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DAWN OF A CLEAN PLANET

MEMO ON CARBON CAPTURE FROM INDUSTRY AND WASTE INCINERATION FROM REKLIMATE AS

MEMO SENT BY E-MAIL TO POSTMOTTAK@ED.DEP.NO
«INNSPILL VIRKEMIDDELUTREDNING 24/815» AS OF 15.05.2024 FROM REKLIMATE AS:
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REKLIMATE AS, DÆLENENGGATA 4, PO BOX 6804, RODELØKKA, 0504 OSLO, NORWAY – ORG.NO. 919 713 313

BACKGROUND

The Norwegian Government wants to continue its efforts to promote CO2 capture and storage as an important contribution to achieving Norway's climate goals, and has in this context invited relevant stakeholders to submit input related to a new study in which Oslo Economics and SINTEF Energy is to research and map policy instruments that can facilitate CO2 capture in Norwegian industry and waste incineration. The Ministry of Energy has expressed a desire for input on the report and the instruments proposed. The Norwegian company ReKlimate AS as part of the Norwegian Green Power Group (incl. subsidiaries) would like to provide its comments and input for further work on handling CO2 in Norway and in relation to Norwegian engagement internationally.

As part of an innovative industry development within Direct Air Capture (DAC), ReKlimate AS has a new technology that our company now owns 76% of. This technology has been developed and patented by Ecolair in Colombia, and tested in the city of Giradota in Colombia for 3 years where the level of all air pollution incl. CO2 went down dramatically. The DAC technology has been verified by national certification companies in Colombia where international companies such as Yamaha and Corona already are customers. From June 2024, the municipality of Medellin and Ruta N will be the newest customers of the company while there are ongoing negotiations with Harvard University, Pepsi-Co and Renault.

In Norway, the industry has a desire to adapt within a predictable framework, and many companies are considering how to handle CO2 at their plants. The Government wants to help reduce the barriers companies face in reducing their emissions. The report from Oslo Economics and SINTEF Energy is to be thorough and an important contribution to the Government's continued commitment to reducing CO2 as a necessary climate measure on the road to a low-emission society, said Minister of Energy Terje Aasland.

The report is assessing both the need for, and the policy instruments needed to promote CO2 emissions in industry and waste incineration. We see relevant instruments that Norwegian actors already have access to nationally and through EU cooperation as relevant. The report highlights the need to change the structure and possibly strengthen existing policy instruments. The report recommends, among other things, the introduction of a subsidy scheme that ensures predictable financing of projects. We support this proposal, and see such

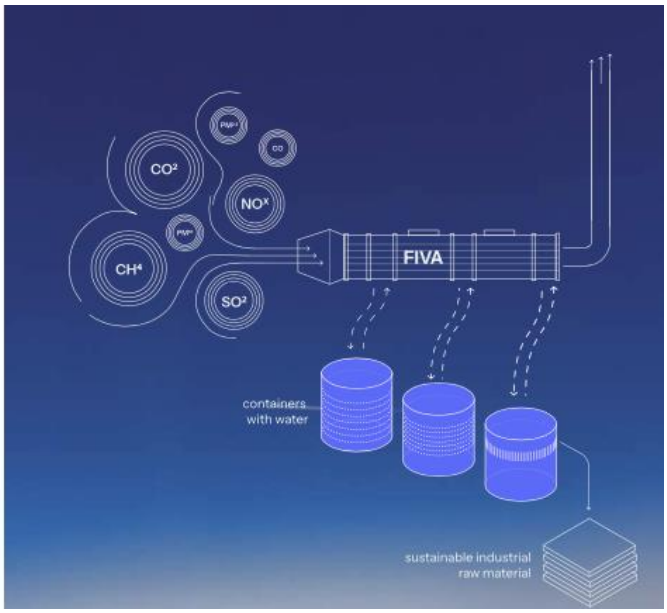
a measure as the most predictable form of subsidy based on carbon capture that suits our business very well. However, it will be important to ensure that the scheme includes all technologies and solutions for carbon capture that can document and certify that projects lead to carbon capture and/or are carbon neutral.

