Investor Relations 2021

Doosan Fuel Cell
Q2 2021 Earnings Release

2021.07

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 a IFRS separate basis.

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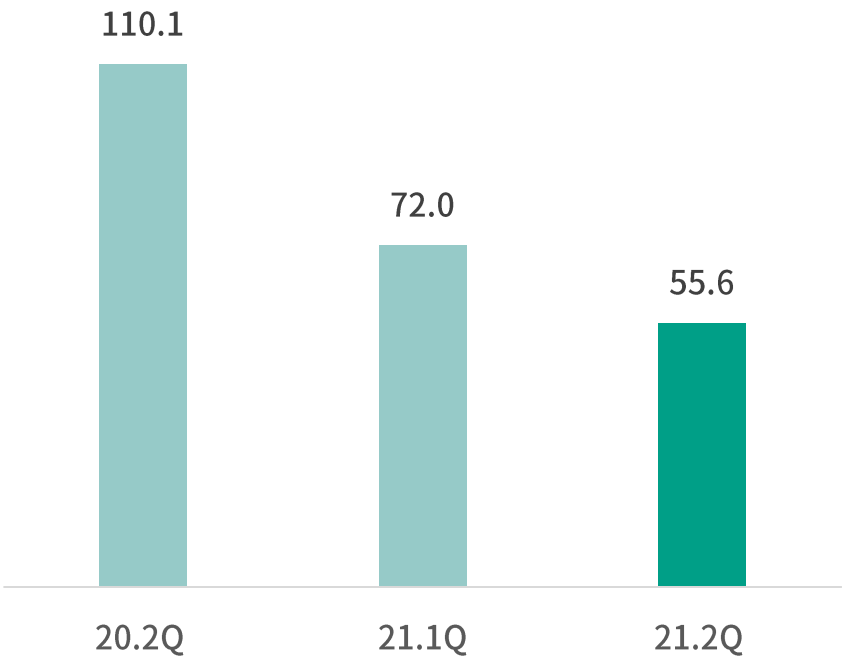
Q2 2021 Earnings

Sales revenue of 55.6 bn won and Operating income of 1 bn won

- Revenue and operating income slow down YoY due to temporary cease of new orders in Q3 2020
- Despite soft revenue, better product mix improved profitability QoQ

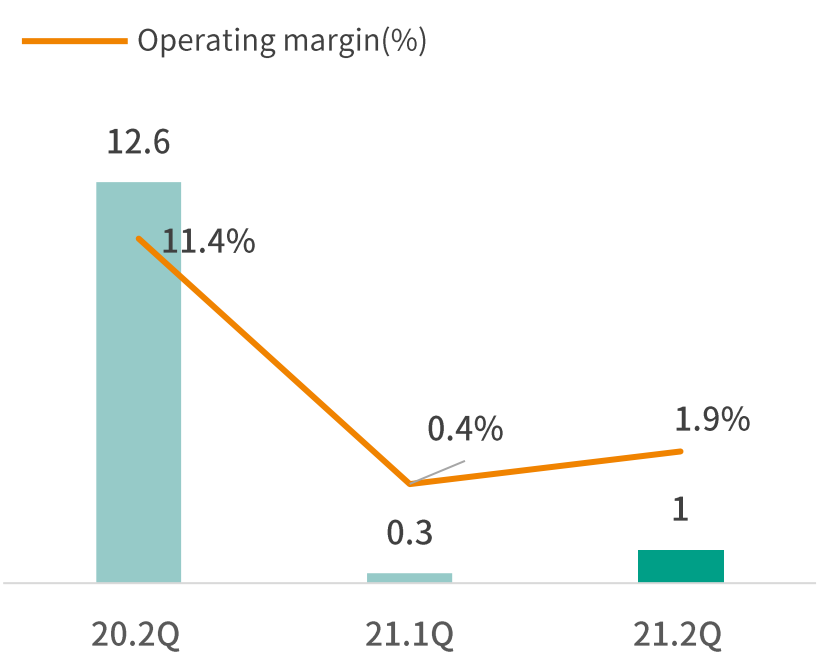
Sales Revenue

(Unit: KRW in billions)



