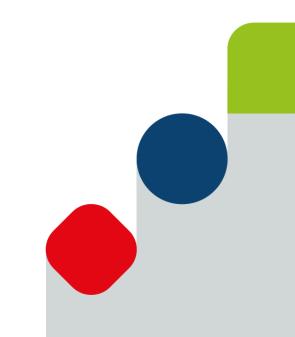
# LOTTE Chemical CEO IR DAY (CIO Meeting)

2022. 3. 31





#### **Disclaimer**

This material includes future forecast information,

based on the information provided by the management at this time.

Inherently, this material contains uncertainty of future-related prospects, hence, while significant differences may occur, LOTTE Chemical is not obligated to supplement or modify the details laid out in this material.

Additionally, in no case can this data be used as evidence of legal liability for investment results.

#### **Contents**



# **Changes in the Petrochemical Industry**

✓ After the initiation of Vision 2030 in 2018, petrochemical industry has seen several significant changes



Growing interests in ESG followed by the need for ESG Strategy

Importance of Sustainability heightened due to Regulation / Environmental changes,
Need for ESG initiatives amplified



Opportunities to endorse Specialty opportunities within LOTTE Chem's Operating region

Newly discovered business areas for value creation, followed by global regulation changes and impact from the market dynamics changes



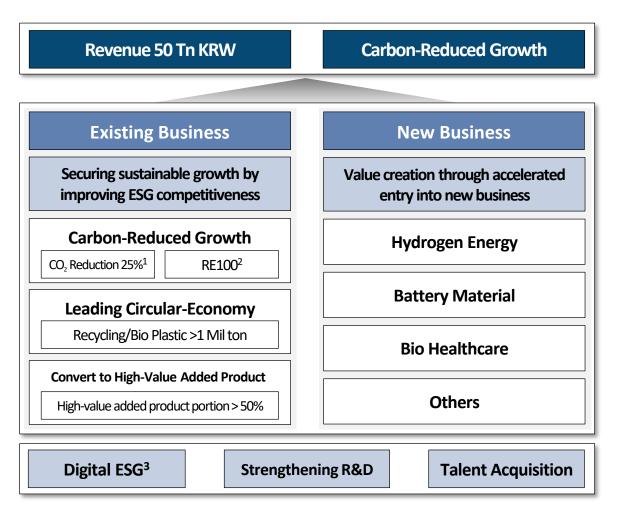
Growing interests in the Specialty sector which also leverage Shareholder Value

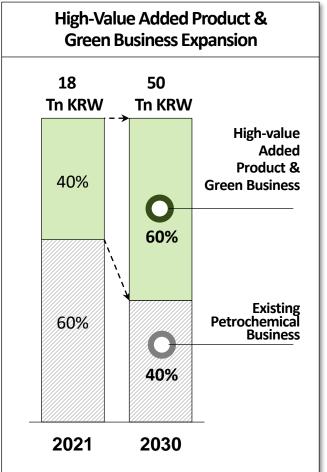
Need to venture into High-Valuation business, apart from existing petrochemical business

## **ESG Growth Strategy**



✓ Build sustainable growth through strengthening ESG initiatives within the existing business and developing Green/New business opportunities, unlocking more value for shareholders





# Road to Hydrogen / Battery / Recycling Transition



✓ Set directions for new business in response to the current ESG trend, materialize roadmap for new business strategies

# 1 Hydrogen



Carbon-Neutral / Clean energy expansion deemed essential, but uncertainty remains

## 2 Battery Material



Market expecting high, accelerated growth along with eco-friendly mobility industry

#### Recycling / Bio Plastic



Increase of global regulations / policy against plastic, expectation for petrochemical companies to respond first

Company Strategy

Industry

Outlook

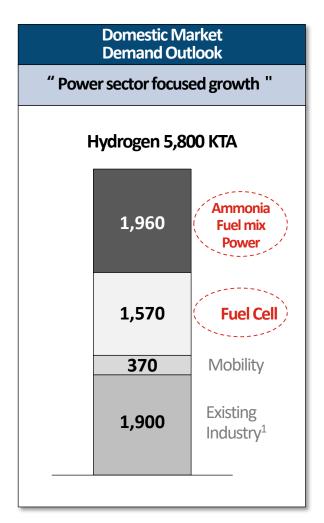
- Acquiring overseas ammonia / Gain leadership through Infrastructure establishment
- Develop vacant technology / Accelerate business for hydrogen utilization expansion
- Expanding already-established business through entering high-growth market
- Identify to ways to further develop highvalue added battery material business
- Preemptive response towards regulations by expanding CAPA of Mechanical / Chemical / Bio plastic products and acquiring needed technologies

