

Doosan Fuel Cell

DOOSAN

2026 1Q IR Presentation

April 2026

Investor Relations



Disclaimer

The information herein is provided for your information purposes only and contains preliminary figures which may be materially different from the final figures.

Forecasts and projections contained in this material are based on current business environments and management strategies, and they may differ from the actual results upon changes and unaccounted variables.

We make no guarantees and assume no responsibility for the use of information provided. We trust your decisions will be based on your own independent judgment.

Financial data in this presentation is on K-IFRS consolidated and separate basis.

Table of Contents

I. Business Performance and Outlook

1. Annual Sales
2. Order Performance and Outlook
3. Mid-to-Long Term Sales Outlook

II. Market Environment

1. Domestic Power-generation Market
2. Data Center

III. Growth Engine

1. Market Expansion: PAFC
2. Product Line-up Diversification : SOFC

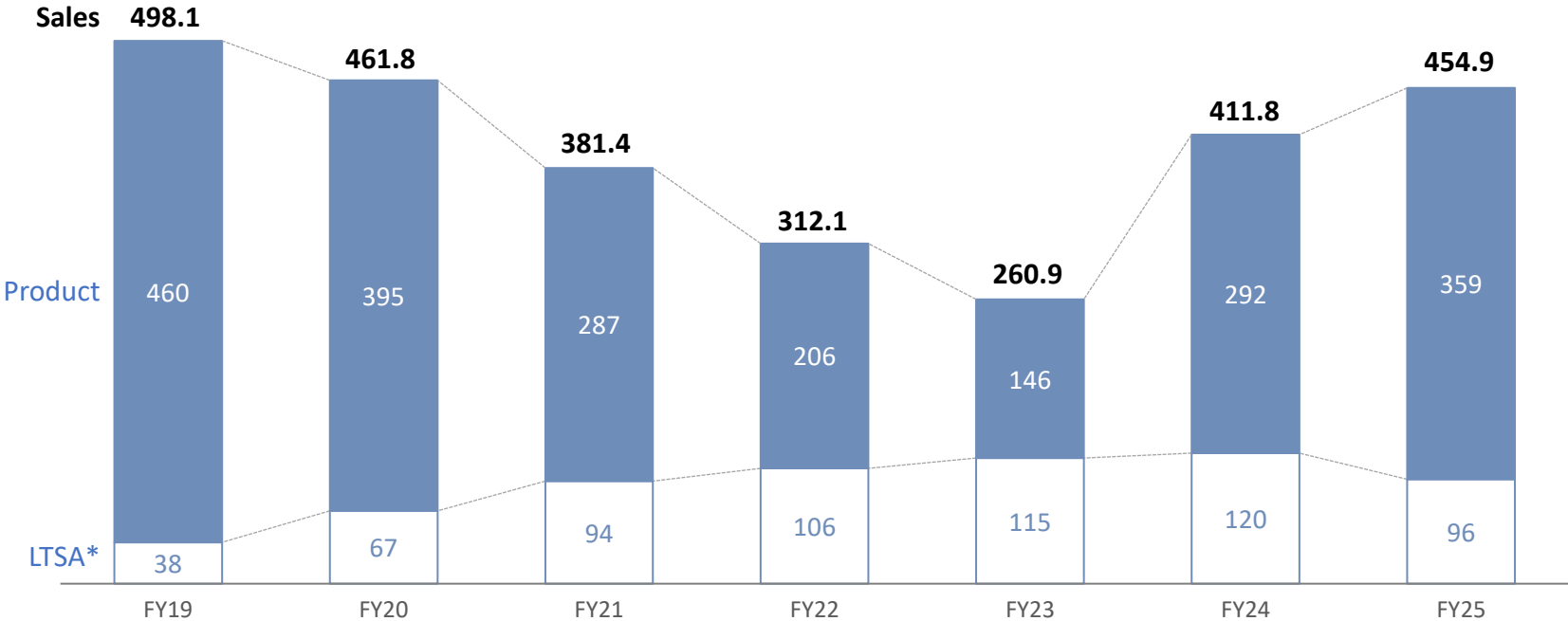
Appendix

1. Sales

Sales declined through 2023, but growth resumed in 2024.
A significant increase in Sales is expected in 2027.

Annual Sales Trend (2019-2025)

(Unit: KRW billion)



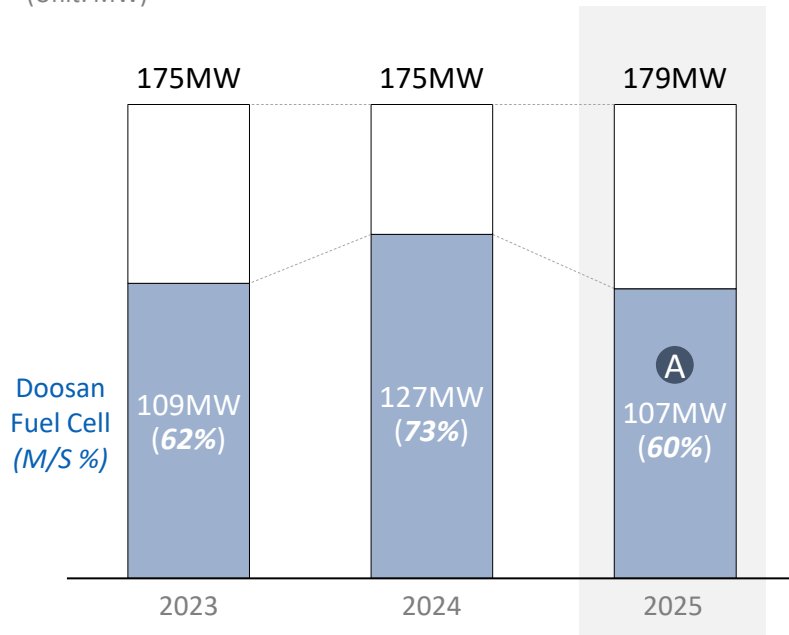
*) LTSA: Long Term Service Agreement

2. New Orders

New orders(2025) 72MW: Contract recognition for 2024 CHPS projects initially expected in 2H25 was deferred to 2026.
 New orders(2026) to increase significantly: 2025 CHPS project awards + Carry-over from 2024 CHPS + Overseas orders

CHPS General H2 Bidding Market

(Unit: MW)

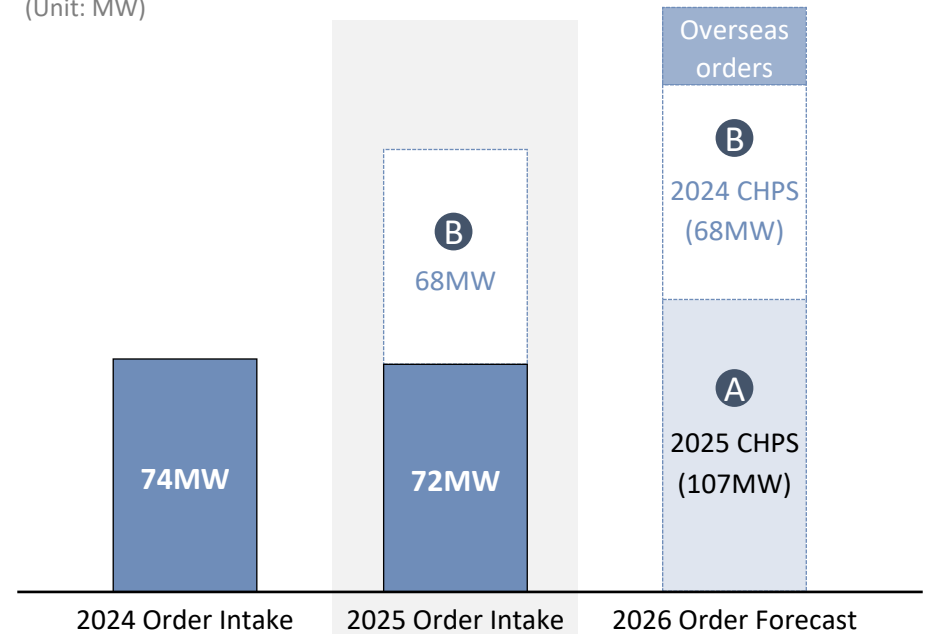


[>60% M/S for three consecutive years since the market opened in 2023]

