss the possibilities of reducing additional CO_2-emissions and reduction of impact on the local environment by the respective companies and the possibilities of the Government to assist therewith;
    ii. Second, if an EoP is signed and appears to be a good basis for further discussions, parties intend to continue discussions with the aim to define the specific measures to be taken and intend to agree on those in a draft joint letter of intent ("JLoI");
    iii. Third, the draft JLoI will be submitted to the 'Adviescommissie Maatwerkafspraken Verduurzaming Industrie' for an expert advice to the Minister of Economic Affairs and Climate Policy with respect to, among others feasibility, cost-effectiveness and level of ambition;
    iv. Finally, if a final JLoI has been agreed upon and signed, parties intend to implement and elaborate their agreements in final and binding tailor-made agreements.
7. The current EoP therefore is only of an indicative, non-binding nature, which means that in the further discussions in the context of the tailor-made approach neither Party can be held to expressed intentions, statements, facts or numbers in this EoP, among other things because at this stage, such expressed intentions, statements, facts or numbers cannot and will not be fully verified by the Parties to this EoP and because neither Party wants to enter into legally binding commitments with this EoP.

[1] Kamerbrief *Voorjaarsbesluitvorming Klimaat,* d.d. 26 April 2023.
[2] Kamerbrief *Stand van zaken Nationaal Programma Verduurzaming Industrie, d.d. 14 July 2023*
[3] Kamerbrief *Zomerbrief Maatwerk*, d.d. 8 July 2022.
[4] Kamerbrief *Voortgang Maatwerkafspraken*, d.d. 27 February 2023.

8. Parties confirm explicitly that (i) they shall have full discretion in agreeing on a JLoI or not, and in modifying, removing or completing any intentions, statements, facts or numbers mentioned in this EoP, and (ii) that at its sole discretion, either Party may terminate discussions at any time for any reason.

Role and activities of LYB in The Netherlands

9. The LyondellBasell group (hereafter and in article 1 under n defined as "LYB") is a leader in the global chemical industry creating solutions for everyday sustainable living. Through advanced technology and focused investments, LYB is enabling a circular and low carbon economy.
10. As one of the world's largest producers of polymers and one of the leaders in polyolefin technologies, LYB develops, manufactures and markets high-quality and innovative products for applications ranging from sustainable transportation and food safety to clean water and quality healthcare. LYB sells its products in more than 100 countries.
11. LYB has operations in more than 30 countries and 90 manufacturing sites across the world. LYB employs more than 19,000 employees across its global footprint, of which 1500 in the Netherlands.
12. In the Netherlands, LYB has its regional headquarters for its European, Asian and International operations, located in Rotterdam, and through its Dutch affiliates, operates manufacturing sites in Maasvlakte, Moerdijk, Botlek (Rotterdam) and 's-Gravendeel, and a plastics recycling facility Quality Circular Polymers ("QCP") in Geleen. The aforementioned operational activities in the Netherlands are carried out through a number of Dutch entities.
13. LCN operates the aforementioned manufacturing operations in Botlek and Maasvlakte, which are LYB's two largest sites in the Netherlands. The main focus of this EoP is on these two sites, as these have a significantly larger carbon footprint than the other LYB sites in the Netherlands. The sites have been included in LYB's CO_2 emission reduction program and are therefore crucial in achieving ambitious CO_2-reduction in the Netherlands.
14. The Botlek site, which was built in 1972, is LYB's biggest production facility in the Netherlands, located in the industrial complex at the Seinehaven in the Port of Rotterdam. It consists of a propylene oxide (PO) and Tertiairy Butyl Alcohol (TBA) production unit. Later site expansions include the addition of MTBE/ETBE and propylene glycol ether plants in the 1980s, a BDO plant in 2002, and in 2015, a Butane isomerization capacity increase. The Botlek site produces products that are used in many everyday products, including in the manufacture of furniture, food and feed, paints and coatings, personal care products and textiles.
15. The Maasvlakte site, owned by Maasvlakte VOF and operated by LCN, is a world-scale Propylene Oxide (PO) and Styrene Monomer (SM) production location. The facility started operating in 2003. Maasvlakte VOF is a partnership between Lyondell PO-11 C.V. and Covestro Polyurethanes B.V., each owning 50 percent of the plant. The plant is located on the first Maasvlakte, in the Port of Rotterdam. It also produces products used to manufacture many everyday products ranging from seat cushions and pet food to antifreeze, paints, coatings, food packaging and housing insulation.
16. QCP operates an industry-leading mechanical recycling plant in Geleen, with a production capacity of 55,000 metric tons per year. The QCP site produces high-quality polymers from post-consumer plastic waste. QCP's recycled polymers marketed under LYB's *Circulen Recover* brand can be used to make everyday items from bottles, buckets, caps and closures to strollers and suitcases.
17. For certain topics LYB has goals, ambitions and aims that are intended to be global in nature and, accordingly, LYB NL does not have its own separate set of goals, ambitions and aims. LYB NL will hereafter refer to LYB's goals, ambitions and/or aims and, where relevant and feasible, express its intentions with regard to the (potential) impact in the Netherlands.

