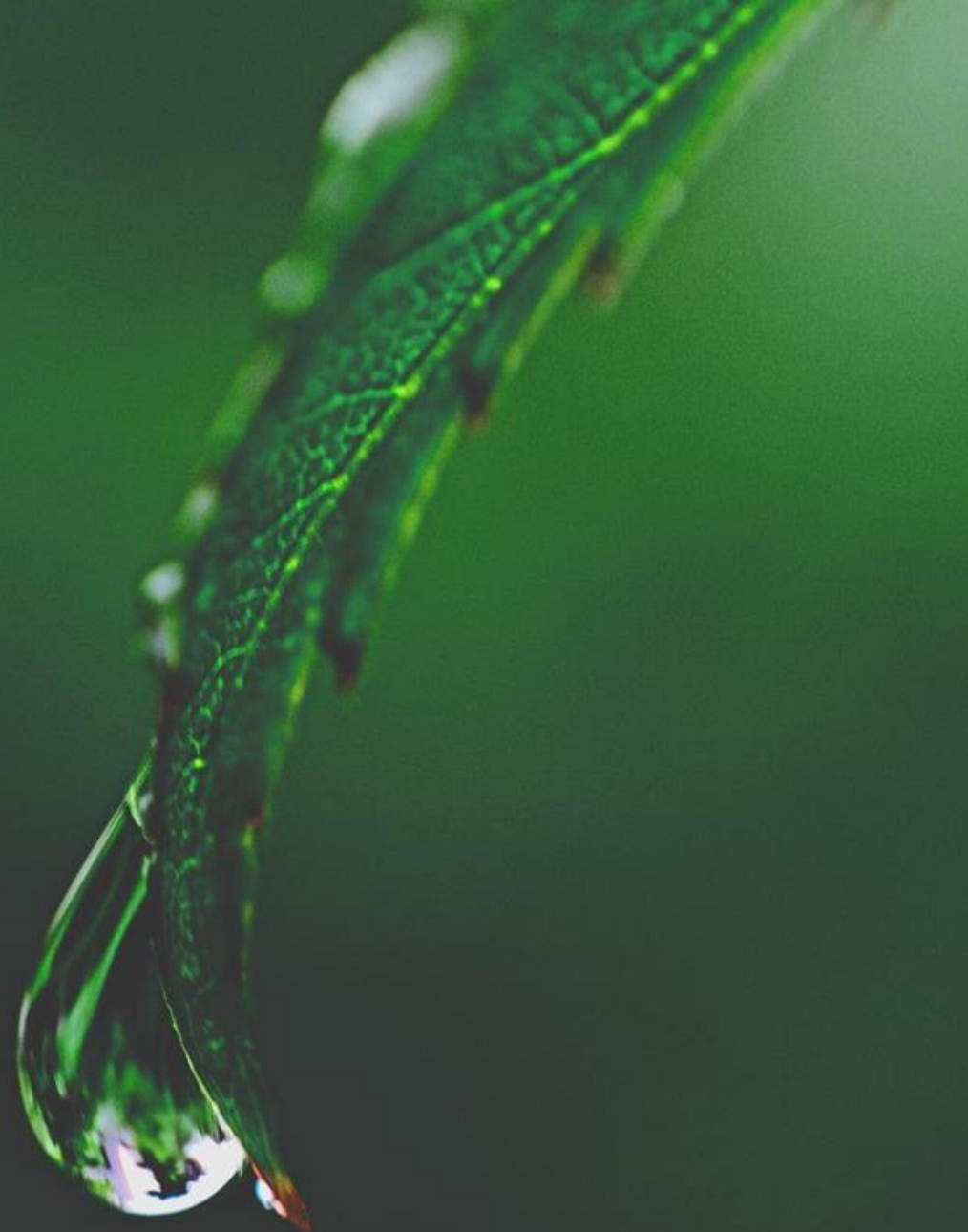




**P2X Solutions**

*Forerunner in  
Green Hydrogen & Power-to-X*

*Helsinki - Finland*



# P2X Solutions: Forerunner of green hydrogen production in Finland

## P2X Solutions

- Privately held Finnish company established in 2020 by world-class business developers and energy experts.
- Producer and distributor of green hydrogen and e-fuels, such as e-methane, e-methanol and e-ammonia.
- Green hydrogen is produced by utilizing renewable energy and water.
- Green hydrogen and e-fuels are sold to industrial processes and transport.
- P2X's first 20 MW green hydrogen electrolysis plant will be operational in 2024.
- P2X was chosen as one of the top 10 most prominent Finnish start-ups in Feb 2022.