- **A** 2025 project awards → recognized in 2026
 - 107MW (15 projects)

Orders Intake & Outlook

(Unit: MW)

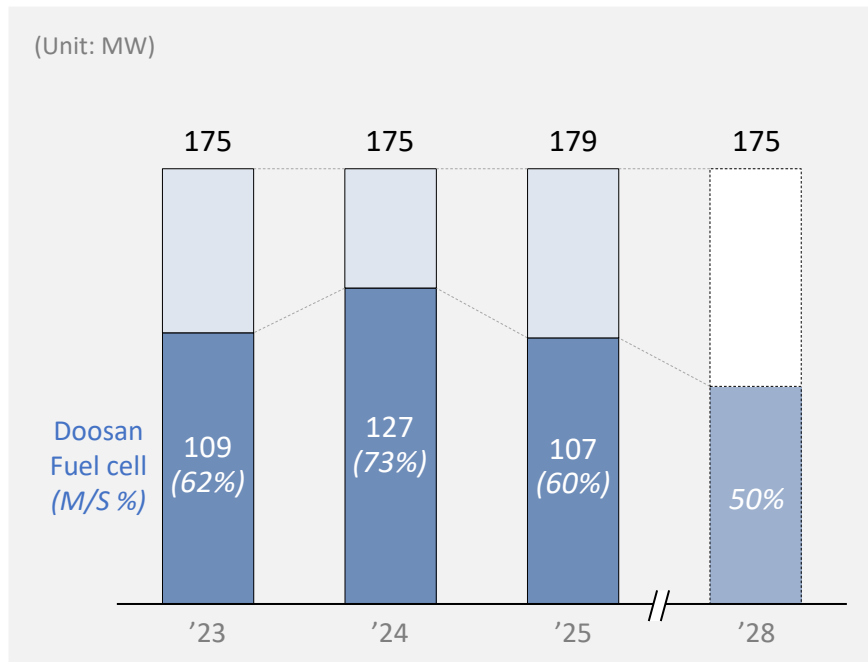


- 2025 Order Intake: 72MW
 - Intake: RPS 21MW + 2023 CHPS 3MW + 2024 CHPS 48MW
 - Recognition deferred to 2026: **B** 2024 CHPS project awards 68MW
- 2026 Order Outlook: to be increased significantly
 - **A** 2025 CHPS awards + **B** Carry-over from 2024 CHPS + Overseas

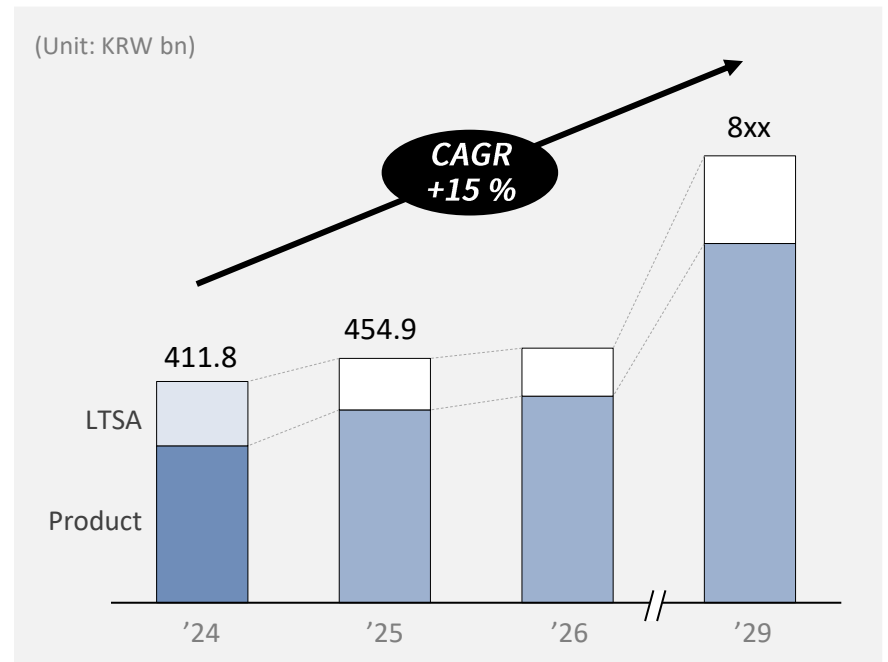
3. Mid-to-Long Term Sales Outlook

Assuming 50% M/S in future CHPS bidding markets, Sales could double within five years

CHPS General H2 Bidding Market Outlook



Mid-to-Long Term Sales Outlook



- 1) CHPS: Clean Hydrogen Portfolio Standard
- 2) RPS: Renewable Portfolio Standard

Table of Contents

I. Business Performance and Outlook

1. Annual Sales
2. Order Performance and Outlook
3. Mid-to-Long Term Sales Outlook

II. Market Environment

1. Domestic Power-generation Market
2. Data Center

III. Growth Engine

1. Market Expansion: PAFC
2. Product Line-up Diversification : SOFC

Appendix

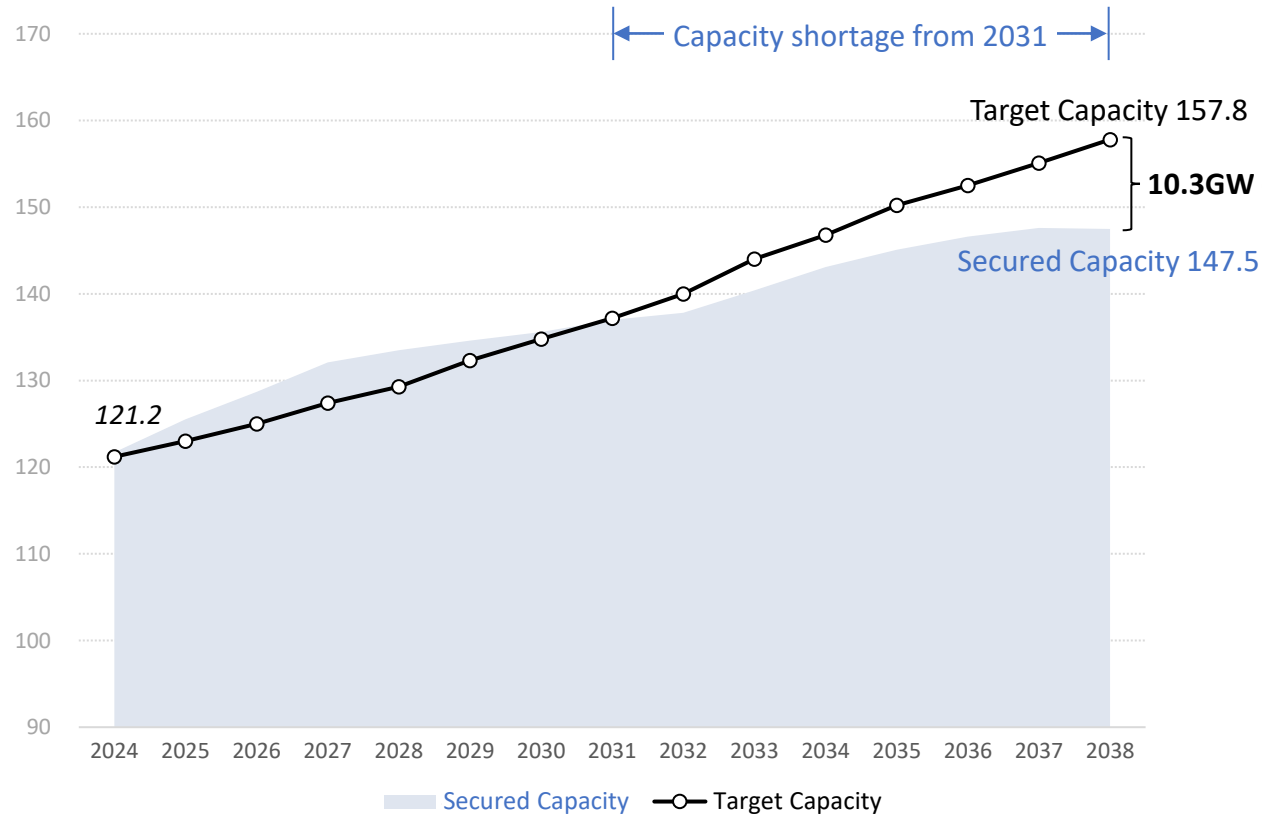
1. Domestic Power-generation Market

The 11th Basic Plan for Electricity Supply & Demand¹⁾: Despite reflecting the expansion of renewable energy, A capacity shortage is expected starting from 2031.