Ambitions of LYB towards further CO_2 reduction

18. LYB's goal is to achieve net zero scope 1 and 2 Greenhouse gas emissions from its global operations by 2050. LYB's interim global target is to reduce absolute scope 1 and 2 Greenhouse gas emissions by 42% by 2030 relative to a 2020 baseline. LYB has also committed to reduce global scope 3 Greenhouse gas emissions by 30% within the same timeframe relative to a 2020 baseline. LYB has committed to procure a minimum of 50% of its electricity from renewable sources by 2030 based on 2020 procured levels.
19. The Botlek and Maasvlakte sites are both very efficient producers thanks to investments in energy efficiency and CO_2 emissions reduction measures during the past years. A recent publication by the Dutch Emission Authority (NEa) showed that Maasvlakte is performing at the benchmark level for ETS installations (amongst the 10% best performers of the applicable

benchmark category) and the Botlek site is amongst the 25% best performers of the applicable benchmark category.[5]

20. The Circular Steam Project at the Maasvlakte site that was announced in 2018 has significantly improved the site's energy efficiency. As a result of this project, CO_2-emissions in the Netherlands are reduced annually with 0.08 Mton. Besides a significant CO_2 reduction, the Circular Steam Project has a positive effect on reactive nitrogen emissions and surface water quality.
    a. DeNOx facilities were installed to reduce NOx emissions to the lowest technically possible level.
    b. The new technology will prevent discharge of waste water containing salts to surface water (typically 11.000 mt per year of salts). The project was the first step in LYB's journey towards climate neutrality and circularity in the Netherlands.
21. LYB is investing in the Botlek Heat Integration Project, where it will purchase residual steam from its neighbours replacing steam generated by natural gas (currently purchased from LYB's utility supplier). This will help LYB to achieve a CO_2 emissions reduction up to 0.09 Mton per annum. The Botlek Residual Heat Integration project is important for the short term (2030) reduction goals of the participating companies. It is a major reduction step as part of a longer decarbonisation pathway towards climate neutrality in 2050. The project requires a large CAPEX investment and commitment from various parties for over 12 years (2025-2037). The project is complex due to the different commercial parties involved. Use of residual steam will reduce the steam production by natural gas fired boilers by LYB's utility suppliers, as a result next to Greenhouse gases as referred to above, off site NOx emission at LYB's utility suppliers are reduced by approximately 25 mt/a.
22. LYB's process emissions are an inherent part of its production process and LYB is continuously investigating solutions to address these hard-to-abate emissions. The solutions will depend on technological development, the presence of new infrastructure and the availability of low carbon energy sources.

Infrastructure, renewable electricity and supporting policies

23. Parties acknowledge that timely realisation of energy-infrastructure is in their joint interest and crucial for the success of industrial decarbonisation projects.
24. Parties acknowledge that decarbonization projects by the industry require the timely realisation of energy & CO_2 infrastructure and a clear industrial demand for such infrastructure. The Government has developed a national and regional infrastructure program (*Programma Infrastructuur voor een Duurzame Industrie (*PIDI*)*) in which governments, industry and grid operators work together to (i) take stock of all infrastructural needs for the industry, including for LYB NL and (ii) to enable acceleration of infrastructural projects admitted to the MIEK (*Meerjarenprogramma Infrastructuur en Klimaat*) and CES (cluster Energie Strategieën) where desirable and possible.
25. Within the framework of the tailor-made approach, the Government intends to support LYB NL's endeavours to contribute to additional scope 1 and 2 CO_2 emissions reduction in the Netherlands through, among other things: stimulation of demand for sustainable products, timely decision-making on permit applications, advancing timely availability of affordable low carbon energy carriers and required infrastructure for these energy carriers (such as electricity, CCS and hydrogen), addressing (EU or other) regulatory uncertainty and exploration of possibilities for financial support through generic financial mechanisms.
26. The Government aims to facilitate the energy transition of the industry in the Netherlands, through pricing instruments such as the carbon levy for industry and through instruments covering uneconomical parts of necessary and efficient investments and operations. The Government recognizes the necessity of continued involvement with the industry to monitor whether the current governmental instruments are indeed suitable and sufficient towards this end.
27. Parties acknowledge that the use of fossil-based CCS is a transitional application of this technology that should be phased out before 2050, but that this technique may play a part in achieving negative emissions to offset hard-to abate emissions. Towards 2030, it is uncertain whether infrastructure can be timely realized to allow for electrification at LYB's Dutch sites. Developing new technologies to convert waste fuels will take significant time. LCN therefore emphasizes that CCS is the required technology to reduce CO_2-emissions at the required pace.

[5] CO2-efficiëntiecijfers bedrijven openbaar | Nieuwsbericht | Nederlandse Emissieautoriteit

28. The Aramis project is an important enabler in achieving the Dutch 2030 climate goals. Several industrial companies depend on the Aramis project for the reduction of their CO_2 emissions by means of CCS by 2030.
29. The Delta Rhine Corridor Project is an enabler to create a successful CCS and hydrogen value chain throughout Europe. The Delta Rhine Corridor Project connects the Rotterdam port area to the German Rhineland region, creating access to, among other things, low carbon hydrogen and capacity for the capture and storage of CO_2 for LYB's locations in The Netherlands and Germany.
30. As mentioned in Recital 18, LYB has the ambition to purchase 50% renewable electricity by 2030, mainly through power purchase agreements. In the Netherlands, access to offshore renewable energy production will be crucial to achieve these targets. Parties recognize the challenges in this area, given the size of the demand from different parties for this renewable electricity and the pace of the deployment of the supply. Direct electrification is an efficient way of using renewable electricity given there is no conversion loss and implementing market-ready technologies like electric steam boilers on site or in the industry cluster is less complex.
31. Parties acknowledge the importance of residual steam as a transition technology. LCN points out that the long-term availability of steam is crucial for LCN's participation on the Botlek Heat Integration project, and the availability of residual steam could be influenced by potential future regulatory developments, like the potential closure of all waste incinerators. According to LYB NL changes in policy framework could jeopardize the business case.

