

# LOTTE ENERGY MATERIALS

## Overseas NDR

2023. 12. 04

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# Company Profile

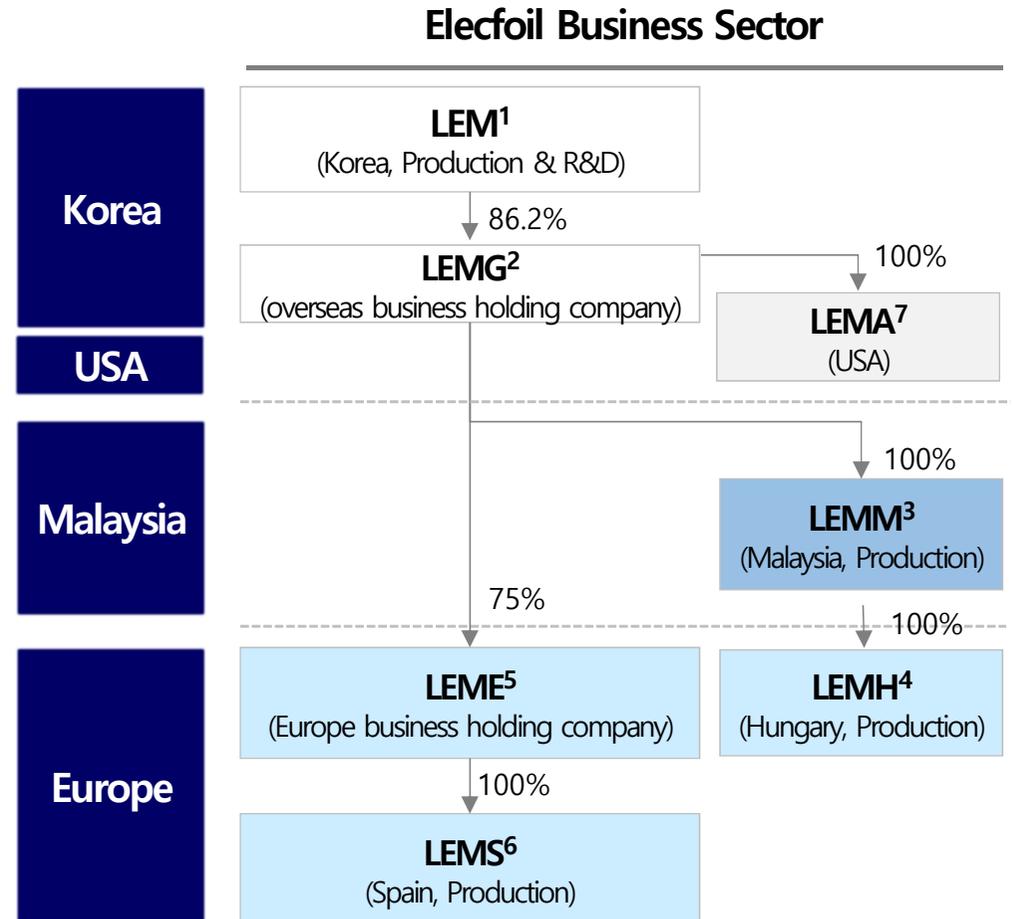
## LEM Profile

<b>CEO</b>	Kim Yeon-seop
<b>Date of establishment</b>	1987.08.11
<b>Date of flotation</b>	2011.03.04
<b>Capital Stock</b>	23.1(KRW bn) as of 2023.09.30
<b>Number of employees</b>	543 as of 2023.09.30
<b>Main business</b>	Elecfoil

## Shareholders / Stock Status

<b>Market of flotation</b>	KOSPI
<b>Total number of issued stocks</b>	46,110,835
<b>Par value</b>	500 KRW
<b>The largest shareholder</b>	LOTTE CHEMICAL CORPORATION (24,578,512 / 53.61%)
<b>Composition of shareholders</b>	The largest shareholder 53.6%, General shareholder 26.1%, Institutional investor 11.0%, Foreign investor 9.2% (2022.12.31 List of shareholders)