➔ Fuel cell power generation, as a zero-carbon energy source, has [an opportunity to participate in 4.6GW](#) of the 10.3GW additional capacity.

Electricity Supply and Demand Outlook by year(2024 – 2038)

(Unit: GW)



New Power Facility Composition by Period

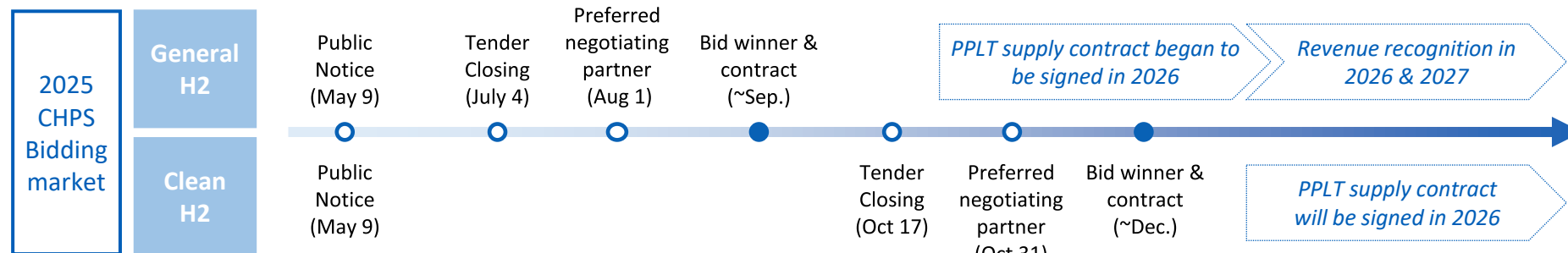
(Unit: GW)

Period	Capacity shortfall	Facilities to be Deployed
'31-'32	2.2	CHP 2.2
'33-'34	1.5	deferred 1.5
'35-'36	2.2	SMR 0.7 Carbon-free competition 1.5
'37-'38	4.4	NPP 2.8 deferred 1.6
Total	10.3	

1) Basic Plan for Electricity Supply & Demand: Ministry of Trade, Industry and Energy (2025.2.21)

[Back-up] Trends in the CHPS bidding market

The bidding market for general and clean hydrogen power generation commenced in 2023.



		General H2	Clean H2
		Volume	1,300 GWh
Target	Fuel cell	Fuel cell and hybrid power generation(LNG-H2, Coal-Ammonia)	
Fuel	Clean, reforming, byproduct H2	Clean H2 ¹⁾	
Hybrid ratio	-	More than 20% of power generation	
Evaluation	Price (60%)	Levelized Cost of Energy	Levelized Cost of Energy
	Others (40%)	Industrial-economic contribution, characteristics of distributed power, system acceptance, etc.	Clean H2 grades, stability of fuel introduction, etc.
Settlement	Gap between bid price and market price	Gap between bid price and market price	
Contract terms	2 years of preparation, 20 years of transaction - Penalty for failing to commence commercial operations within 2 years of the contract conclusion	3 years of preparation, 15 years of transaction - Penalty for failing to commence commercial operations within 3 years of the contract conclusion (4 years applies only to the initial contract)	

1) Greenhouse gas emissions per kg of hydrogen generation are less than 4kg

2. Data Center Market

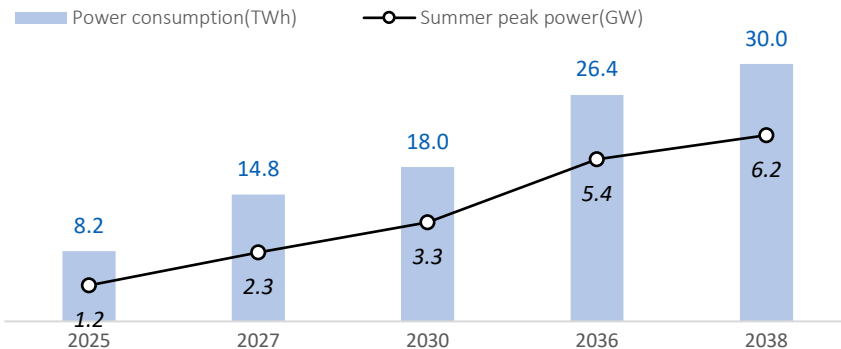
Fuel cell market opportunities driven by rising Data Center power demand

(Domestic) Transitioning from back-up power role to primary power

(Overseas) Leveraging overseas affiliates to win U.S. data center orders and advancing pilot projects in Southeast Asia

Domestic Data Center power demand outlook

The 11th Basic Plan for Electricity Supply & Demand*



- Fuel cells in data centers are confined to back-up power due to KEPCO centralized domestic supply system
 - Doosan Fuel cell to supply 1 unit to Equinix Goyang (Aug.'23) and 2 units to Samsung Electronics HPC data center (Apr.'24)
- Fuel cells are expected to play a growing role as distributed power sources amid surging data center demand and Seoul-area concentration
- Pursuing long-term use of fuel cells as primary power
 - ⇒ Advancing commercialization and regulations with partners

Why Fuel Cells?

Fast

- Short manufacturing and installation enables power supply within one year of order
- On-site power
 - Eliminates the need to wait for grid connection

Reliable

- High availability(95%) ensures 24/7 power generation
- No weather-related intermittency; ESS not required

Data Center

- Electricity efficiency comparable to gas turbines
 - NG model 43%, Hydrogen model 50%
 - Using heat for data center cooling boost efficiency↑
- Compact footprint
- Modular supply → Scalability

Efficient

- Minimal NOx and SOx emissions
- Hydrogen model → No greenhouse gas emissions

Eco-friendly

*) Ministry of Trade, Industry and Energy (Feb 21, 2025)

[Back-up] PAFC: Data Center Solution for competitive positioning

Data centers electrical grid market has recently become favorable to fuel cells, and PAFC is recognized as a solution applicable to data center environments.

Recent Environment

On-site

- On-site power generation investment by Big-tech companies are expected to rise
 - ▶ Following the Trump administration's announcement of the "Emergency Power Auction"

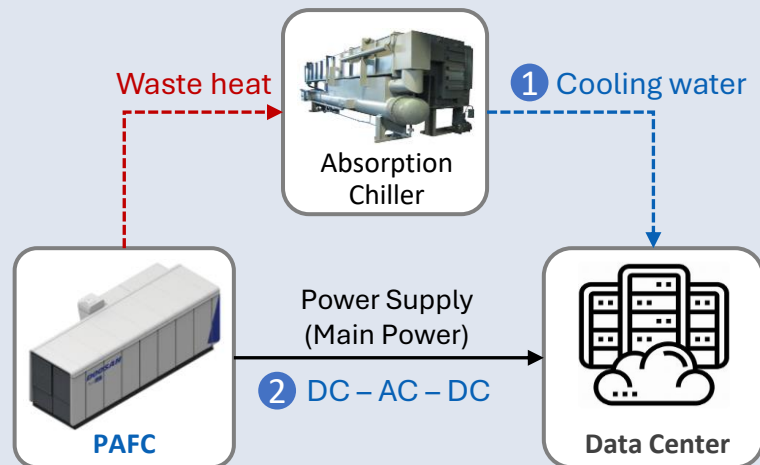
ITC benefits

- Business feasibility of Fuel cell business improved thanks to OBBBA 48E
 - ▶ 30% ITC for projects starting construction from 2026

800VDC

- 800VDC adoption expected to accelerate from 2027
 - ▶ Fuel cells highlighted as a DC-based power source

PAFC Solution



1 Use waste heat from fuel cells for data center cooling

- Absorption chiller generates cooling water
- Potential to reduce cooling load, which accounts for 20-40% of data center power usage

2 DC power from fuel cells can be directly used (DC - DC)

- Minimized efficiency loss without AC conversion

Current Status

- Positive feedback from data center players on **the performance and suitability of PAFC Solution**

- One big tech company has completed technical and quality validation (Iksan factory due diligence, etc.)
- Discussions ongoing with utilities and developers.