Operating Income

(Unit: KRW in billions

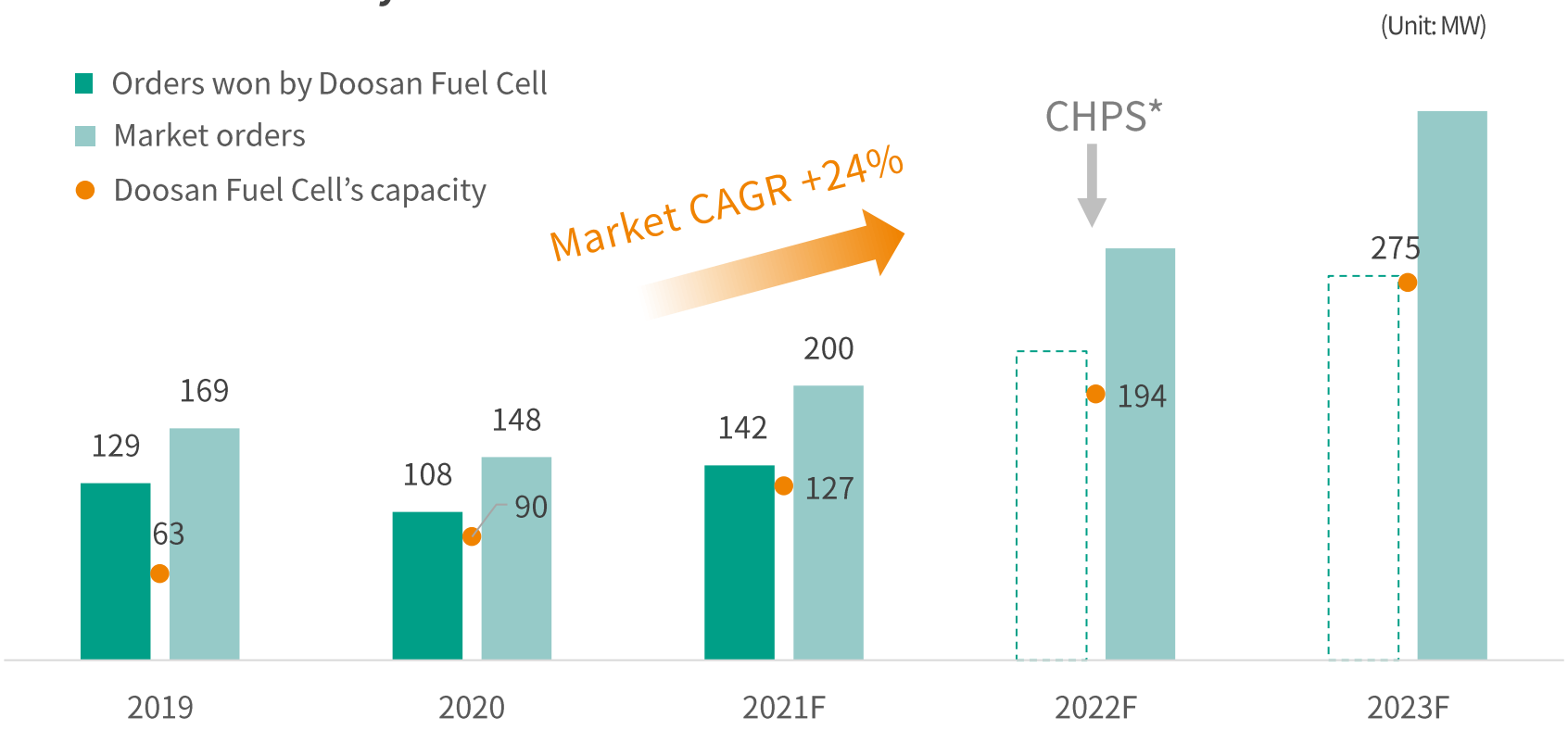


New Orders for Stationary Fuel Cells and Outlook

Stable growth driven by government policy materialization

- New orders are expected to come in the second half of 2021 under RPS
- Expanding capacity to meet the market demand

