

Greenports project

Gas from REnewable Energy in PORTS

ICON project; 2019-2020



Project partners

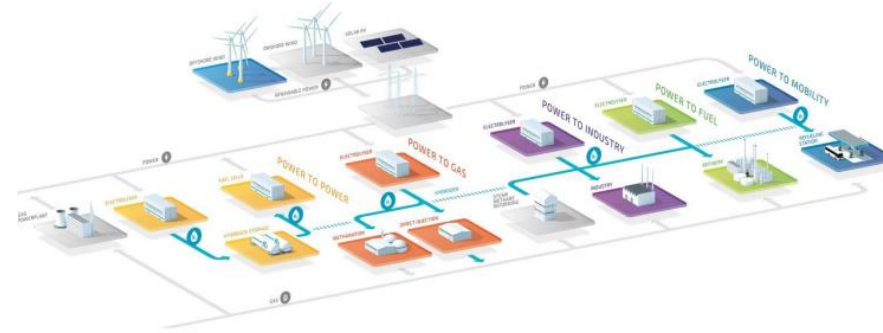


WaterstofNet



Why?

- 2017: Power-to-gas roadmap Flanders
- Port environment as the ideal location for hydrogen hubs
- Port of Zeebrugge is the ideal location for H₂ production, storage and injection in gas grid



