

**ELWA**

systems for energy

## Driven by power

AHK Business Trip

Barcelona, 28<sup>th</sup> November 2017

Christian Salmen  
Head of Sales



1 GW

8'000'000 €

T/O in 2016

70 Employees

86 yrs.

# Who are we looking for

Potential business partners

## Application



Local Heat I



Local Heat II



Grid Stability

## Developer



## Requestor





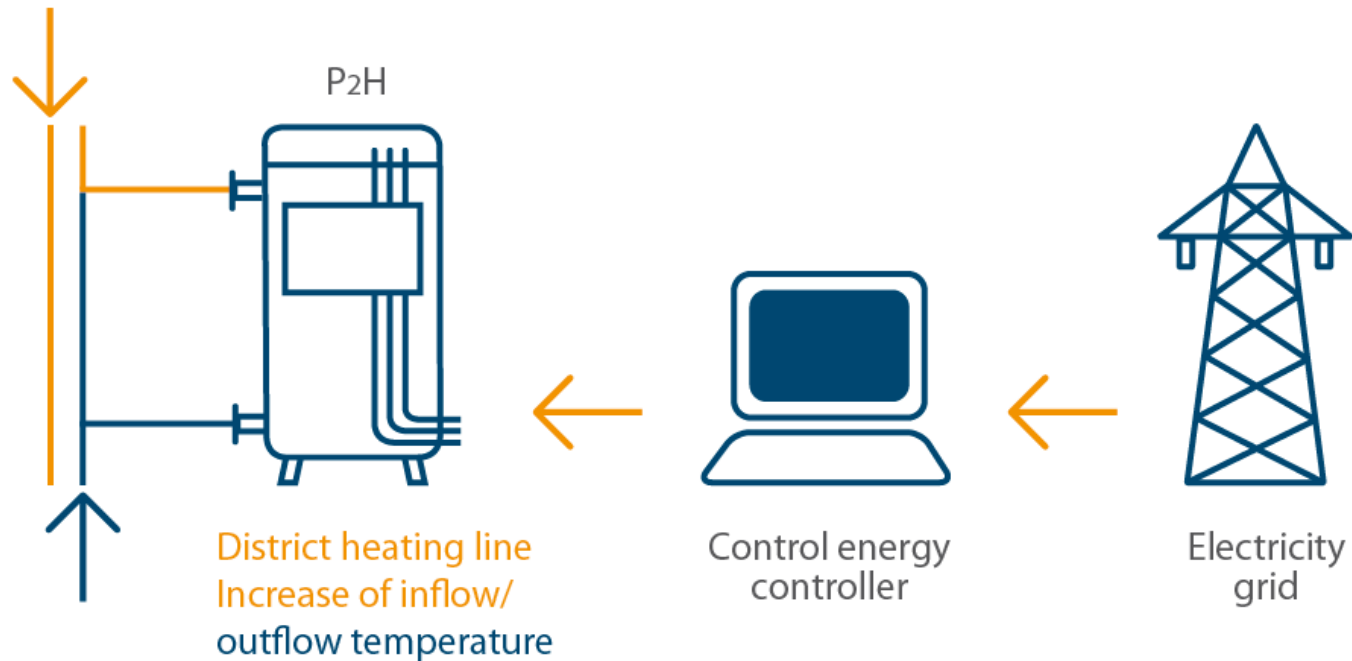