## LEM Governance



1. LOTTE Energy Materials 2. LOTTE Energy Materials Global 3. LOTTE Energy Materials Malaysia 4. LOTTE Energy Materials Hungary 5. LOTTE Energy Materials Europe  
6. LOTTE Energy Materials Spain 7. LOTTE Energy Materials America

# Company Overview

## LEM Business Introduction



### Elecfoil business sector



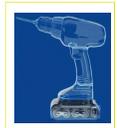
EV Battery  
(Large sized)



ESS  
(Large sized)



Phone battery  
(Small sized)



Electric tool  
Battery  
(Small sized)



PCB Circuit



Mobile phone



Note book



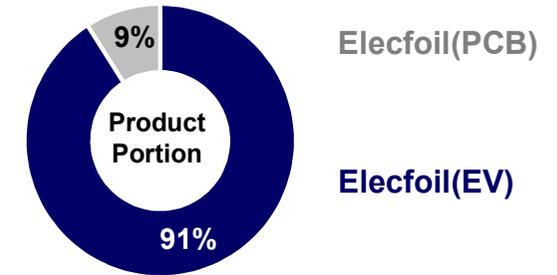
IT Device

### Subsidiaries



## LEM Elecfoil Business Product

Accumulated sales as of 2023.3Q



### Main product

### Product characteristics

Elecfoil  
(EV)

I2B

General purpose  
8 $\mu$ m

I2S

High-End product for  
secondary battery

Elecfoil  
(PCB)

ICS

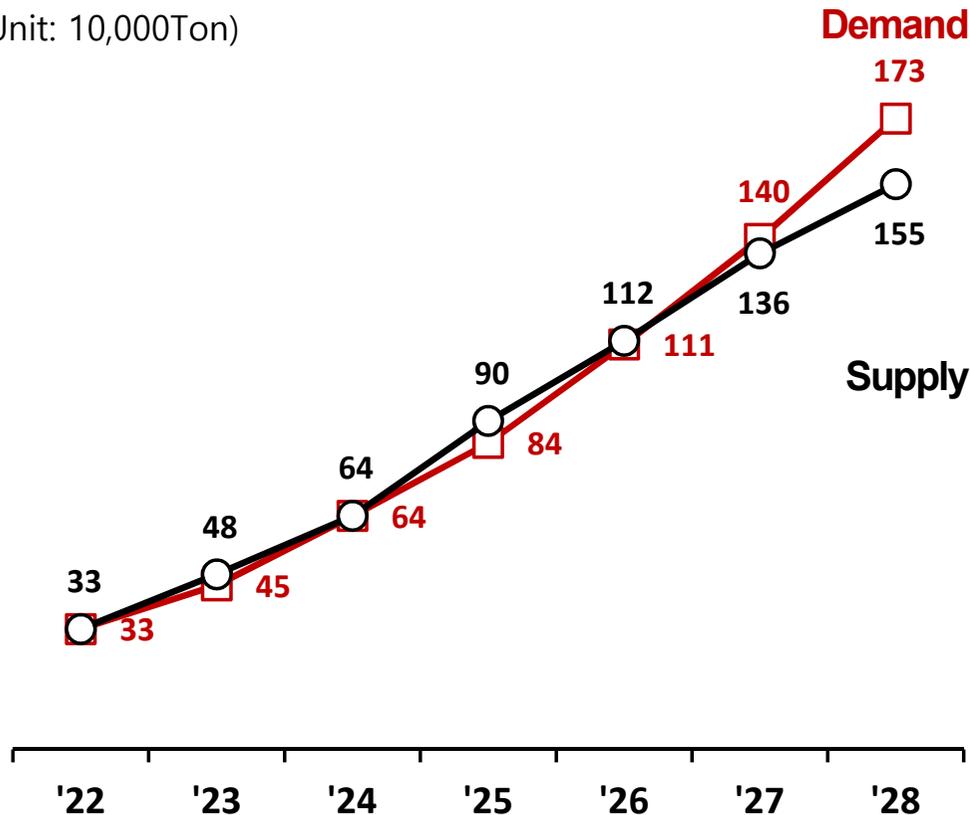
Customer demand  
driven thickness  
(9, 12, 18, 35 $\mu$ m etc.)

