

H₂ Energy

At the heart
of the energy transition

Dave Edwards

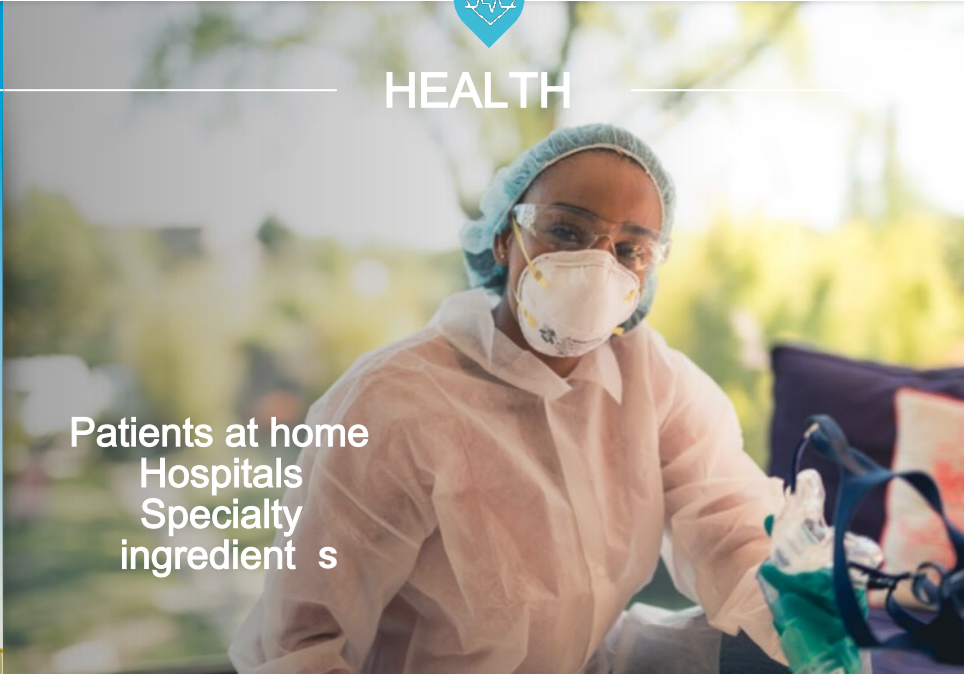
Director and Advocate for Hydrogen Energy
Air Liquide

A world leader in gases, technologies, and services for...



INDUSTRY

Cleaner and sustainable solutions for a wide range of industrial processes of our customers: energy, metals, food, chemicals, automotive, pharmaceuticals, etc.



HEALTH

Patients at home
Hospitals
Specialty
Ingredient s



~64,500
EMPLOYEES



PRESENT IN
78 COUNTRIES



+3.8 MILLION
CUSTOMERS &
PATIENTS



REVENUE
€20.5bn



NET PROFIT
(GROUP SHARE)
€2.4bn



INVESTMENT
DECISIONS
€3.2bn



Air Liquide Commitment: Creating value for a low -carbon society



ABATEMENT OF CO₂ EMISSIONS SETTING A TRAJECTORY TO REACH **CARBON NEUTRALITY**

Air Liquide Commitments



CO₂ emissions **start decreasing** in absolute value

~2025

-30%

Carbon intensity
in kg CO₂/€ EBITDA^(a)
vs 2015



2035

Decrease scope 1 & 2
CO₂eq emissions in
absolute value by
-33%^(b)

