Unprecedented External Changes:
Seismic, Unpredictable & Simultaneous

- Climate Change
- Energy Transition
- Pandemics
- Global Inflation
- Trade Conflict
- Russia-Ukraine War
LG Chem Four Corporate Initiatives  (Feb, 2019)

01 Portfolio Shift to Future Mega-Trend
02 Innovation & Differentiation
03 Efficiency Everywhere
04 Global/Contemporary Culture
2020 Covid 19 Pandemic –
LG Chem’s Crisis Management Principle (Feb, 2020)

- Control What We Can Control
- Don’t Mortgage the Future
- Preserve Cash
## LG Chem Brand Value

### Top 10 Most Valuable Brands

<table>
<thead>
<tr>
<th>Rank</th>
<th>Brand</th>
<th>Change</th>
<th>2022</th>
<th>2021</th>
<th>Change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BASF</td>
<td>▲ 1</td>
<td>$8,348m</td>
<td>$7,285m</td>
<td>+14.6%</td>
</tr>
<tr>
<td>2</td>
<td>စီရင်စီးငွေ</td>
<td>▲ 1</td>
<td>$4,670m</td>
<td>$4,017m</td>
<td>+16.2%</td>
</tr>
<tr>
<td>3</td>
<td>LG Chem</td>
<td>▲ 1</td>
<td>$4,297m</td>
<td>$3,602m</td>
<td>+19.3%</td>
</tr>
<tr>
<td>4</td>
<td>DOW</td>
<td>▲ 1</td>
<td>$4,293m</td>
<td>$3,729m</td>
<td>+15.1%</td>
</tr>
<tr>
<td>5</td>
<td>Linde</td>
<td>▲ 1</td>
<td>$3,578m</td>
<td>$2,679m</td>
<td>+33.6%</td>
</tr>
<tr>
<td>6</td>
<td>lyondellbasell</td>
<td>▲ 1</td>
<td>$3,033m</td>
<td>$2,282m</td>
<td>+32.9%</td>
</tr>
<tr>
<td>7</td>
<td>Asan KASEI</td>
<td>▲ 1</td>
<td>$2,318m</td>
<td>$2,126m</td>
<td>+9.0%</td>
</tr>
<tr>
<td>8</td>
<td>江苏石化股份有限公司</td>
<td>▲ 1</td>
<td>$2,292m</td>
<td>$1,604m</td>
<td>+42.9%</td>
</tr>
<tr>
<td>9</td>
<td>MITSUBISHI CHEMICAL</td>
<td>▲ 1</td>
<td>$2,119m</td>
<td>$1,856m</td>
<td>+14.2%</td>
</tr>
<tr>
<td>10</td>
<td>Shin &amp; Eaton</td>
<td>▲ 1</td>
<td>$2,099m</td>
<td>$1,355m</td>
<td>+54.9%</td>
</tr>
</tbody>
</table>

* Brand value of chemical Companies

Global No.3

---

* Source: Brand Finance Group, U.K.
LG Chem Revenue Growth for the Last 4 Years

2018
- 59% Petrochemicals
- 22% Advanced Materials
- 15% Energy Solution

2022
- 38% Petrochemicals
- 45% Advanced Materials
- 14% Energy Solution

CAGR 17%

2018: 28 KRW tn
2022: 52 KRW tn
LG Chem Market Capitalization Change for the Last 4 Years

End of 2018 | As of 2023
---|---
25 | 55 (Unit: KRW tn)

As of Dec 28, 2018 (Including Battery business unit) | As of April 28, 2023 (LG Chem Only)
Global Top 100, Whose Market Cap Grew the Most During Pandemic

Prospering in the pandemic 2020
THE TOP 100
(Financial Times Selection 2020)

In a dismal year for most companies, a minority have shone: pharmaceutical groups boosted by their hunt for a Covid-19 vaccine; technology giants buoyed by the trend for working from home; and retailers offering lockdown necessities online. Public companies had the tailwind of a surprisingly robust stock market — which many believe is a bubble. To rank companies that prospered in the pandemic, we have chosen to look at equity value added. Later in the series, we will look at an alternative gauge of success, as well as the big corporate losers and four thematic winners: pharma, cloud computing, ecommerce and gaming. Tom Braithwaite
LG Chem Major Events from 2019 to 2022

