



PowerCell Group



# Headquarters in Sweden. Global presence.



Leading fuel cell technology built on 25 years of R&D & IP

Spin-out from the Volvo Group in 2009

Listed on NASDAQ since 2014

Driving business with strategic partners

Development & production according to industry standards



# Core



# Services



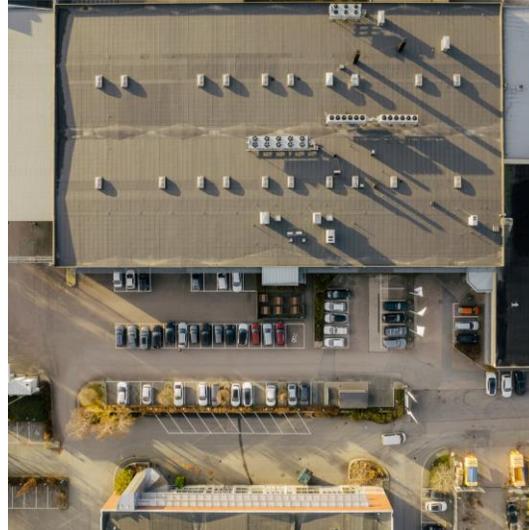
## Consultation

Feasibility studies that guide you to make the right choice



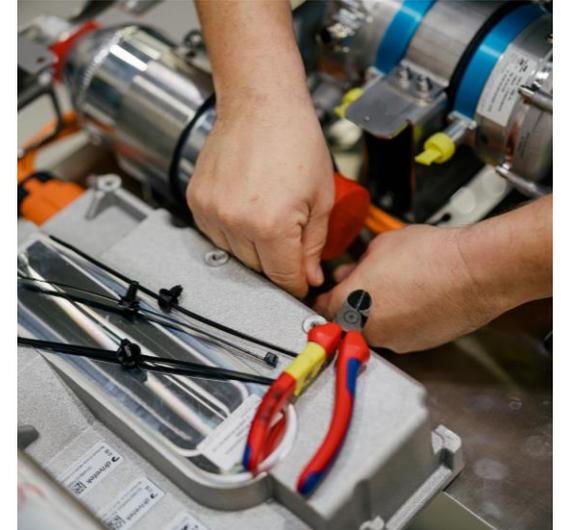
## Industrialised Innovation

New market-leading products developed from our industrialised portfolio



## Support

Integrations, installations and operations, online and on-site



## Modification

Customised application-ready products based on our industrialised portfolio

# Segments & Drivers

## Marine

Passenger vessels  
Fast ferries  
Cargo vessels  
Large yachts

## Aviation

Passenger planes  
eVTOL  
Drones

## Power Generation

Back-up power  
Prime power  
Peak shaving  
Shore power

## Off-road

Mining equipment  
Material handling  
Agriculture machinery  
Heavy equipment

## On-road

All on-road vehicles

Transition drivers

- IMO GHG reduction strategy
- Fuel EU Maritime regulations
- Local emissions free zones
- Quick refueling
- Insufficient grid for connecting ships to grid when at shore

- IATA Net Zero resolution
- Cheaper than SAF for small & regional planes
- Superior energy density and quicker refuelling compared to batteries

- Local air emission regulations (e.g. emissions free zones)
- Science Based Targets
- Off-grid applications
- Insufficient grid
- Long duration energy storage

- Science based targets
- Local air emission regulations (e.g. emissions free construction sites)
- Electrification at off-grid sites
- Fuel efficiency

Served through license agreement with Robert Bosch GmbH

- Science Based Targets
- Range
- Refueling times
- Weight and volume restrictions

# Proven track-record of customer installations and blue-chip partnerships



ZeroAvia a pioneer in the Aviation segment



Torghatten (SEAM) two Norwegian ferries



Hitachi HyFlex – enabling emissions free construction sites



H2Fly develops zero-emission commercial flight



Feadship project 821, world's first hydrogen fuel-cell superyacht



PowerCell's Power Generation 5 – the Ocean Race Edition

## Partnerships



Automotive license agreement

Stack manufacturing agreement



Fuel Cell Power Generator Partnership

Global sales reach

## Other engagements



German ASI project – Mass-produced fuel cell stacks for automotive



EU initiative to develop disruptive new aircraft technologies to support the European Green Deal, and climate neutrality by 2050.



