



GREEN

INDEPENDENCE

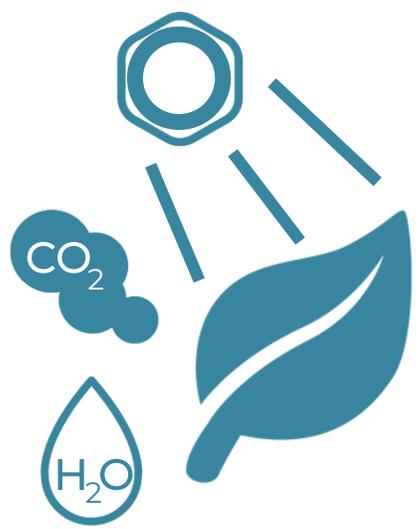
EMPOWER EVERYBODY



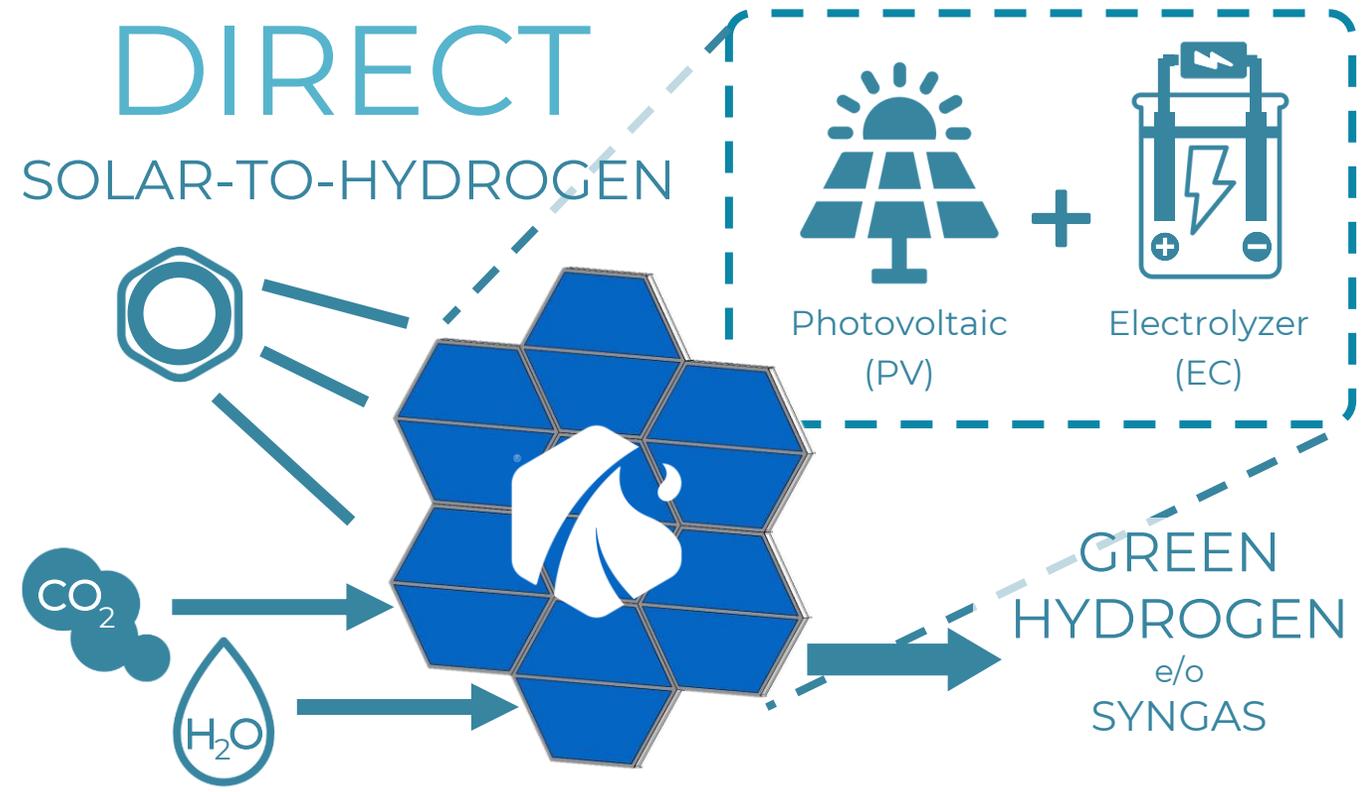
POC CELLA FOTO-ELETTRO-CATALITICA