# Current Status and Outlook of Elecfoil market

- ✓ In contrast with expansion made in advance by Elecfoil manufacturer through out the world, delay in expansion by battery manufacturers in Europe and America has caused temporary imbalance between supply and demand
  - Above mentioned imbalance in our target market is expected to improve after stabilization in '24

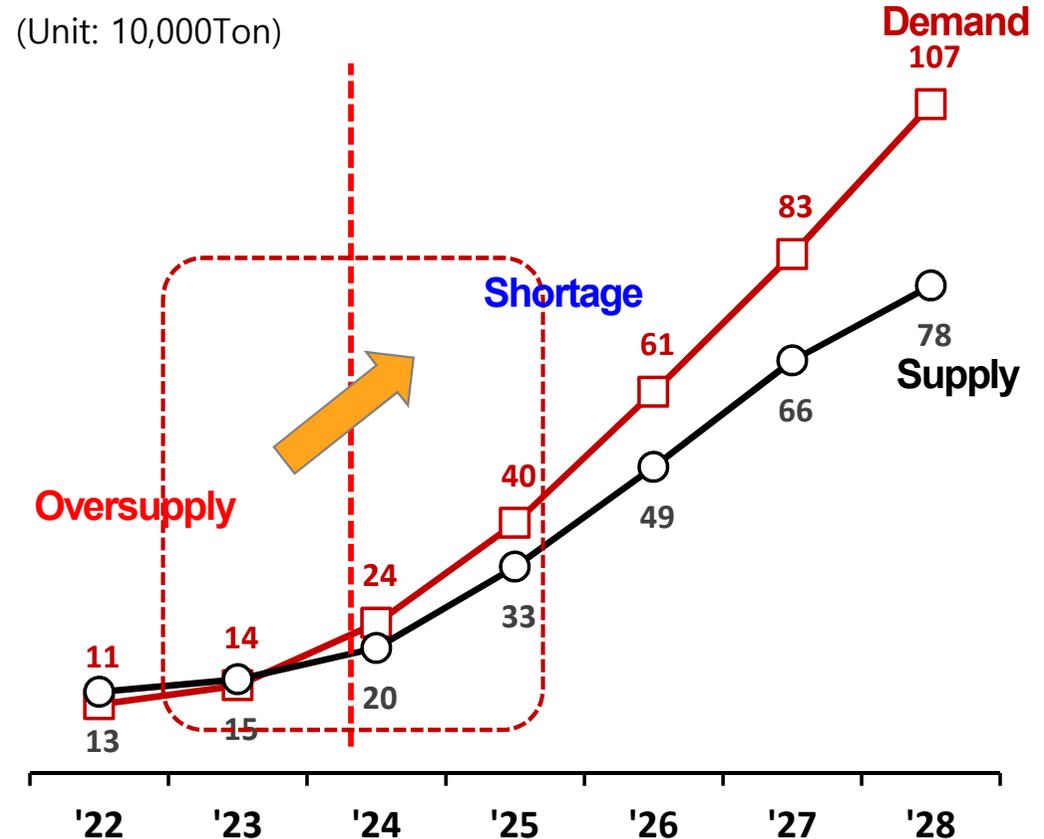
**Global Elecfoil(EV)  
Supply and Demand  
(China included)**

(Unit: 10,000Ton)



**Elecfoil(EV) in Target Market  
(Europe/North America)  
Supply and Demand (China excluded)**

(Unit: 10,000Ton)