EU's Newborn project – Aviation-grade megawatt fuel cells



European development project for fuel cells in harsh marine installations

Products

# Fuel Cell Stacks



S2 Stack

3-35 kW



S3 Stack

75-150 kW



HDS300 Stack

300 kW

Products

# Fuel Cell Systems



P System 100



Power Generation System 200



Marine System 225



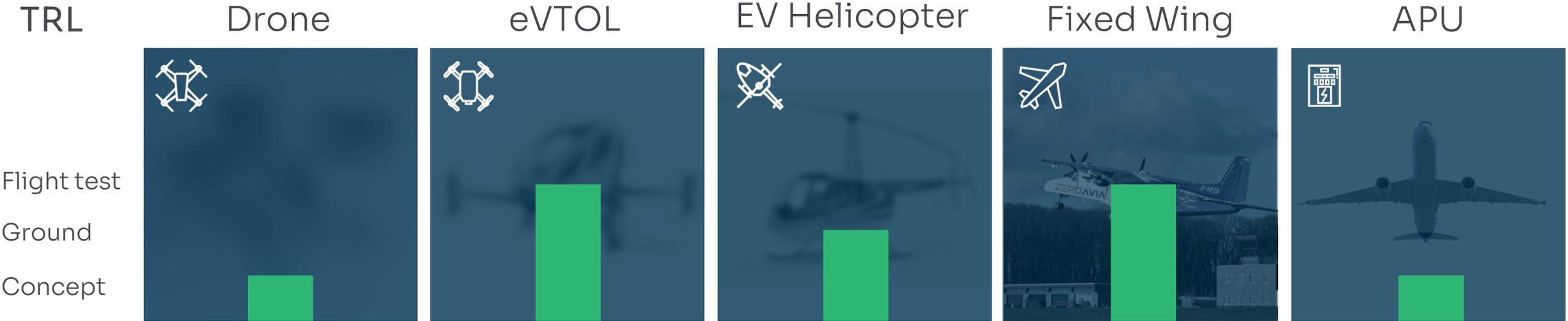
M2Power 250

A view from an airplane window showing the wing and tail against a sky with clouds.

