# **FUTURING SMART ENERGY**

# 2Q 2018 Review & Outlook

LSIS

# Disclaimer

This presentation material is prepared for investors' reference, based on data that have not been filed with the financial supervisory commission.

Actual business performance may not necessarily be consistent with the projections herein, as a result of unexpected changes in the market environment and other conditions.

The financial information in this document are consolidated earnings results based on K-IFRS.

# I. Results & Outlook

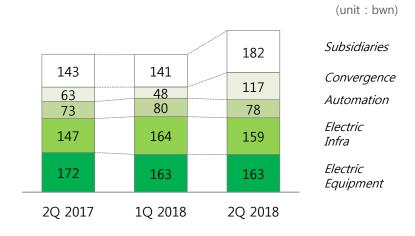
# 2Q 2018 Total Results

**Income Statement** 

Sales 661bwn (YoY 72bwn increased), Operating Profit 65bwn (YoY 22bwn increased) Electric Infra, Automation and Convergence led to the increase

#### (unit : bwn) 1Q 2018 2Q 2018 2Q 2017 Segment YoY QoQ 661 Sales 588 592 72 69 Operating 44 55 65 22 10 Profit Profit 43 53 57 14 4 before tax 40 7 Net income 33 43 ∆3

## Sales Breakdown by Business



- \* Subsidiaries includes LS Metal, LS Sauter, LS Mecapion, LSIS Wuxi, LSIS Dalian and LS-Vietnam
- \*\* Convergence Business includes Trans SOC, Solar, Smart-Grid and EV components.
- \*\*\* Sales of subsidiaries are before the consolidated adjustments.



# **1Q 2018 Financial Position**

Total assets 2,361bwn (YoY 58bwn increased)

Total liabilities/Equity Ratios dropped 14%p (YoY, 111%→97%)

#### **Financial Statement**

Segment	2Q 2017	1Q 2018	2Q 2018	YoY	QoQ
Total Assets	2,303	2,355	2,361	58	6
Current Assets	1,465	1,526	1,542	77	16
Cash & cash equivalent	405	413	359	∆46	△53
Total Liabilities	1,211	1,195	1,161	△50	∆34
Debts	719	653	595	△125	△58
Net Debts	315	241	236	△79	∆5
Equity	1,092	1,160	1,200	108	40

#### (unit : bwn)



**Financial Ratios** 



## **Business Results & Outlook**

Electric Equipment – Sales decreased in overseas mkt & Exchange rate Electric Infra – Sales profit grew due to SWGR and TR in Domestic major company mkt

#### **Electric Equipment**





- Sales decreased YoY 5.0%, OP decreased YoY 10.9%
- Sales decreased by overseas mkt (Middle East)
- Sales profit decreased by exchange rate
- For the 2018,
- Strengthen Domestic & Europe DC Equipment mkt (Accumulated sales result up to 2Q : 14bwn)
- Expansion into SE Asia mkt
- Sales increased YoY 8.3%, OP increased YoY 457.9%
- Domestic sales improved by demand in major mkt
- Boosted profitability due to the product mix changes and SWGR projects
- For the 2018, Domestic performance keep improving by favorable demand in governmental mkt Expect to win a new HVDC/FACTS PJT in domestic mkt

## **Business Results & Outlook**

Automation –Sales increased in Domestic (Semiconductor & Water treatment mkt) Convergence- Sales increase in Solar and Smart-Grid (Smart-Grid & EV turn into profit )

#### Automation



### **Convergence Business**



#### Sales increased YoY 6.4%, OP increased YoY 15.4%

- Sales increase in Domestic mkt (Semiconductor mkt)
- Sales profit increased by PLC/IVT sales volume
- For the 2018,
- Strengthen Overseas sales in Target Area (Vietnam, Middle East, Europe)

- Sales increased YoY 86.6%, OP increased YoY 116.3%
- Sales increased in Solar & Smart-Grid mkt
- Sales profit increased by EV & Smart-Grid(making profit)
- For the 2018,
- Expand floating Solar EPC (20~40MW Scale)
- Expand Smart-Grid mkt (ESS system in Plant & Solar mkt)
- Expand EV components in China mkt (Clear grant policy)



## **Business Results & Outlook**

China Subsidiaries led to the performance increase

LS Metal – Sales increased by Copper pipe & Stainless steel

**Subsidiaries** 

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- Sales increased YoY 27.9%, OP YoY 108.7% increased
- LS Metals improved due to favorable demand in construction and Electronic mkt
- Wuxi performance increased in renewable mkt and Electric Car mkt condition
- Dalian sales increased by major mkt (LG Display)
- For the 2018,
- LS Metals performance keep improving by copper price
- Wuxi performance improving by better Electric Car mkt condition in China.