NEW ARTIFICIAL LEAF TECH

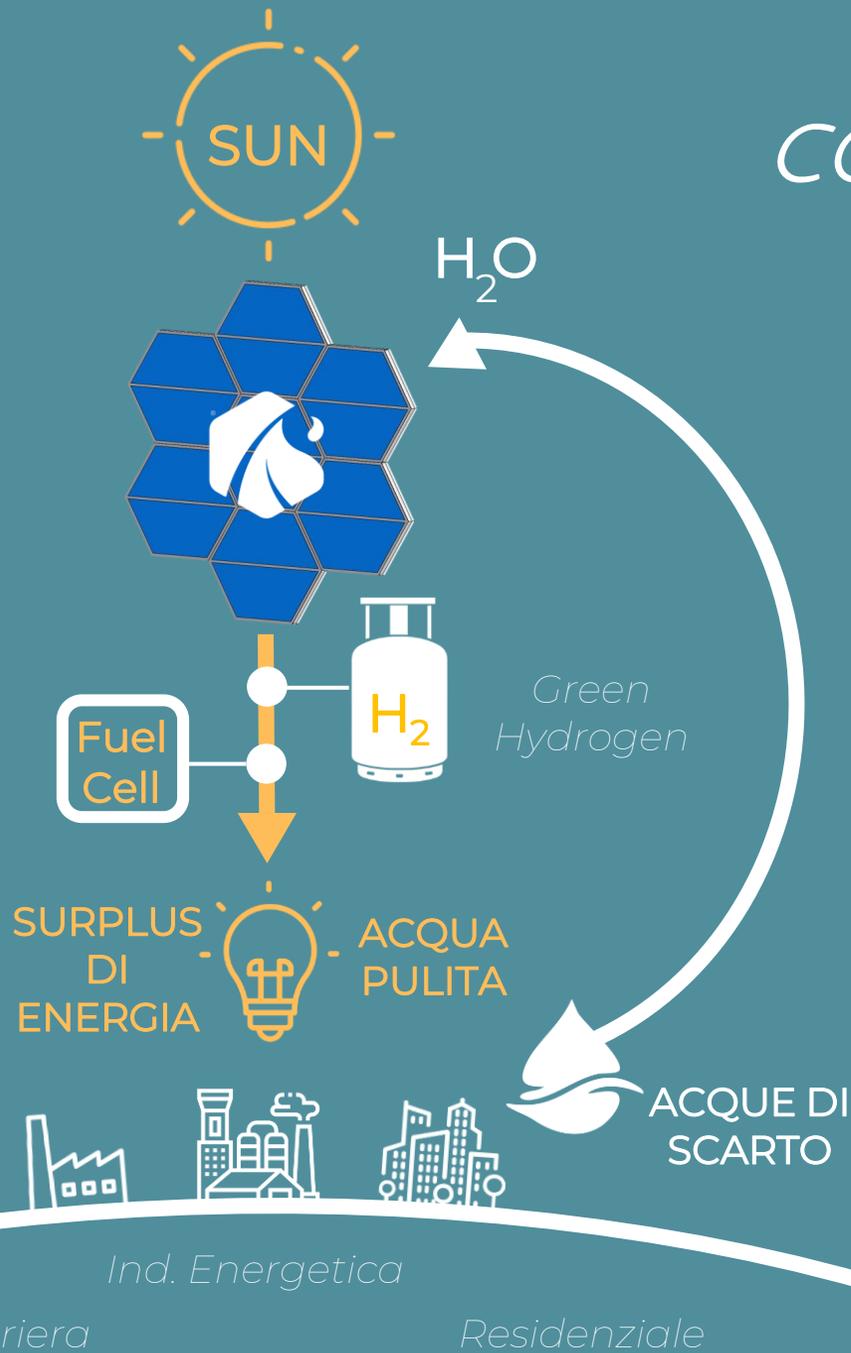


Natural Leaf

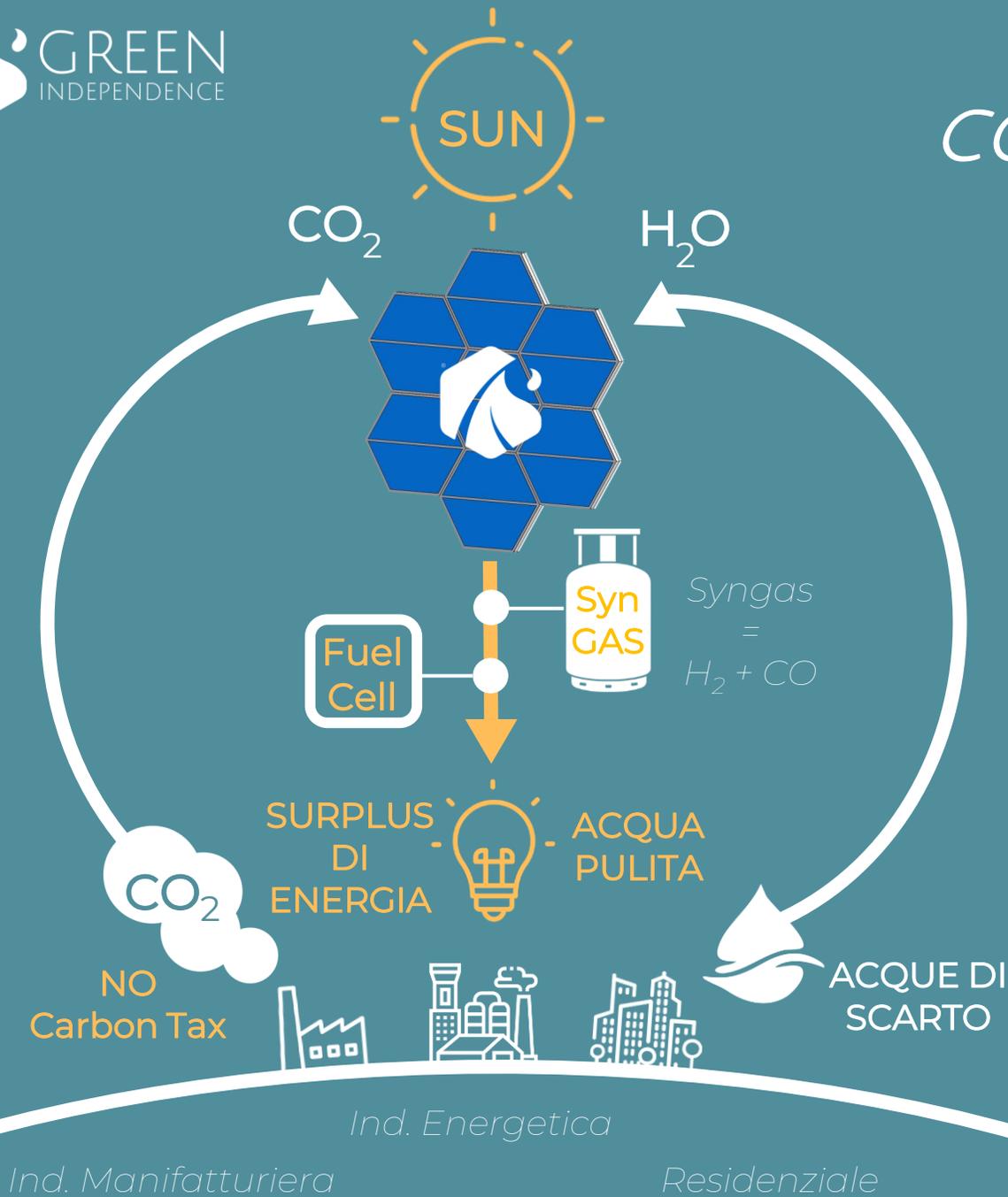


New Artificial Leaf