We appreciate that the Ministry of Energy invites stakeholders to provide input on the study, and that such input will be included in the further work to follow up on the study. This is particularly important as the report has little focus on other methods of carbon capture than CCS. In our companies, however, we focus on a number of different technologies that lead to carbon capture and long-term and permanent storage in soil, building materials and in other recycled products. In this way, our companies want to contribute in several ways to the enormous work it is to get our planet back into balance climate wise, and especially in relation to CO2 capture and storage.

REKLIMATE'S DIRECT AIR CAPTURE (DAC) TECHNOLOGI

A NORWEGIAN WAY

A ground-breaking, low-cost capture of most air pollutants in a circular process



A FIVA unit captures pollution and triple-filters it releasing purified air. The waste is separated as a slush in water containers and transformed into the sustainable industrial raw material, that can be used in a variety of consumer and industrial products.

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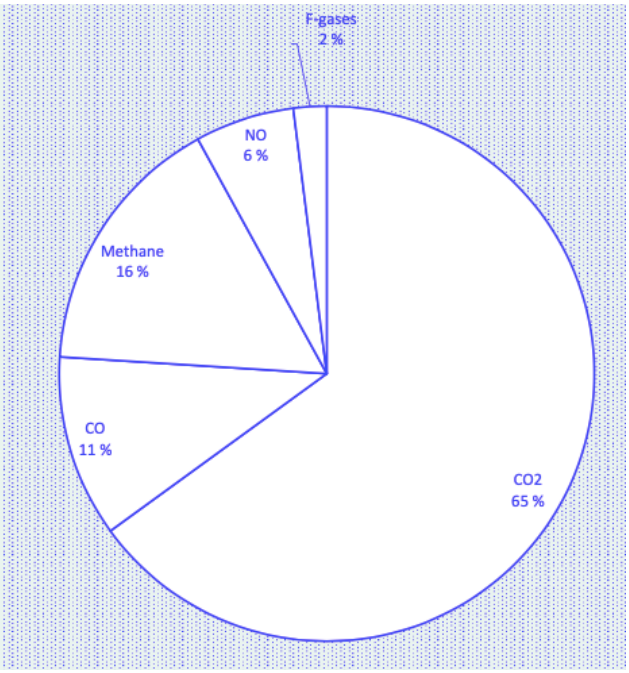
Ecolair, founded by Mariana Pérez, is the creator and developer of the most efficient direct air capture (DAC) technology in the world.

Ecolair partnered with NGP in 2023 to establish ReKlimate after turning down offers from Bill Gates earlier that year

Ecolair installed its first demonstration assembly on a bluff above Giradota, an industrial city of 60,000 people

This demonstrations showed:

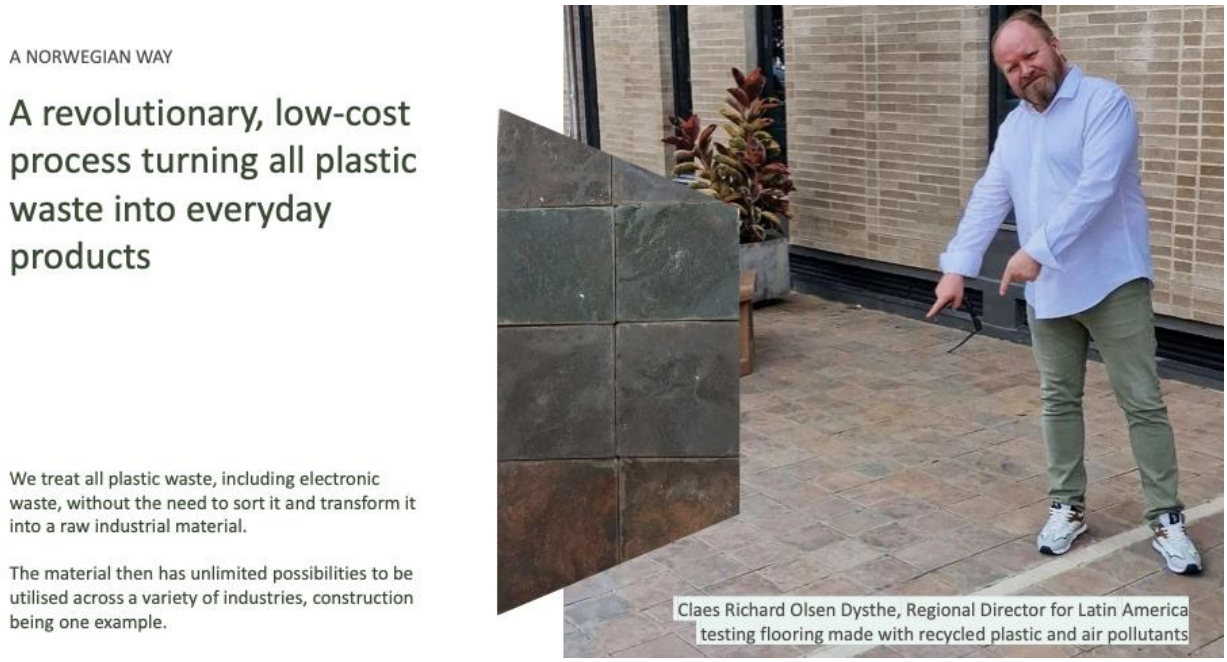
- Removal efficiencies between 70-99%
- Capturing CO_2, NOx, SOx, CO, PM, NH_3, Hydrogen Sulfide, VOC
- No environmental liabilities



The story of how Ecolair has developed the world's most efficient and affordable form of Direct Air Capture (DAC) based on the idea of a machine based on the functions of the body: it "breathes" air pollution, captures it in water containers, and then you can extract the waste fractions as a slush. This slush can easily be transported like water and mixed with e.g. recycled materials such as plastic to produce useful materials such as tiles and other building materials, parts for machines, etc. The slush alone can be used to make biodegradable "plastic bags" from CO2. This technology captures not only CO2, but also methane and all other greenhouse gases, air pollution and particulate matter. More info at www.reklimaet.earth.

The technology is well suited for:

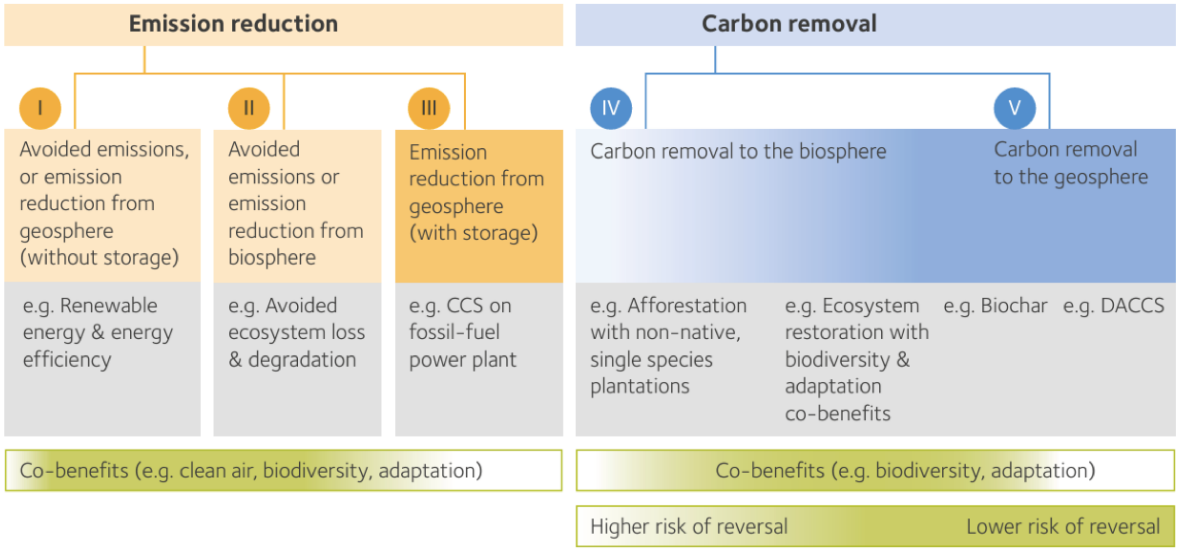
- industrial direct source capture of CO2 and other polluting particles
- be installed where necessary, possibly with retrofitting
- hardware provided as part of the service
- low energy use
- marginal transport needs
- no permanent storage required