Ambitions of LYB towards Building a Circular Economy

32. LYB is fostering innovative products and technologies that will help unlock a circular and low carbon economy. In September 2022, LYB announced its new Circular and Low Carbon Solutions business to deliver on its ambition to produce and market at least 2 million metric tons of recycled and renewable-based polymers annually by 2030. This goal represents approximately 20% of LYB's global sales of polyethylene and polypropylene in 2022.
33. Parties are of the opinion that circularity is enhanced through different, complementary technologies: mechanical recycling, chemical recycling and renewable-based polymers. LYB is investing in each of these routes. All technologies and solutions present advantages in terms of Greenhouse gas emissions compared to the use of virgin raw materials. LYB markets products made from plastic waste through a mechanical recycling process. These polymers can be used in a wide variety of industrial, household and consumer product applications. Historically, mechanically recycled polyolefins have not been fit for use in most applications with strict regulatory requirements. Chemical recycling on the other hand allows the production of recycled materials of the same quality as virgin plastics, hence suitable for high tech applications (e.g. automotive, electronics, construction products) and food contact.
34. LYB continues to invest in mechanical recycling. The recent restructuring of the ownership of QCP (mechanical recycling plant) shows that QCP now represents a growth platform for mechanical recycling and a key asset to continue to progress LYB's strategy to build a profitable circular and low carbon solutions business. In July 2023, LYB announced it has acquired a 50% stake in Stiphout Industries B.V. ("Stiphout"), located in Montfort. Stiphout is involved in the sourcing and processing of post-consumer plastic packaging waste.
35. The use of renewable feedstocks for the production of plastics and chemical products can offer a lower carbon footprint compared to the production of equivalent products sourced from fossil-based feedstocks. LYB NL has certified its Botlek's and Maasvlakte sites for mass balancing through the International Sustainability and Carbon Certification (ISCC+). The availability of renewable (e.g. bio-based) or circular feedstocks for more sustainable chemicals manufacturing is crucial for LYB's goals on climate and the circular economy and for reducing LYB NL's scope 3 emissions. The challenge is to create a level playing field between fuels covered by the Renewable Energy Directive (RED) and the various chemical applications to have access to sustainable biogenic carbon sources as feedstocks.
36. LYB progresses with the engineering phase to build a chemical recycling plant with its proprietary MoReTec technology at its site in Wesseling, Germany. This is subject to a final investment decision expected in 2023, with an expected start-up by the end of 2025. The recycled feedstock is mixed with conventional feedstocks in the process, using a mass balance approach certified according to the ISCC+ PLUS standard. In May 2023, LYB announced an investment in Pryme N.V., together with Infinity Recycling and Invest NL. Pryme N.V. is an innovative cleantech company, located in Rotterdam. The group of investors contributed nearly EUR 13 million to support the commercialization of Pryme's pyrolysis process to convert used plastic into valuable products on an industrial scale. Pryme is currently building a chemical recycling plant in Rotterdam that is expected to start production later this year and plans to build a second larger-scale plant in 2025.

37. Parties recognize that the EU legislative process concerning market uptake of sustainable products) is crucial to stimulate investments in circular plastics. The mass balance approach enables the swifter replacement of fossil feedstocks with recycled or bio-based feedstocks for use in existing production facilities by means of co-feed. The standards provided by certification schemes such as ISCC are essential to helping ensure the accurate and transparent use of appropriate chain-of-custody methods along the value chains. LYB and LYB NL believe the EU-legislative framework, particularly the revision of the Packaging & Packaging Waste Regulation (PPWR) and the implementing act on rules for calculation, verification and reporting of recycling plastics content in beverage bottles under the Single Use Plastics Directive (SUPD), should explicitly accept the mass balance fuel-use exempt allocation model to account for the proportion of recycled content in the end-product.