# Outlook of High-End Elecfoil market Growth

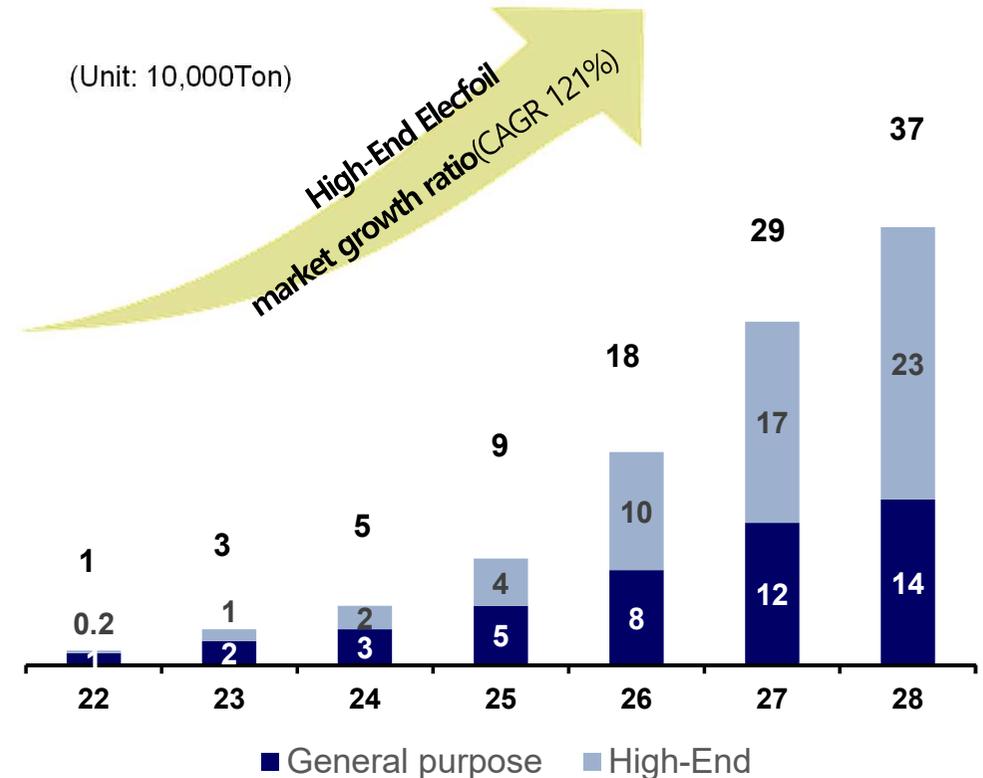
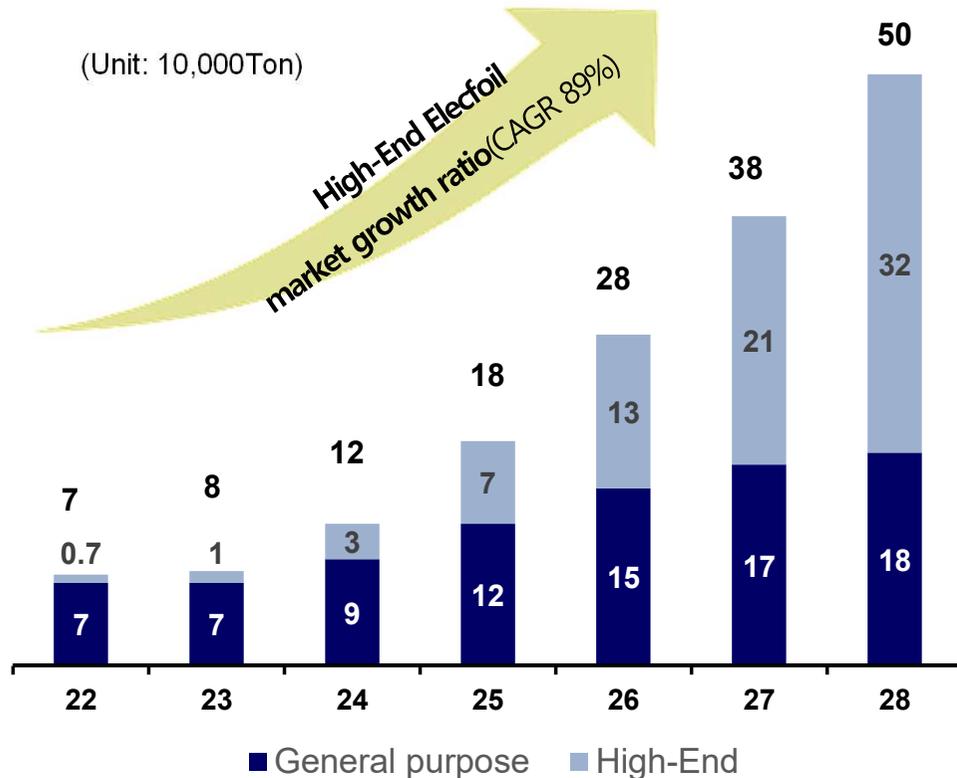
✓ Rapid growth outlook of High-End product<sup>1</sup> after '25 in Europe/North America