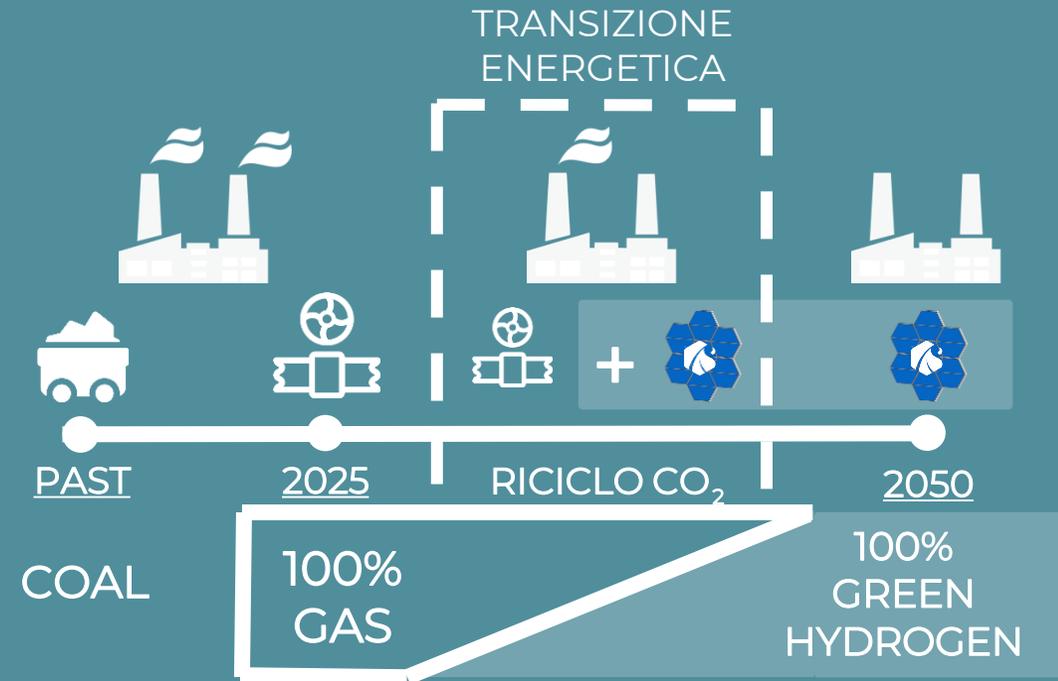
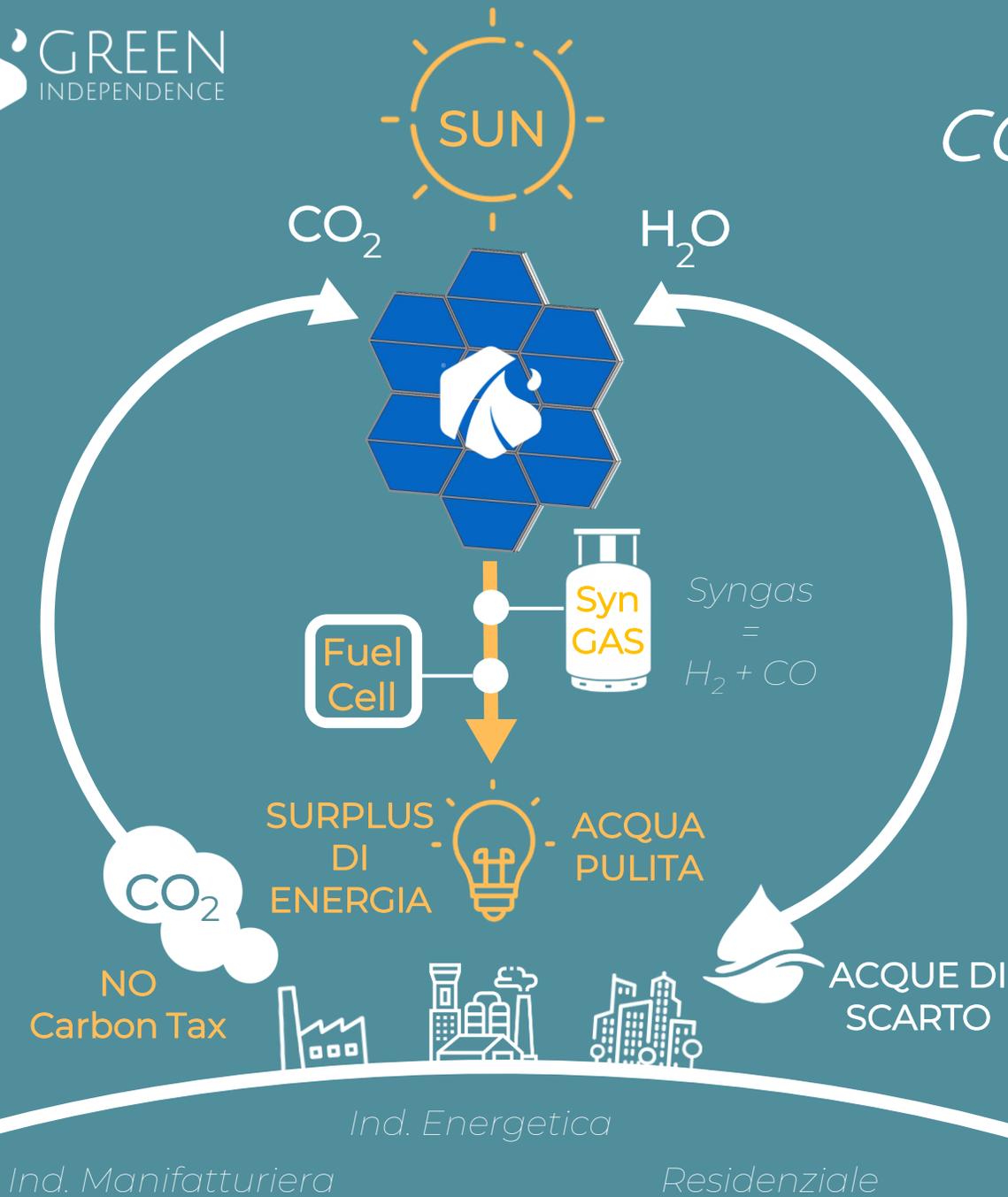
COME NASCE E CAMBIA IL NOSTRO MONDO

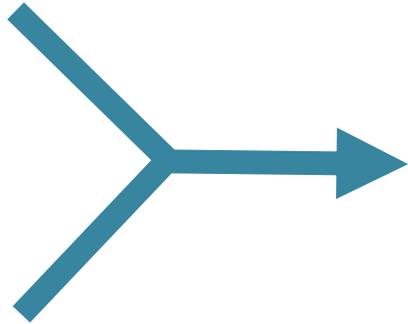