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# **II.** Company & Business Introduction

## Growing into a World's Best from the Nation's First!

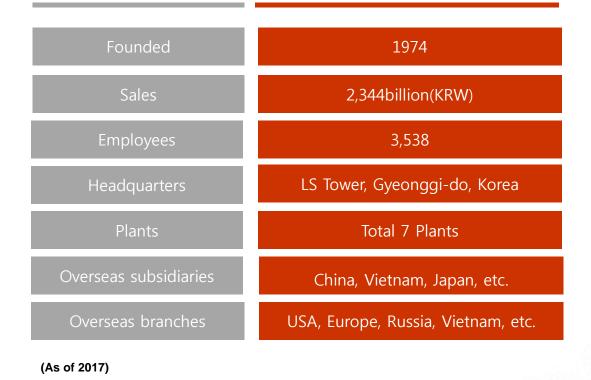
Leading company in the industrial electric, electronics, materials and energy field following its separation from LG in 2003

## LS History



## Leader in Power Solutions, Automation & Green Business

The Leading Company in the Power Distribution & Automation Industry The first to build a Smart Grid, Green Village and Green Factory







## 1. A History of Challenging the Future (1970's ~ 2007)

**1970's** '74 Jul. Established Goldstar Instrument & Electrical Co., Ltd

**1980's** '87 Mar. Established Goldstar Industrial Systems Co., Ltd.

2007 Feb. Opened Marketing Subsidiary in Dubai

2005 Mar. Renamed from LG to LS Industrial Systems Sep. Constructed the Electric & Automation equipment factory in Wuxi, China





**2003** Nov. Disaffiliated from LG Group, joined LS Group

- **2001** Jun. Constructed Dalian factory
- **2000** Sep. Established high-voltage testing agency
- **1990's** '94 Jul. Listed Goldstar Industrial Systems on the Korea Stock Exchange
  - '95 Feb. Renamed from Goldstar to LG Industrial Systems (LGIS)
  - '95 Sep. LGIS merged Goldstar I&E & Goldstar Mechanical & Electrical
  - '99 Apr. LGIS merged LG Metal
  - '99 Aug. Sold copper smelting, Vending Machine, Elevator & Escalator unit

## 2. Shifting the strategy to growth paradigm (2007 ~ 2012)



- Feb. LS Sauter established
- Apr. LS Metal spun off from LSIS and newly established LS Metal
- Apr. Construction of Busan plant completed
- May. LS Hogae Electric established in China
- May. LS Industrial Systems(currently LSIS) got the largest number of Green Certification as the first company in Korea
- Jul. LS Industrial Systems(currently LSIS) opened R&D Center in Beijing, China

## 3. Challenging for the future of Smart Energy (2013 ~)

2017 Mar. Selected as one of the Top 100 patent application corp. in Europe Jun. Awarded the Best Korean Company Grand Award Oct. Completed the Solar Power Station in Hokkaido Japan

2015

Jan. Declared value-based management Mar. Newly constructed R&D campus in Anyang

2013 Apr. Awarded the Great Place to Work Award for 2 consecutive years May. Concluded contract for the transfer of HVDC technology, and partnered with KAPES and Alstom Oct. Selected as one of the Top 100 Global Innovators by Thompson Reuters Nov. Awarded the 39th Korea National Quality Grand Award Dec. Won the 500 million Trade Tower Award





- 2016 Jan. Selected as one of the Top 100 Global **Innovators by Thompson Reuters** Mar. R&D campus achieved the first
  - **BEMS** certification
  - Jun. Awarded the Best Korean Company Grand Award
  - Sep. R&D campus equipped ESS for emergency electric power supply

Jan. Launched new strategic automation product lines for A&D 2014 May. LSIS Vice Chairman Ja-kyun Koo Received Gold Tower Order of Industrial Service Merit

