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The information regarding business performance of LG Energy Solution is provided for the convenience of investors of the Company prior to the audit by external auditors.

Please note that some of the information contained herein may change in the course of the final audit by external auditors.

The financial information contained in this document has been prepared on a consolidated basis in accordance with K-IFRS or Korean International Financial Reporting Standards.

Some of the statements as contained herein can be forward-looking considering the current business environment and the Company's business strategies. Therefore, in accordance with uncertainties inclusive of changes in future business environment and corporate strategies, actual results may differ materially from those expressed in the afore-mentioned statements.

**SECTION** 

# 1

# **Business Performance**



## **Q2'22 Business Performance**





#### **Performance Analysis**

- ✓ The revenue in Q2'22 grew QoQ and YoY\*

  due to strong sales of cylindrical cells for EVs

  and having passed through metal price hikes

  to the battery prices.
  - \* Excluding the one-off factors in Q2'21
- The operating profit in Q2'22 decreased QoQ and YoY due to lock-down measures in China, global logistic disruptions and lagging impact of passing through incremental cost.
  - \* When excluding the one-off factors, the OP decline is minimal compared to Q2'21



<sup>\*</sup>The Q2'21 business performance includes the one-off factors.

Business Performance

Q2'22 Business Performance

Q2'22 Financial Results

Q2'22 Cash Flow

Annual Outlook

## **Q2'22 Financial Results**



#### **Financial Position**



				,
		Q2'21	Q1'22	Q2'22
Assets		22,178	34,976	36,434
	Cash and Cash Equivalents, etc.*	2,045	10,162	8,184
Li	abilities	13,099	15,536	16,532
	Debt	6,252	7,299	7,441
Е	quity	9,079	19,440	19,902



#### **Leverage Ratios**

(%, X)

	Q2'21	Q1'22	Q2'22
Liabilities to Equity	144%	80%	83%
Debt to Equity	69%	38%	37%
Net Debt to Equity	46%	-15%	-4%
Debt to EBITDA	3.0x	3.3x	4.2x



<sup>\*</sup>Deposits held by financial institutions included

Business Performance

Q2'22 Business Performance

Q2'22 Financial Results

Q2'22 Cash Flow

Annual Outlook

# Q2'22 Cash Flow



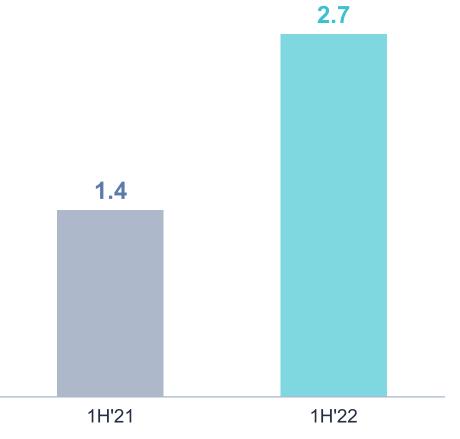
#### **Cash Flow**

(Billion KRW)

	Q2'21	Q1'22	Q2'22
Beginning Cash Balance	2,602	1,284	10,162
Cash Flows from Operating Activities	35	396	-947
Working Capital	-440	73	-1,374
Cash Flows from Investing Activities	-717	-1,527	-1,320
Capex	-731	-1,246	-1,452
Cash Flows from Financing Activities	122	9,960	231
Ending Cash Balance	2,045	10,162	8,184
Net Changes in Cash	-557	8,878	-1,978



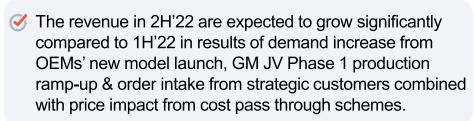
(Trillion KRW)

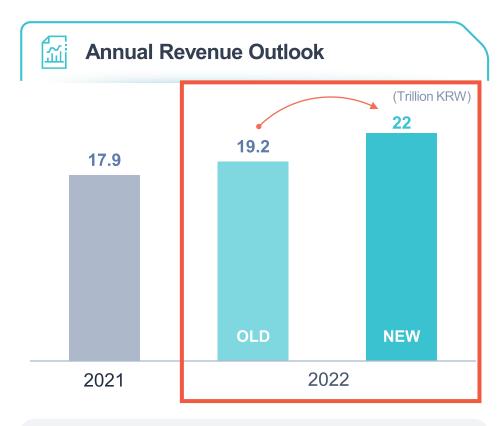


Business Performance Q2'22 Business Performance Q2'22 Financial Results Q2'22 Cash Flow Annual Outlook

#### **Annual Outlook**







Annual revenue outlook is revised up to around 22 trillion won from prior guidance of 19.2 trillion won.



<sup>\*</sup> The 1H'21 and annual performance include the one-off factors.