COME NASCE E CAMBIA IL NOSTRO MONDO



COME NASCE E CAMBIA IL NOSTRO MONDO



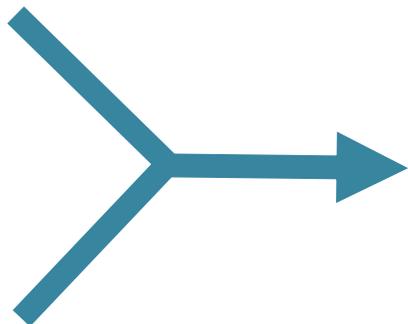
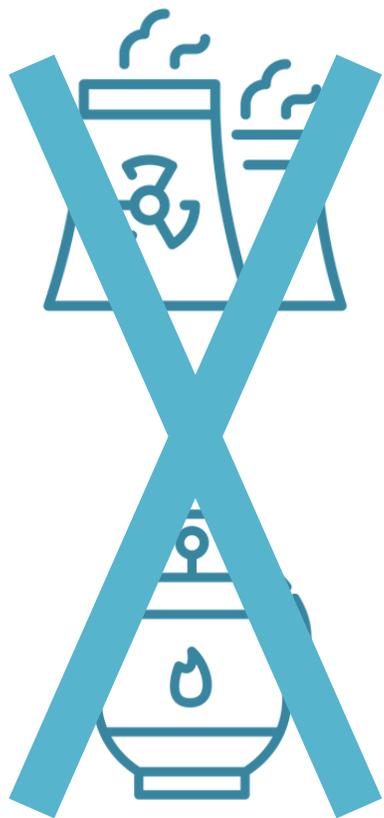