May. Won the World's Largest Order for Smart Grid Project in Irag

Jun. Awarded the Best Korean Company Grand Award for 7 consecutive years

Jul. Marked the 40<sup>th</sup> anniversary of the foundation

Nov. Selected as one of the Top 100 Global Innovators by Thompson Reuters



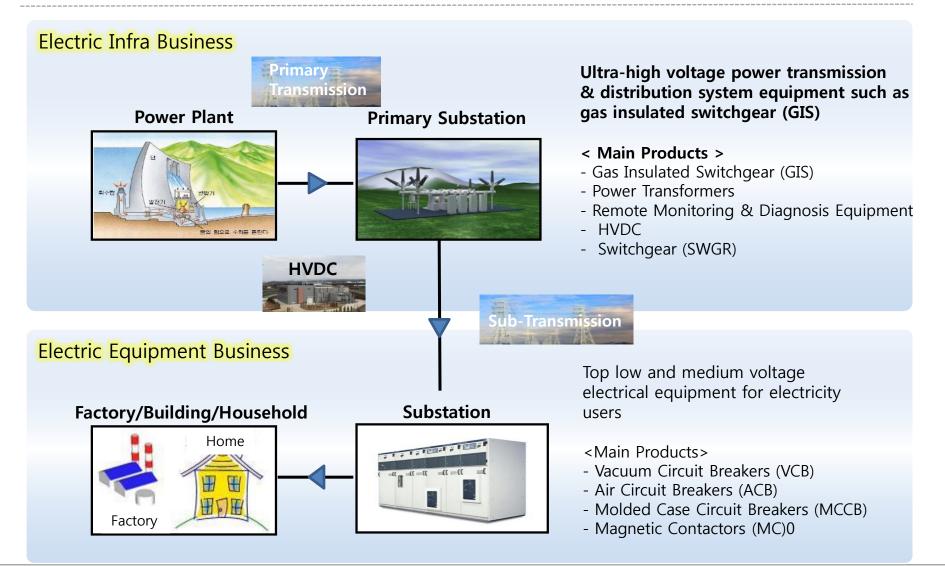
**J**UTURING **S**MART **E**NERGY

We guarantee all our customers a safe and affluent life and a happy future by supplying them with convenient smart energy.



LS

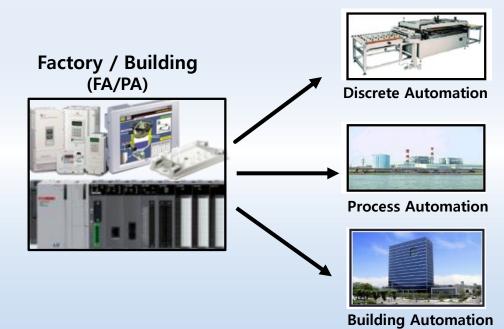
## Leading Provider of Total Electric Power, Automation & Green Business Solutions





# **Business Introduction**

## Automation Business



From simple automation control to large-scale manufacturing facilities and process control, LSIS provides the optimal solutions to diverse industrial fields.

#### < Main Products >

- Variable Frequency Drive
- PLC (Programmable Logic Controller)
- HMI (Human Machine Interface)
- Servo Drive & Motor
- DCS (Distributed Control System)
- RTU (Remote Terminal Unit)

## Convergence Business



**Smart Grid** 



**Green Car Solution** 



**Photovoltaic System** 



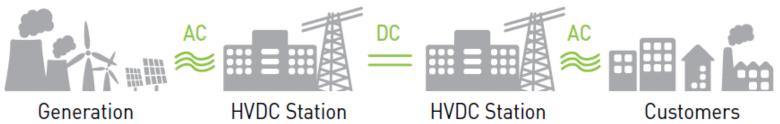
**Railway System** 



# HVDC

HVDC system converts AC to DC to transmit long distance and then converts back again to

Connect with the AC grid with very low loss



#### Long Distance Transmission with Lower Cost

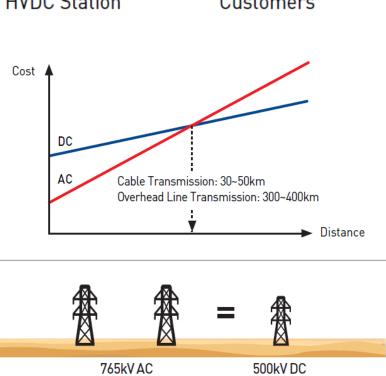
HVDC is the only option for the overhead transmission longer than 300km or submarine/underground 40km thanks to DC characteristics.

