Geleen Plastic2Plastic recycling

Publieke samenvatting / Public summary

Aanleiding

Plastic Energy B.V. has developed a novel Thermal Anaerobic Conversion (TAC) technology to recycle end of life (EOL) plastic waste into TACOIL, a hydrocarbon that can be used to produce virgin plastic products. Plastic Energy wants to demonstrate this technology in a new processing plant to be developed and constructed in Geleen, The Netherlands. Plastic Energy has experience with two other plants currently in operation using similar technology but on a smaller scale. This project comprises of a demonstration project for a four-time scale-up of the current technology, as operated in two smaller Spanish plants.

Doelstelling

The goal of Plastic Energy and Renewi is to achieve plastic recycling by processing end of life plastic waste into TACOIL, a hydrocarbon, which can be used to produce virgin plastic products (Plastic2Plastic recycling). This would ensure a transition from single use plastics to multi use plastics without the need for new fossil-based materials (circular economy). With this demonstration project Plastic Energy aims to demonstrate their Thermal Anaerobic Conversion (TAC) technology by constructing a plant in the Netherlands. Renewi will construct a new sorting line and facility for the pre-treatment of feedstock. After construction, the plant will process up to 20,000 tonnes of waste plastic each year and turn it into 13.7k tonnes of TACOIL (product) per year to be sold to offtaker SABIC. This will result in a significant contribution to lowering CO2 emissions from plastic disposal, recycling and production. The purpose of

Projectinformatie / Project information

Projectnummer / Project number
DEI120017
Subsidiebedrag / Grant amount
€ 12.000.000,00

Algemene informatie / General information

Penvoerder / Secretariat
SABIC Plastic Energy Advanced Recycling B.V.

Publicaties en materialen / Publications and attachments

- **16.10.2025**

  Eindrapport DEI120017

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this project is to complete construction of the new sorting line and the plant by December 2021 and operate the line for a minimum of 12 years and the plant for a minimum of 20 years (until 2041).

Korte omschrijving

Plastic Energy will design, build, own and operate the plastic conversion plant. Construction will be contracted out to an engineering firm yet to be appointed. The demonstration project will entail the completion of the engineering design drawings (FEED), the procurement of all necessary equipment, achieving approval for construction, securing the necessary permitting, and finally the complete construction and operation of the plant. Renewi will build, own and operate the formulation line for the pre-treatment of the feedstock. Design will be contracted out to Bollegraaf Recycling Solutions. For Renewi, this project will entail the preparations for the formulation line, which includes the sourcing of feedstock from several Renewi locations and third parties, the procurement of the formulation line, the preparations for the building activities, the construction of the formulation line as well as the building, and the operation of the formulation line, which also includes the transportation of the feedstock.

Resultaat

Plastic Energy: A fully operational four-time scale up processing plant for Plastic Energy's TAC technology and the production of TACOIL. During the project several tangible deliverables will be achieved including: • Secured permitting • Engineering Design Timesheets and documentation • Engineering procurement • Off-site (modular) and On-site construction • Production of TACOIL Renewi Highly advanced sorting line for mixed plastic waste (so called Formulation Line) in Eindhoven Acht, for removal of contaminations from the EOL plastic waste, to provide high input quality for Plastic Energy's plant. This will result in the following tangible deliverables: • Highly advanced sorting line for mixed plastic waste, called formulation line. • A new building to locate the storage and transhipment activities that are currently taking place in the

building foreseen for the formulation line. • Daily transportation of suitable feedstock to Plastic Energy.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.
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