300 000 GWh/yr



5000
kWh/yr

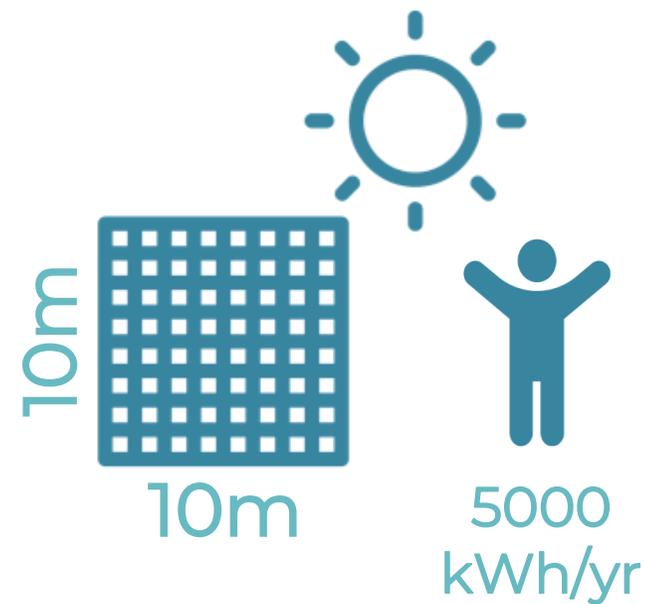
INDIPENDENZA ENERGETICA ZERO EMISSIONI



300 000 GWh/yr

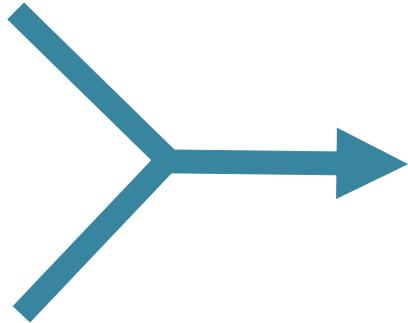
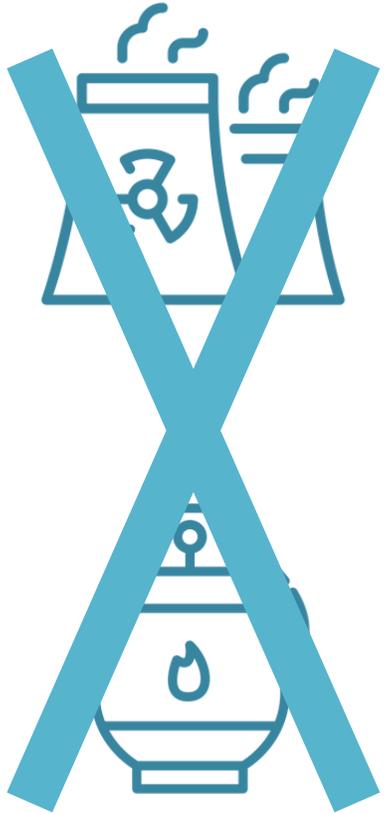