Reach **Carbon Neutrality** by **2050**

2050



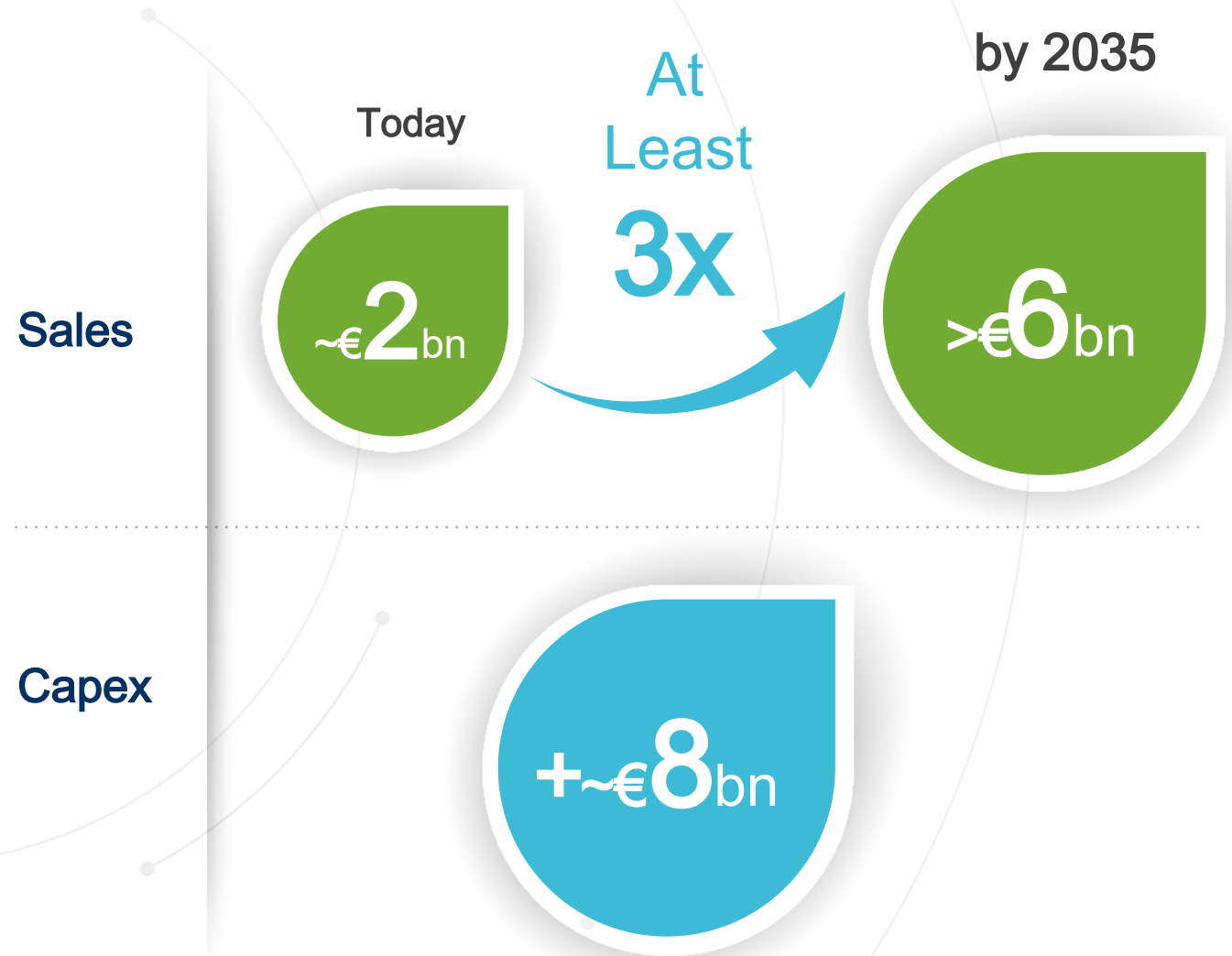
(a) at 2015 exchange rate and excluding IFRS16 for greenhouse gas emissions scopes 1 and 2
(b) from 2020 Market based emissions of 32.5 million tonnes CO₂eq (Scope 1+2)



Hydrogen, cornerstone of the energy transition



AIR LIQUIDE HYDROGEN MARKET TO MORE THAN TRIPLE BY 2035



Capturing demand:

- Low Carbon + Renewable H₂ offer
- New H₂ industrial applications
- Carbon Capture as a service
- H₂ mobility

Capturing additional value by decreasing customers CO₂ footprint

Investment in:

- CO₂ Capture plants
- Electrolyzers
- Supply chain for mobility
- Acquisitions

3 GW^(a)

(a) Including 1 GW decided still under construction



LEADING THE HYDROGEN ECOSYSTEM DEVELOPMENT



Electrolysis
Denmark
1.2 MW



CCU + Low-Carbon H₂
France
1 CO₂ Capture "Cryocap"



CCS + Low-Carbon H₂
(In Devt.) Antwerp / Benelux
CO₂ Capture



Electrolysis
Bécancour, QC
1x 20MW



Large scale electrolysis
(In Devt.) H2V France
200 MW



H₂ reduction in steelmaking
Germany



Supply Chain
US West Coast
H₂ Liquefier



H₂ Stations for Consumers
70 HRS



H₂ Network for trucks
France / Benelux / Germany
HyTrucks



Supply Chain
(In Devt.) Norway
Liquid H₂ for ships



H₂ Forklifts
US+EUROPE
9 sites



H₂ Bus & Taxi fleets
France / China / Korea

KEY FIGURES

1.2 Mt of H₂/year

1,850 km H₂ pipeline

53 large H₂ / CO plants

20MW PEM Electrolyzer

€2bn sales

Co-founder of **Hydrogen Council**

Northeast: Bécancour, QC:

The world's largest operating PEM Electrolyzer



\$42 M additional investment to existing site with liquefier



20 MW PEM electrolyzer
Nearly 100% renewable H₂ production



8.2 tons per day; increasing site's total production by 50%



Strengthen supply to main industrial markets in Canada and U.S.

Western US: North Las Vegas

Our first production facility dedicated to the Mobility Market



\$200M Investment including production, liquefaction and distribution



30 TPD Production able to meet the needs of 40,000 FCEVs



Flexible production able to meet the renewable hydrogen needs of the market



Strengthen supply to mobility markets across western US

**At Air Liquide, we are confident in the hydrogen market of the future
because we have built the hydrogen market of today**

Thank you!

 **Air Liquide**