# Together we fly

Enabling Zero-Emission Aviation

# Aviation Applications



# Aviation



H2Fly

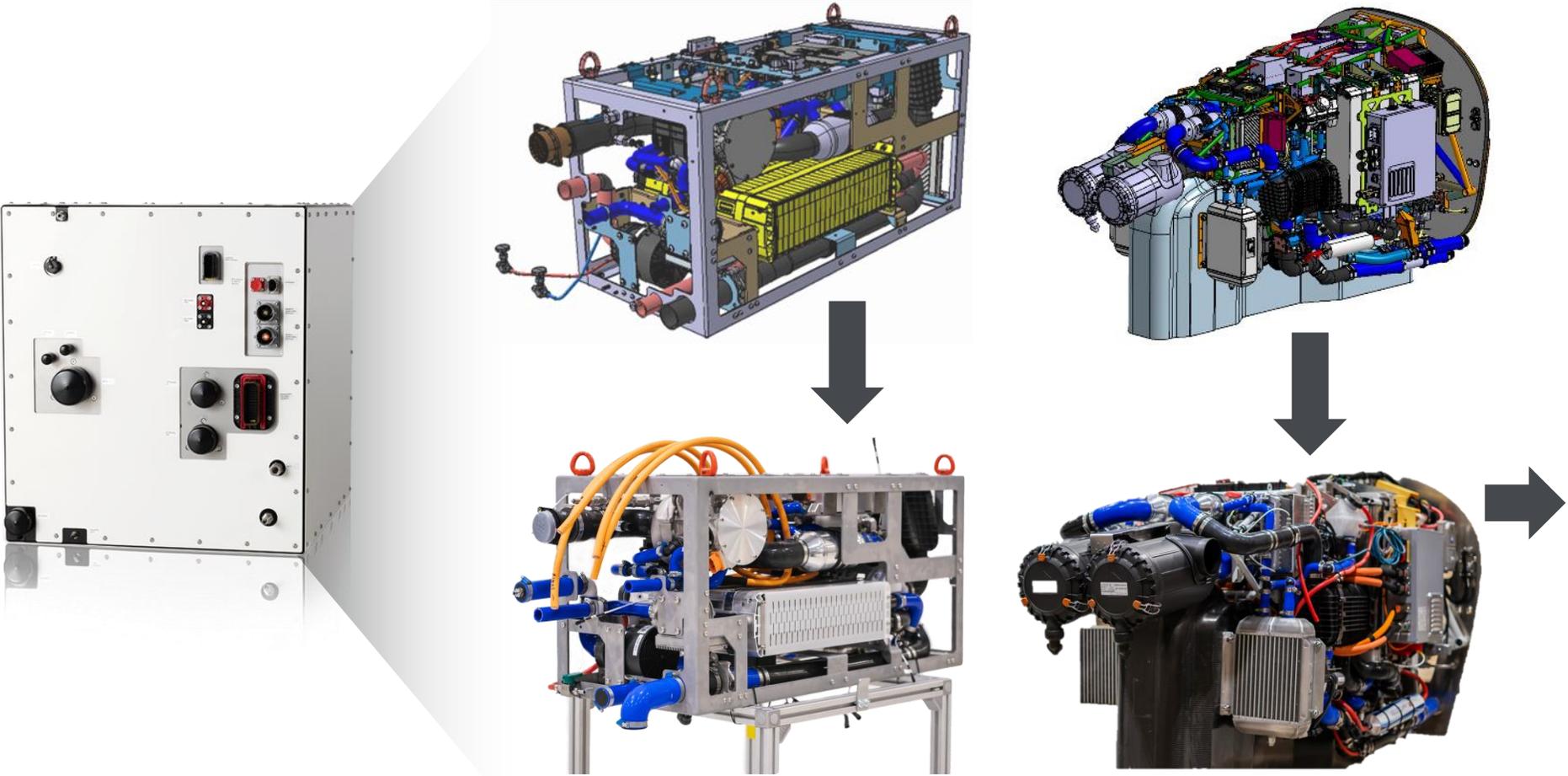


ZeroAvia



AMSL Aero

# Customised Systems



# Aviation driving development



Get it to work  
50°C



Reliability & durability  
60°C



Power density & cost  
75°C



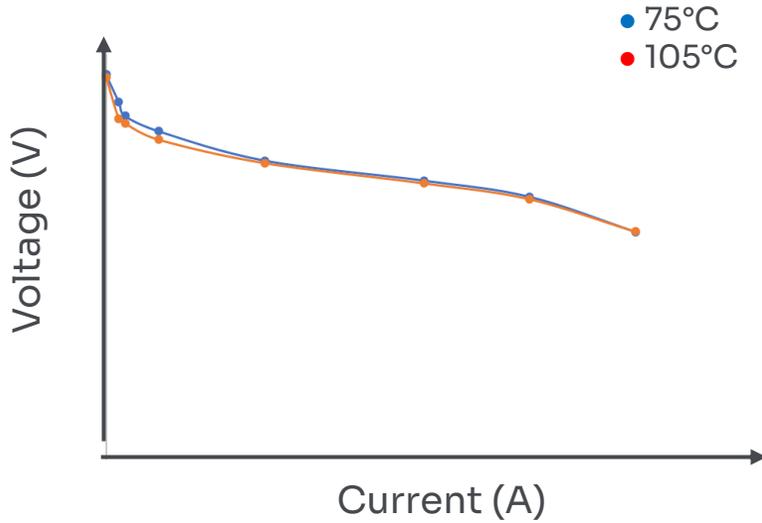
Power density,  
reliability & durability  
85°C