# What we make

## Execution Power-to-Heat (P<sub>2</sub>H)



# Heat network input creates economic benefits

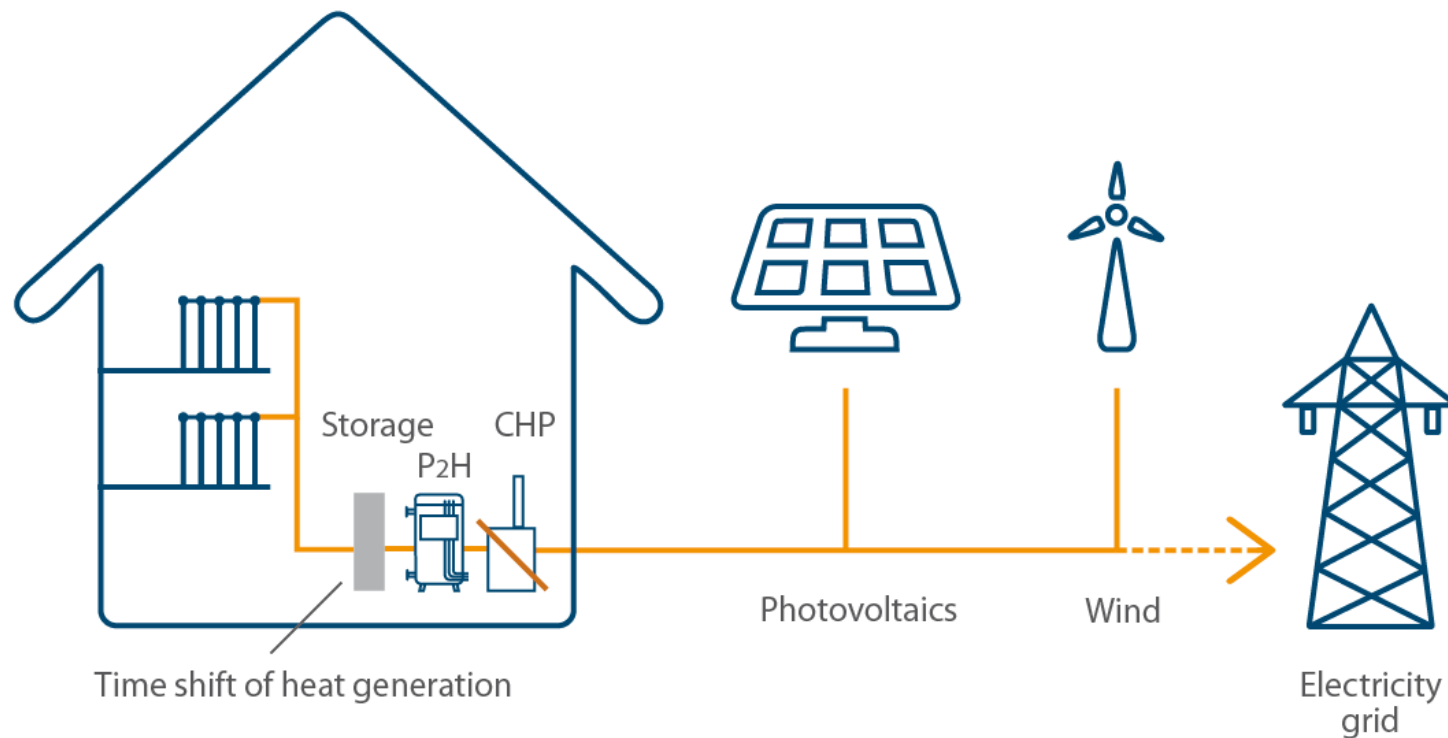
Application example P2H (1|4)



<b>Task</b>	Absorption of controlling power range (primary / secondary)
<b>Realisation</b>	Precise control, incl. ramping of several combined heat and power plants (CHP)
<b>Result</b>	Power grid stabilisation, thermal energy for district heating

# P2H utilisation of surplus power

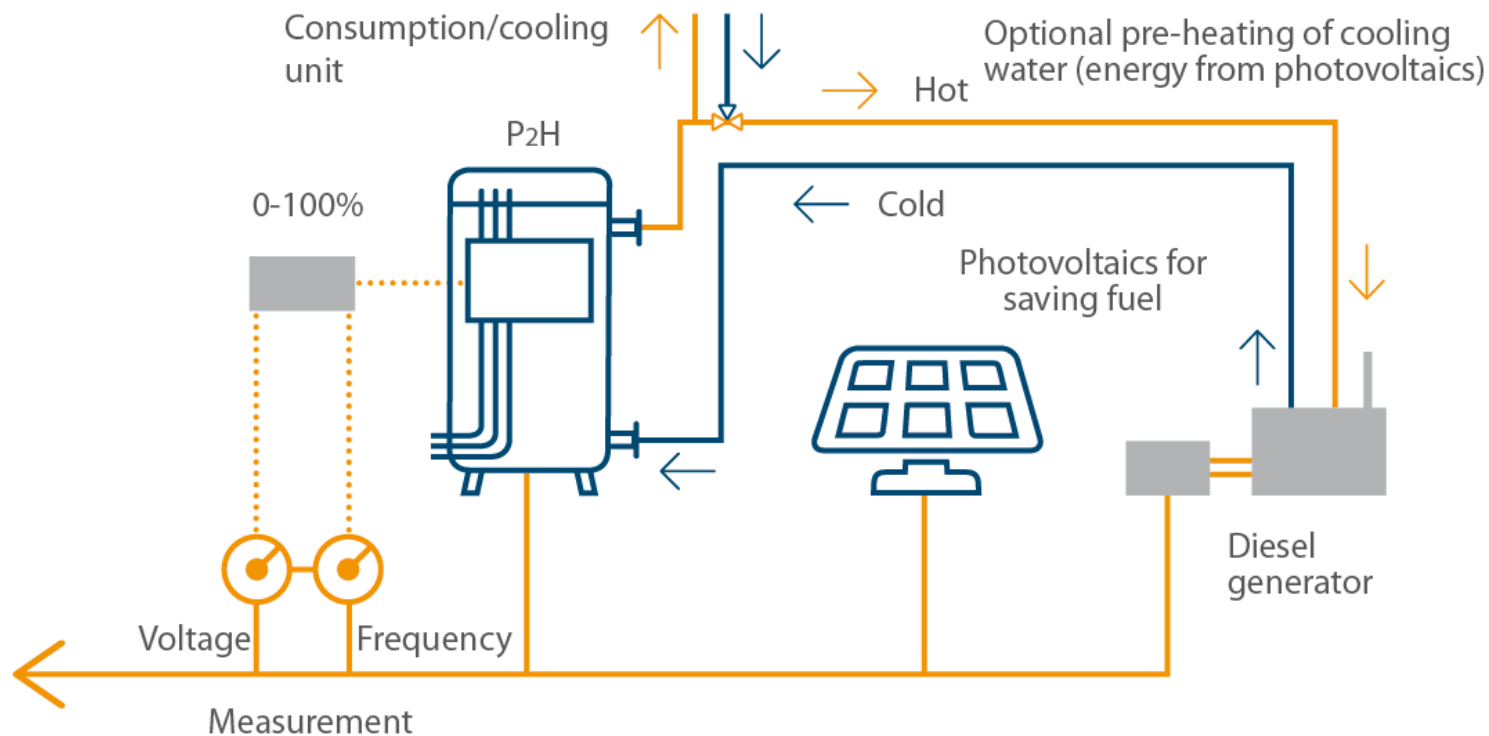
Application example P2H (2|4)