# Our key players

## Herkko Plit – CEO



Founding partner **Plit** has more than 25 years of management experience in the energy industry. He has served as the **CEO of Baltic Connector Oy**, which implemented Finland's share in the natural gas pipeline between Estonia and Finland, and worked for TVO, Fortum, the Ministry of Employment and the Economy and the European Commission. Plit is a board member of Enersense International Oy.

## Kati Levoranta – EVP



**Levoranta** has more than 25 years of managerial and legal experience from privately owned and publicly listed companies. Before starting in P2X, she worked as a **CEO in Rovio Entertainment Oy**. Levoranta holds several board positions and is e.g. the newly elected Chairperson of Finavia Oy, the Finnish airport operator.

## Anu Kankkunen – SVP Finance



**Kankkunen** has almost 30 years of experience in financial management positions in Finnish and international organisations, including Silmäasema and Digita. Before joining P2X she acted as **SVP Finance and Control at Sanoma Oy**. Kankkunen is a board member of Edita Oy and Printcom Center Oy.

## Tuomo Rinne – VP Technology



**Rinne** has more than **ten years of experience in industrial product development**, design, and product management. He brings to P2X his substantial expertise in electrical engineering, the manufacturing industry, and working with suppliers.

## Ilkka Taka-aho – Project Director



**Taka-aho** has more than **25 years of experience in project management and investment project development and implementation from the energy sector**. He brings to our organization his extensive experience in executing ongoing and future hydrogen projects.

## Board of Directors

- Chairperson: Esa Härmälä
- Timo Ahopelto
- Jaakko Eskola
- Marjo Miettinen
- Herkko Plit

# Attractive and fast-growing market

10 000 B€

Global green hydrogen  
market for utilities in  
2050

2 000 B€

Europe's green hydrogen  
market for utilities in  
2050

630 B€

Global annual sales of  
clean hydrogen in  
2050

Up to 24 %

Share of green hydrogen  
from global energy needs  
by 2050 (~4 % in 2020)

The green hydrogen market is driven by ambitious climate targets, a fast adaption of hydrogen and major support for hydrogen at the national, EU and global level

# Our business model covers the entire green hydrogen value-chain



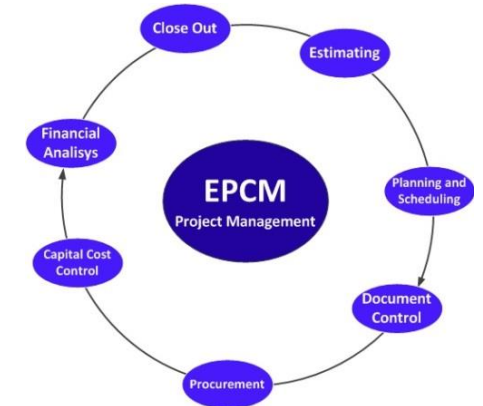
## Green hydrogen and e-fuel production

- Green hydrogen and e-fuel production in our own green hydrogen electrolysis plants
- End-users in industry and transport