EXECUTIVE SUMMARY

October 2016

Project partners

HYDROGENICS
SHIFT POWER | ENERGIZE YOUR WORLD



umicore
materials for a better life

Sustesco

COLRUYT GROUP

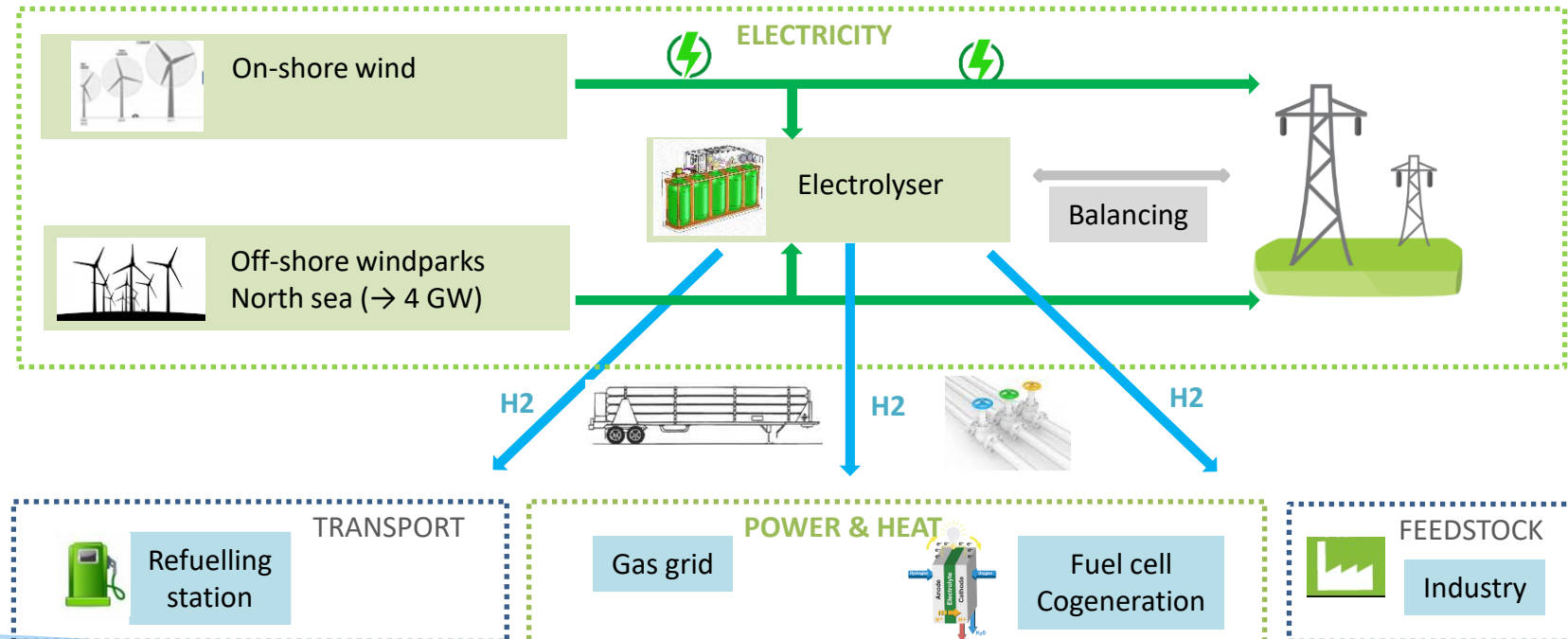
FLUXYS
EXCELLENCE IN GAS TRANSPORT

elia
Powering a world in progress

eandis

Project development and process

- Group of interested partners within IBN Power-to-Gas
- Original idea: 2MW demonstration
- Role Flux50: advise & help for funding, add academic partner



However...

Colruyt Group (Eoly), Parkwind and Fluxys join forces in power-to-gas

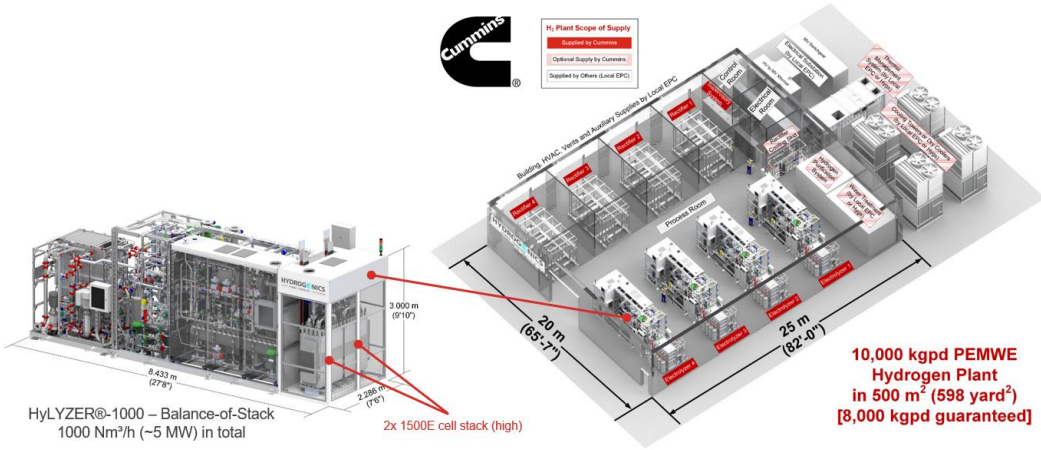
Eoly, part of Colruyt Group, Fluxys and Parkwind have set up a collaboration to boost the sustainability of the energy landscape in Belgium. The ambition is to build an industrial-scale power-to-gas installation that converts green electricity into green hydrogen that can be transported and stored in the existing natural gas infrastructure.

Tuesday, April 24, 2018

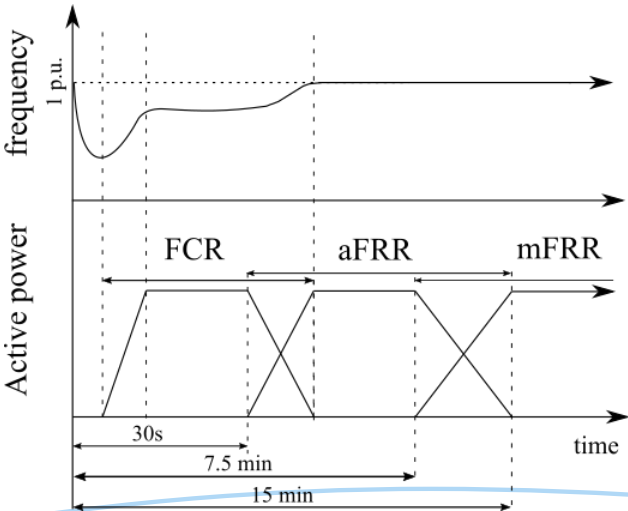
Industrial-scale project to boost Belgium's hydrogen economy