Forecast for stationary fuel cells in Korea



*CHPS: Clean Hydrogen Portfolio Standard

Back-up: Key Advantages of Our PAFC Technology

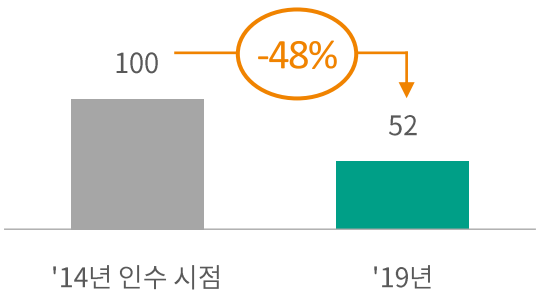
Our PAFC serves the government green initiatives

- 1) higher localization rates and combined efficiency, 2) structural merits for supporting easy convert to H_2 model

✓ High localization & combined efficiency

Part localization [98%] Based on amount

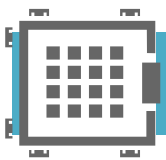
COGM



High combined efficiency & long lifespan

Combined efficiency 90%

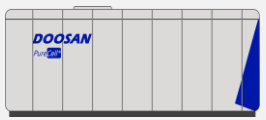
Electricity 42% + Heat 48%



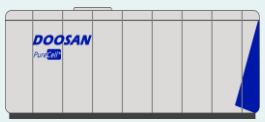
Cell Stack life: 10 years

✓ Easy convert to H_2 model

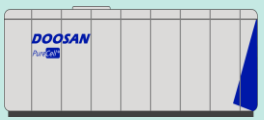
NG model
Natural Gas



LPG/NG model
LPG + NG



Hydrogen model
Pure H2



"Hydrogen Ready" Legacy models are convertible to hydrogen model

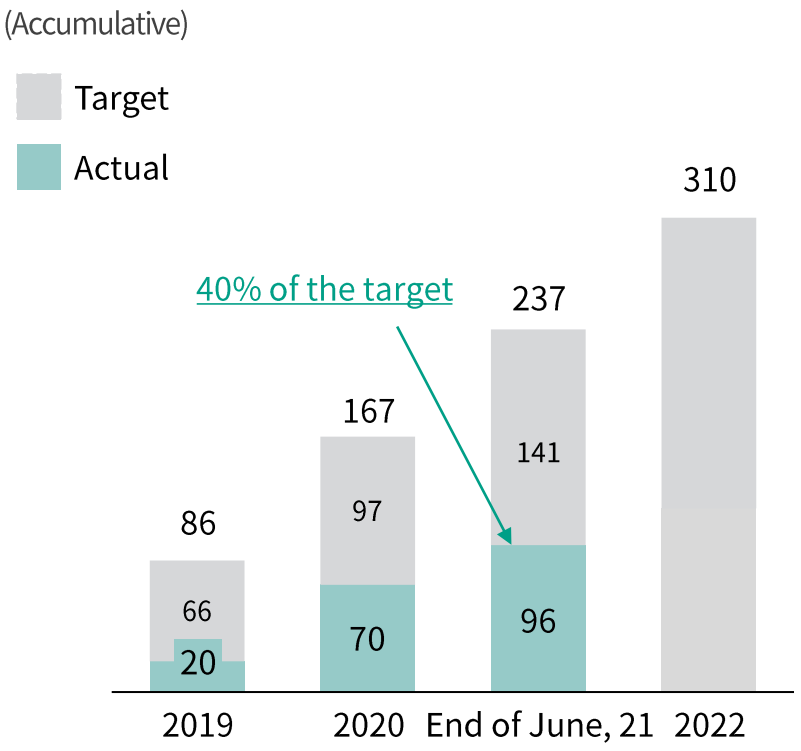
First commercialized to usher in Green H_2 economy