CARBON CAPTURE IN A GLOBAL CARBON MARKET

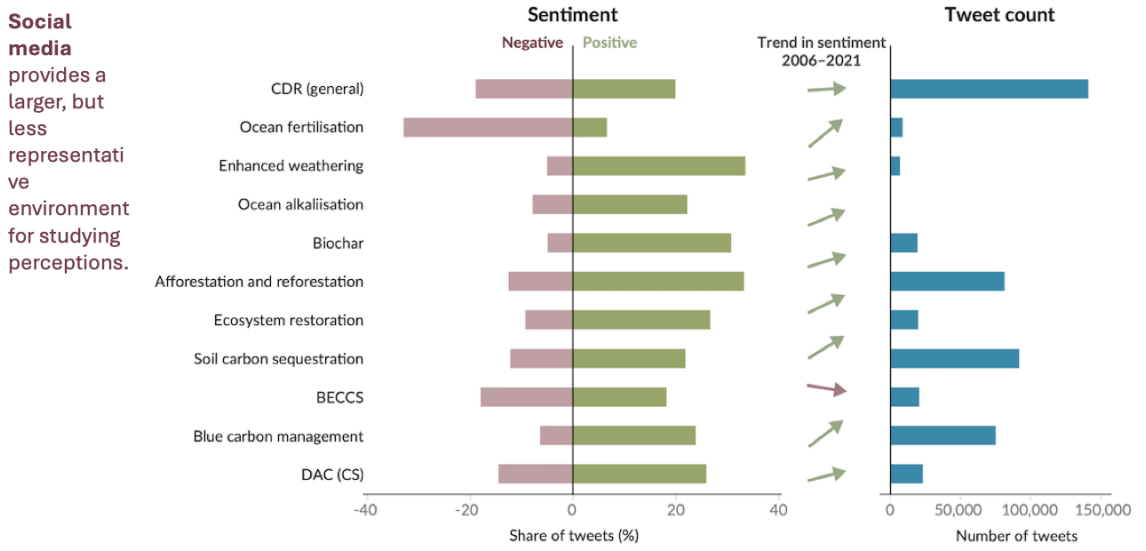
We believe that there is a great need to investigate further solutions with the aim that all these will contribute to increasing the proportion of proven carbon capture and storage in order for Norway to comply with its commitments by broadening the perspective on what is useful knowledge and insights, and solutions for carbon capture from industry and waste.

Based on this, we believe the government needs to investigate this type of technologies more closely, because it both solves the problem of carbon capture and storage in a far more cost-effective way than CCS. The ReKlimate solution is just one of several other solutions for carbon capture that are well suited for Norwegian industry and waste incineration.



The illustration above showing different methods in relation to risk factors for emissions is taken from a presentation on the carbon market (O. Levallois, Hamerkop Climate & Finance, May 2024).

