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LIFE NEW HYTS

Re**New**able green **Hy**drogen for **T**ransport

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KWR

Bridging Science to Practice

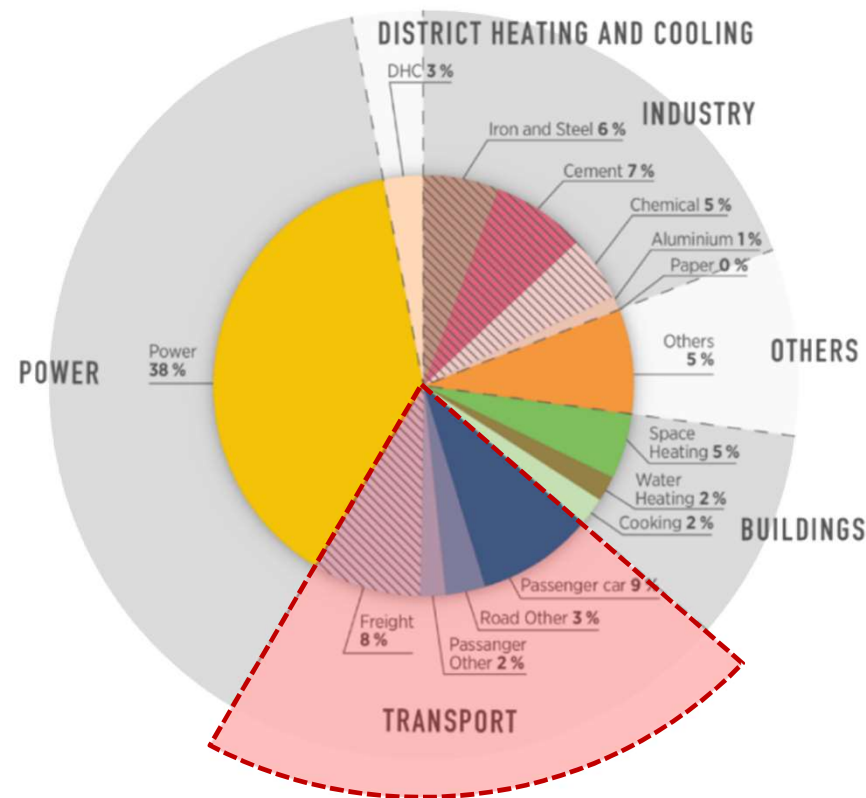


Transport sector emits a lot of CO₂

22% of European emissions by transport sector
 14% passenger and other transport
 8% freight transport

In the Netherlands the transport sector emitted 35,5 Mton of CO₂ of the total 250 Mton in 2017

Moreover, the transport sector is growing, especially heavy transport



Green hydrogen for transport

High potential for heavy transport: long-haul and heavy transport in inner cities

- Dual fuel as a transition technology, allowing for the addition of hydrogen alongside diesel fuel
- Fuel cell electric vehicles as an emerging technology
- Hydrogen combustion engines as an award-winning innovation



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Introduction of green hydrogen for transport: Deadlock





LIFE NEW HYTS project

Breaking the deadlock through the implementation of a local green hydrogen value chain

Highlights

- Unique integration of local green hydrogen production and distribution and use of green hydrogen for road transport
- Support for the implementation of green hydrogen in transport in the region of Utrecht
- Dissemination actions to Vlaams Gewest (BE) en Nordrhein-Westfalen (DE)

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Project specifications

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PROJECT LOCATION: Utrecht

BUDGET INFO:

Total amount: 8,361 kEuro

% EC Co-funding: 55%

DURATION: Start: 01/07/2021 - End: 31/12/2025

PROJECT'S objective and scope:

Breakthrough in uptake of green hydrogen in road transport, contributing directly to the reduction of greenhouse gas (GHG) and other harmful emissions

Combining expertise, operational capacity, monitoring, policy making and implementation





Project consortium

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Project actions

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The Province of Utrecht stimulates green hydrogen transport, and is noticed by the Global Covenant of Mayors on Climate and Energy for its policy developments

- Training of technical staff
- Hydrogen Covenant of Province Utrecht for CO₂ reduction in the transport sector
- Replication actions
- Contribution into a sustainable strategy set out at provincial, national and EU levels



Project actions

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Research institute KWR is coordinating beneficiary of the LIFE NEW HYTS project.

- Consultation with experts in the field
- Monitoring and analysis of the impact of project actions
- Coordination of communication and dissemination
- Project management

Project actions

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- Green hydrogen service provider Hysolar
- prepare for the installation of the electrolyzer and pipeline to the existing hydrogen refueling station
 - Purchase and operate a 2MW PEM electrolyzer
 - Build the business case for the implementation of a green hydrogen value chain



LOGISTICS - WAREHOUSING

Project actions

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Logistics companies CvHeezik and v.d. Heerik and retail contractor Stamhuis will purchase and operate 6 FCEVs for heavy transport

- 3 tractors for long-haul logistics
- 1 box truck of 19-ton for inner city logistics
- 2 box trucks of 3.5 ton for on-site service





Project actions

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Civil works contractor Jos Scholman will purchase and operate heavy machinery:

- 2 dual fuel heavy tractors
- 2 dual fuel holders for maintenance work
- 2 fuel cell electric excavators



YOUR WARE - OUR CARE

v.d. HEERIK b.v.
LOGISTICS - WAREHOUSING



Expected Impacts

Reduction of emissions:

- 10.206 tons CO₂ during project by electrolyzer
- 34.700 tons CO₂ during technical lifespan of electrolyzer
- 22% CO₂ and 75% NO_x by 4 dual fuel machines
- 100% CO₂ and NO_x emission reduction by 8 FCEVs

- Improvement of GHG monitoring and reporting as a basis for a solid business case and Life Cycle Analysis
- 5 Replications of local green mobility acceleration
- Education, job generation, improved well-being through increased use of hydrogen



After-LIFE

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Operating electrolyzer, hydrogen fueling station, FCEV's and hydrogen machines beyond the end of the project

Active promotion of the LIFE NEW HYTS model and experiences, in the Netherlands, Europe, worldwide

Position of frontrunner in sustainable policy making, by further execution of Hydrogen Covenant to support long-term strategy towards transition to green hydrogen economy



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Congresinformatie

- Polish LIFE project webinar
- Online
- 11-03-2022

Trefwoorden

Green hydrogen, transport

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