01. Successful Pandemic Recovery
02. LG Energy Solution Split-off (2020)
03. Three New Growth Drivers Launched (2021)
04. 2050 Carbon Net-Zero Declared (Firstly in 2020 & Upgraded in 2022)
05. Significant Portfolio Actions
06. Digital Transformation Initiative (2019)
07. Global Business Service Center (2020)
LG Chem’s EV Battery Business Chronology

1995  Started Lithium-Ion Battery Development

1999  Commercialized Small Battery

2000  EV battery Development Started

2009  HEV Lithium-Ion Battery Commercialized (World’s first)

2010  PHEV Lithium-Ion Battery Commercialized (World’s first)

2022  LG Energy Solution Split-off and IPO – Market Cap Over KRW 100 tn

- Battery Order Backlog : KRW 385 tn (as of Dec, 2022)
- More Than 30,000 Battery Related Patents
LG Chem’s Exciting Transformation

From Petrochemical Company

To Global Science Company
LG Chem’s 3 Future Growth Drivers

- Battery Materials
- Sustainability Business
- Innovative New Drugs
LG Chem’s 3 Future Growth Drivers

Battery Materials

Sustainability Business

Innovative New Drugs
1. EV Penetration & EV Segment

<table>
<thead>
<tr>
<th></th>
<th>2022</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume (63%)</td>
<td>(19%)</td>
<td>(53%)</td>
</tr>
<tr>
<td>Premium (19%)</td>
<td>(19%)</td>
<td>(28%)</td>
</tr>
<tr>
<td>Entry (17%)</td>
<td>-</td>
<td>(28%)</td>
</tr>
</tbody>
</table>

50% Volume Growth by 2030

※ Source: Market Data & Company Estimation
Moving towards Global Top Comprehensive Battery Materials Company

- **Cathode**
- **Separator**
- **Additional Battery Materials**
- **New Materials, New Business**
LG Chem’s Leadership in Cathode

1. Technology Leadership
   - Maximization of Energy Density: Ultra High Nickel (>95%)
   - Improvement in Stability & Safety: Single Crystal

2. Market Leadership

3. Metal Sourcing Leadership
   - High Voltage NCM (Mid-Ni)
   - LFP
   - Mn-Rich

- Innovating & Enhancing Process Engineering
- Keeping & Protecting IP Competitiveness
LG Chem’s Leadership in Cathode Battery Materials

1. Technology Leadership
2. Market Leadership
3. Metal Sourcing Leadership

Expansion of Capacity

Diversification of Customer Portfolio

(Unit: K ton)

2022 2023 2026 2028

88 120 280 470

External Customers

40%

2030

3%

LG Energy Solution
1. Technology Leadership

2. Market Leadership

3. Metal Sourcing Leadership

Securing supply chain for stable supply and higher profitability & Setting up recycle eco-system across the world

**China**
- Quzhou Precursor JV
- Lithium Long-term Contracts

**Korea**
- KEMCO Precursor JV
- Saemangeum Precursor
- Investment on Recycling Company (Jaeyoungtech)

**North America**
- Li-Cycle Minority equity investment
- Piedmont Lithium Off-take Contract

**Australia**
- Cooperation with Lithium Miners

And More...
LG Chem’s Expansion in Separator

- No. 1 Coating Technology
- Partnership with Toray
- Capacity Expansion across the World
Additional Battery Materials & New Business Opportunities

**Additional Battery Materials**
- CNT
- Anode Binder
- Cathode Dispersant

**New Materials, New Business**
- Pure Silicon Anode
- Electrolyte for Solid State Battery
- Advanced Battery Materials
Revenue Outlook for Battery Materials

(Unit: KRW tn)

※ The estimated amount of the business target is based on business plan and may differ from the actual amount due to changes in the business environment and strategy.
LG Chem’s 3 Future Growth Drivers

Battery Materials

Sustainability Business

Innovative New Drugs
Changing Petrochemical Business more towards Sustainability Business

**Recycled Material**
- Mechanical Recycling Expansion of Products Foundation of Ecosystem
- Chemical Recycling Initiation of Pilot Production (2024)