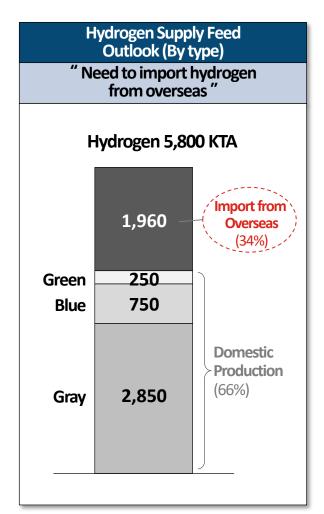
2030 Goal Clean hydrogen 1.2 Mil ton, Revenue 5 tn KRW (Accumulated investment in total: 6 tn KRW)

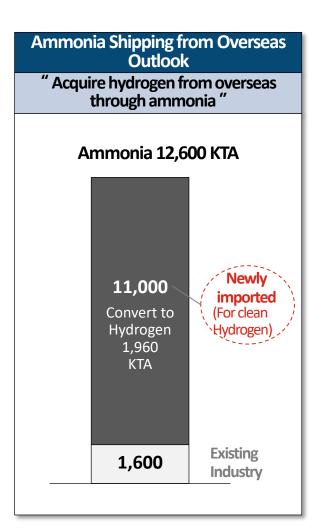
Expansion into domestic/overseas markets, Revenue 5 tn KRW (Accumulated investment in total: 4 tn KRW) Recycling / Bio > 1 Mil ton,
Revenue 2 tn KRW
(Accumulated Investment in total: 1 tn KRW)

# [Hydrogen] Outlook on Domestic Hydrogen market (Year 2030)

✓ Domestic hydrogen market growth centralizes on power generation industry, Ammonia will play a key role

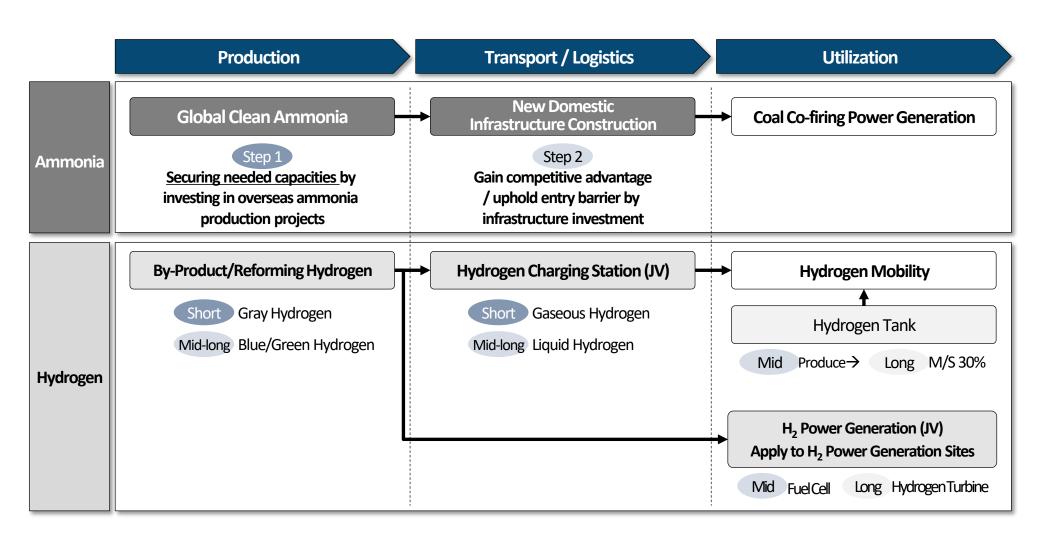






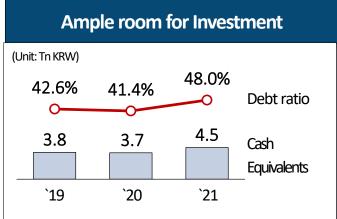
# [Hydrogen] LOTTE Hydrogen Business Growth Roadmap