**SECTION** 

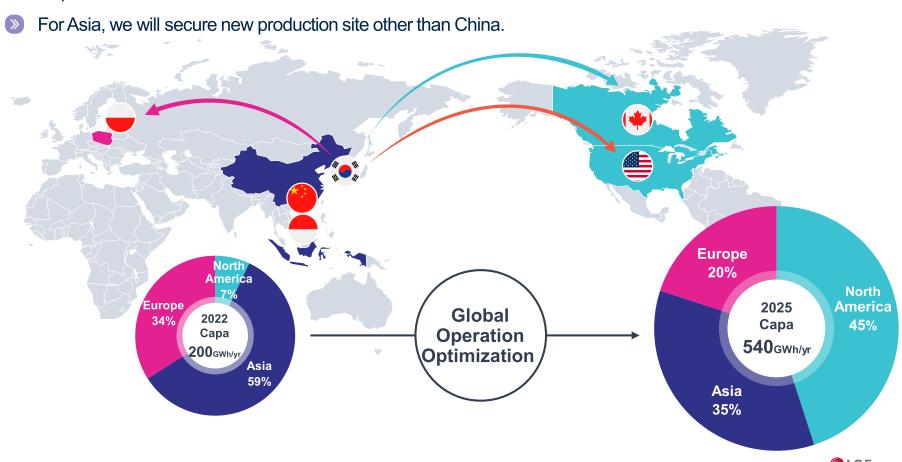
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# Mid to Long Term Corporate Strategies



## **Market Portfolio**

- Focusing on the fast growing North America market, we aim to expand JVs with OEMs for pouch batteries and the cylindrical battery supply for the strategic customers and EV start-ups.
- For Europe, we plan to add a new production footprint for cylindrical batteries in addition to the existing plant in Poland for pouch batteries.



# 2 Product Portfolio



Mid to Long Term Corporate Strategies

## **Dual Form Factor Strategy and Next Generation Technology Development**

**Pouch** 

# Maintain Outstanding Performance and Expand the Mainstream Segment

Premium

Continue to offer advanced solutions in terms of energy density and quick charging by applying single crystal NCMA cathode and silicon anode

Mainstream

Develop new cost-competitive chemistries by applying high voltage mid-nickel NCM, LFP, Manganese-rich chemistry, etc. Cylindrical

Lead the Market by Securing the Production Capability for the New 4680 Battery

New

Differentiate energy density and cost with advanced chemistries such as single crystal NCMA cathode and silicon anode





#### **Technology Roadmap**

2024 2026 2030

**Battery Technology** 

Lithium-Ion Battery (NCMA + SiO)

Polymer-Based Solid State Battery

\*\*\*

Sulfide-Based Solid State Battery

# 3 Quality Assurance

Corporate Strategies







#### **Execute 8 Key Initiatives for Quality Improvement**

- Implement the key initiatives to address quality issues such as torn anode tab and folded separator, etc.
- Minimize and detect manufacturing defects by enhancing product design and process



#### **Enhance Manufacturing Processes**

 Strengthen battery safety by applying more advanced manufacturing processes including ALS (Advanced Lamination & Stacking)



#### **Establish Full In-line Inspection System**

- Guarantee product quality and capture defects pre-emptively by applying automated in-line inspection system to the entire production line
- Minimize potential recall impact and range through data tracking



#### **Upgrade Safety Diagnostic Algorithm in BMS**

 Enhance detection capability to identify abnormal cases by monitoring in advance

# **4** Smart Factory





#### **Detect Issues Pre-emptively via Real-time Monitoring**

- Monitor manufacturing status and movement in real time
- Find errors and take actions pre-emptively



#### **Maximize Productivity Backed by Auto Calibration**

- Automate parameter calibration without human intervention
- Increase productivity by minimizing equipment failures

(7.)

#### Minimize Defects by Expanding Automated Inspection

- Execute automated inspection for semi and finished products for each manufacturing process
- Target to achieve defect-free manufacturing environment

Increase Yield/ Stabilize Quality

**5%p** ↑

5 Year Goals

+

Enhance
Workforce Efficiency

**75**% ↓ LABOR INTENSITY

Improve Processes/
Boost Productivity

**11**%p <sub>1</sub>

OVERALL EQUIPMENT

Effectiveness



# Value Chain



Corporate Strategies

#### Secure Competitive Metal Sourcing Capability and Stable Supply Chain Environment



#### Stable Supply Chain based on Strategic Partnership with Upstream Suppliers

- Enhance cost innovation competency by purchasing metals at discounted prices through direct investments
- Localize supply chain for 4 key raw materials via strategic partnership





#### Closed-loop Ecosystem through Cooperation with Leading Companies

- Establish a closed-loop battery ecosystem in order to prevent environmental pollution and create sustainable values (Collection of used batteries → disassembly/refining/smelting → metal recycling)
- Improve cooperation with relevant parties to collect and recycle used batteries (i.g. partnership with Li-Cycle in North America)