Environmental aspects

38. Parties acknowledge that the Dutch Coalition Agreement aims to decrease the reactive nitrogen compound emissions to reduce the deposition thereof in Dutch Natura 2000 nature areas, and that each sector, including the industrial sector, is expected to contribute fairly to the necessary reduction of reactive nitrogen compound emissions. The letter regarding nitrogen[6] explains the policy framework.
39. The Government aims, in line with the European Zero Pollution Vision for 2050, to reduce air-, water- and soil contamination by 2050 to levels that are no longer harmful to general health and natural ecosystems, thereby taking into account the limits of planet earth with the aim of realizing a toxin-free environment and has formulated emission reduction and health gain ambitions in several policy acts to this end.
40. The Government has formulated an emission policy that includes the legal obligation to minimize emissions of persistent pollutants and pollutants of high concern (*zeer zorgwekkende stoffen* (ZZS)) emissions and inform the authorities on achieved reduction and next steps every five years.
41. LYB NL has invested in reactive nitrogen compound emissions reduction through different projects[7], equipped with "de-NOx" facilities, over the past decades resulting in assets with a very low emission on NOx and complying to latest "BREF's". Average NOx concentration of Botlek and Maasvlakte sites is approximately 40 mg/Nm3, i.e. in the low range of "Best Available Technology". Next to on-site emission reduction also "off-site" NOx emissions are reduced[8]. This resulting in a decrease of NOx emissions of approximately 65 mt/a at LYB NL utility suppliers (for comparison 2021 NOx emission for LYB Botlek and Maasvlakte sites combined was 85 mt/a).
42. Parties acknowledge the Government's ambition to realise a complete circular economy by 2050, by (i) using raw materials more efficiently in existing production processes; (ii) making use of sustainably sourced, renewable (inexhaustible) and generally available materials if new materials are required; and (iii) by developing new production methods and new circular products. A reduction of 50% of use of primary raw materials (minerals, metals and fossil fuel) has been set as the Government's intermediate goal for 2030.

Other

43. **Safety:** LYB stresses its facilities are among the safest in its industry. LYB closely monitors safety risks, thoroughly investigates incidents, and near misses, and takes corrective action to prevent recurrence. LYB prioritizes recognizing and mitigating potential hazards in the workplace to stop incidents and injuries before they happen. LYB conducts risk assessments for potentially hazardous work.
44. **GoalZERO:** GoalZERO is LYB's commitment to operating safely with zero injuries and zero process safety, product safety, and environmental incidents. LYB cultivates a GoalZERO mindset with clear standards, regular communication, training, targeted campaigns, and events, including LYB's annual Global Safety Day. Health, Safety and Environmental (HSE) indicators are monitored continuously by LYB using a performance dashboard. Every manufacturing site sets goals to improve process safety and occupational safety and reduce environmental incidents.
45. **Diversity, equity, and inclusion (DEI):** LYB's aspiration is to be recognized as an inclusive employer, where leaders embrace a culture of belonging, where its people can bring their entire selves to work, where employees are treated fairly with equal opportunities to advance

[6] Kamerbrief *Stand van zaken stikstof en landelijk gebied*, d.d. 15 juli 2022.
[7] Recent examples are the "Circular Steam Project" and the "Botlek Steam Boiler project"
[8] A recent example is the Botlek Heat integration project where LCN will purchase residual steam from its neighbours replacing steam generated by natural gas. The project startup is expected in 2025. A second example is the construction of 2 new steam boilers by LYB NL (2015) equipped with de-NOx facilities reducing intake of steam of LYB NL's utility supplier (reducing NOx emissions in the Botlek region).

their careers, and where all feel like a valued part of LYB's company family. LYB's DEI progress enables LYB to retain and attract top talent and meet the needs of LYB customers and communities.

46. **Community engagement:** LYB is committed to being a responsible, good neighbour to communities in its operating areas. LYB NL has deep ties to communities in Rotterdam and is actively engaged with many community partnerships and initiatives.
47. **Social investment:** LYB partners with the Feyenoord Foundation, the social branch of Feyenoord Rotterdam (a Dutch football club), to offer Science Technology Engineering and Math (STEM) education, career guidance and physical exercise to children under 12. One of the partnership's pillars with the Feyenoord Foundation is to facilitate educational activities for over 7,000 local children of all backgrounds each year. LYB is also offering guest lessons and is involved in Feyenoord's career program, offering advice in career choices to youths.

Now, therefore, the Parties have agreed:

1. Definitions

The following terms, if capitalized as indicated, shall have the following meanings:

a. **Carbon Capture and Storage (CCS)** is the process of capturing, transporting and permanently storing carbon dioxide to prevent it from entering the atmosphere, and will hereafter also be referred to as 'CCS';
b. **Climate neutrality** is to be understood as net-zero Greenhouse gas emissions in CO_2 equivalent terms;
c. **CO_2** is to be understood as all Greenhouse gases in CO_2 equivalent terms, unless stated otherwise;
d. **Dutch Climate Agreement** means the agreement dated 28 June 2019 as supported by the Government, Dutch companies and other interested parties in relation to the reduction of Greenhouse gases as part of the Dutch climate policy (*Klimaatakkoord*)*;*
e. **Dutch Climate Law** means the law enacted on 2 March 2022 (*Klimaatwet*);
f. **Dutch Coalition Agreement** means coalition agreement (*Coalitieakkoord*) of the cabinet Rutte IV dated 15 December 2021;
g. **Dutch Climate Policy Programme** means the governmental policy programme (*beleidsprogramma Klimaat*) dated 2 June 2022 on the main features of the climate policy until 2030 aimed at the realization of the objectives of the Dutch Climate Law;
h. **Dutch CO_2 Levy** means the national levy on industrial CO_2 emissions, governed by the 'Wet belastingen op milieugrondslag' chapter VIB;
i. **Expression of Principles** or **EoP** means this Expression of Principles;
j. **Government** means the government of the Netherlands;
k. **Greenhouse gases** means gases listed in Annex II to Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the European Union;
l. **Industrial Emissions Directive** means Directive 2010/75/EU of the European Parliament and the Council on industrial emissions;
m. **LCN** means Lyondell Chemie Nederland B.V.
n. **LYB** means the LyondellBasell group, being the group of companies with parent company LyondellBasell Industries N.V., listed at the New York Stock Exchange, which, through its subsidiaries such as LCN and Maasvlakte VOF, participates globally across the petrochemical value chain;
o. **LYB NL** means LCN and Maasvlakte VOF;
p. **Maasvlakte VOF** means LyondellBasell Covestro Manufacturing Maasvlakte VOF;
q. **Parties** means the Parties to this Expression of Principles;
r. **Permits** means any permit, license, exemption, consent or other authorisation that LYB NL requires from the State or any (local) governmental organization for the realization of projects executed by LYB NL relating to the tailor-made approach;
s. **Potential Projects** means all the potential projects in the Netherlands (described in article 4) related to LYB's global Net Zero Program, aimed at achieving 42% Greenhouse gas emission reduction in scope 1 and 2 in 2030 relative to 2020 baseline that LYB NL intends to investigate that could potentially contribute to the ambition to achieve additional CO_2-emission reductions in the Netherlands and for which the State, within the framework of the tailor-made approach, intends to support LYB NL's endeavours.
t. **SDE++** means the aid scheme 'Stimulation of sustainable energy production and climate transition' through which the State can subsidize the unprofitable component of a project during the operational period of that project;