- ✓ Ammonia Global ammonia production investment / Securing initiatives through establishment of infrastructure
- ✓ Hydrogen Establish domestic hydrogen ecosystem / Promote business by acquiring partnership with companies



# [Hydrogen] LOTTE's Hydrogen Business Strengths

✓ LOTTE has various strengths, showing more capabilities than the production of by-product hydrogen











# [Hydrogen] LOTTE's Hydrogen Business Objectives

✓ Supply 1.2 mil ton of clean hydrogen in 2030, by focusing on importing ammonia, hydrogen and utilizing mixed combustion power generating business

Ammonia

Import globally produced Blue/Green ammonia into the domestic market

1.05 mil ton
(Ammonia 6 mil ton)

Use NH<sub>3</sub> Directly

Convert to H<sub>2</sub> Ammonia Fuel-Mix Power Generation



600 KTA

(Ammonia 3.5 mil ton) 30% of domestic market demand

Hydrogen



Fuel cell, Hydrogen mixed-combustion power generation



450 KTA

15% of domestic market demand

Hydrogen Mobility

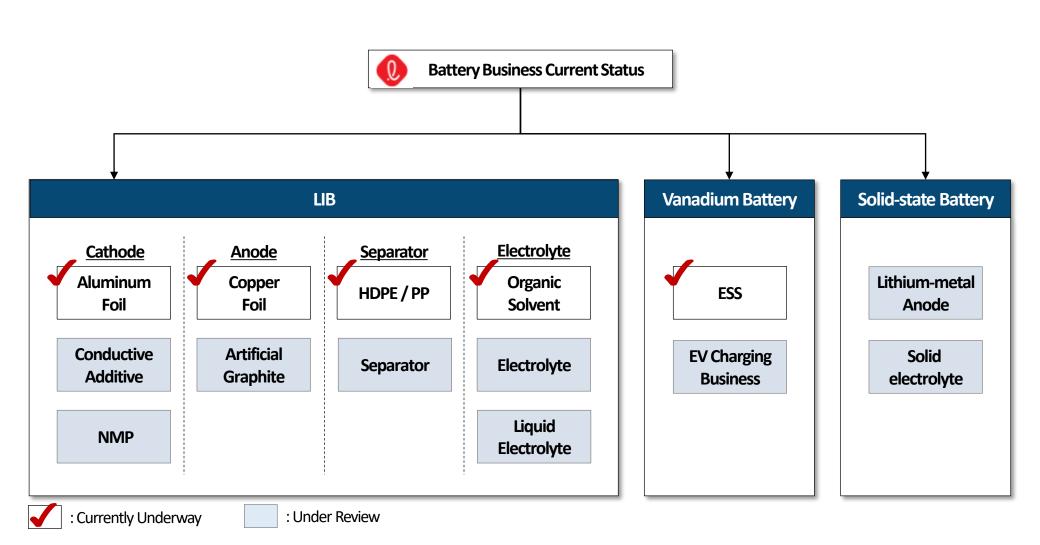


150 KTA

40% of domestic market demand

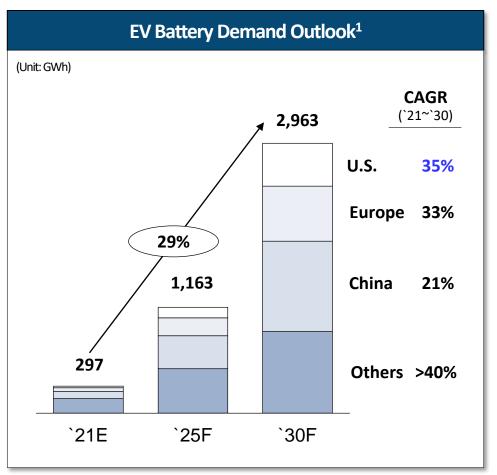
# [Battery] LOTTE Group Battery Business Value Chain

✓ Focusing on 4 major battery components, devising collaborative plans to enter global market with related partners