High-End Demand Outlook in Europe

More European battery manufacturers' entrance into the market is expected after '25

High-End Demand Outlook in North America

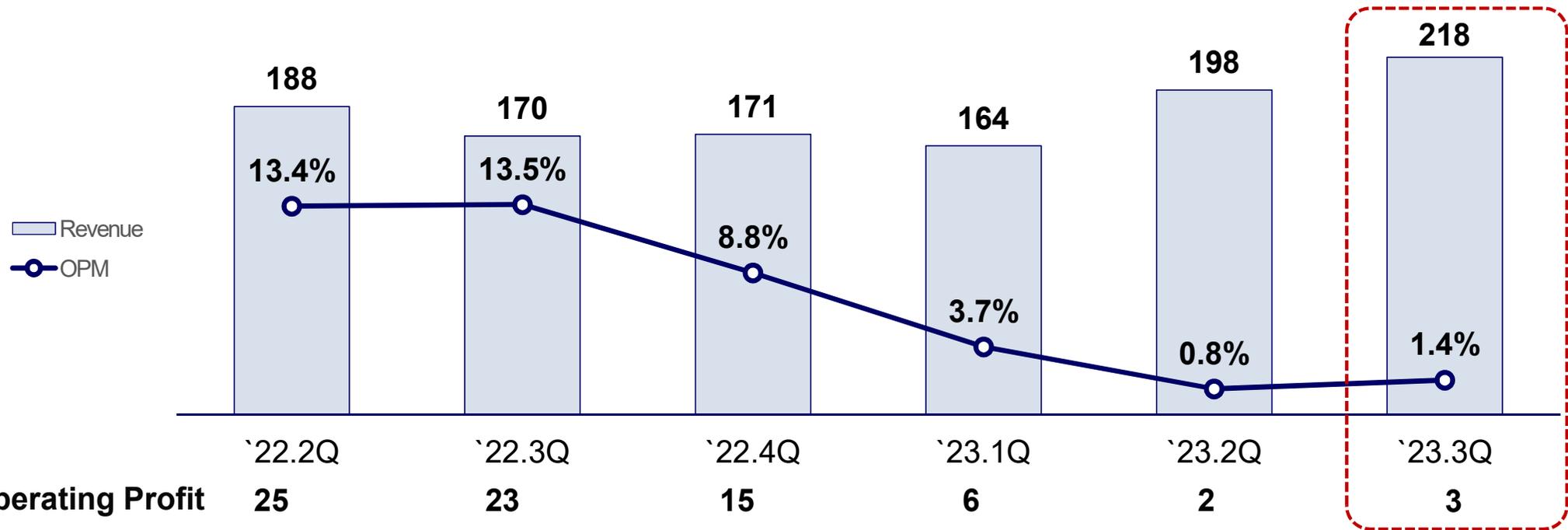
Regional characteristic(long distance travel) and initiation of mass production for 4680 battery



<sup>1</sup> High-End Elecfoil: High-strength Elecfoil, High-elongation Elecfoil, High-strength and High-elongation Elecfoil

# Quarterly Business Results & Outlook

(Unit: KRW bn, %)