2. Objectives for the cooperation between the Parties

The objectives of this EoP are to:

1. express non-binding principles for potential subsequent mutual agreements on the cooperation between the Parties to pursue the objectives and intentions as stated below in this EoP each from their own purview and subject to each Party's internal criteria for cooperation and decision making;
2. accelerate reduction of LYB NL's scope 1 CO_2 emissions on site and scope 2 emissions at its utility suppliers subject to the Dutch CO_2 Levy in the Netherlands, aiming for 0.35 – 0.55 Mton CO_2 reduction in the year 2030 relative to the year 2020;
3. accelerate reduction of local environmental impact in the Netherlands, with a focus on reducing nitrogen emission levels (on site or at LYB NL's utility suppliers), aiming for the lower end of the BAT Associated Emission Level bandwidth;
4. accelerate the transition to circular products in the Netherlands by (as elaborated in intention 4):
    a. LYB supporting partnerships with recycling and plastic waste processing companies to expand LYB's portfolio for mechanical recycling, particular with regards to QCP and Stiphout;
    b. LYB NL further investing in feedstocks for chemical recycling and cross-border transportation of these feedstocks;
    c. increasing the use of circular and sustainable bio-circular feedstocks by LYB NL, contributing to further reducing LYB NL's scope 3 emissions through the concept of mass balancing validated by ISCC+ certification;
    d. LYB NL investigating the potential of CO_2 utilization as an alternative to permanent storage to achieve net zero emissions in 2050.

3. Intentions

3.1 Intention 1 – establish a basis for cooperation

1. Parties intend to cooperate on the basis of mutuality ("wederkerigheid") in a staged process to create mutual and simultaneously increasing levels of commitment, in due course towards binding agreement(s) on achieving the objectives, to be laid down in writing and subject to authorized signature.
2. As the next step, Parties intend to strengthen their principles described in this EoP and aim to facilitate cooperation by drawing up and agreeing on a JLoI. The JLoI will elaborate on the levels of commitment related to the objectives, intentions and the Potential Projects to be pursued thereafter. At the moment of signing this EoP, Parties aim to agree on the JLoI mid-2024.
3. LYB NL intends to further reduce Greenhouse gases to net zero in 2050. All projects mentioned under article 4 (Potential Projects) are established under LYB's Global Net Zero Program and aim to bring LYB NL's emissions to net zero by 2050, or provide an important step to move further towards net zero emissions.
4. LYB NL intends to realise the lowest possible emission levels within the BAT Associated Emission Level bandwidth for its carbon reduction projects.
5. LYB NL intends that the on-site and external safety exposure, on and around production- and storage sites should not deteriorate because of the Potential Projects as mentioned in article 4 in comparison to the current situation and, where possible, improves. Where necessary, LYB NL intends to mitigate new risks.
6. Parties acknowledge that apart from an adequate application process, early alignment, effective prioritisation, planning and cooperation between the State, the relevant (local) governmental authorities, the relevant public institutions and LYB NL are important for effectively conducting permitting processes to obtain the relevant Permits and to that effect:
    a. Parties acknowledge each Party's and other entities' responsibilities under various laws and regulations;
    b. Parties intend to, individually and jointly, engage and align with relevant public entities and institutions to promote a timely and predictable permitting process. LYB NL intends to continue its engagement with relevant stakeholders, e.g. those in the vicinity of its operations, in relation to the permitting process; and
    c. the State intends to facilitate, where possible and within its purview, timely decision-making on permit applications for any Permit and, whilst respecting their respective authority and role under public law, encourage relevant public entities and authorities whose actions and/or decisions are required for obtaining any Permit, to contribute to timely decision making.