=> Redefinition Greenports to study project

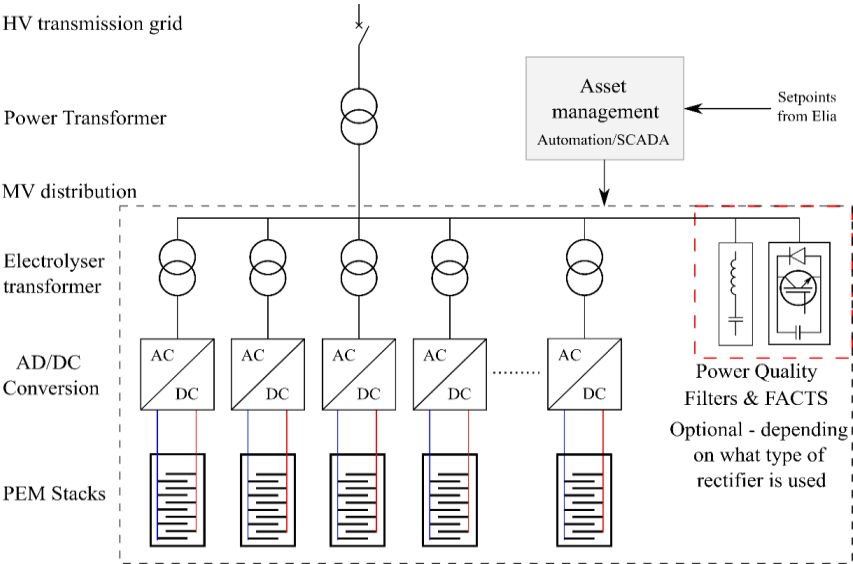
Topics & results (1)



Upscaling of electrolyser product platform to **20MW/ 8000kg H₂/day**

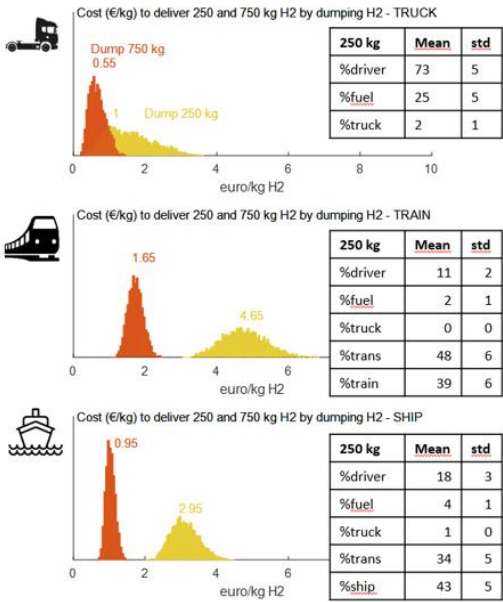


Grid services with electrolyser?