## 3Q Earnings Review

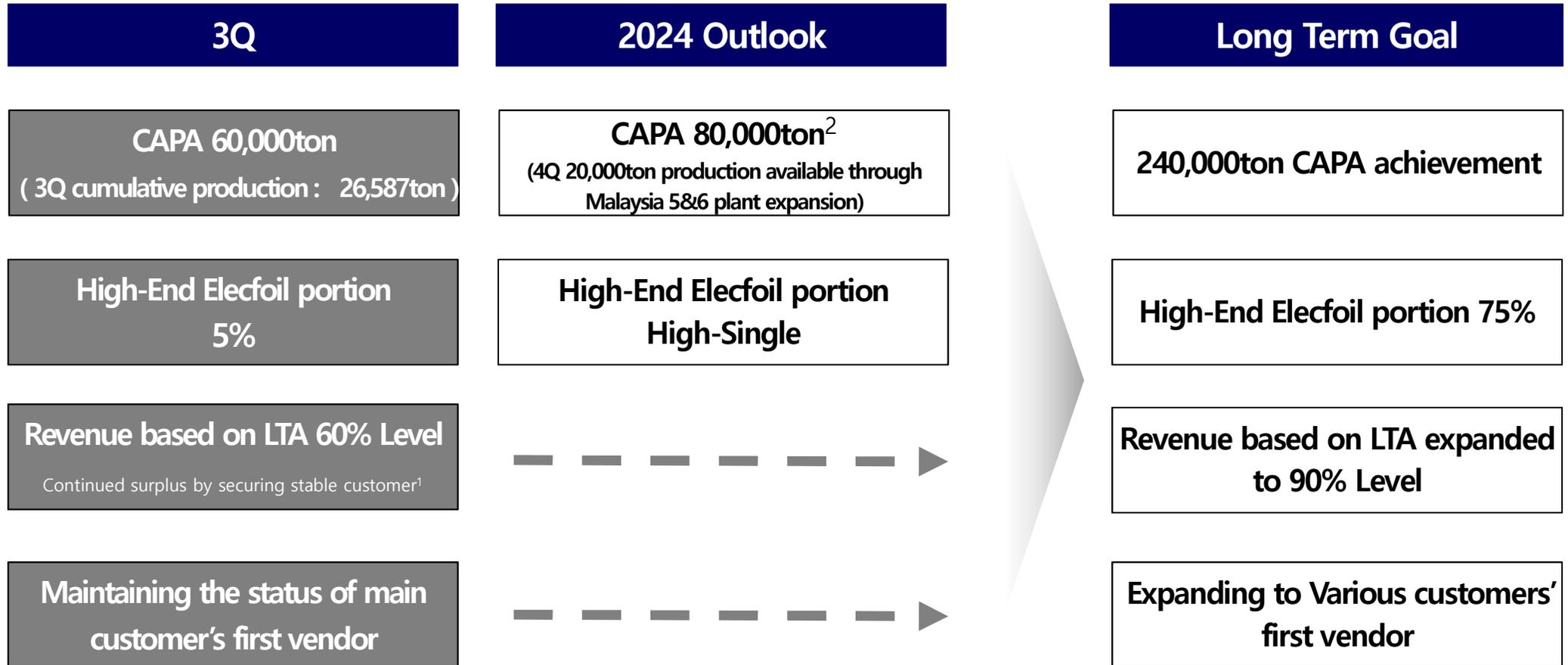
- Solid growth in Elecfoil sales volume and revenue resulting the highest quarterly revenue
- Operating profit margin was slightly improved resulting from Improvement in manufacturing costs per unit due to recovery in utilization

## 4Q Outlook

- Stable demand forecast from major customers and customer diversification are expected to increase utilization and sales volume in 4Q
- Although improvement in profitability is expected to be limited due to fixed cost burden, 4Q profitability is expected to increase compared to 3Q

# 3Q Highlight – '24 & Long-term Business Direction

- ✓ Production and High-End Elecfoil portion are expected to continuously grow despite slowing demand for forward industries
  - Continuing long-term business goals by expanding LTA<sup>3</sup> and the status of various customers' first vendors