3.2 Intention 2– reduction of LYB NL's CO_2 emissions

1. This intention relates to CO_2 emissions of LYB NL's activities (almost all at the Botlek and Maasvlakte sites) under its operational control. In the year 2020 LYB NL's CO_2 scope 1 and scope 2 emissions were 0.99 Mton.
2. LYB NL aims, with support of the tailor-made approach by the State, to reduce its annual CO_2 emissions in the year 2030 by 0.35 – 0.55 Mton when compared to the year 2020. Because of the interconnectedness with third parties through heat imports and exports, combined with the various Potential Projects, each with its own complex calculation, it is impossible to determine the exact amount of additional CO_2 reduction by the Potential Projects at this time. However, based on current figures and projections, it can be determined that LYB NL needs to reduce annual CO_2 emissions approximately 0.27 Mton CO_2 (scope 1 and 2) relative to 2020 baseline to achieve an emissions level equal to the expected amount of CO_2 reduction in 2030 under the Wet belastingen op milieugrondslag. Therefore, Parties consider reductions beyond 0.27 Mton in 2030 relative to 2020 as additional CO_2 reductions, of which 0.17 Mton (scope 1 and 2) are expected to be contributed by the Circular Steam Project and the Botlek Heat Integration Project (see recital 20 and 21).
3. LYB NL intends reduce its CO_2 emissions as stipulated in article 3.2.2 with Potential Projects, including but not limited to:
    a. energy efficiency and heat integration;
    b. electrification and/or use of low carbon fuels;
    c. Carbon Capture and Storage.
4. LYB NL intends to further elaborate the Potential Projects as mentioned in article 4 of this EoP, including but not limited to electrification and/or use of low carbon fuels and Carbon Capture and Storage.
5. According to LYB NL the following enablers are required to accomplish this intention as described under article 3.2:
    a. (Timely/Accelerated) realisation of MIEK infrastructures projects, notably:
        i. the 150kV and 380kV electrical infrastructure at the Botlek and Maasvlakte, before 2030. Botlek would require 0.3 GW and Maasvlakte 0.25 GW in case of large scale electrification. As it stands now, there will be no grid capacity available for LYB NL to install measures for electrification, for example electric or hybrid boilers or drives for compressors and blowers in a CCS unit, before 2028.
        ii. the Aramis Project (and the Delta Rhine Corridor Project, as described in recitals 28 and 29, provides an opportunity for LYB NL to deliver CO_2 for carbon storage before 2030 via a pipeline connection from the Maasvlakte to the compressor station at the Aziëweg, Maasvlakte Rotterdam. LYB NL supports the development of such infrastructure for the capture and storage of CO_2 to enable emission reductions from hard-to-abate processes where no other suitable technical or economical solution exists today. Currently, there is no infrastructure in place which connects the Maasvlakte area to a storage facility.
    b. (Timely) access to offshore renewable electricity at competitive conditions.
    c. Competitive transport and storage conditions for CCS projects. The current conditions to participate in the Aramis Project regarding the timing of CO_2 delivery make this investment unviable, according to LYB NL. The CCS market is currently based on a business-to-business market model. According to LYB NL, such a market should be based on non-discriminatory principles like third party access and fair tariffs. LYB NL intends to address this at a national level and at EU-level, in light of the upcoming EU CCUS Strategy.
    d. Support for the development of low emission outlets (as described in Article 4.2) of hard-to-abate waste streams (e.g. gasification).
    e. An adequate electricity grid pricing structure for flexible use, as LYB NL acknowledges the potential for flexible electricity demand.
    f. Timely permits to execute the project portfolio. Risks related to the permitting processes are to be addressed as well as pathways to accelerate these processes. Including better alignment of the different timelines for application for an environmental permit and contractual obligations regarding transport & storage regarding subsidies such as SDE++.
    g. Financial support for unprofitable business cases. An economically feasible electrical, CCS and hydrogen infrastructure is a critical lever to reduce emissions and enables supply of blue and green and circular hydrogen. According to LYB NL the viability of post combustion carbon capture relies on support from financial instruments like the SDE++.

h. The possibility to explore involvement of neighbouring suppliers in the tailormade agreements because of its deep interconnection with other companies

6. Parties intend to explore how they can contribute to the enablers mentioned in the previous article. For some of these enablers, the Parties also depend on third parties. In this context:
    a. The State intends to continue to coordinate the – in certain cases accelerated – realisation of MIEK projects, notably the 150kV and 380kV electrical infrastructure at Botlek and Maasvlakte, the Delta Rhine Corridor, the national Hydrogen Transport Network and the Aramis project. Whereby, LYB NL, within its influence, intends to commit its best endeavours for timely realisation of these projects.
    b. The State intends to explore ways to ensure commercially and legally viable access to CO_2 transportation and sequestration infrastructure.
    c. The State intends to develop policies, in anticipation of the REDIII, to enable investments in the green hydrogen value chain – market development, infrastructure development (power connections and hydrogen backbone), subsidies, credits and streamlining in permitting procedures.
    d. The State intends to explore how existing and future generic subsidy schemes can be adequately funded and be kept up to date to address possible deficiencies, subject to all internal criteria (political consent, subsidy design principles and state support regulations among others).
    e. If existing financial support mechanisms and new market pull instruments are deemed insufficient or not fit for purpose, Parties intend to explore other facilitating mechanisms to contribute to the implementation of the Potential Projects.
    f. Parties intend to explore the potential to increase the share of flexible electricity consumption, in order to allow for the efficient integration of renewable electricity into the electricity grid in space and time.
    g. Parties intend to address risks related to the permitting processes and identify pathways to accelerate permitting processes.
7. Parties intend to agree to monitor and periodically evaluate LYB NL's additional CO_2 emissions reduction.
8. Parties acknowledge that it is LYB NL's intention not to further trade with other companies additional CO_2 dispensation rights under the 'Wet belastingen op milieugrondslag' that ensue from the additional CO_2 reduction realized by the tailor-made approach, in order to prevent a "waterbed effect". The effects hereof will be discussed in the coming period and worked out in more detail in the JLoI.