**Bio/Biodegradable Material**
- PBAT (MP: 2024, 50K ton)
- PLA (MP: 2026, 75K ton)
- Bio-Balanced Products HVO, Bio-Feedstock

**Renewable Energy Materials**
- Materials for Solar Panels
- POE Capacity Expansion (280K ton → 380K ton, Oct 2023)
Changing Petrochemical Business more towards Sustainability Business

PLA (Poly Lactic Acid)
Made with lactic acid produced by fermenting corn

Biodegradable Application
(Ex. Disposable plastic utensils)
decomposed within a few months

JV agreement with ADM (Aug, 2022)
Construction begin in 2023
Mass production begin in 2026 (75K ton)
Changing Petrochemical Business more towards Sustainability Business

Revenue Outlook for Sustainability Business

(Unit: KRW tn)

※ The estimated amount of the business target is based on business plan and may differ from the actual amount due to changes in the business environment and strategy.
LG Chem’s 3 Future Growth Drivers

- **Battery Materials**
- **Sustainability Business**
- **Innovative New Drugs**
Global Pharmaceutical Company

• Specialized in Oncology
• 5 Innovative New Drugs by 2030
Successful M&A Closed - Aveo Oncology

INNOVATIVE NEW DRUGS

Aveo Oncology

an LG Chem company

Innovative Oncology Drug Developer in the U.S.

Fotivda® for RCC treatment launched

*RCC: Renal Cell Carcinoma

Former NASDAQ Listed Company with 2022 Revenue over USD 100M

Consolidated into LG Chem in Feb, 2023
Revenue Outlook for LG Chem’s 3 Future Growth Drivers

- Innovative New Drugs
- Sustainability Business
- Battery Materials

Growth in 8 YEARS X6

<table>
<thead>
<tr>
<th>Year</th>
<th>Innovative New Drugs</th>
<th>Sustainability Business</th>
<th>Battery Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>1.9</td>
<td>19.7</td>
<td>4.7</td>
</tr>
<tr>
<td>2026</td>
<td>4.0</td>
<td>80.0</td>
<td>14.0</td>
</tr>
<tr>
<td>2030</td>
<td>40.0</td>
<td>30.0</td>
<td>30.0</td>
</tr>
</tbody>
</table>

(Unit: KRW tn)

※ The estimated amount of the business target is based on business plan and may differ from the actual amount due to changes in the business environment and strategy.
Revenue Outlook for LG Chem (Excluding LG ES)

(Unit: KRW tn)

※ The estimated amount of the business target is based on business plan and may differ from the actual amount due to changes in the business environment and strategy.
LG Chem’s Dedication to the **Sustainable Growth**
LG Chem’s Sustainability Approach

1. 2050 Net Zero Commitment
2. Build Sustainability Business
3. Global Leadership
2050 Net-Zero Commitment

Executing Net-Zero Strategies, reducing CO₂ in Scope 1 & 2

Reduce
Energy Efficiency Innovation

Avoid
Renewable Energy 100% for Overseas by 2030, for domestic by 2050

Compensate
Developing Carbon Offset Projects

CO₂ Emissions (Unit : ton/yr)

- BAU (Business As Usual)
- Net-Zero
- 20M
- 9.5M
- 6.6M

2019 2030 2050
(Excluding LG ES)

(Excluding LG ES)
LG Chem’s Actions to Achieve 2050 Net Zero

1. Renewable Energy Transition
2. Low Carbon Emitting Process Development
3. Fuel Switching to Low Carbon Fuel
4. Feedstock Switching to Biofuel
5. CCU Technology
6. Portfolio Shifting to Low Carbon
   (Applying ‘Internal Carbon Pricing’ since 2023)
Expanding to measuring Scope 3 emission

Completing LCA in 2023

Building up Partnership for Carbon Reduction Model

Reducing CO₂ in Scope 3

2050 CARBON NET ZERO COMMITMENT
BUILD SUSTAINABILITY BUSINESS
Launch of Integrated Green Brand ‘LET Zero’
Global Leadership in Sustainability

World Economic Forum

The Alliance of CEO Climate Leaders

Largest CEO-led Climate Alliance In the World

119 Companies

12 Industries

27 Countries
Thank You