We want to also focus on alternative utilisation or transformation of waste than what is focused on in the report. Through the company Norwegian Biopower AS, we have gathered a number of technologies and solutions that, among other things, reuse organic waste - yes, we actually see waste as part of the solution! We are e.g. referring to the use of organic waste for fertilizer production, the production of biochar for fertilizer and soil improvement, the use of municipal organic waste for the production of compost/fertilizer, biogas and biochar should, in our opinion, have been much more focused on in the two studies referred to. Globally, the focus is completely different than in Norway, where the focus seems to be almost solely on subsea carbon storage (CCS). We refer, among other things, to international experts that point to the various forms of carbon capture and storage over 100 years:



Source: The State of Carbon Dioxide Removal, A global, Independent scientific assessment of Carbon Dioxide Removal, 2023

AN HOLISTIC INDUSTRIAL PERSPECTIVE

Circular model

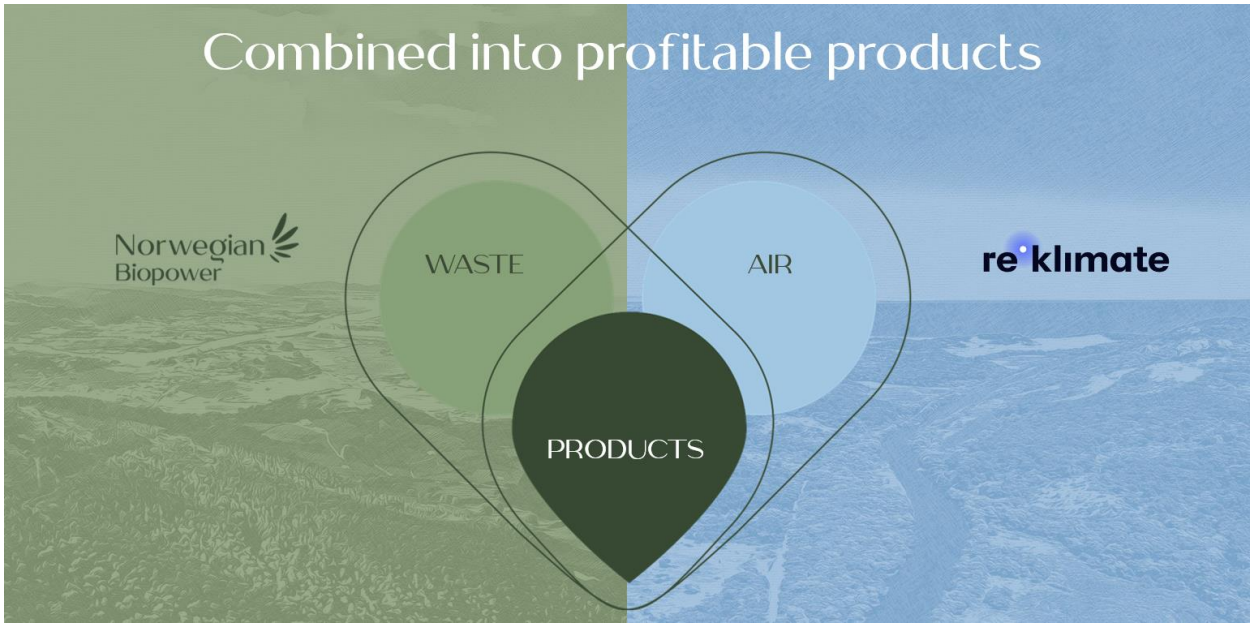
We develop projects adapted to local resources and markets by bringing together world -class sustainable technologies in holistic solutions on which our businesses can grow with global ambitions

PROBLEM
We identify problems where we can have the most potential impact in solving the most urgent global issues using a highly commercial business approach

TECHNOLOGY
We actively search for technology around the world that most effectively can solve these fundamental problems

SOLUTIONS
We bring together suitable technologies and products in integrated, sustainable solutions to form profitable businesses for focused market opportunities solving fundamental problems

PROJECTS
We identify, develop, finance and execute the most impactful and profitable projects utilising our solutions in collaboration with governments, financial partners, tech providers and climate activists found in our extensive global network