### **Eco-friendly Transmission**

HVDC system has lower environmental impact because it requires fewer overhead lines comparing to AC system. The technology is also the key component in the future energy system based on renewable energy sources.

### **Optimal Grid Management**

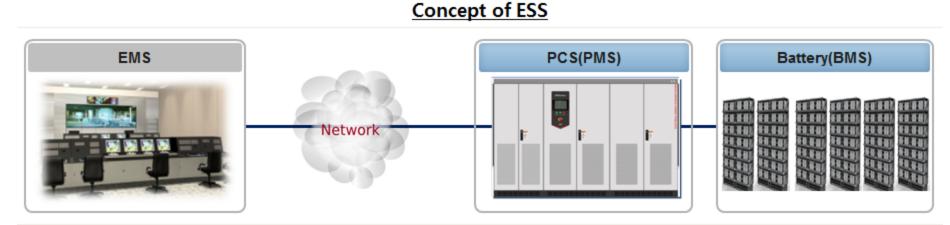
HVDC can directly interconnect load centers with huge energy sources efficiently. Therefore, negative impact on the grid is minimized. HVDC also improves the performance of AC grid by means of additional controllability.



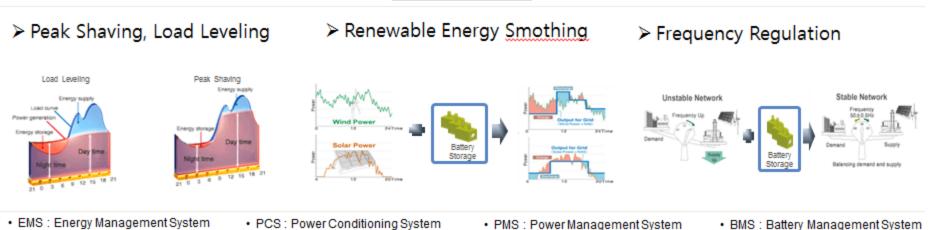


# **ESS Applications**

ESS(Energy Storage System) includes PCS(Power Conversion System) and battery, and make an efficient way of use electricity power



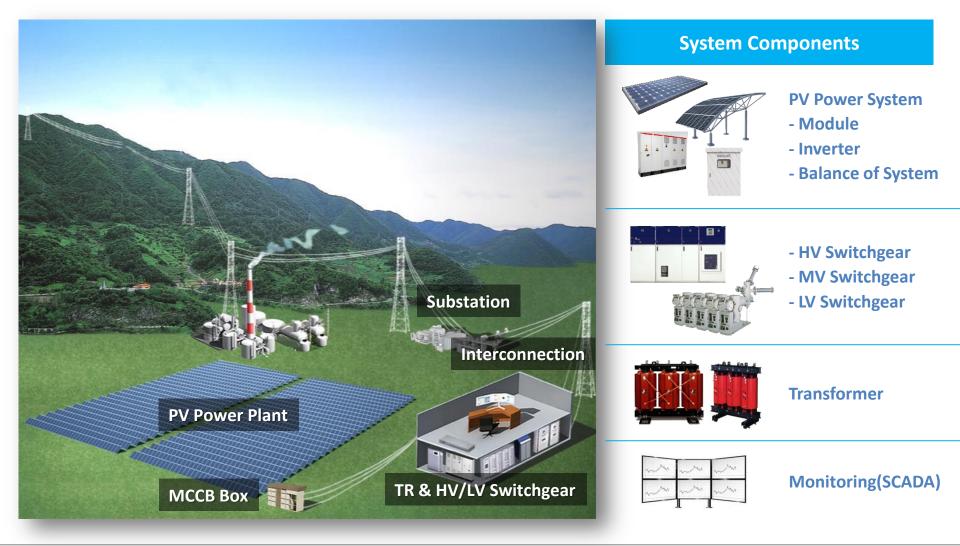
Function of ESS





# **PV Power Plant**

We provide total solution for PV Power Plant. In addition to PV products, we can provide customers with all kinds of electric power equipment manufactured by LSIS.