Tri-Gen Model for H_2 Charging Station

Working on Tri-Gen model to fulfill national charging station scheme

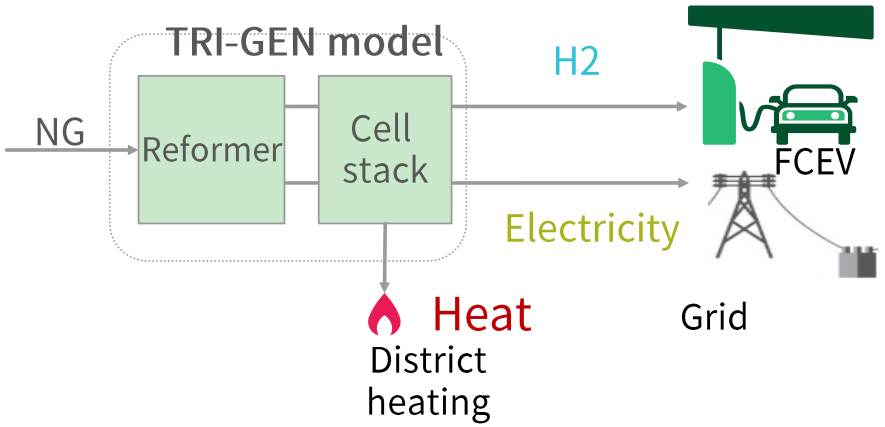
- On-site tri-gen to ensure H_2 transportation cost cuts and economics

National Target for H_2 Charging Station



Source: Ministry of Environment