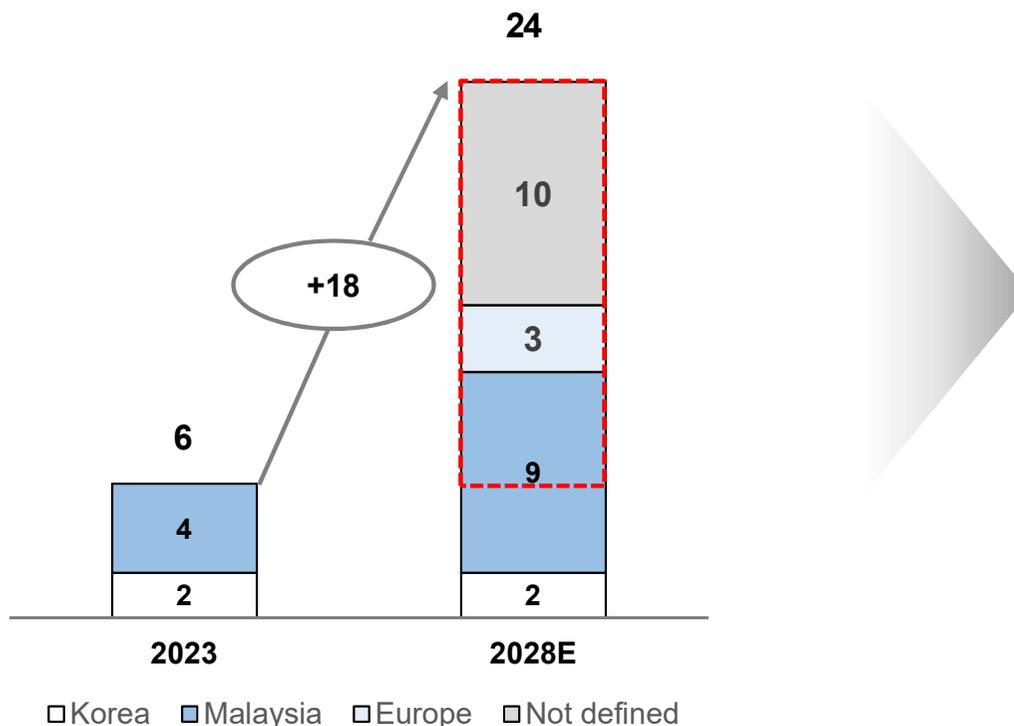
※ Note : 1. 2023 quarterly OP standard  
 2. End of 2024 standard  
 3. Long-Term Agreement

# 3Q Highlight – Expansion and Financing plan

- ✓ Debt/Equity 23% (High Financial stability and Borrowing capacity)
- ✓ Future expansion-related financing utilizes **internal reserved cash + operating cash flow** + **financial leverage through borrowing**

## Expansion Plan

(Unit: 10,000Ton)



## Financing Plan

(Unit: KRW)

### Financing resource 3.4 trillion KRW over<sup>1</sup>

Operation 1 trillion + α	Operating cash flow
Borrowing 1.4trillion	Maintaining proper borrowing
Cash and equivalents <sup>2</sup> 0.7trillion	Cash + Financial instruments
Finished investment 0.3trillion	Malaysia 5&6 plant on construction

Debt/Equity '23 3Q 23%

→ '28(E) Debt/Equity 100% under maintaining

※ Note : 1. Capex per 10,000ton 0.187trillion KRW (23.08.07 Average application of Spain expansion investment in publicized future business plan)

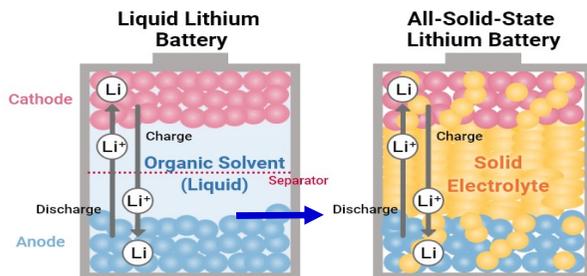
2. Cash and equivalents (Cash&short term financial instruments 0.5trillion + other financial asset 0.2trillion)

# Next Generation Product Portfolio

✓ Increasing corporate value through next-generation product development

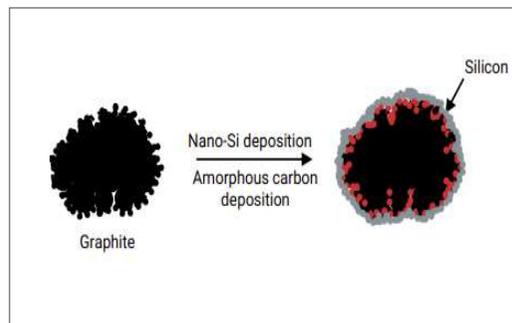
## Solid electrolyte

- Participating and leading national program for technical development in cooperation with institutes and renowned companies
- Factorial equity investment
- Technical completeness in LAB Scale
- Pilot Scale production(~'24)