#### **Income statement**

2018 661 △529 132 20.0%)	YoY 12.3% 10.4% 20.4%	QoQ 11.7% 12.7%
△529 132	10.4%	12.7%
132		
	20.4%	7 50/
20.0%)		7.5%
-0.070)	-	-
△67	1.2%	△1.0%
65	49.3%	17.9%
(9.9%)	-	-
∆9	1,252.9%	233.6%
57	31.4%	7.2%
40	21.1%	△6.3%
(6.1%)	-	-
l2.1%	-	-
(	65 9.9%) △9 57 40 6.1%)	65 49.3%   9.9%) -   △9 1,252.9%   57 31.4%   40 21.1%   6.1%) -

#### **Statement of Financial position**

(unit : bwn, %)

_					
Segment	2Q 2017	1Q 2018	2Q 2018	QoQ	YoY
Fotal Assets	2,303	2,355	2,361	3%	0%
Current Assets	1,465	1,526	1,542	5%	1%
Cash&Cash Equivalents	405	413	359	△11%	∆13%
Inventories	162	189	176	9%	∆7%
Other Current Assets	897	924	1,006	12%	9%
Non-Current Assets	838	829	819	∆2%	∆1%
Tangible Assets	592	573	571	∆4%	∆0%
Intangible Assets	123	119	118	∆4%	∆0%
Other Non-Current Assets	123	138	130	6%	∆5%
otal Liabilities	1,211	1,195	1,161	∆4%	∆3%
Current Liabilities	658	737	698	6%	∆5%
Short-term borrowings	185	204	146	∆21%	∆29%
Non-Current Liabilities	553	459	463	△16%	1%
Long-term borrowings	534	449	449	△16%	0%
Equity	1,092	1,160	1,200	10%	3%
Current Ratio	223%	207%	221%	∆1%	7%
Equity/Total Assets	47%	49%	51%	7%	3%
Total Liabilities/Equity	111%	103%	97%	∆13%	∆6%
Net debts Ratio	29%	21%	20%	∆32%	∆5%

#### **Statements of Cash Flows**

(unit : bwn)

(unit : bwn, %)

Segment	'17.2Q	'18.2Q	YoY
Cash and cash equivalents at the beginning of year	340	262	∆79
Cash Flows From Operating Activities	101	97	∆3
Cash Flows From Investing Activities	∆30	96	127
Сарех	△21	∆24	∆3
R&D	∆7	∆5	1
Others	∆3	125	128
Cash Flows From Financing Activities	∆4	<b>∆99</b>	∆95
Effect of exchange rate changes on cash and cash equivalents	1	3	5
Cash and cash equivalents	405	359	∆46



HQ

(unit : bwn)

	<b>C</b>					15					16					17				18	Y-o-Y	
	Segme	nt		1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	Total	(4Q)
			Domestic	105	107	108	109	429	<i>95</i>	101	102	101	399	115	111	109	100	435	111	107	218	∆3%
	Electric	Sales	Overseas	58	62	67	62	249	61	62	55	57	235	59	61	56	55	230	52	56	108	∆8%
	Equipment		Total	164	168	175	172	678	157	163	157	157	634	173	172	165	155	665	163	163	326	△5%
		Operating Profit		31	35	41	32	139	36	36	37	33	142	40	36	37	26	139	34	32	66	△11%
	Electric		Domestic	79	107	100	98	384	64	82	105	141	392	90	106	131	120	447	134	115	248	8%
		Sales	Overseas	12	16	15	33	75	36	33	20	46	134	41	40	38	55	174	30	44	74	10%
	Infra		Total	91	122	115	130	459	100	114	125	187	526	130	147	169	175	621	164	159	322	8%
		Operating Profit		∆2	0	7	2	7	ightarrow 5	0	⊿7	8	_∆4	0	2	13	14	29	14	10	24	458%
	Automation	tion	Domestic	47	43	48	49	187	46	48	47	45	186	48	49	51	44	193	54	56	110	14%
HQ			Overseas	21	22	21	25	89	26	23	19	20	88	24	24	26	20	94	26	21	48	△10%
			Total	68	65	69	74	276	72	71	66	65	274	72	73	77	64	287	80	78	158	6%
		Operating Profit		4	4	8	4	19	9	6	6	6	27	8	10	12	6	36	11	12	23	15%
			Domestic	45	83	67	76	271	38	46	30	56	171	26	36	31	52	145	32	90	122	149%
	Convergence	Sales	Overseas	11	7	23	28	69	17	17	31	42	107	23	26	24	15	89	16	27	43	2%
	Business		Total	56	89	90	105	340	56	63	61	98	278	48	63	55	68	234	48	117	165	87%
		Opera	ting Profit	△11	0	∆3	∆3	△18	ightarrow10	riangle 15	∆11	∆31	△67	⊿14	⊿9	∆8	∆28	⊿60	∆8	1	⊿7	116%
			Domestic	277	339	323	332	1,271	244	277	284	343	1,148	278	303	322	317	1,220	330	369	699	22%
	Subtotal	Sales	Overseas	102	106	126	149	482	141	134	125	164	564	146	151	145	145	587	124	148	273	∆2%
	Sustotui		Total	379	445	449	481	1,753	385	411	409	507	1,712	425	454	467	461	1,807	455	517	972	14%
		Opera	ting Profit	22	38	53	35	148	29	27	25	16	97	34	38	53	18	143	50	55	106	45%