Development Status & Strategy

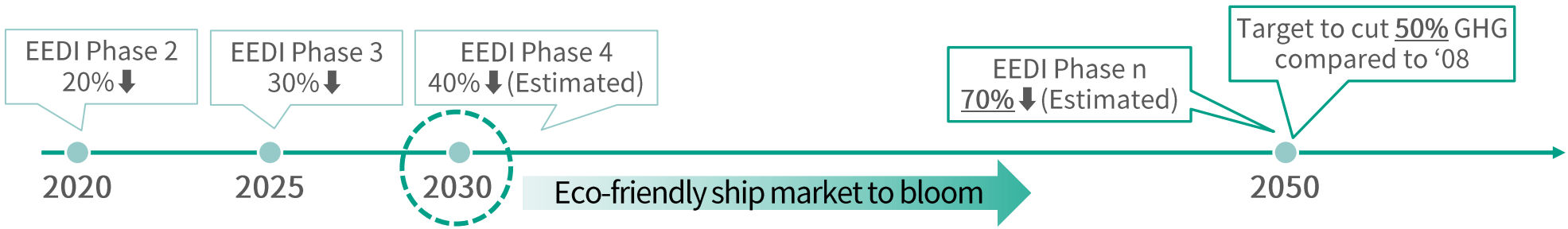


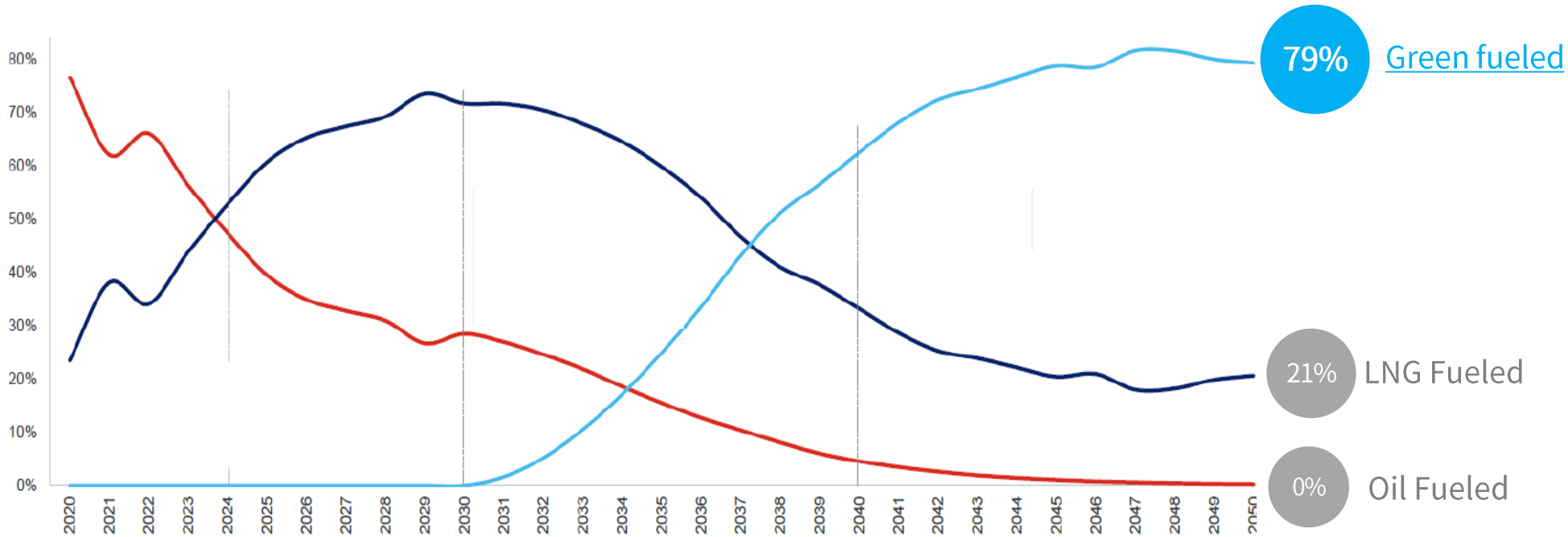
- On-site H_2, electricity, and heat supply for FCEVs and EVs
- Offset expensive H_2 transportation
- Pilot test planned within ’21 and commercialization in ’22