3.3 Intention 3 – reduction of LYB NL's local environmental impact

1. This intention relates to accelerate reduction of local environmental impact in the Netherlands, with a focus on sustaining nitrogen emission levels.
2. As mentioned in recital 41, LYB NL has invested in reactive nitrogen compound emissions reduction over the past decades (Circular Steam Project and Botlek Steam Boiler Project complying to latest "BREF's" - i.e. Best Available Technology). The Environmental permits for both sites were recently updated.
3. After implementation of the Botlek Heat Integration Project (RHIP), LYB NL intends to reduce nitrogen compound emissions through its utility suppliers by ~ 25 mta (expected by our suppliers), aiming to be operational in 2025.
4. LYB NL intends to review further reduction of nitrogen compound emissions of its existing Maasvlakte and Botlek operations (e.g. "kosten effectivitetstoets" for its furnace 'B890').
5. LYB NL intends to investigate the nitrogen compound effects linked to the CO_2 reduction technologies that are currently being studied.

3.4 Intention 4 – circularity

1. LYB's circularity goals, ambitions and aims are global in nature and therefore LYB NL does not have its own circularity goals, ambitions and/or aims. Where relevant and possible LYB NL will hereafter point out LYB's goals, ambitions and/or aims regarding circularity and subsequently express its intentions with regard to the (potential) impact in the Netherlands.
2. LYB NL points out that LYB aims to continue investing in recycling and plastic waste processing companies that support their existing assets in the Netherlands and Germany, like the recent investment in Stiphout. Through these collaborations LYB NL intends to leverage local synergies with QCP''s business in terms of logistics and operations. Furthermore, LYB NL points out that LYB aims to unlock possibilities to further expand its portfolio for mechanical recycling, among others in the Netherlands.

3. LYB NL continues to explore opportunities to transition to the use of circular and sustainable bio-circular feedstocks, such as those made from bio-based waste and residues, using the mass balancing concept, validated by ISCC+ certification. LYB NL underlines that the success of this transition will depend upon the availability of these feedstocks. The availability of these feedstocks to the chemical industry is under pressure because of their mandated application in bio-fuels.
4. LYB NL points out that LYB aims to use part of the pyrolysis oil produced from the new Pryme facility in its planned integrated hub in Cologne, Germany. LYB aims to address the availability of pyrolysis oil in the Netherlands as a crucial feedstock for LYB's planned integral recycling hub in Germany. Access to feedstock for chemical recycling in Europe is a crucial condition for LYB to achieve its target to produce and market at least 2 million tons of recycled and sustainable biobased polymers by 2030 at global scale.
5. In addition to the efforts on recycling LYB NL points out that LYB is exploring ways to increase the use of sustainable biogenic resources as alternative feedstock for plastics manufacturing.
6. In the longer term, LYB believes in the potential of CO_2 utilization as an alternative to permanent storage. LYB NL is exploring and intends to further explore collaboration opportunities with different stakeholders to bring CO_2 utilization approaches to technological and commercial maturity. CO_2 utilization not only has the potential to reduce scope 1 and 2 emissions through CO_2 capture, but also to reduce scope 3 emissions by converting the captured CO_2 to higher value chemicals that could replace current fossil-based feedstocks.
7. LYB NL intends to investigate the possibility of utilizing captured carbon for green methanol production. LYB NL points out that this Potential Project is in early stages and its success will depend on many factors.
8. The State intends to further stimulate investments in recycling and sustainable products.
9. The State intends to facilitate (cross-border) transportation, for example the Delta Rhine Corridor Project, of low carbon and circular feedstocks.

4. Potential Projects

LCN and Maasvlakte VOF are part of a highly integrated utility supply system. The production processes rely on a reliable steam intake, provided by neighbouring utility suppliers. The utility supply at these locations has developed into a highly integrated efficient cluster, where LYB NL takes in steam, but also exchanges waste fuels with utility suppliers in order to use heat sources in the most optimal way. The result of the highly integrated utility system is that LYB NL has to collaborate with its suppliers to achieve successful Greenhouse gas emissions-savings. According to LYB NL, implementing new technologies leading to low carbon steam sources at its suppliers will not be possible without LYB NL.

In order to meet LYB's climate targets, each large site is subject to LYB's CO_2 emission reduction program, including Potential Projects. LYB NL's strategy for Greenhouse gas emissions reduction in the Netherlands includes a portfolio of Potential Projects categorized under several levers. LYB will continue to further improve its energy efficiency by lowering the energy demand of its operations through initiatives including residual gas recovery, heat integration and process optimization. At the Botlek and Maasvlakte sites, LYB NL intends to implement a number of projects aimed at reducing site steam demand. This is supported by the use of continuous process monitoring and optimization software.