## Green hydrogen distribution

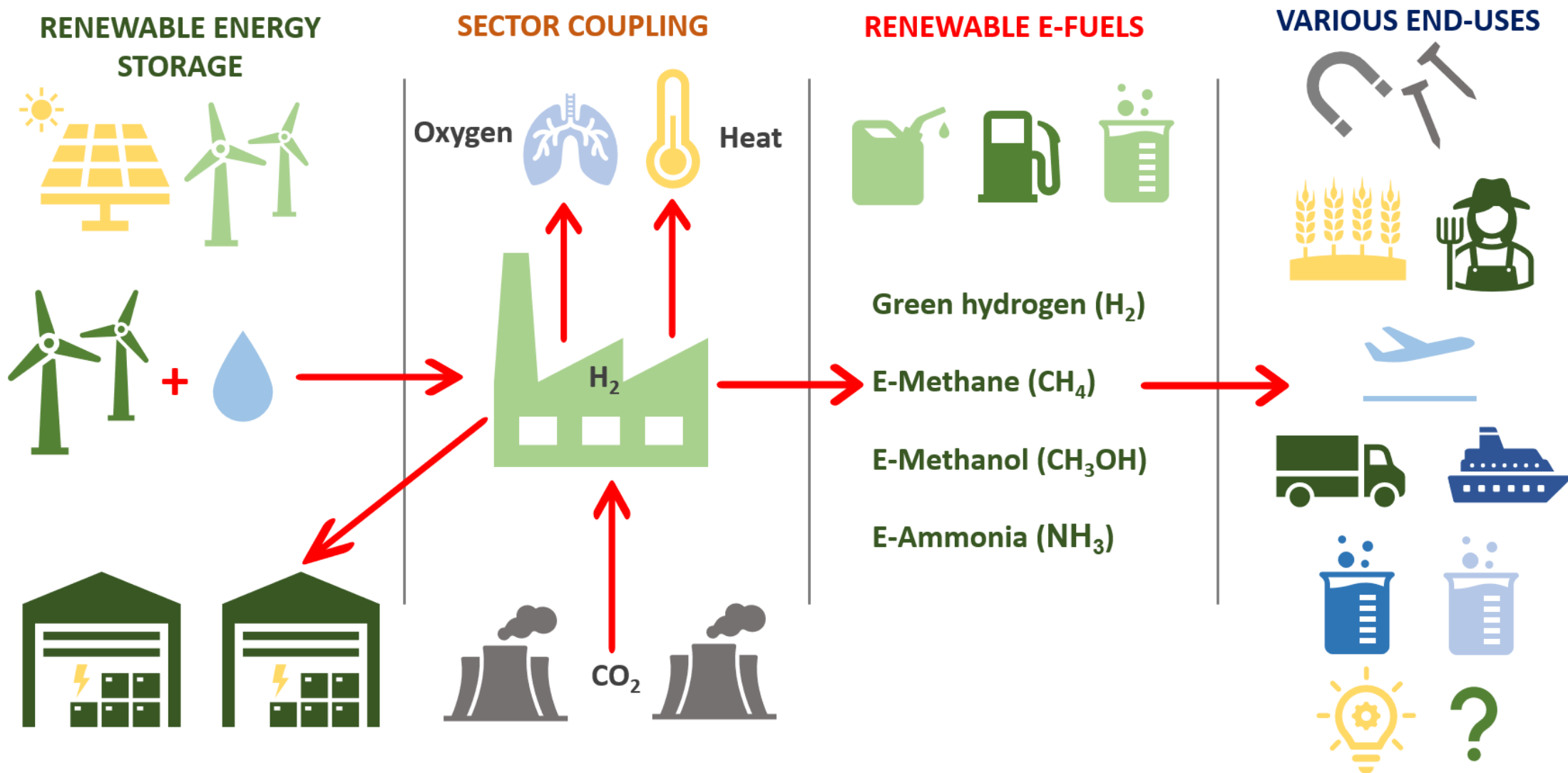
- Green hydrogen distribution network for heavy-duty and maritime transport
- Collaboration with distributors and logistic companies



## Green hydrogen turn-key provider

- Customer projects with turn-key approach
- Project management services

# Hydrogen is the key to green transition





# Green hydrogen production & distribution network

Green Hydrogen plants 90 MW capacity – three plants in 2026

## Hydrogen production



Sales of H<sub>2</sub>

Sales of side streams  
(heat & oxygen)