Table of Contents

I. Business Performance and Outlook

1. Annual Sales
2. Order Performance and Outlook
3. Mid-to-Long Term Sales Outlook

II. Market Environment

1. Domestic Power-generation Market
2. Data Center

III. Growth Engine

1. Market Expansion: PAFC
2. Product Line-up Diversification : SOFC

Appendix

1. Product Competitiveness – (1) Acquisition of exclusive PAFC license

IP (Intellectual Property) rights expanded to strengthen the PAFC business foundation

	AS-IS	TO-BE
Territory	<p><u>Korea</u> Doosan Fuel cell (Non-exclusive)</p> <p><u>Global including Korea</u> HyAxiom, Inc.</p>	<p><u>Asia and Oceania</u> Doosan Fuel cell (Exclusive)</p> <p><u>The Americas, Europe, etc.</u> HyAxiom, Inc.</p>
Scope of Rights	<ul style="list-style-type: none"> • Production, Sales, and Service (within Korea) 	<ul style="list-style-type: none"> • Production, Sales, Service, R&D, and Sub-licensing (within the territory)
Royalty	<ul style="list-style-type: none"> • Payable upon product sales 	<ul style="list-style-type: none"> • One-time payment (no additional royalties)

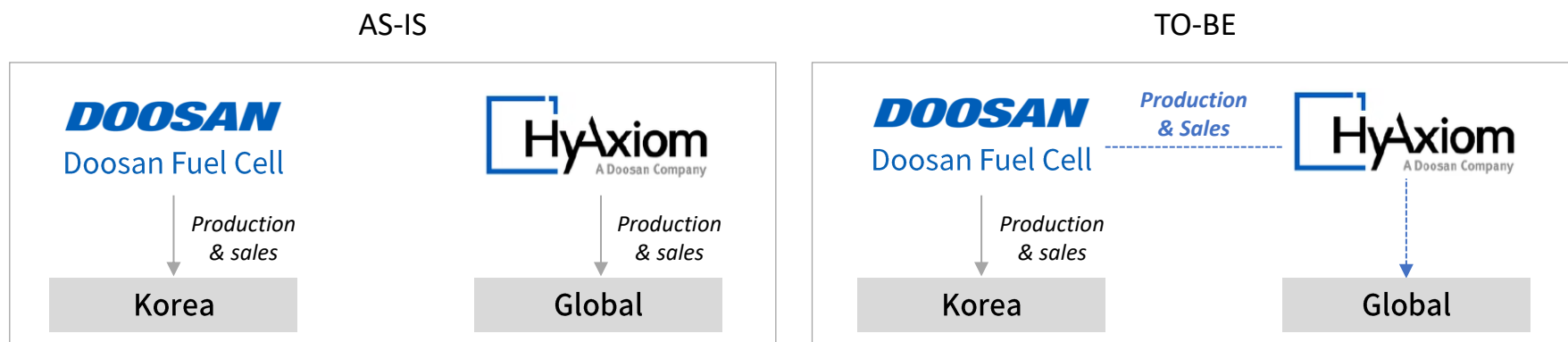
* Doosan Fuel Cell is responsible for production regardless of territory

Expected Outcomes

- 1 Enhanced Product and Technical Competitiveness**
 - Expansion of R&D rights enables faster and more flexible design improvements, leading to enhanced quality competitiveness
- 2 Global Market Entry**
 - Strengthening the foundation for entering major overseas target markets such as China, Taiwan, and Australia
 - Amid intensifying U.S.-China trade tensions, the need for independent business operations is becoming more prominent
- 3 Diversification of Business Models**
 - Business model diversification is possible based on sub-licensing rights (e.g., overseas localization, LTSA outsourcing)

1. Product Competitiveness – (2) Business Area Restructuring

By centralizing fuel cell production corporations in Korea, ‘market expansion’ and ‘cost competitiveness enhancement’ are expected.



Overview

Integrating fuel cell production into the Korean corporation to secure the fundamental competitiveness of the hydrogen business

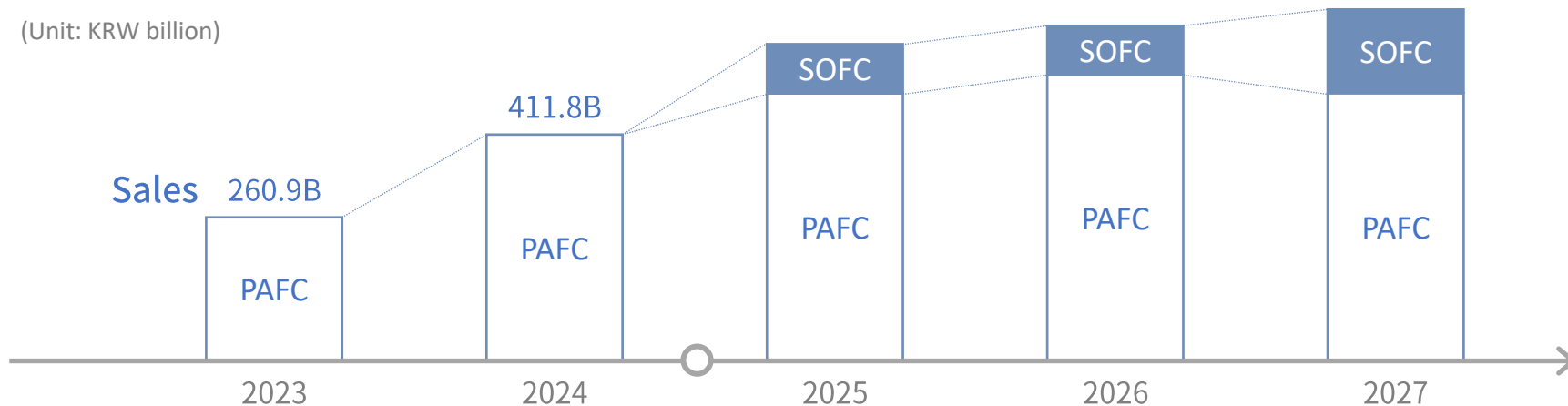
Expected effect

- 1 Market expansion**
 - Potential supply of fuel cell products to the US market
 - Potential benefit from the increasing demand in the US market, including data centers
- 2 Cost competitiveness enhancement**
 - By scaling up production, sourcing negotiation power, and production efficiency are expected to be strengthened.

2. Product Line-up Diversification : SOFC

Securing mid-to-long-term growth drive through SOFC, based on stable sales of PAFC

- The last two years were focused on investments for growth
- New market opportunities identified in SOFC from 2025 (data center, stack foundry, etc.)



Executing investments in growth

SOFC

- Introduction of core technologies
- Facility investments of KRW 155.8 billion (Gunsan factory)

