



Philip Morris Investments B.V.
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**PHILIP MORRIS
INTERNATIONAL**

Public Summary VEKI523002

Project title: Heat Recovery and Heat Upgrade
Publication date: 31 March 2025
Applicant : Philip Morris Investments B.V.
Project period: 01 May 2023 – 31 December 2024

Summary of the Objectives and Goals of the Project

The Heat Recovery project was initiated to address the significant amount of residual heat during production processes at the Philip Morris facility in Bergen op Zoom. The primary goal was to capture and utilise this residual heat for heating hot process/cleaning water and industrial buildings. By implementing heat recovery systems and upgrading the temperature of the recovered heat using heat pumps, the project aimed to reduce reliance on steam generated from natural gas, thereby contributing to sustainability commitments and Dutch climate goals.

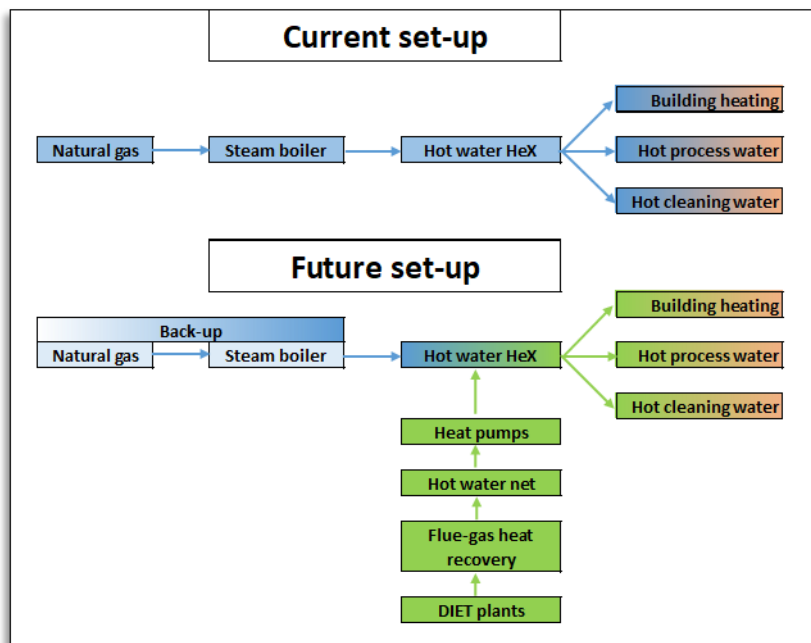


Figure 1: Schematic overview of PMI's CO₂ emission reduction project to capture and use residual heat otherwise exhausted into the air. Heat from two emission points will be transported through a heat net, increased in temperature and replace steam used for hot water production. Heat pump output will be >2.6 MWh or equivalent to 3.8Ton steam/hr.



Figure 2: (From left to right) Venturi-scrubber, Water-pumps & Heat-exchangers, Heat-pumps

Description of Achieved Results and Bottlenecks

The project successfully implemented a heat recovery system that allowed the facility to significantly reduce carbon emissions, achieving an expected annual CO₂ reduction of approximately 1,500 tonnes. The total investment amounted to ~€5-5.5 million.

Despite the success, the project encountered several challenges, including:

- **Technical Bottlenecks:** Unforeseen costs related to additional engineering studies and modifications required for the heat pump installation.
- **Organisational Bottlenecks:** Coordination between multiple suppliers proved challenging, particularly regarding timelines and scheduling.

Contribution of the Project to the Objectives of the Scheme

This project aligns with the goals of the VEKI scheme by supporting investments in both tangible and intangible assets that contribute to the cost-effective reduction of CO₂ emissions in the Netherlands. The implementation of the heat recovery system has established a benchmark for future sustainability initiatives within the industry.

Overview of Public Publications Related to the Project

- **Date:** 06 March 2024
Title: "Restwarmte omzetten naar duurzame energie: JOA Air Solutions lanceert baanbrekend initiatief in industriële energierugwinning"
Source: [Link to Article](#)
- **Date:** 11 March 2024
Title: "Philip Morris wil CO₂-uitstoot decimeren met warmtepomp"
Source: [Link to Article](#)
- **Date:** 02 December 2024
Title: "Veel interesse in terugwinnen warmte bij Philip Morris"
Source: [Link to Article](#)

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