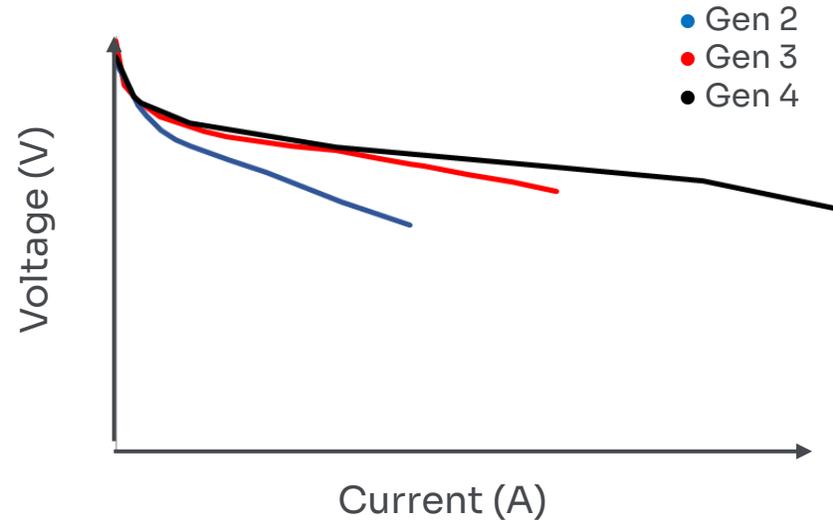
Power density,  
reliability & durability  
105-120°C

# Performance Indicators

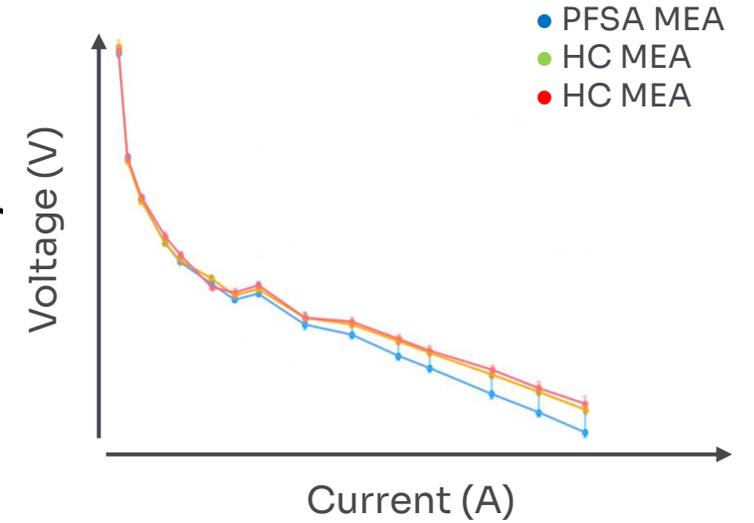
Improved temperatures



Improved performance



Non PFSA membrane



# NEWBORN

Next-generation fuel cell stack development



## 44.8 million €

Funded by the European Union and supported by the Clean Aviation Joint Undertaking and its members.



## 13 experienced partners

The partners have a solid experience in Aircraft architecture and integration, fuel cell systems and high power electronics.



## Project length: 3.5 years

From concept through design, development and validation to working demonstrator.