SOFC Maritime Fuel Cell (1): New Ship Order Outlook

Toughen EEDI[1)] will promote green shipbuilding market in 2030

- Green vessels are expected to account for 79% of new vessel orders in 2050





Source: Clarksons Research (March 2020)

1) EEDI: Energy Efficiency Design Index

SOFC Maritime Fuel Cell (2): Why SOFC?

SOFC is considered the most promising green technology to meet tougher restrictions in the mid term

- Higher efficient and greener to meet EEDI than competing technologies

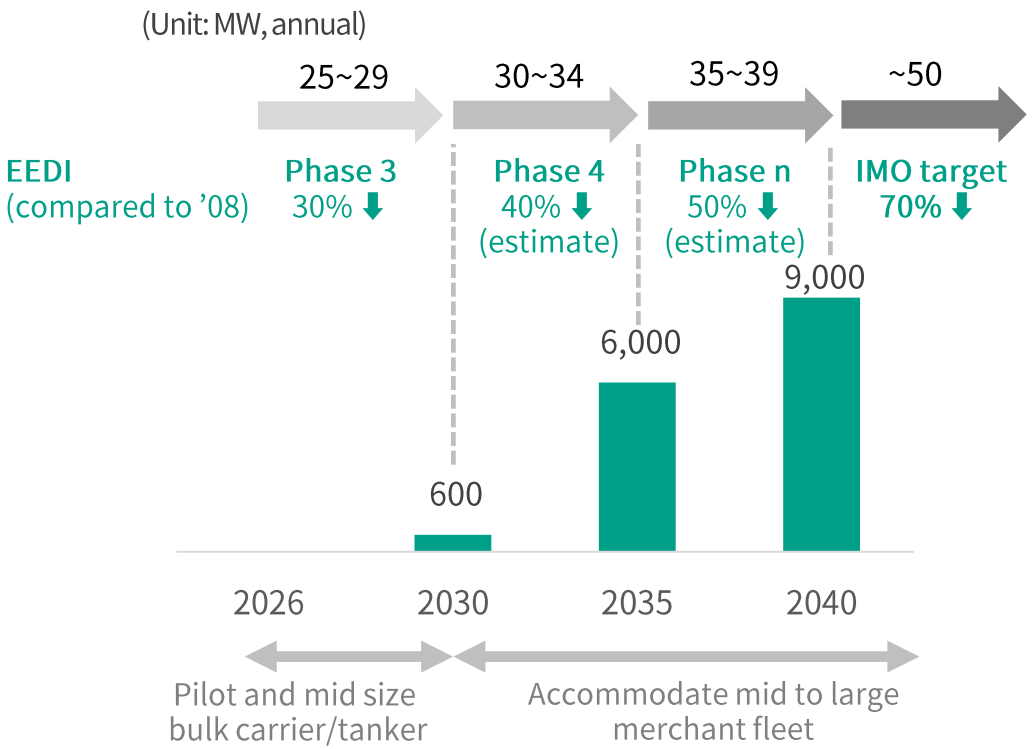
	LNG Engine (Dual Fuel, DF)	SOFC (LNG)	Ammonia Engine (Dual Fuel)
EEDI Response	EEDI Phase 3 compliant	EEDI Phase 4 compliant (convertible to Ammonia)	Above EEDI Phase 4 compliant
Status & tech limit	• DF engine use is spreading • Need to develop reliable high pressure fuel facilities • Methane slip issue (25X GHG effect than CO_2)	• Reliable technology proven by stationary fuel cells • Maritime system development underway	• Need to have emission reducer to deal with increasing NOx • Further R&D required due to slow single combustion and high ignition point
Operating efficiency	• Propulsion engine: 50% • Aux engine: 40%	• 60% or above (based on Doosan developing SOFC)	• Propulsion engine(forecast): 40-45% • Aux engine: 40%
TCO perspective	• Despite inexpensive engine, low operating efficiency elevates fuel consumption and emission cost	• Despite expensive equipment and maintenance, higher operating efficiency cuts fuel and emission cost	• Highest fuel cost, lower equipment, maintenance and emission cost • Need to develop cost effective infrastructure