PAFC

- Acquisition of electrode business for KRW 22.4 billion

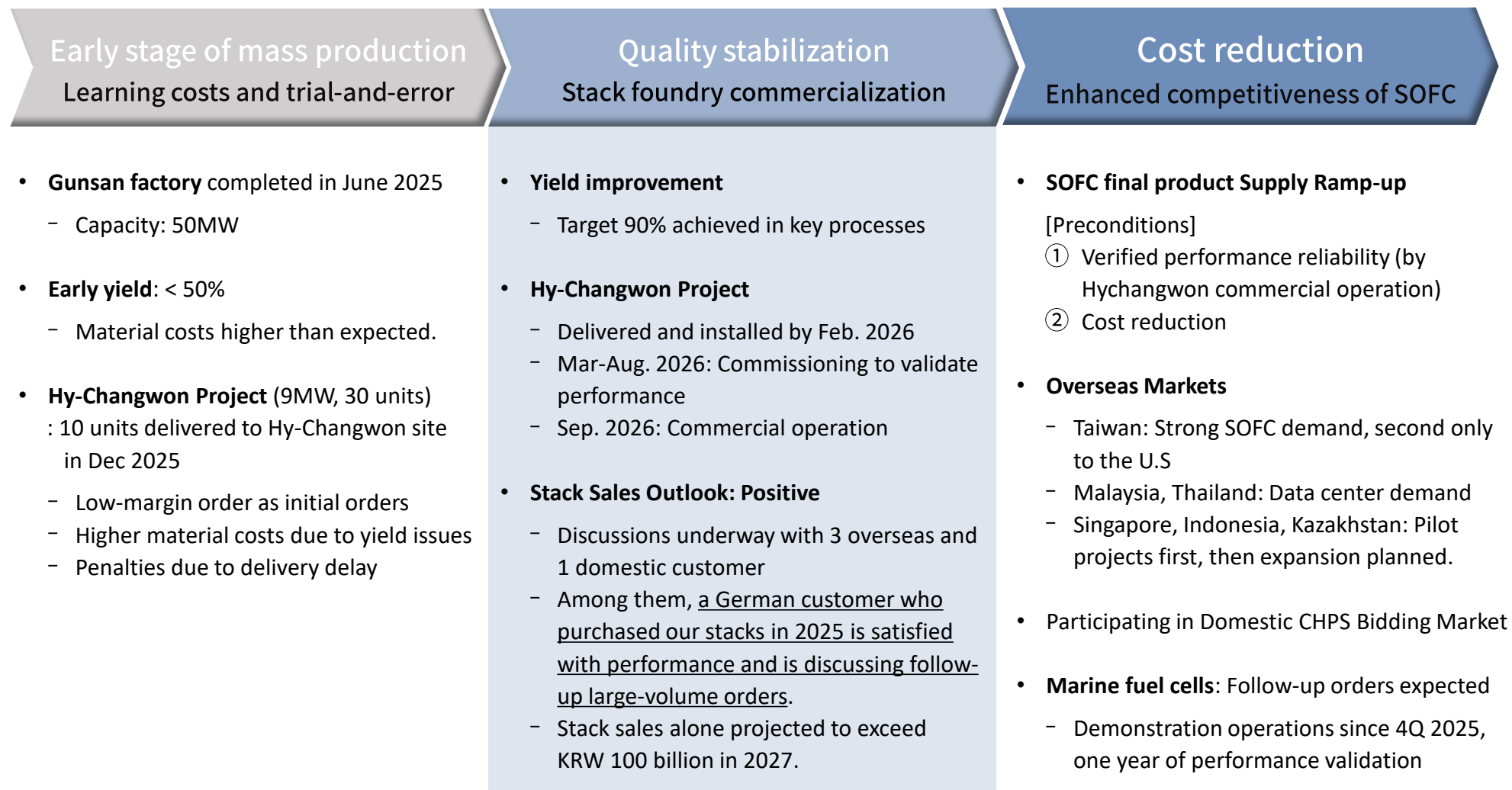
Strengthening competitiveness (PAFC+SOFC Hybrid)

- Diversifying business models in the general H2 market for CHPS (PAFC, SOFC, PA+SO)
- Full-scale entry into data center market
- Commercialization of SOFC stack foundry

2026 SOFC: Quality stabilized → focusing on Stack Foundry business

In 2025, early SOFC commercialization phase faced large losses due to cell yield issues.

Yield improvements have stabilized quality, generating growing customer interest in our SOFC Stack.





Appendix

1. Company Overview
2. Our role in the hydrogen economy
3. Fuel cells
4. 2025 Financial Performance
5. Income Statements
6. Financial Statements

Appendix 1. Company Overview

A leading player in the domestic fuel cell power generation market

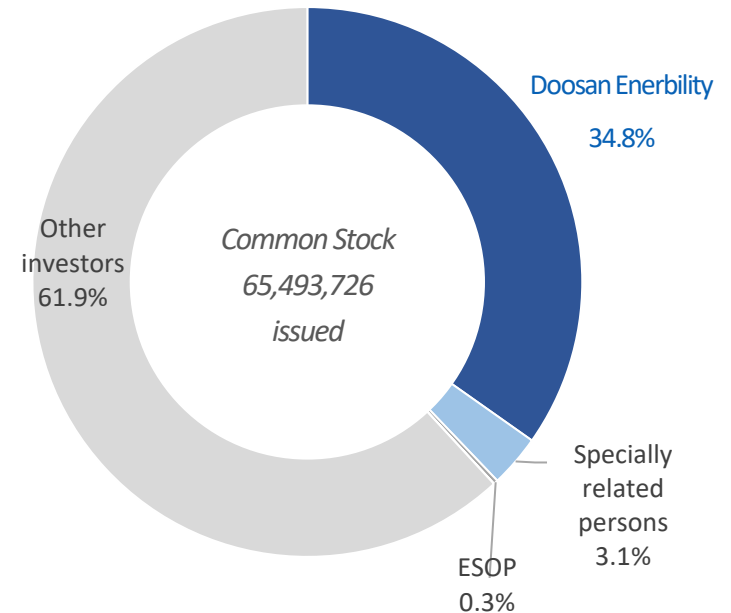
About Doosan Fuel Cell

[As of Dec 31, 2025]

Spin-off	2019. 10. 1. (Spin-off)
HQ address	100, Seokam-ro 7-dil, Iksan-si, Jeollabuk-do
Size	709 employees
CEO	Doosoon Lee / CEO
History	<ul style="list-style-type: none">• 2014 Doosan Co. acquired U.S. fuel cell maker• 2017 Iksan factory construction completed• 2019 Spin-off from Doosan Co. and listing on KRX• 2022 Iksan factory ramp-up (CAPA 232MW)• 2023 Completion of Gunsan factory (CAPA 50MW)• 2024 Acquisition of 100% share in HyAxiom Motors

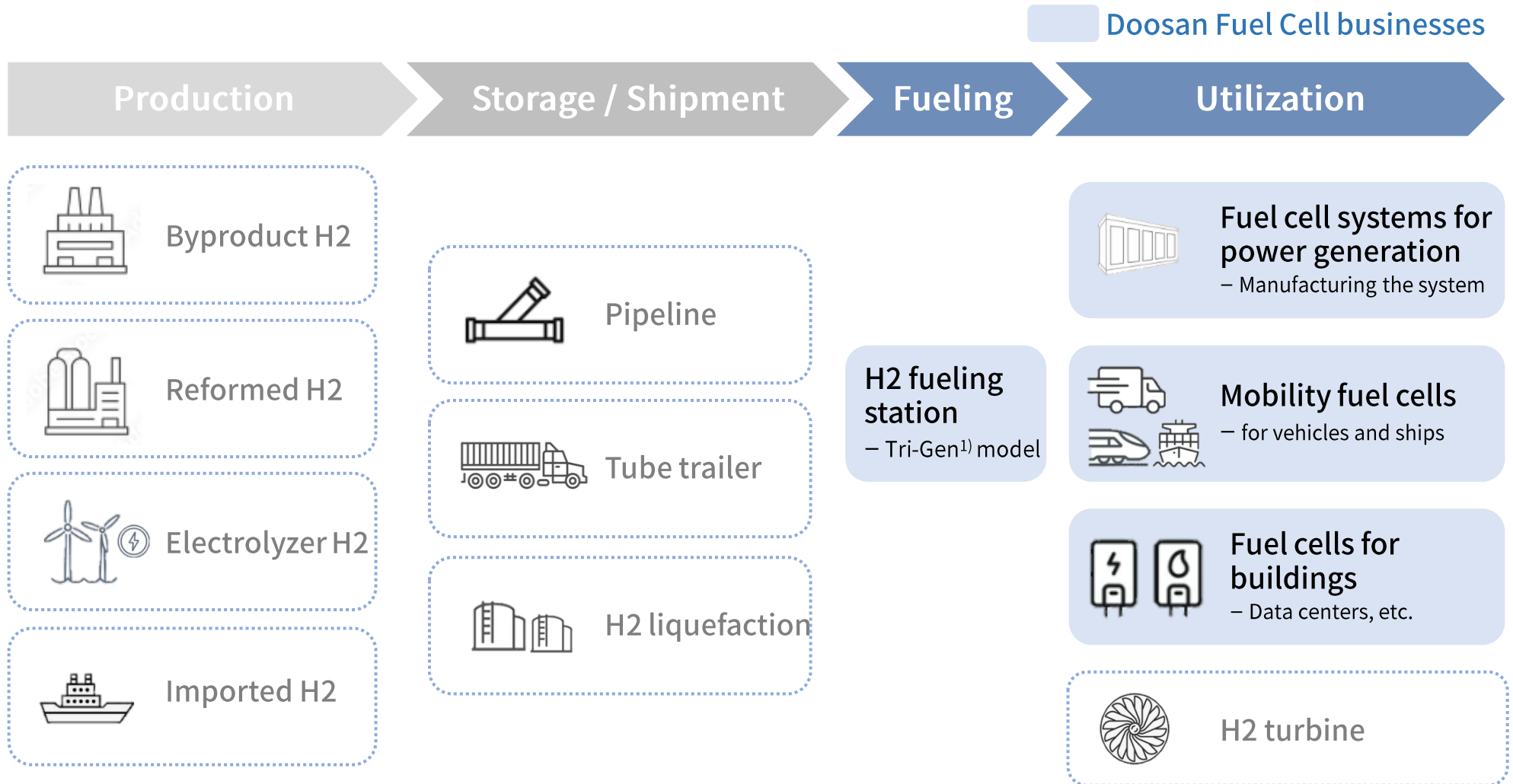
Shareholders

[As of Dec 31, 2025]