#### Subsidiaries

(unit : bwn)

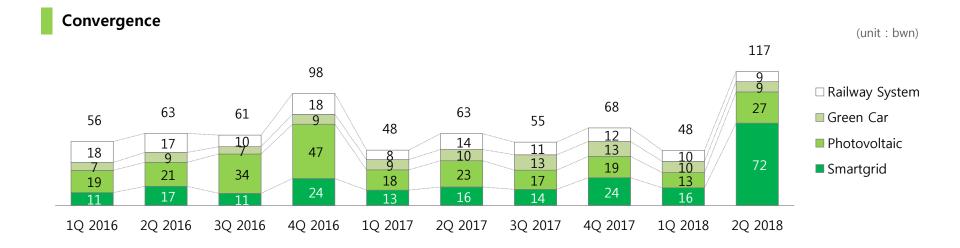
	Commo					15					16					17				Y-o-Y		
	Segme	nt		1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	Total	(4Q)
	LS		Domestic	24	28	26	26	104	25	28	33	40	126	34	37	41	43	156	39	41	81	11%
		Sales	Overseas	47	39	44	39	168	45	36	29	37	147	49	39	37	43	167	48	38	86	∆2%
	Metal		Total	71	67	70	64	272	70	64	62	77	273	83	76	79	85	323	87	79	166	4%
		Operating Profit		∆3	∆2	∆5	1	∆9	1	1	riangle 1	∆0	0	0	⊿0		1	ightarrow 0	⊿0	⊿0		25%
	Subsidiaries	bsidiaries Sa		15	14	11	17	56	10	11	13	25	58	16	22	19	16	72	15	15	30	∆30%
Subsidi	(Korea)	Operat	ting Profit	1	1	0	∆0	2			1	2	2	1	3	2	1	7	2	2	3	∆40%
aries	Subsidiaries	S	Sales	31	43	58	49	180	49	53	42	44	188	39	45	38	48	170	39	82	121	83%
	(China)	Operat	ting Profit	0	2	6	4	13	5	5	4	2	16	1	3	0	3	6	1	10	11	241%
	Subsidiaries	S	Sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	6	10	
	(Vietnam)	Operat	ting Profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Subtotal	S	Sales	116	124	139	130	508	129	128	117	146	519	138	143	135	149	565	145	182	327	28%
	Subtotal	Opera	ting Profit	∆2	2	1	5	6	5	5	4	4	18	2	6	1	4	13	3	12	15	109%

#### Consolidated

(unit : bwn)

Cogmont					16					17			18	Y-o-Y					
Segment	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	3Q	4Q	Total	1Q	2Q	Total	(4Q)
Consolidation adjustment for Sales	△10	∆16	△15	△19	△60	∆12	∆14	∆2	10	△18	∆3	⊿9	△11	⊿5	∆29	∆8	∆39	⊿47	∆348%
Consolidation adjustment for OP	∆1	1	∆0	1	1	0	0	1	8	9	0	⊿0	1	1	3	2	⊿2	0	△588%
Total Sales	485	552	573	592	2,202	501	525	524	663	2,214	559	588	591	605	2,344	592	661	1,252	12%
Total Operating Profit	19	41	54	41	154	35	32	30	28	124	36	44	55	23	158	55	65	121	49%

# **Appendix 3. Sales details for Convergence & Subsidiaries**



**Subsidiaries** 