<b>Situation</b>	Grid extension lags behind extension of renewable energy
<b>Realisation</b>	ELWA P2H utilises surplus from renewable energy
<b>Result</b>	Local surplus power is being transformed in heat (avoiding usage of fossil fuels)

# P2H to create back load & stabilise power grid

Application example P2H (3|4)

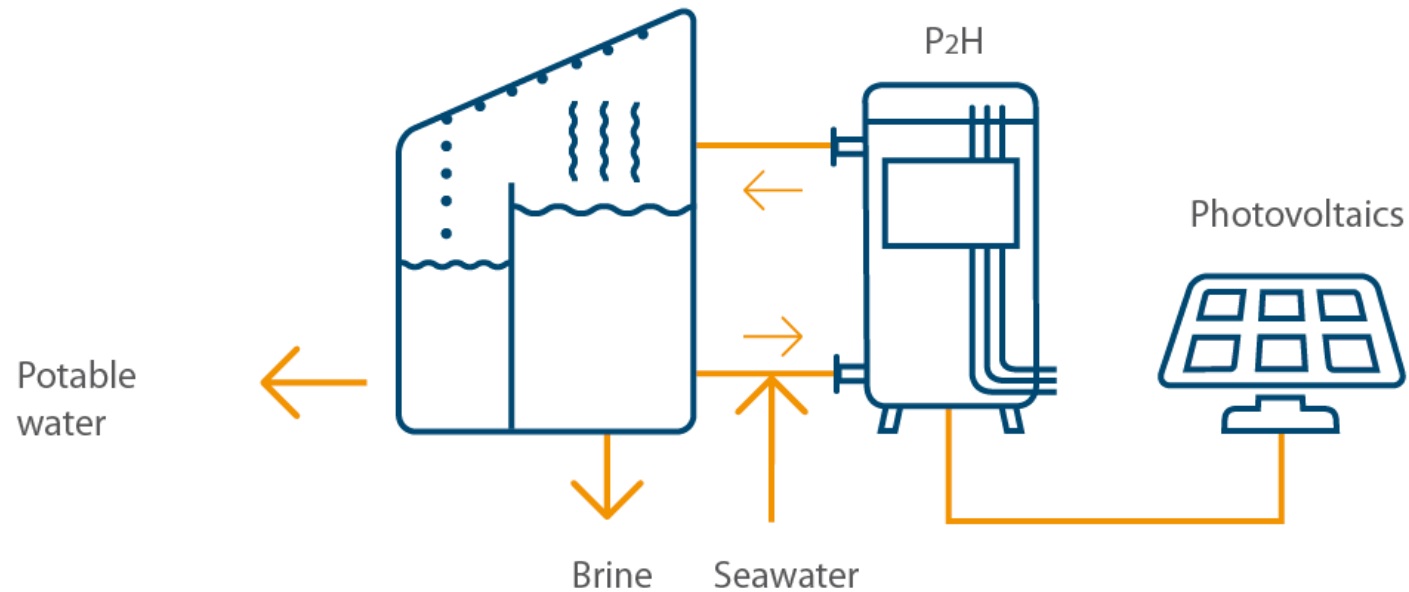


<b>Task</b>	Demand of adaptive back load at variable generators
<b>Realisation</b>	ELWA P2H delivers variable back load by the second
<b>Result</b>	Stabilisation of voltage and frequency PLUS generating heat



# P<sub>2</sub>H as part of a desalination plant

Application example P<sub>2</sub>H (4|4)



<b>Task</b>	“Green” desalination of sea water by using solar power
<b>Realisation</b>	ELWA P <sub>2</sub> H heats sea water self-sufficiently at low costs
<b>Result</b>	Emission-free and off-the-grid production of potable water

# Proven technique – already in use

P<sub>2</sub>H 288 kW district heating



**Technology**



**Demand**



**Subject**



**Sales**



# Strong winds of change

Impression from Andalusia



# Esto es todo.

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