In order to achieve the additional CO_2 emission reduction as mentioned in the objective in article 2.2. and the intention in article 3.2, LYB NL will consider the implementation of the following Potential Projects, which are partly overlapping, meaning that LYB NL will make choices, depending on the conditionalities mentioned in article 3.2:

1. Reduce the use of fossil fuels in LYB utilities through electrification of and/or use of low carbon fuels in steam generation and major electric motor drives. When coupled with renewable or low carbon electricity, this approach will allow LYB to lower the carbon footprint of its onsite produced energy. Longer term, LYB anticipates that process electrification will be an integral part of achieving net zero in its operations.
    a. LYB NL is investigating the possibility of electric or hybrid boilers for Botlek and Maasvlakte sites to replace natural gas fuelled fired steam generation in a first step, followed by residual waste stream generated steam in a second step, dependent on point 2. below. Both sites require continuous steam supply for safe and reliable operation. By implementing hybrid boilers (running on electricity as well as low carbon fuels), LYB NL intends to explore creating flexibility in its electricity demand.
    b. LYB NL emphasizes that large scale electrification would require access to sufficient capacity from the electricity grid at both sites (approximately 0.3 GW in Botlek and 0.25 GW in Maasvlakte). LYB NL stresses that there is currently not sufficient capacity available in the Botlek area for full-scale electrification. LYB NL intends to further concretize its plans and to discuss its needs with TenneT and regional grid operators in more detail for the JLoI.
    c. The Botlek and Maasvlakte sites have an opportunity with regard to access to offshore renewable electricity supply from the North Sea. The manufacturing operations need a reliable and baseload steam supply. Therefore, LYB NL points out that the electricity supply and potential system integration would need to be complemented with other sources of low carbon energy (e.g. hydrogen), to ensure safe and reliable production.

2. Potential Projects to reduce hard-to-abate CO_2 emissions of waste streams, that are currently being combusted for steam production may include post combustion Carbon Capture and Storage, or gasification or reformation of these streams to produce circular hydrogen, in combination with so called pre-combustion carbon capture.

5. Time schedule

Parties share a joined sense of urgency. Parties therefore have the ambition to agree on a JLoI mid-2024.

6. Costs

Each Party will bear its own costs associated with this EoP, unless Parties agree otherwise in writing.

7. Interpretation of terms and substance of this document

1. The terms of this EoP are not legally binding and not legally enforceable upon any of the Parties hereto.
2. Headings used in this EoP are for reference purposes only and are not intended to be used or relied upon in interpreting or enforcing this EoP.
3. The current EoP is only of an indicative, non-binding nature, which means inter alia that neither Party can be held to expressed intentions, statements, facts or numbers in this EoP, among other things because at this stage, such expressed intentions, statements, facts or numbers cannot and will not yet be fully verified by the Parties to this EoP and because neither Party wants to enter into legally binding commitments with this EoP; the EoP only serves the goal of affirming Parties' intention to engage in further discussions about the possibilities of additional CO_2 reduction.
4. Parties shall after signing of this EoP begin discussions on a JLoI, which will more specifically describe the plans of the State and LYB NL in this respect.
5. Parties confirm explicitly that (i) they shall have full discretion in agreeing on a JLoI or not, or in modifying, removing or completing any intentions, statements, facts or numbers mentioned in this EoP, and (ii) that at its sole discretion any of the Party may terminate discussions at any time for any reason, in which case the terminating Party is not liable for any damages or compensation of costs towards (any of) the other Parties.
6. The Province of Zuid-Holland is co-signing this EoP to express its support of the objectives and intentions of this EoP and to express its intention to participate in the upcoming discussions about the JLoI and possibly becoming a party to that JLoI.
7. To the extent that this EoP creates any legal relationship between the Parties, that legal relationship shall be governed and shall be construed in accordance with the laws of the Netherlands. Any dispute about the interpretation or implementation of this document will be resolved through consultations between the Parties.

8. Other

This EoP comes into effect on the signature date.

Signed on 13 October 2023 in The Hague, in four original copies, each in the English language.

Minister of Economic Affairs and Climate Policy,
acting in her capacity as administrative body (bestuursorgaan) and as representative of the State of the Netherlands,

_____
By: Mrs. M.A.M. Adriaansens

State Secretary of Infrastructure and Water Management,
acting in her capacity as administrative body (bestuursorgaan) and as representative of the State of the Netherlands,

_____
By: Mrs. V.L.W.A. Heijnen

The Provincial Executives of the Province of Zuid-Holland (Gedeputeerde Staten),
acting as administrative body (bestuursorgaan) and the royal commissioner of the Province of Zuid-Holland, acting as a representative of the Province of Zuid-Holland, on his behalf,

_____
By: Mrs. J. Baljeu

Lyondell Chemie Nederland B.V.

_____
By: Mr. Ronald van Klaveren

Lyondell Chemie Nederland B.V.

_____
By: Mr. Christopher Cain

LyondellBasell Covestro Manufacturing Maasvlakte V.O.F

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By: Mr. Ronald van Klaveren

LyondellBasell Covestro Manufacturing Maasvlakte V.O.F

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By: Mr. Christopher Cain