The Norwegian approach with CCS as a government driven industrial project where the government chooses the solution and technology is neither circular nor innovative. When we were in talks with Norwegian actors such as the waste incineration plant at Klementsrud in response to how they went out in the media with the message that carbon capture alone was so expensive that it could not be implemented economically, we ended up being told that it was not possible to look at alternative solutions like ours because the government subsidized the carbon capture itself with billions in addition to paying all other costs for transportation and storage. This was despite the fact that we outlined a solution where we took all the technology risk and were responsible for the entire financing by delivering the entire carbon capture plant as a service where Klementsrud would only pay a fixed price of around USD 60 for each ton of CO2 captured all inclusive. This is a fraction of the cost compared to any other options and low enough to make a profit on the sale of carbon credits generated.

The government's singleminded focus on CCS has become a barrier to all other solutions, such as Enpro's project to make large amounts of soda ash at Kollsnes as a commercially profitable product – a raw material with high global demand, and which with today's production processes emits enormous amounts of CO2. In Denmark, ReKlimate is working with partners using a model based on establishing an industrial cluster for the construction industry in Northern Jutland based on a cement factory in Aalborg that alone accounts for 1/3 of the entire country's CO2 emissions. By focusing on the application of all this CO2, we see the contours of a whole series of products for the building industry that not only utilise CO2, but also utilise all types of concrete and construction waste to create new sustainable building products as a result of the unique way ReKlimate captures CO2 as it can bind everything together in new products. For example, we already sell tiles made from CO2 and all types of recycled plastic in Colombia. This product is sold by Home Depot in the US market and Harvard University will use it on its campus. One of the companies in Northern Jutland providing offtake for the CO2 is a Norwegian manufacturer of building modules that will get a unique fire protection by using CO2 in the insulation so that it can never burn.

The key to circular handling of CO2 is to view the various environmental problems in context and facilitate innovation rather than the government itself making choices on technology and solutions. Such choices are best made by commercial actors in collaboration with research institutions and others who are far more competent and incentivized to create profitable products and services. In addition to creating a huge money drain for the government by taking this role, the government is actively stifling innovation and Norway's ability to achieve the climate goals set for 2030. We believe that with the business model that forms the basis of ReKlimate as a Norwegian company owning this carbon capture technology, Norway can completely avoid huge government investments to electrify Melkøya and the continental shelf, as well as the entire Norwegian industry, oil and gas sector, while at the same time achieving at all our national emission targets or more by 2030.

Two of the most urgent global challenges

WASTE

By 2050 global waste will grow to 3,400m, while municipal solid waste is to reach 3.40b tons, outpacing population growth.

AIR

WHO data shows that almost all the global population breathe air that exceed guidelines limits and contains high levels of pollutants.

NORWEGIAN BIOPOWER

Processing the most troublesome waste first

ORGANIC WASTE

Patented technology transforming organic waste into bio - fertilizer approved for human food production

AIR POLLUTION

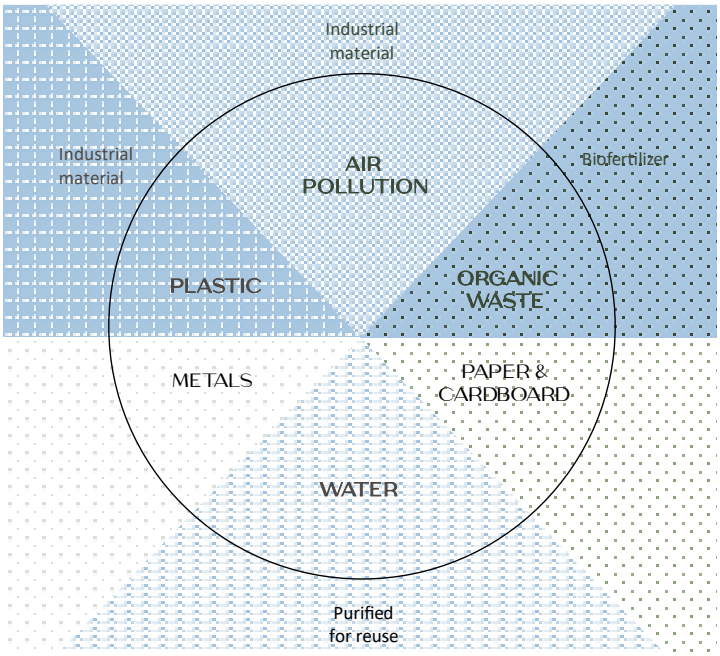
ReKlimate's patented technology enables low -cost collection and transformation of all air pollutants into products such as building materials