H<sub>2</sub>



Industrial processes



H<sub>2</sub>

Transportation



H<sub>2</sub>

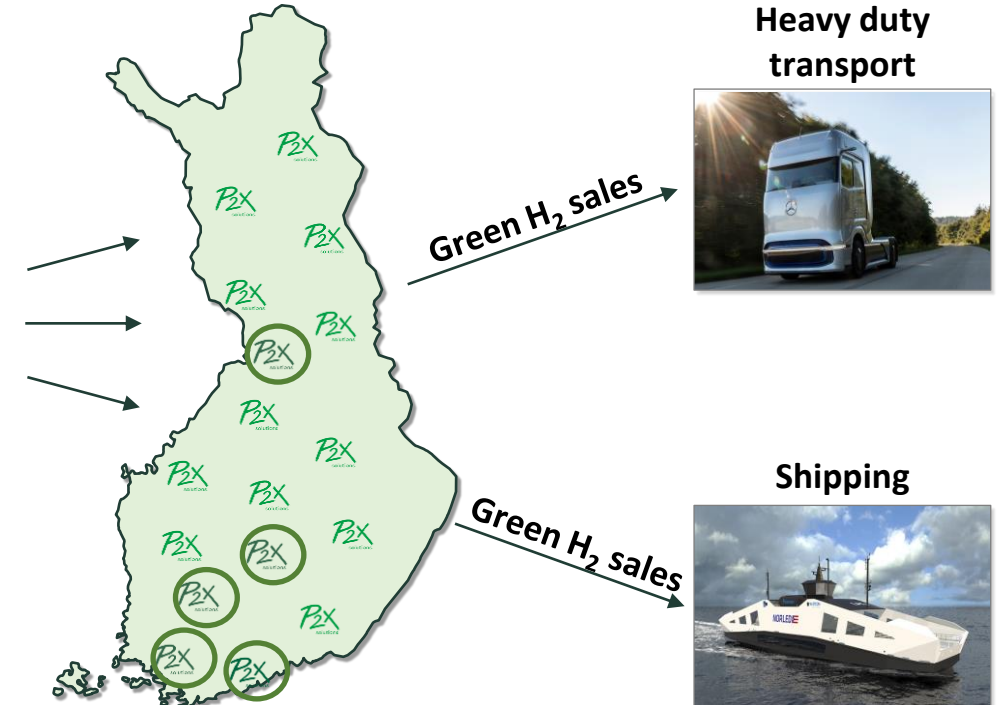
CO<sub>2</sub>

CH<sub>4</sub>

Production of  
synthetic  
methane (CH<sub>4</sub>)

P2X own distribution network

Illustrative distribution network



Heavy duty  
transport



Shipping



# Finland's first 20 MW green hydrogen production plant

## Green hydrogen plant in brief

**Green H<sub>2</sub>** production   **20 MW** H<sub>2</sub> capacity   **2024** operational   **~70M €** CAPEX



**P2X is opening green hydrogen market**  
in Finland with the first commercial scale green H<sub>2</sub>  
plant in Finland

## Building of 20 MW green hydrogen production plant

- **Plant:** 20 MW green hydrogen production plant
- **End products of the plant:**
  - Green hydrogen, and
  - By-products (e.g., oxygen and waste heat), and
  - Synthetic methane (that can be further processed from the green hydrogen and captured CO<sub>2</sub>).
- **Final Investment Decision:** January 2022.
- **Public funding received:** 26 MEUR from Finnish Ministry of Economic Affairs and Employment and 10 MEUR from Finnish Climate Fund in December 2021.
- **The first plant operational:** 2024
- **Electrolysis technology:** Commercially proven alkaline from Sunfire.



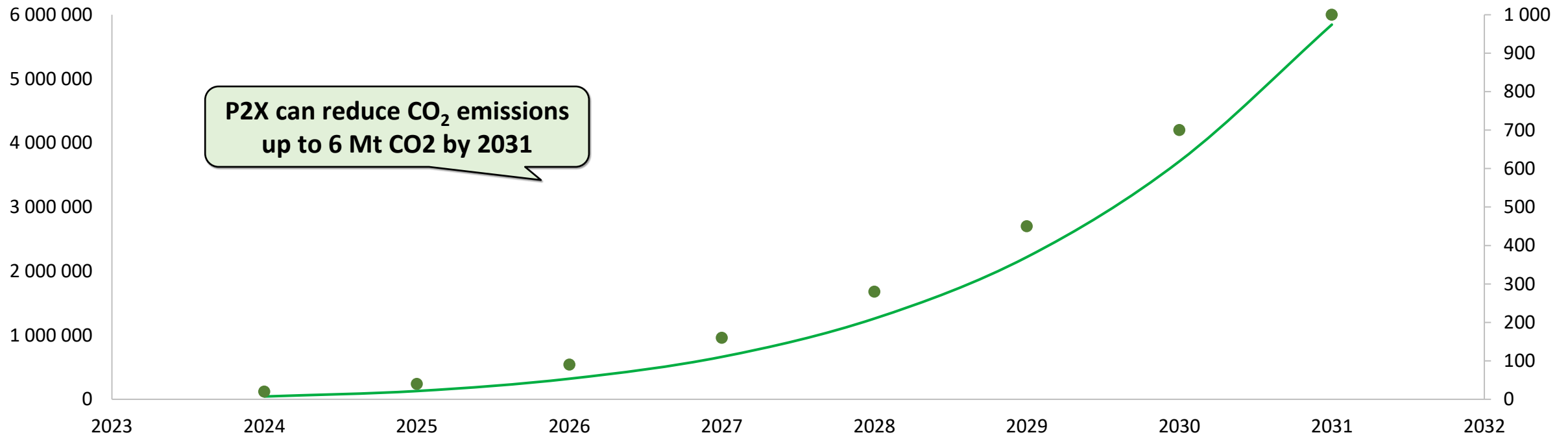
# P2X can reduce carbon emissions significantly