SOFC Maritime Fuel Cell (3): Market Outlook and Strategy

SOFC base maritime fuel cell will be developed to lead the market

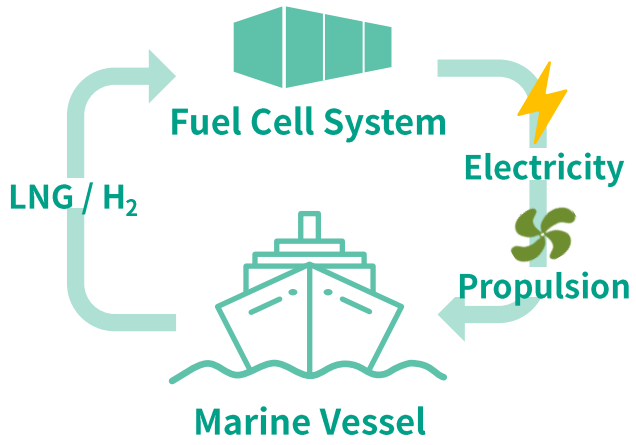
- Estimated SOFC demand will grow sharply from 600MW in 2030, 6GW in 2035, and to 9GW in 2040
- Aim to commercialize in 2025 and lead the market by working with local and global shipbuilders and shipping companies

Maritime SOFC market outlook



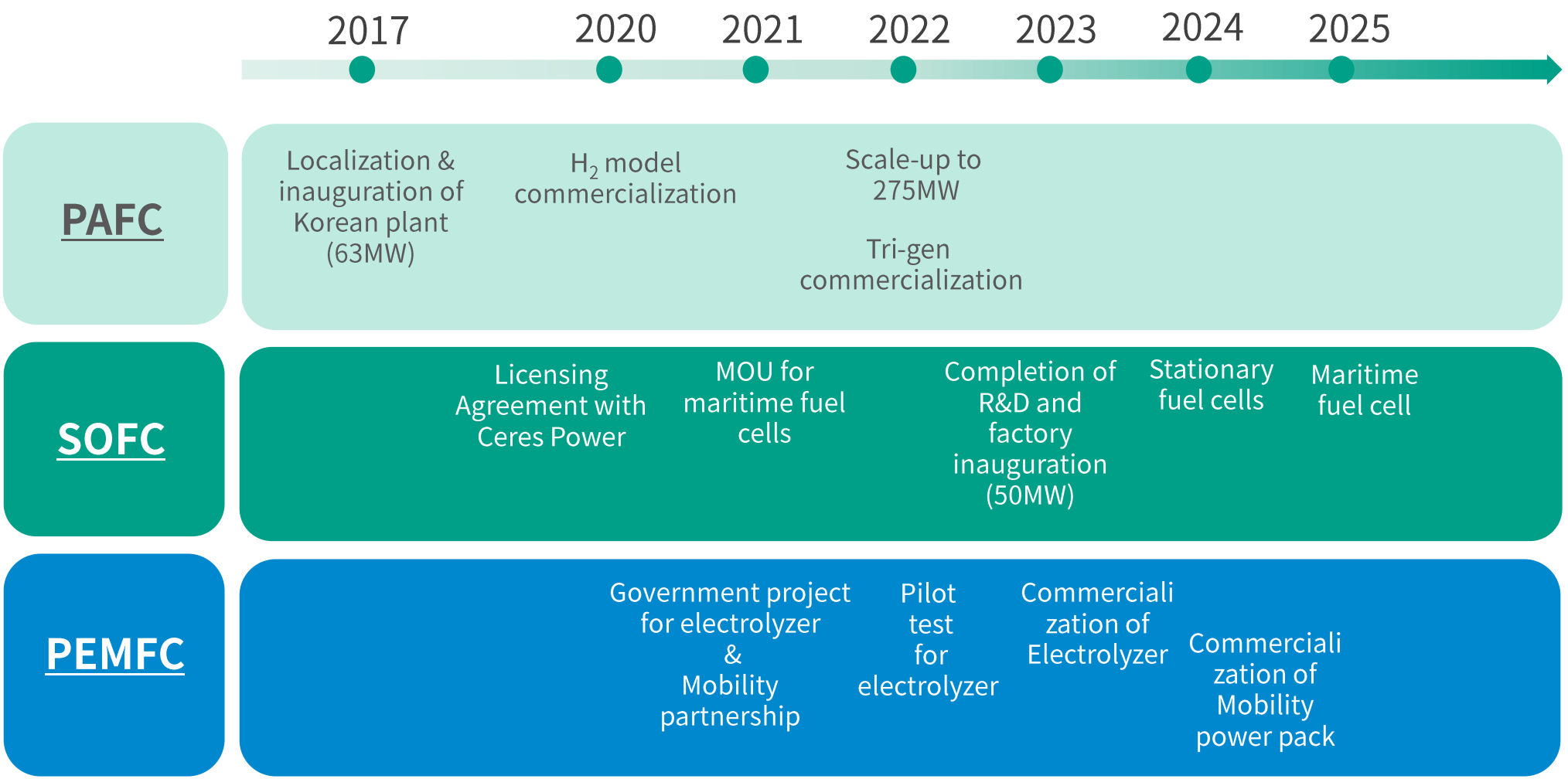
Development status and strategy

- After MoUs with local or global shipping and shipbuilding companies for joint development
- Improving in-house engineering function for expedited development
- SOFC commercialization in 23, maritime fuel cell commercialization in 25