1%
SUPERFICIE



Brucciando l'idrogeno con un'efficienza del 25%

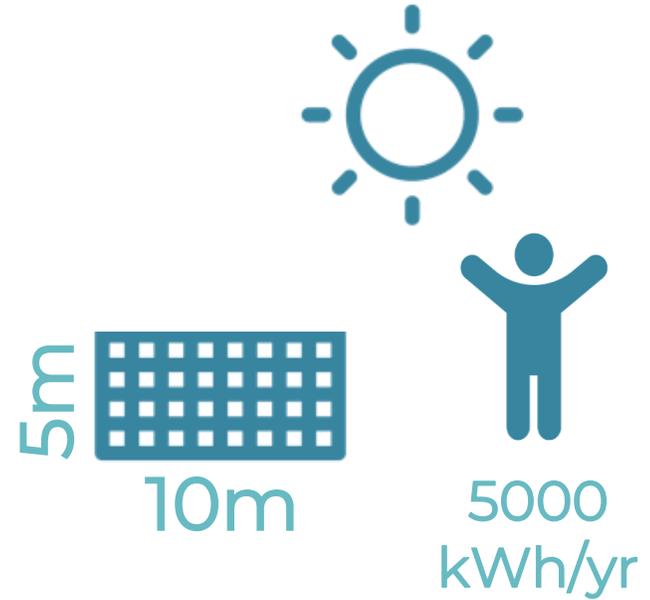
INDIPENDENZA ENERGETICA ZERO EMISSIONI



300 000 GWh/yr



0,5%
SUPERFICIE



TECH ROADMAP

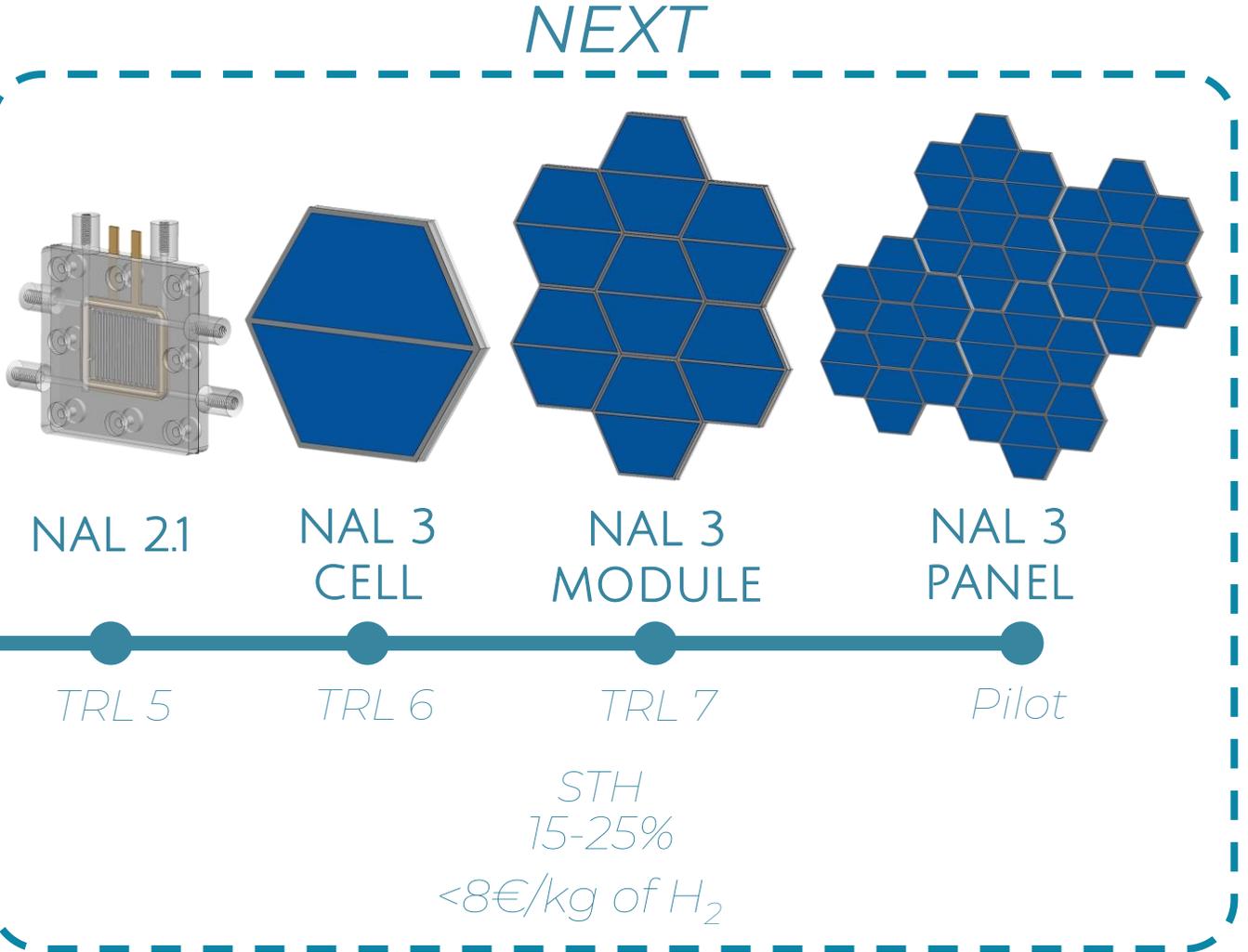
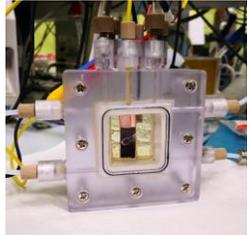
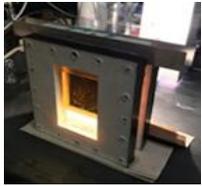
UIC
UNIVERSITY OF ILLINOIS AT CHICAGO