WATER

Purified for reuse

PLASTIC

Patented technology enabling the transformation of **all** plastic without sorting into products such as building material



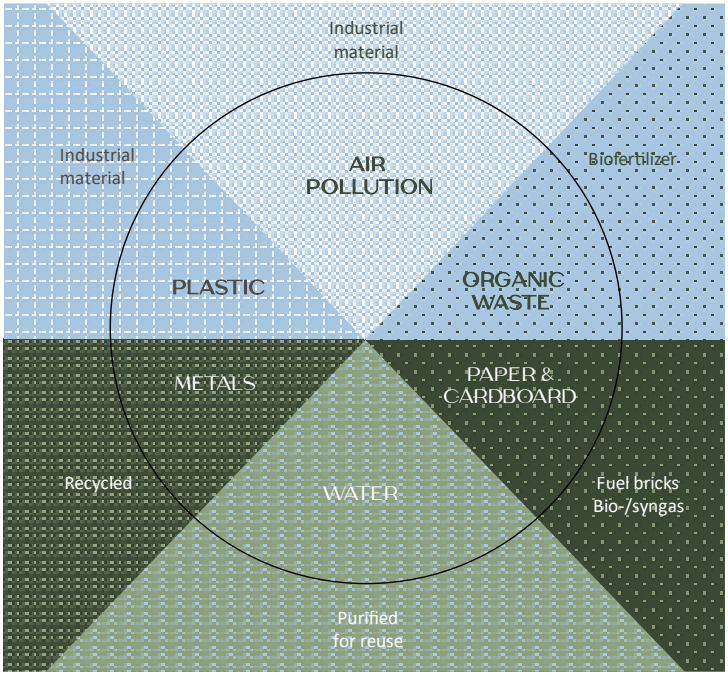
EXPANDING TO COVER MOST WASTE

Low tech, high impact solutions for all waste being explored

For sorting and recycling less complicated waste like metals, wood, paper and cardboards, technologies and solutions are already readily available, if properly sorted.

We have been exploring a range of new approaches and technologies that can improve the efficiency, environmental impact, type and quality of potential end products for all waste categories that we aim to bring over time.

To enable this, we are currently focused on adding partnerships related to sorting.



The prerequisite for this is that we dare to start with completely blank sheets of paper and crayons by being willing to put aside previous prestige projects if necessary. For example, let's start with waste management, which is also one of the main focuses of this study and is much more difficult than carbon capture for existing industry due to the complexity of handling many different and demanding waste streams. Insineration to produce energy should only be an emergency solution. Through our sister company Norwegian Biopower AS, we have identified a number of relevant technologies and solutions that over time should be able to solve most waste streams, as we do today in Colombia by combining ReKlimate's CO2 capture with a mixture of all types of plastic without the need for sorting and cleaning, which is the main problem for reusing plastic today. The UN has certified our solution as the only one in the world that can handle one of the most difficult waste problems - e-waste.

Steinar Brenden
EXECUTIVE DIRECTOR
+47 463 87679 [NO/WhatsApp]
steinar@norwegiangreenpower.com

Claes Richard Olsen Dysthe
REGIONAL DIRECTOR LATIN-AMERICA
+34 645 122 738 [ES/WhatsApp]
richard@norwegiangreenpower.com

Unni Beate Sekkesæter
CSR DIRECTOR
+47 934 91894 [NO/WhatsApp]
unni@biopowertana.no