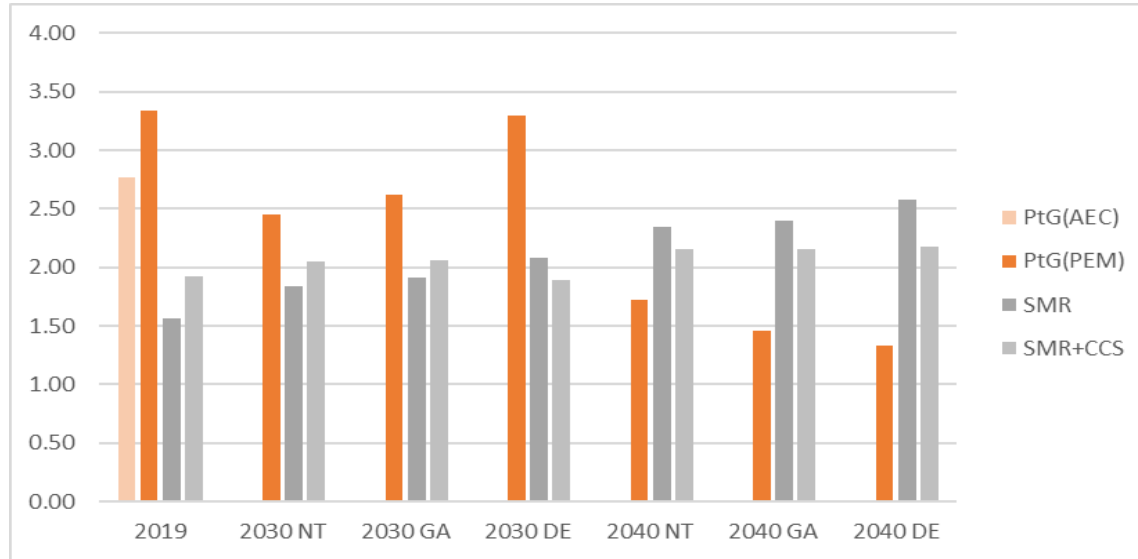
Electrical connection of the electrolyser to the grid

Cost model for transport of H₂ from central production site



Topics & results (2)

€/kg H₂



Economic model



Regulatory aspects
In general and specific for the port

https://www.watersstofnet.eu/_asset/_public/Greenports/Greenports-final-report-Feb-2021.pdf

Challenges

- Disconnection of concrete pilot project
- Administrative requirements for the partners
- Cooperation university <-> industry
- Convergence to one common result....



Results & impact & follow-up

New milestone in sustainable methanol production in the port of Antwerp

7 May 2020 // Press Release

Colruyt en Fluxys bouwen waterstoffabriek in Zeebrugge



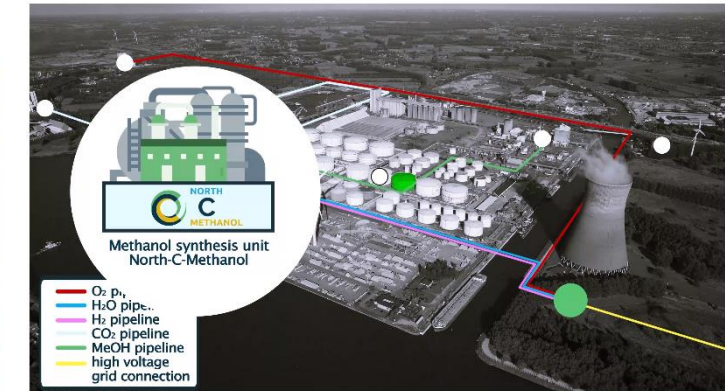
De stroom voor de waterstoffabriek zal komen van de windparken op zee van Parkwind. ©Belwind



Consortium of 7 players established to build 'power-to-methanol' demonstration plant.

This week, the port of Antwerp is taking another important step forward in the transition to alternative energy sources and a sustainable, low-carbon circular port. ENGIE, Fluxys, Indaver, INOVYN, Oiltanking, Port of Antwerp and the PMV – investment company of the Flemish Government - have established a consortium for the sustainable production of methanol, an essential raw material used by industry in the Port. Construction of a demonstration plant at the INOVYN site in Antwerp is scheduled to start by 2022, with the aim of producing 8000 tonnes of sustainable methanol annually, thus avoiding at least an equivalent volume of CO2 emissions [...]

North-C-Methanol partners



Partners involved in the construction and operation of North-C-Methanol have signed a Joint Development Agreement. These include the partners below. They will sign other agreements with other parties involved in the value chain.



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Bedankt voor uw aandacht!
Thank you for your attention!