## Goals



1-8 MW scalable fuel cell power module



TRL 4 technology ground demonstrator in 2026



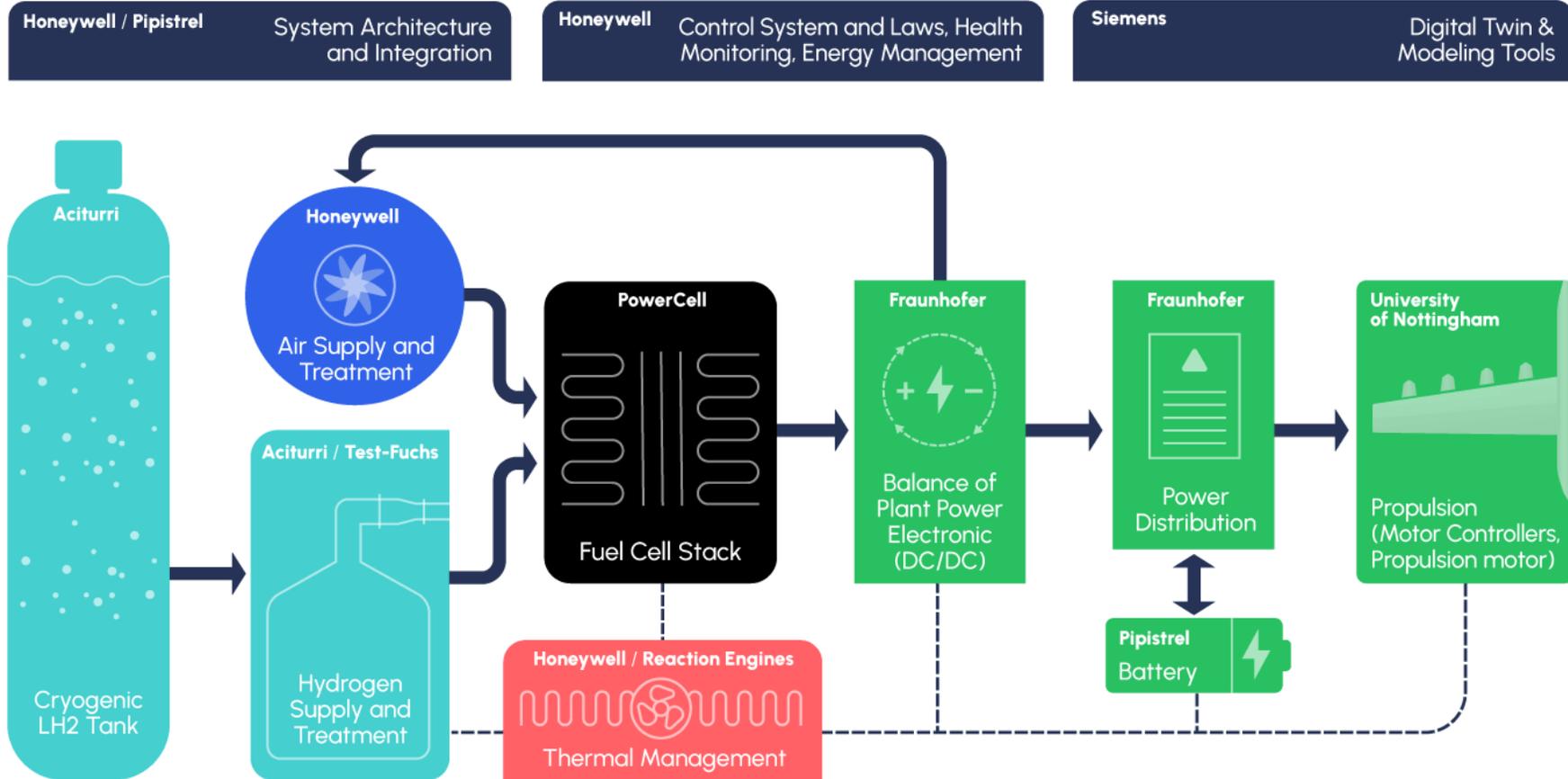
1MW modules are directly usable for CS-23 aircraft



Target Aircraft category CS-25 (HERA architecture)