Appendix 2. Doosan Fuel Cell's role in the hydrogen economy

Manufacturing and supply of fuel cell equipment, which is key to hydrogen utilization

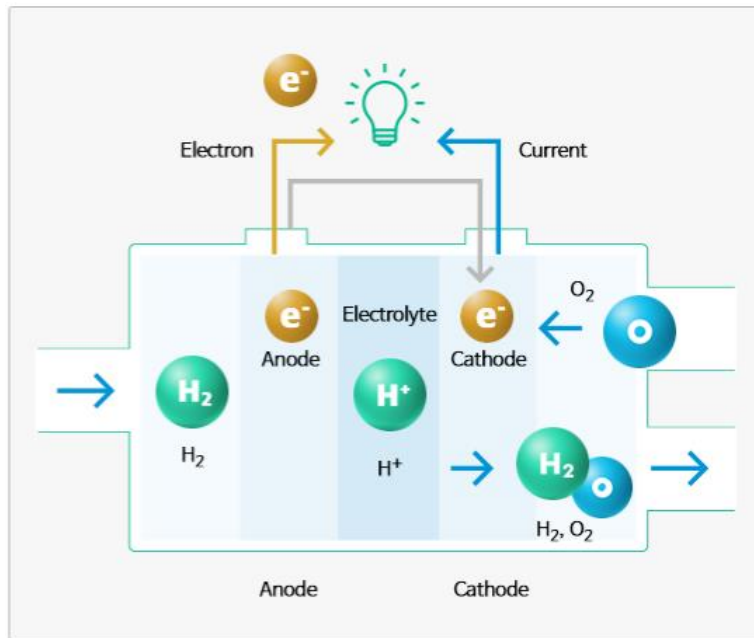


1) Tri-Gen : a model capable of generating electricity, heat, and hydrogen

Appendix 3. Fuel cell

A fuel cell uses hydrogen and oxygen to generate electricity through an electrochemical reaction, instead of burning the fuel.

Fuel cell working principle



Types of Fuel cells

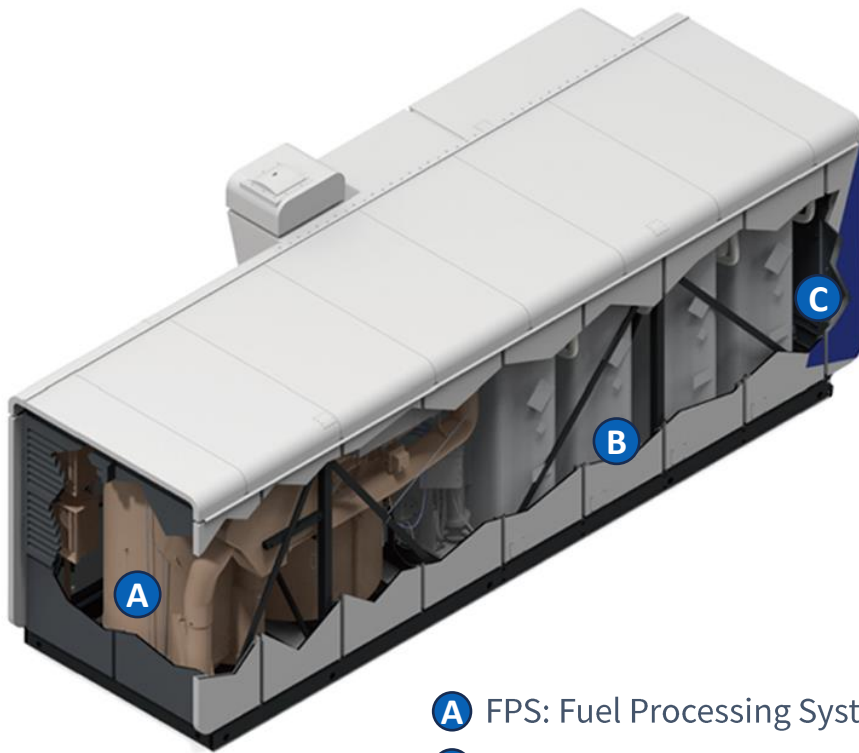
	PEMFC	PAFC	MCFC	SOFC
Electrolyte	Polymer Electrolyte Membrane	Phosphoric Acid	Molten Carbonate	Solid Oxide
Operation Temperature	25 ~ 80°C	160 ~ 200°C	650°C	600 ~ 1,000°C
Catalyst	Platinum	Platinum	Perovskites	Nickel
Elec. Efficiency	35%	40 ~ 45% (NG) 48 ~ 50% (H ₂)	45 ~ 60%	50 ~ 60%
CHP (Elec. + Heat)	-	90%	80%	50 ~ 80%
Applications	Portable, Mobility	Building, Power Plant	Building, Power Plant	Residential, Building, Power Plant

※ The exact details may vary depending on the manufacturer.

Appendix 3-1. Fuel cell: PAFC

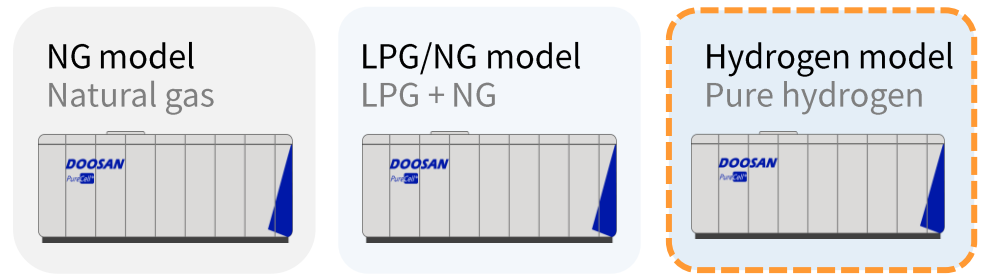
- 1) High localization rate, 2) High combined efficiency and World's first commercialization of H2 model,
- 3) Technologies aligned with national policy orientations (CHPS), such as load-following

✓ Main components of PAFC

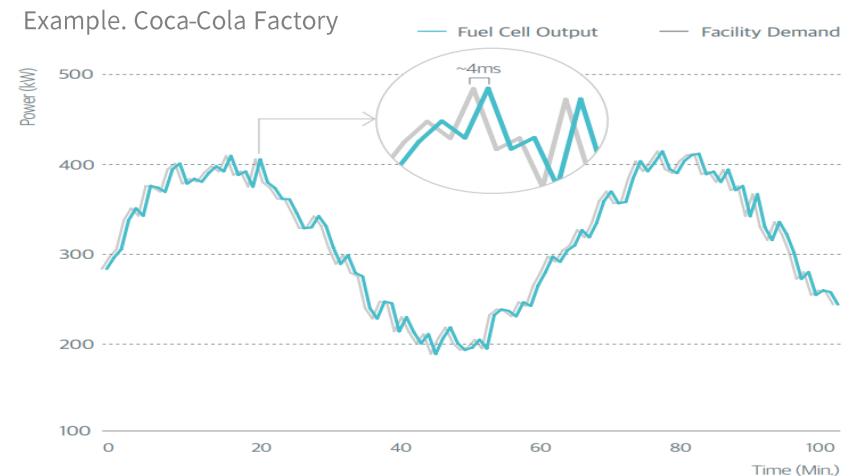


- A** FPS: Fuel Processing System
- B** PSS: Power Supply System
- C** ESM: Electrical System Module