# 6 New Business

Mid to Long Term Corporate Strategies

## **BaaS** (Battery as a Service)

#### **Broaden Business Scope Into Data-based Service**

- Offer battery data analytics and manage battery life cycle
- Provide convenient solutions to optimize the residual values of the battery



# EaaS (Energy as a Service)

#### Improve Energy Efficiency and Resolve Power Shortage

- Look into pain points of domestic electric power industry in light of the expanded use of new renewable energy
- Offer a total solution contributing to creating social values including energy optimization and management





# Mid to Long Term Plan

Mid to Long Term Corporate Strategies





#### Mid to Long Term Growth Plan

- Increase revenue over three times in five years by expanding JVs with OEMs in North America, scaling up the supply of cylindrical batteries, developing the new form factor, and discovering new business opportunities based on market/customer/product portfolio strategies.
- Achieve double-digit Operating Profit Margin by obtaining technological leadership with differentiated chemistries and processes. In addition, stabilize/localize value chain based on strategic partnerships and enhance quality & manufacturing capability with smart factory.

**SECTION** 

# 3 Appendix



# **Appendix: Income Statement**

(Billion KRW)

			20	22			
	1Q	2Q	3Q	4Q	FY	1Q	2Q
Revenue	4,254	5,131	4,027	4,439	17,852	4,342	5,071
Cost of Goods Sold	3,477	3,412	3,271	3,794	13,953	3,567	4,249
Gross profit	777	1,719	757	646	3,899	775	822
Selling and Admin Expense	436	995	1,129	570	3,130	516	626
Operating Profit (Loss)	341	724	- 373	76	768	259	196
(%)	8.0%	14.1%	- 9.3%	1.7%	4.3%	6.0%	3.9%
EBITDA	659	1,073	6	482	2,220	676	627
(%)	15.5%	20.9%	0.1%	10.9%	12.4%	15.6%	12.4%
Net Income before Tax	301	838	- 463	102	777	260	129
(%)	7.1%	16.3%	- 11.5%	2.3%	4.4%	6.0%	2.5%
Net Income (Loss)	434	630	- 206	72	930	227	90
(%)	10.2%	12.3%	- 5.1%	1.6%	5.2%	5.2%	1.8%

<sup>1.</sup> The performance of the 2nd quarter of 2021 includes a one-off license revenue from SKI and a one-off recall expense.



<sup>2.</sup> The performance of the 3rd quarter of 2021 includes a one-off expense for GM recall.

Appendix Income Statement Financial Position Cash Flow

# **Appendix : Financial Position**

(Billion KRW)

		20	20	22		
	1Q	2Q	3Q	4Q	1Q	2Q
Assets	20,800	22,178	23,612	23,764	34,976	36,434
Cash and Cash Equivalents, etc.*	2,602	2,045	1,532	1,284	10,162	8,184
Account Receivables	2,788	2,698	2,665	2,915	2,907	3,611
Inventory	3,177	3,677	4,327	3,896	4,813	6,276
Property, Plant and Equipment	8,919	9,523	10,255	11,051	11,986	13,162
Liabilities	12,582	13,099	14,390	15,022	15,536	16,532
Account Payables	2,657	2,627	2,467	2,178	3,161	3,952
Debt	6,214	6,252	7,107	6,969	7,299	7,441
Equity	8,218	9,079	9,222	8,742	19,440	19,902
Share Capital	100	100	100	100	117	117

Key Leverage Ratios						
Liabilities to Equity (%)	153%	144%	156%	172%	80%	83%
Debt to Equity (%)	76%	69%	77%	80%	38%	37%
Net Debt to Equity (%)	44%	46%	60%	65%	- 15%	- 4%

<sup>\*</sup> Deposits held by financial institutions included.



Appendix Income Statement Financial Position Cash Flow

# **Appendix: Cash Flow**

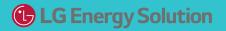
(Billion KRW)

						(Billion KRW
		202	2022			
	1Q	2Q	3Q	4Q	1Q	2Q
Beginning Cash Balance	2,093	2,602	2,045	1,532	1,284	10,162
Cash Flows from Operating Activities	424	35	- 250	770	396	- 947
Operating Profit/Loss	341	724	- 373	76	259	196
Depreciation	318	349	378	407	417	431
Working Capital	75	- 440	- 778	- 107	73	- 1,374
Cash Flows from Investing Activities	- 48	- 717	- 1,086	- 926	- 1,527	- 1,320
Capex	- 659	- 731	- 1,172	- 1,470	- 1,246	- 1,452
Cash Flow from Financing Activities	89	122	770	- 97	9,960	231
Borrowing/Repayment	54	38	856	- 138	330	142
Ending Cash Balance	2,602	2,045	1,532	1,284	10,162	8,184
Net Changes in Cash	508	- 557	- 513	- 248	8,878	- 1,978

<sup>1.</sup> The financial information stated herein has been prepared in the manner different from the standard applied to the cash flow statement of the auditor's report.



<sup>2.</sup> Deposits held by financial institutions included.



# THANK YOU