Source: estimated based on Clarksons Research

Strategic Focus



APPENDIX

Appendix. Summary of Financial Position

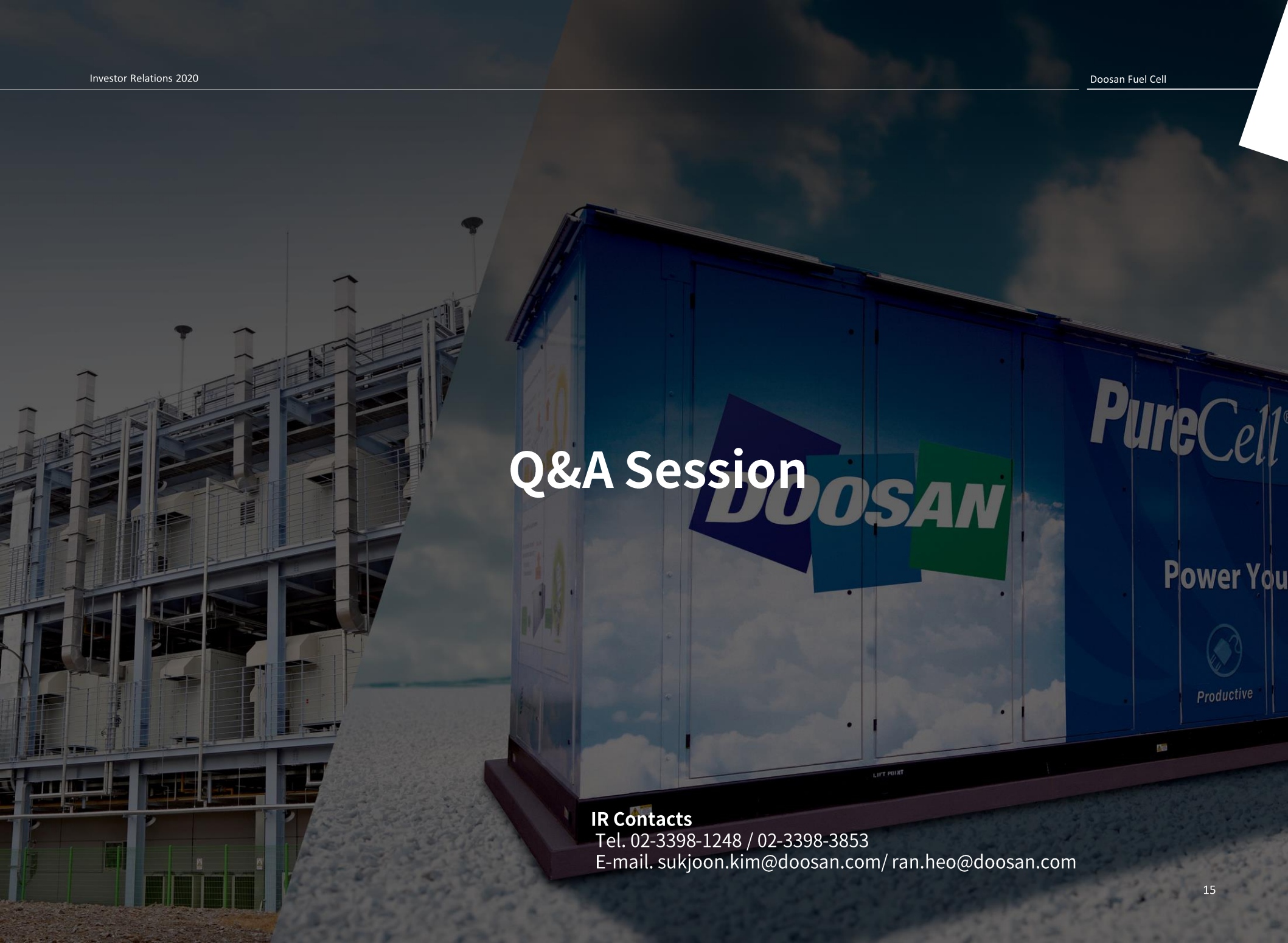
(Unit: KRW in billions)	21.Q1	21.Q2	Change
Total Assets	**769.4**	**867.3**	**97.9**
Current Assets	621.5	706.4	84.9
Non-current Assets	147.9	160.9	13.0
Total Liabilities	**261.1**	**358.8**	**97.7**
Current Liabilities	241.0	336.1	95.1
Non-current Liabilities	20.0	22.7	2.7
Shareholder's Equity	**508.3**	**508.5**	**0.2**
Share Capital	**769.4**	**867.3**	**97.9**
Leverage Ratio	51%	71%	
Debt	99.0	99.0	-
Cash and Cash Equivalents*	336.4	367.1	30.7
Net Debt**	-237.4	-268.1	-30.7

* Cash and cash equivalents +ST financial instruments + ST financial assets

** Debt- Cash and cash equivalents and etc.

Appendix. Summary of Income Statement

(Unit: KRW bn)	'20.2Q	'21.1Q	'21.2Q	YoY	QoQ
Sales Revenue	**1,10.1**	**72.0**	**55.6**	-50%	-23%
Operating Income	**12.6**	**0.3**	**1.0**	-92%	233%
Margin(%)	11%	0%	2%		
EBITDA	**14.4**	**2.2**	**3.0**	-79%	36%
Margin(%)	13%	3%	5%		
Income before Tax	**11.8**	**2.0**	**0.6**	-95%	-70%
Net Income	**9.1**	**-4.3**	**0.4**	-96%	Turned black



Q&A Session

IR Contacts
Tel. 02-3398-1248 / 02-3398-3853
E-mail. sukjoon.kim@doosan.com/ ran.heo@doosan.com