iit ISTITUTO ITALIANO DI TECNOLOGIA

Politecnico di Torino
1859

snam

Politecnico di Torino
1859



NAL 1

NAL 2.0

NAL 2.SNAM

NAL 2.1

NAL 3 CELL

NAL 3 MODULE

NAL 3 PANEL

TRL 3

TRL 4-5

TRL 5

TRL 5

TRL 6

TRL 7

Pilot

STH
5-12%

STH
15-25%
<8€/kg of H₂



Politecnico di Torino



Ultrasound spray-coater



Micro-GC & GC/MSD



1.6 m² artificial leaf

Photo/bio/electrochemical prototypes

Electrodes optimization & scale-up

Photo/bio/electrochemical technologies for CO₂ reduction and sustainability

Gas & Liquid analysis



Multi-channel Potentiostat

20-150°C 0-30bar

Reactors & pilot plants optimization

Sun simulators and UV Lamps



Xe lamps & Monochromators



Bubbling reactor

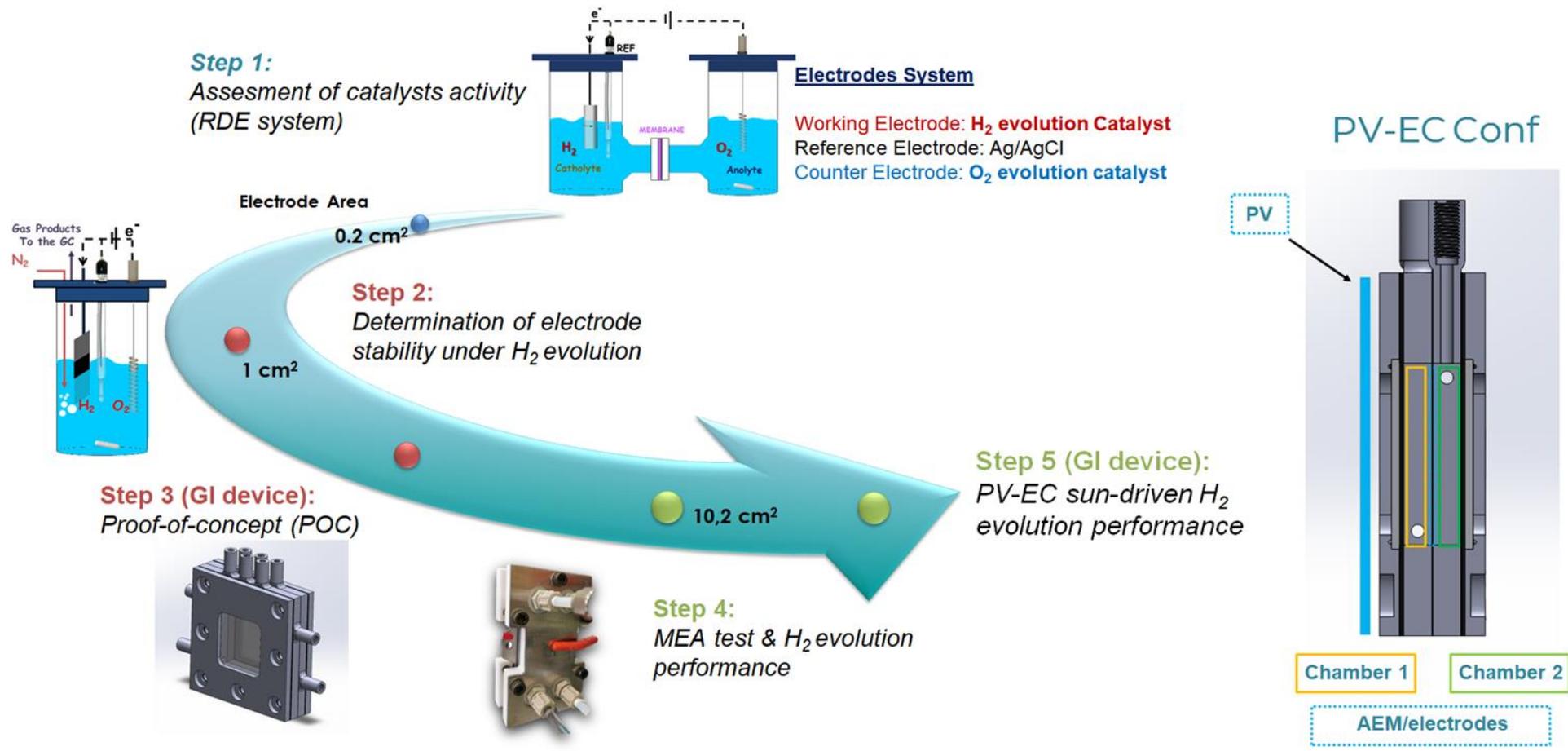