## Silicon composite cathode active material

- High manufacturability / High Performance / Low Cost (Si-C series)
- Enwires 7.9bn equity investment
- Enwires France pilot factory on operation
- Research and Development of 4th Generation Cathode Active Material



## LFP electrode active material

- Customized high manufacturability
- LMO production experience + Track record in Solid state method
- Construction of production line(~'24) - LMO → LFP Conversion

electrode active material	Energy capacity	Safety	Life span
NCM/ NCA	High	Mid	Mid
LMO	Mid	High	Low
LFP	Low	High	High

# Appendix\_3Q 2023 Business Results : Income Statement LOTTE ENERGY MATERIALS

(Unit: KRW bn, %)

	`23.2Q	`23.3Q	QoQ	`22.3Q	YoY
<b>Revenue</b>	198	<b>218</b>	9.8%	170	28.3%
<b>Operating profit (%)</b>	2 0.8%	<b>3</b> <b>1.4%</b>	99.8% (+0.6%p)	23 13.5%	△86.7% (△12.1%p)
<b>Pre-tax Profit (%)</b>	△15 △7.4%	<b>12</b> <b>5.6%</b>	Turn around (+13.0%p)	12 7.2%	△0.9% (△1.6%p)
<b>Net Profit (%)</b>	△8 △3.8%	<b>7</b> <b>3.2%</b>	Turn around (+7.0%p)	14 8.5%	△51.4% (△5.3%p)

# Appendix\_3Q 2023 Business Results : Financial Position

(Unit: KRW bn, %)

	`23.2Q	`23.3Q	QoQ (Change)	Remarks
<b>Asset</b>	2,426	<b>2,432</b>	5	
Cash and Equivalents <sup>1</sup>	370	<b>520</b>	150	Cash Increase through sell of other financial asset
<b>Liabilities</b>	456 (23.1%)	<b>448</b> (22.6%)	△8	<b>Debt/Equity 22.6%</b>
Borrowings <sup>2</sup>	245	<b>214</b>	△31	
<b>Shareholder's Equity</b>	1,971	<b>1,984</b>	13	

※ Note : 1. Cash and Equivalents = Cash and Equivalents + Short-term financial instruments

2. Borrowings = Short-term borrowings + Liquidity Long-term borrowings + Long-term borrowings + Loans (Current, Non-current)

# Appendix\_Consolidated Financial Statements

(Unit: KRW bn)

	`23.2Q	`23.3Q
<b>Assets</b>	2,426	2,432
<b>Current Assets</b>	1,413	1,387
<b>Cash and Equivalents<sup>1</sup></b>	370	520
<b>Non-Current Assets</b>	1,013	1,044
<b>Tangible/Intangible Assets</b>	971	1,003
<b>Liabilities</b>	456	448
<b>Borrowings<sup>2</sup></b>	245	214
<b>Shareholders' Equity</b>	1,971	1,984
<b>Equity attributable to the parent</b>	1,441	1,450
<b>Capital Stock</b>	23	23
<b>Non-controlling interests</b>	530	534

	`22.3Q	`23.2Q	`23.3Q
<b>Revenue</b>	170	198	<b>218</b>
<b>Operating Profit</b>	23	2	<b>3</b>
<b>Finance Income/Expense</b>	△17	△20	<b>8</b>
<b>Equity Method Income/Loss</b>	-	-	-
<b>Other Income/Expense</b>	6	4	<b>1</b>
<b>Pre-tax Profit</b>	12	△15	<b>12</b>
<b>Net Profit</b>	14	△8	<b>7</b>
<b>Profit attributable to the parent</b>	20	△3	<b>3</b>

※ Note : 1. Cash and Equivalents = Cash and Equivalents + Short-term financial instruments

2. Borrowings = Short-term borrowings + Liquidity Long-term borrowings + Long-term borrowings + Loans (Current, Non-current)