## P2X's cumulative CO<sub>2</sub> emission reductions – Production starting in 2024

- Emission reduction
- Capacity

P2X's cumulative emission reduction (tCO<sub>2</sub>)

P2X's planned capacity (MW)





## Suomen ensimmäinen vihreän vedyn tuotantolaitos suunnitteilla Harjavaltaan

Suomalainen P2X Solutions on hakenut kansallista tukea vedyn tuotannon käynnistämiseen Harjavallassa. Jos tuki myönnetään,

Germany's Sunfire to provide equipment for Finland's green hydrogen plant

Reuters

Green Hydrogen – P2X Solution: Explores Carbon-Neutral Propulsion Options for Maritime Transport with Baltic Sea Project Financing

April 19, 2022 Add comment 2 views

EUROPE FEATURED HYDROGEN

## Hitachi ABB Power Grids and P2X Solutions partner on hydrogen production

By NEDIM HUSOM

Hydrogen

UNCATEGORIZED

Hitachi ABB Power Grids and P2X Solutions to build Finland's first scale 20 MW green hydrogen production plant

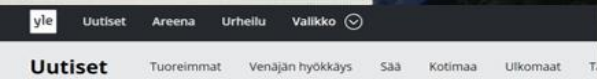
Tankki täyteen 5 minuutissa, ajaa liki 700 kilometriä ja päästöt nollaa – Suomessa vetyautoja kiertää P2X Solutions



## Tulevaisuuden VETY-SUOMI

Eri puolille Suomea suunnitellaan satamia sähkönykyisyyttä, tuhoisia tuulivoimaloja ja vetyputkistoja, jos Suomi siirtyy vetytalouteen.

H



Vety

## Savon Voima ja P2X Solutions suunnittelevat vedyn tuotantolaitosta Joensuuhun

## Kauppalehti

Rovion entinen toimitusjohtaja Kati Levoranta hyppää vetybisnekseen – "Uskon vahvasti vihreän vedyn voimaan"

2021 18:39 NIMITYKSET TYÖELÄMÄ ENERGIA



Talous | Energia

## Suomen ensimmäistä vihreän vedyn tuotantolaitosta suunnitellaan Harjavaltaan

P2X Solutionsin ja Harjavalan kaupungin tähtäimessä on rakennustöiden aloittaminen vuonna 2022.

## Our Recognitions

Talouselämä:  
Finnish Top 10  
Most Promising Start-Up 2022



We are proud to be selected as a  
Nordic Top 50 Impact Company 2022



All Nordic Top 50 Impact Companies at [www.oneinitiative.org](http://www.oneinitiative.org)

Nordic Impact Business Summit THE ONE INITIATIVE 12-13 September in Copenhagen

The One Initiative:  
Nordic Top 50  
Impact Company 2022

European Hydrogen  
Investment Summit:  
Top Presenting Company  
2022



# Green H<sub>2</sub> is a core solution in the inevitable energy transformation



Green hydrogen will have a major role by **2030**



The timing to build capacity is **now**



There will be a heavy **H<sub>2</sub> energy shortage** in Europe



**P2X** is the pioneer of green H<sub>2</sub> in Finland



**We change the world to become  
cleaner - together**