Micro-Flow cell

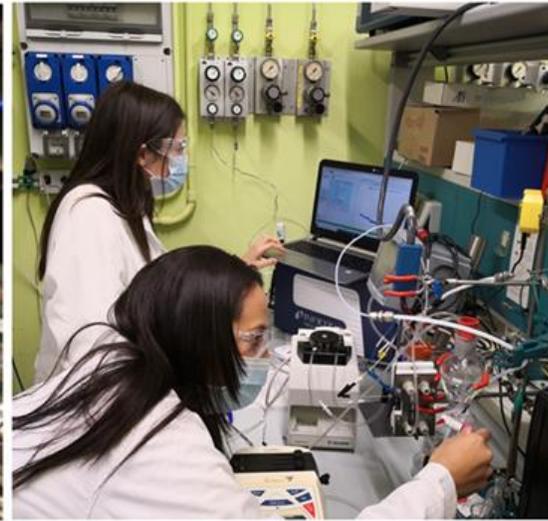
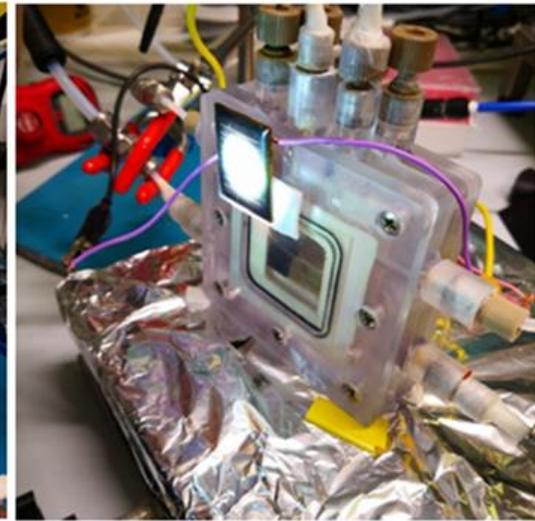
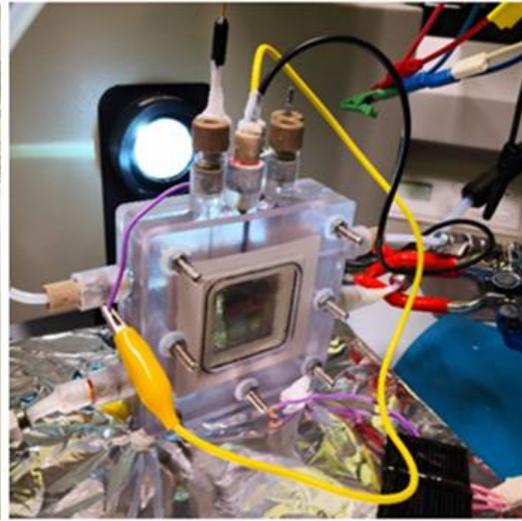
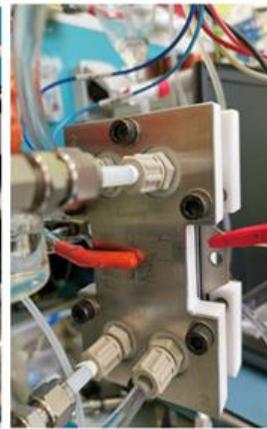
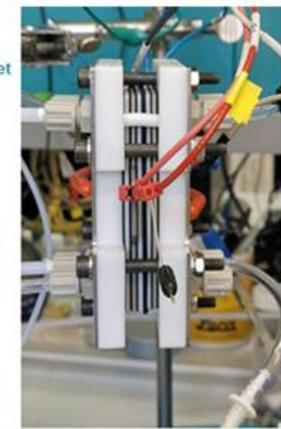
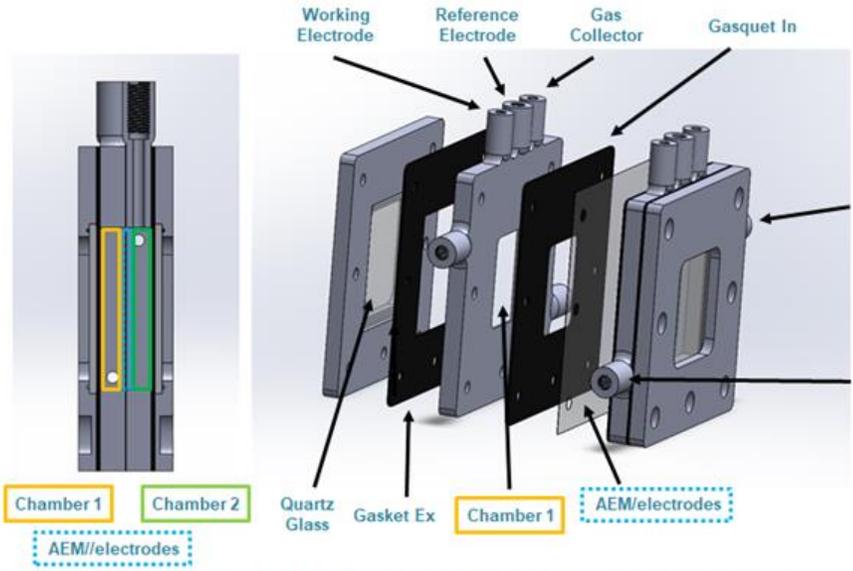
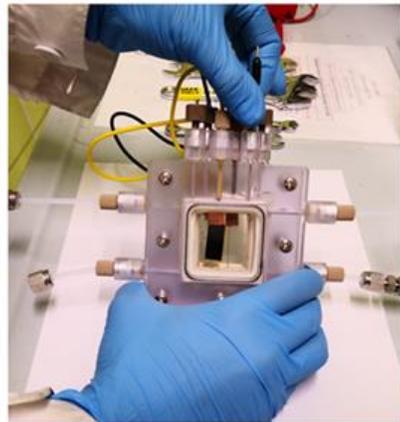


Electrochemical test-bench (TRL2-4)

TEST PHASE



TEST PHASE





TRASPORTI PRIVATI

Riduzione delle emissioni da tutti i trasporti alimentando FCEV

EDIFICI RESIDENZIALI

Smart cities ed edifici indipendenti dal punto di vista energetico

TRASPORTI PESANTI

Treni, Camion, Aerei, Navi

INDUSTRIA ENERGETICA

Riconvertire e facilitare la transizione della produzione di energia



GRAZIE PER L'ATTENZIONE

<http://co2circlelab.eu>



GREEN
INDEPENDENCE