Zero CO<sub>2</sub> aviation by fuel cell powered Aircraft



# NEWBORN

Fuel cell stack development and delivery

## Targets

- Development of 300 kW fuel cell blocks
- Ability to combine 2-4 stack blocks

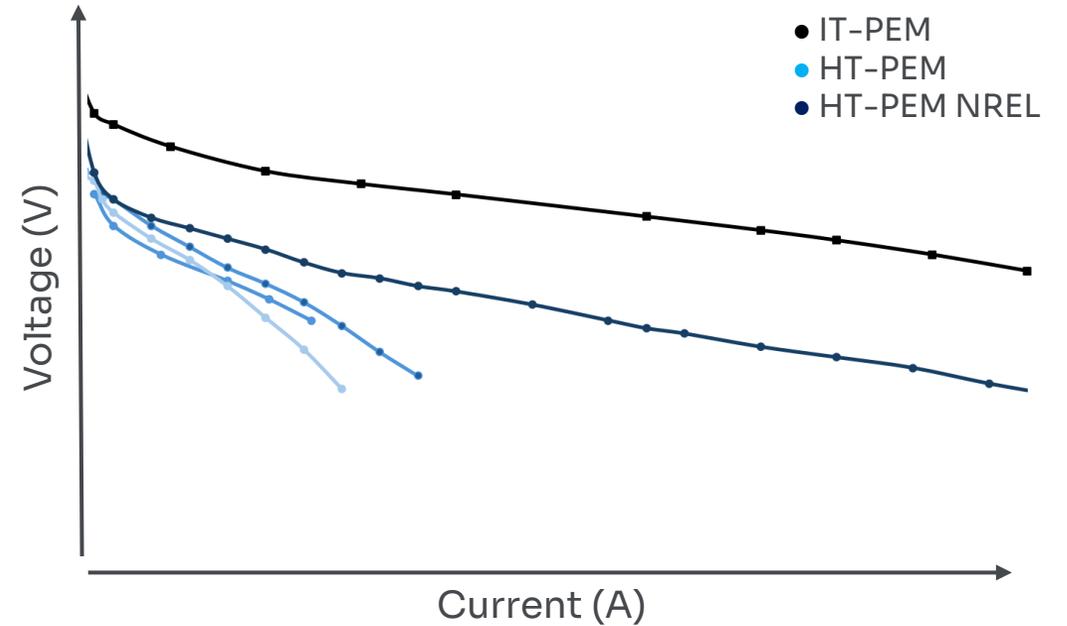
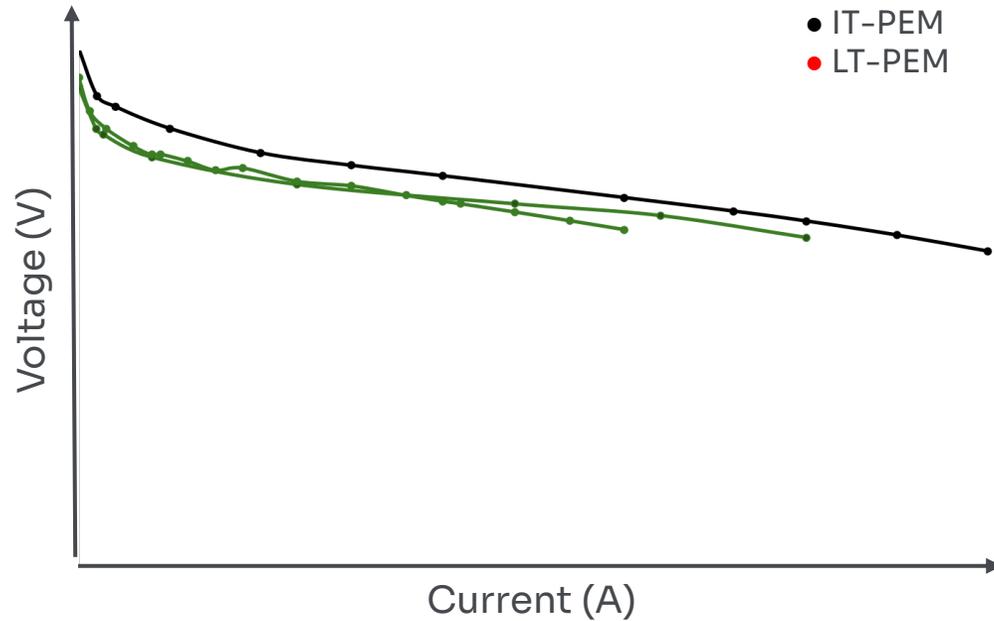
Efficiency	~49-60%
Operating temperature	105 °C
Fuel cell technology	PEM
Power / Stack	Modular (range: 300 kW – 1 MW)
Power density	>5 kW/kg



Grant Agreement No. 101101967



# PEM technologies



“Do not let perfection (HT-PEM) be the enemy of the good (IT-PEM)”

# Summary

**PowerCell is ready today** to support the transition with:

- Industrial products that **already flying**
- **AS9100 certified** and Manufacturing Capabilities
- Preparing for next phase hydrogen aviation with industrial products **HDS300 (IT-PEM)**
- We **minimising** your **technical risk, time to market** and **investment**

Together we fly!



PowerCell Group