✓ Easy transition to a hydrogen model



✓ Load-following: fast response in the power grid



Appendix 3-2. Fuel cell: SOFC

SOFC mass production begins in H2 2025

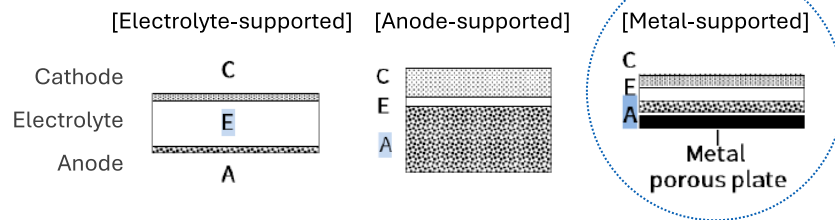
- 5kW Stacks have started shipping; 300kW SOFC products to be delivered from year-end

SOFC product

Technology	Metal-supported low temperature SOFC
Rated Power	300kW
Efficiency	55% (64% at BOL ¹⁾)
Temperature	Around 600°C (improved durability and lifespan)
Fuel	Natural Gas

1) Beginning of Life: Initial state with maximum performance

Cell type of SOFC



[Gen3 SOFC: Metal support handles mechanical stress during stacking]

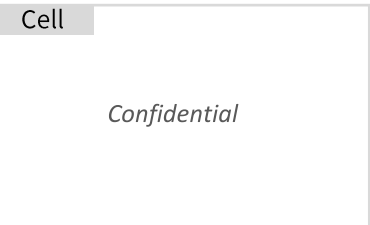
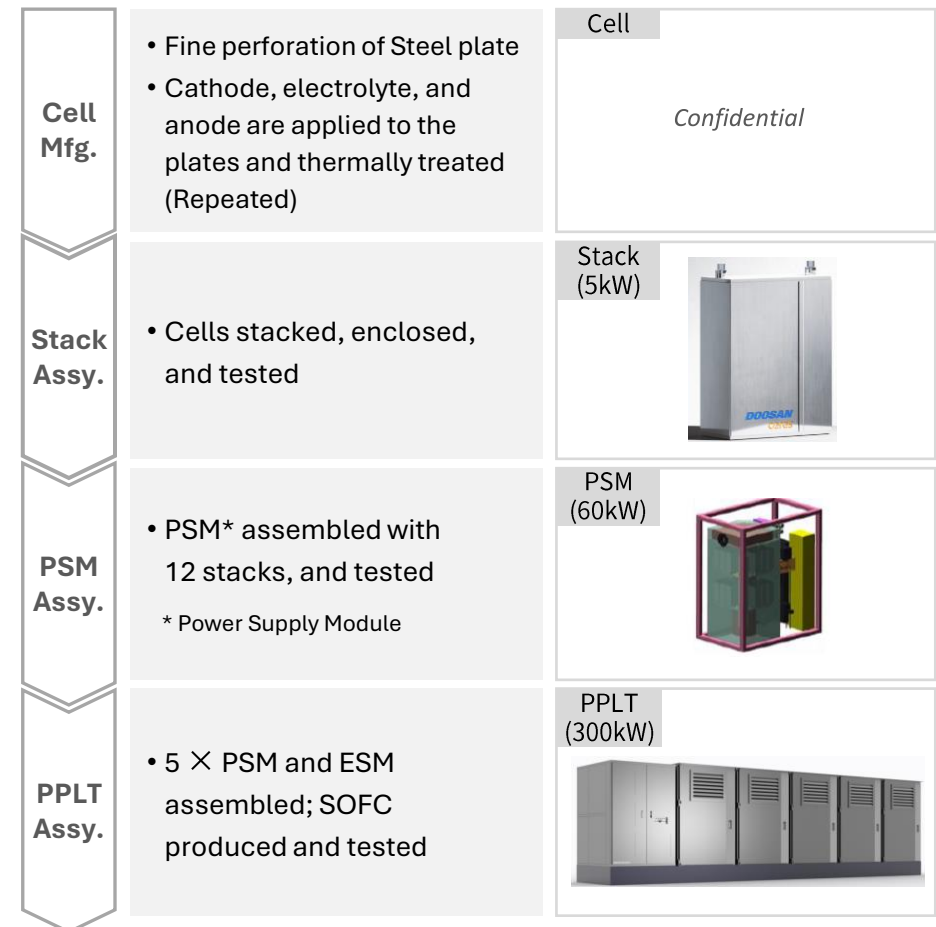
Pros

- Operation around 600°C due to reduced electrolyte thickness
- High stability thanks to high mechanical strength
→ Shock-resistant, broadly applicable e.g., marine fuel cells

Cons

- Complicated manufacturing process. No mass production to date

Manufacturing process



[Back-up] Hy-Changwon Project (1/2)

Total capacity: 39.8MW (SOFC 9MW + PAFC 30.8MW)



[Back-up] Hy-Changwon Project (2/2)

SOFC reliability validation through over three months of commissioning, securing track records



- **Installed(Feb. 2026)**
 - 10 Units in 2025
 - 20 Units in 2026
- **Commissioning(3+ Months)**
 - Performance Validation
- **Start of Commercial Operation(Sep.2026)**
 - Long-Term Service Agreement(10yr)

Appendix 4. 2025 Financial Performance

Sales growth(+10.4% YoY): Stable revenue growth driven by the full reflection of CHPS projects

Operating loss: 1) Increased raw-material costs(e.g., platinum), 2) Increased CSA replacements
3) Recognition of one-off expenses related to SOFC

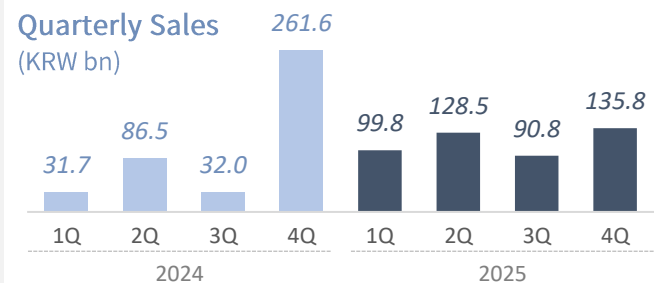
Summary of Income Statement (Separate basis)

(Unit: KRW bn)

Category	FY24	FY25	YoY
Sales Revenue	411.8	454.9	+10.4%
COGS	375.6	517.1	
(%)	(91.2%)	(113.7%)	(+22.5%p)
SG&A	35.9	41.5	
Operating Profit/Loss	0.3	-103.7	Turned to loss
(%)	(+0.1%)	(-22.8%)	
Finance income	-11.5	-18.0	
Other income	2.6	1.0	
Gain on equity method evaluation	0.8	-0.7	
Income before taxes	-7.8	-121.5	Continued loss
Tax	0	8.8	
Net income	-7.8	-130.2	Continued loss

Sales revenue

- Sales revenue KRW 454.9bn: +10.4% YoY
- Acceleration in CHPS revenue recognition supported growth with existing RPS volume and reduced quarterly volatility



Operating loss

- Margin pressure from increased raw material costs
- Increased CSA replacements
 - Early replacements for KESCO’s periodic inspection
 - Performance issues at sites with early localized units('18-'19)
- Initial SOFC commercialization-related costs
 - Initial project order (Hy-changwon 9MW, 30 x SOFC)

* CSA: Cell Stack Assembly

[Back-up] 1. P&L Analysis

PAFC powerplant sales remains profitable, but losses from SOFC new business and aftermarket segments(LTSA) were the primary drivers of the operating loss.

