

CO2 from Dutch Waste to Energy Plant to be Used in Horticultural Greenhouses

Dutch waste recycling and waste to energy firm, AVR, will start the construction of a large-scale CO2 capture system as it seeks to reduce its greenhouse gas emissions.

By [BEN MESSENGER](#)

[Netherlands emissions](#) [Waste to Energy AVR](#) [Air Liquide](#)



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Dutch waste [recycling](#) and [waste to energy](#) firm, [AVR](#), will start the construction of a large-scale CO2 capture system as it seeks to reduce its greenhouse gas emissions.

The company explained that the CO2 released at AVR after the incineration of residual waste, serves as an important raw material for the growth of crops as an alternative to CO2 from natural gas. This installation should be operational, at the AVR location in Duiven, in a year's time. According to AVR, with this step it contributes directly to the CO2 reduction in the Netherlands and in reaching its climate targets.

The construction of the CO2 capture plant in 2019 means that 60,000 tonnes of CO2 is expected to be captured and recycled. This is 15% of the total CO2 emissions in Driven.

The CO₂ captured by AVR will be transported by French gas technology firm, [Air Liquide](#), to greenhouse horticulture areas in the Netherlands. The CO₂ will be used to stimulate the growth of vegetables, soft fruit, flowers and plants. Especially in the summer, [horticulturists](#) have the need for a substantial amount of CO₂ in order to grow their crops.

AVR added that should it find an additional customer in the winter, the total CO₂ captured may rise to a maximum of 100,000 tonnes.

"After a lot of effort and development this first installation is for AVR a test case that should result in making capture installations more efficient in the future and will help to utilise residual waste for a 100%. We are researching the possibilities of building a similar CO₂ capture installation at our location in Rozenburg (Port of Rotterdam)," said Michiel Timmerije, Director of Energy & Residues at AVR.

"We aim for the capture and application of 800,000 tonnes of CO₂ annually. To achieve this we don't only look at greenhouse horticulture, but also at the sustainable applications of CO₂ for example in building materials such as concrete, basic chemistry for plastics and biofuels," continued Timmerije. "We can use all the support and help from the government, politics, but also from the business community and startups. "

Lars Strandberg, Vice President Air Liquide North West Europe added: "This project will strengthen the liquefied CO₂ supply and availability for this growing market. Air Liquide is committed to improve and optimise the CO₂ footprint and thus contribute to circular economy."

Berno Schouten of Lingezege Energy, the collective energy company of several affiliated greenhouse horticulture companies located in the Horticulture Area Next Garden located between Arnhem and Nijmegen commented: "At the moment we use 20 to 25 million m³ of gas with which we produce heat, electricity and CO₂ for several greenhouse horticulture companies."

We are constantly looking for alternative sustainable energy sources to heat greenhouses. The switch to sustainable energy sources goes hand in hand with a sustainable and reliable CO₂ source. We wholeheartedly support this AVR initiative and pave the way for us to take further steps in the phasing out of fossil fuels," he concluded.