Gross Profit Breakdown

(Unit: KRW bn)

Category	1Q	2Q	3Q	4Q	FY25
Sales Revenue	99.8	128.5	90.8	135.8	454.9
COGS	99.7	119.6	96.7	201.1	517.1
(COGS ratio)	99.9%	93.1%	106.5%	148.1%	113.7%
Gross Profit	0.1	8.9	-5.9	-65.3	-62.2
SG&A	11.1	10.3	9.2	10.8	41.5
Operating P&L	-11.0	-1.4	-15.1	-76.2	-103.7

Source of Income

PAFC

- **Gross profit: KRW 6.5B**

- Margin declined amid higher raw material costs (e.g., platinum)

SOFC

- **Gross profit: KRW -50B**

- Deliveries of 10 units to Hy-Changwon started in 4Q, with provisions recognized for remaining 20 units to be delivered in 2026.

- ① Low-margin orders to secure references
- ② Higher material input due to yield issues
- ③ Penalties due to delivery delay

LTSA

- **Gross profit: KRW -18.8B**

- Increased CSA replacements (Early replacements for KESCO's periodic inspection)

* KESCO: Korea Electrical Safety Corporation)

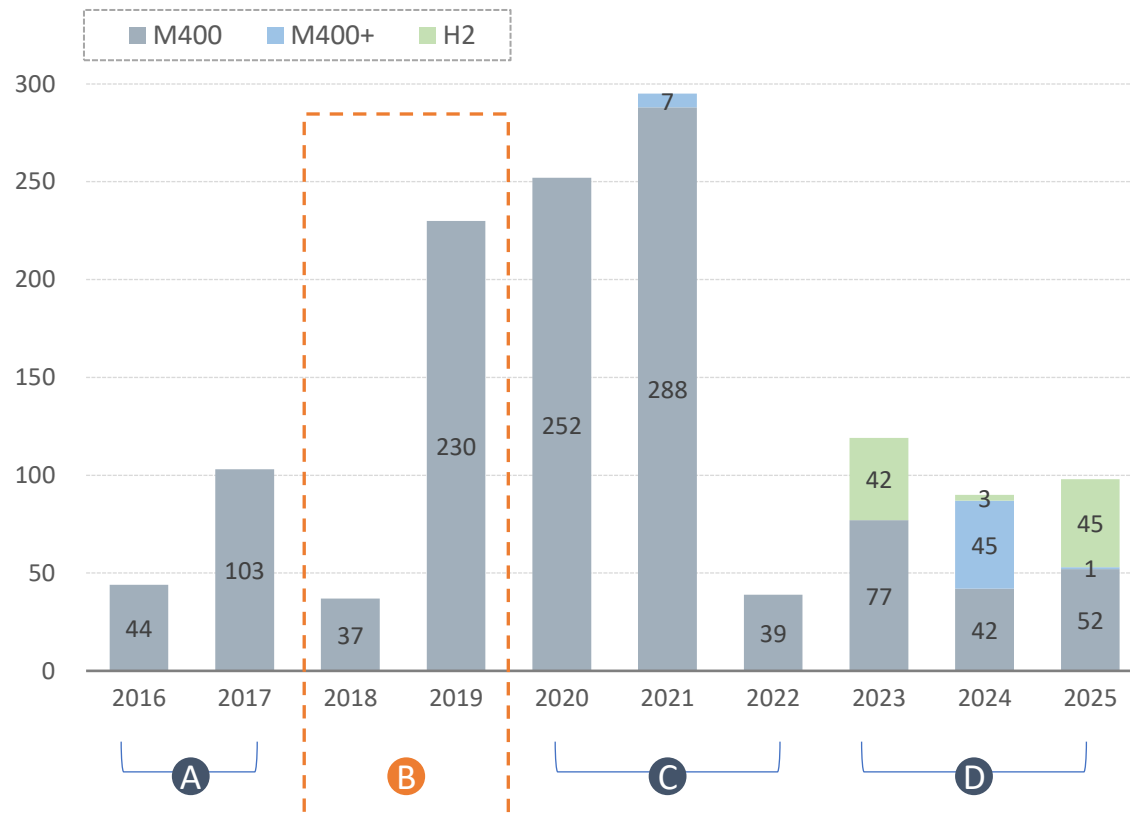
[Back-up] 2. CSA replacement units

Manufacturing-related quality issues identified in products produced during the early PAFC commercialization stage, two years following the Iksan factory completion in 2017.

A limited number of cases observed at LTSA sites with produced and supplied between 2020-22 (currently under review).
No quality issues in products manufactured and supplied since 2023.

Number of Fuel Cells under LTSA by Year

(Unit: number of installed Fuel Cells)



- After commercial operation, inspections occur every 4 years.
→ Ahead of the 8th-year inspection, **CSA from year 6-7 were replaced early.**

- **M400+, M500** : No Quality issues

- **M400 Supply Timing**

A LTSA started before Iksan factory completion in 2017
- Imported from the U.S. for installation and operation

B **LTSA started 2018-2019**

- Initial units produced at Iksan factory
- Rapid localization to reduce costs, including supply chain changes

C LTSA 2020-2022 : Quality issues under review

D LTSA since 2023 : No quality issues

* M400 / M400+: NG model with 4 CSA (Output: 440kW)
H2 : Hydrogen model with 4 CSA (Output: 440kW)

Appendix 5. Income Statements (Separate/Consolidated)

Separate Income Statement

(Unit: KRW bn)	'25.1Q	'25.4Q	'26.1Q	YoY	QoQ
Sales	99.8	135.8	144.9	+45%	+7%
COGS	99.7	201.1	134.4		
Gross Profit	0.1	-65.3	10.4		
SG&A	11.1	10.8	11.2		
OP	-11.0	-76.2	-0.8		
Margin(%)	-11.1%	-56.1%	-0.5%	+10.5%p	+55.5%p
EBITDA	-7.1	-66.2	9.6		
Margin(%)	-7.1%	-48.8%	6.6%		
Income before Tax	-14.6	-82.6	-8.4		
Net Income	-9.5	-102.0	-12.5		

Consolidated Income Statement

(Unit: KRW bn)	'25.1Q	'25.4Q	'26.1Q	YoY	QoQ
Sales	99.7	135.8	144.8	+45%	+7%
COGS	99.6	201.1	134.4		
Gross Profit	0.1	-65.3	10.4		
SG&A	11.6	11.3	11.7		
OP	-11.5	-76.6	-1.3		
Margin(%)	-11.6%	-56.4%	-0.9%	+10.7%p	+55.5%p
EBITDA	-7.5	-66.5	9.1		
Margin(%)	-7.5%	-49.0%	6.3%		
Income before Tax	-15.2	-83.2	-9.1		
Net Income	-10.1	-102.6	-13.2		

※ Consolidated subsidiary: HyAxiom Motors Co., Ltd.

Appendix 6. Financial Statements

KRW 138.7 billion in borrowings due for repayment this year, remaining under stable management

Balance Sheet (Separate)

(Unit: KRW bn)	'25.12	'26.03	Change
Total Assets	1,201.9	13,222	1,203
Current assets	580.0	6,916	1,116
<i>Inventories</i>	<i>371.8</i>	<i>3,683</i>	<i>-35</i>
Non-current assets	621.8	6,306	87
Total Liabilities	828.0	9,593	1,313
Current liabilities	462.1	6,089	1,468
Non-current liabilities	365.9	3,504	-155
Shareholder's equity	373.9	3,629	-110
Capital stock	8.2	82	
Capital surplus	477.5	4,775	
Other equity	-111.8	-1,228	-110
<i>Debt to Equity Ratio</i>	<i>221%</i>	<i>264%</i>	<i>43%p</i>
Total borrowings	542.1	6,559	1,138
Cash and cash equivalents	66.4	1,289	625
Net borrowings	475.8	5,271	513

Borrowings Maturity Schedule

(Unit: KRW bn)

Type	'26.03 Balance	Repayment Schedule				
		Q2	Q3	Q4	FY2026	After 2027
C. Bond	216.8	-	47.0	-	47.0	169.8
Banks	359.2	5.8	30.8	35.8	72.5	286.7
ABD [*]	80.0	-	9.6	9.6	19.2	60.8
Total	655.9	5.8	87.4	45.4	138.7	517.2

*) ABD: Asset-Backed Debt

- Only KRW 138.7 billion in borrowings is scheduled for repayment during the remainder of 2026
 - KRW 47 billion in corporate bonds mature in Q3; considering refinancing
- Major Investments Completed in 2025
 - Gunsan Plant Completion, PAFC IP Acquisition, etc.