# [Battery] Global Market Outlook

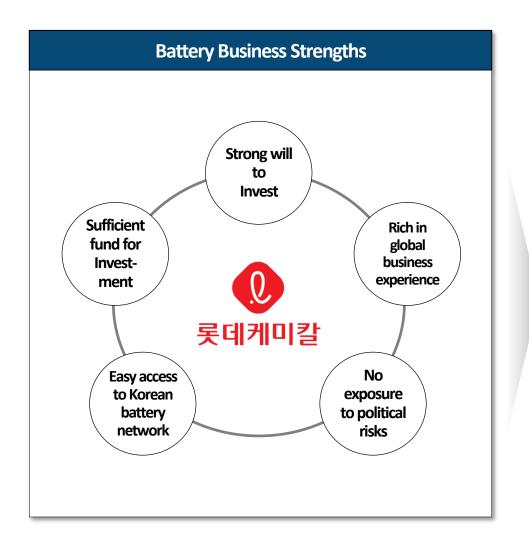
- √ Rising demand for electric vehicles, expansion of renewable energy lead to increase in demand
  - → High growth of CAGR 30% expected over the next 10 years
- ✓ Of the top 3 global markets, US-centered reorganization of supply chain underway
  - → More opportunities for overall value chain participants

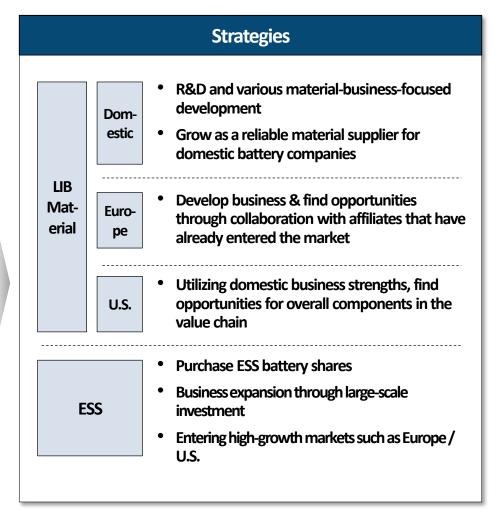


## **Dynamics of Top 3 Global Markets** • Keeps its position as the largest EV battery market under strong government support Closed market, supply centered around the domestic demand Emerging as the 2nd largest electric vehicle market; Korean battery and material companies have entered the market Meeting market maturity, Chinese companies looking to expand their presence • Low electric vehicle market share, high dependence on battery imports → Pressure on China - U.S. focused revamping of supply chain Favorable conditions for Korean battery and material companies

# [Battery] LOTTE Business Strengths and Strategies Going Forward

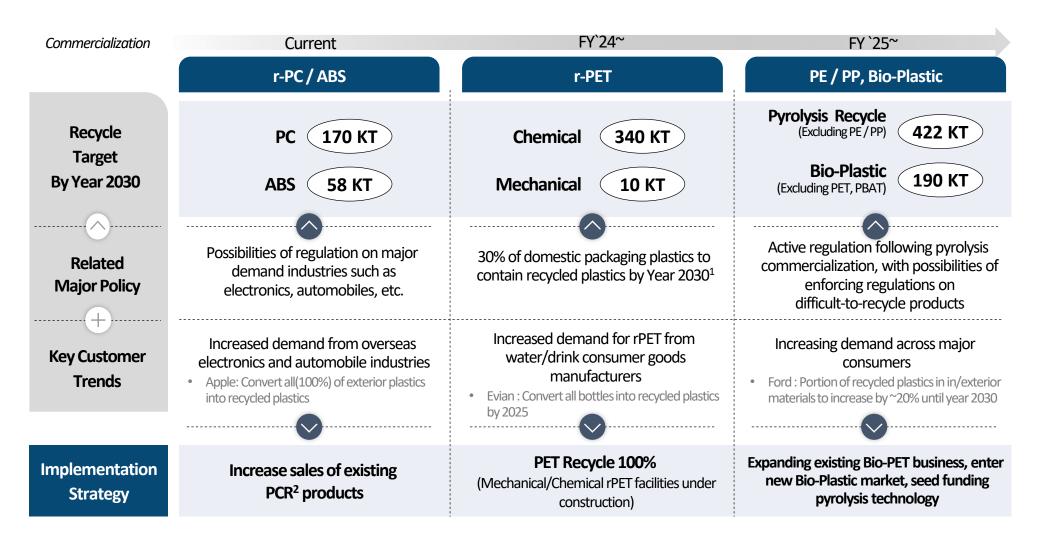
✓ Utilize LOTTE's strengths to continuously expand its presence in domestic / global markets





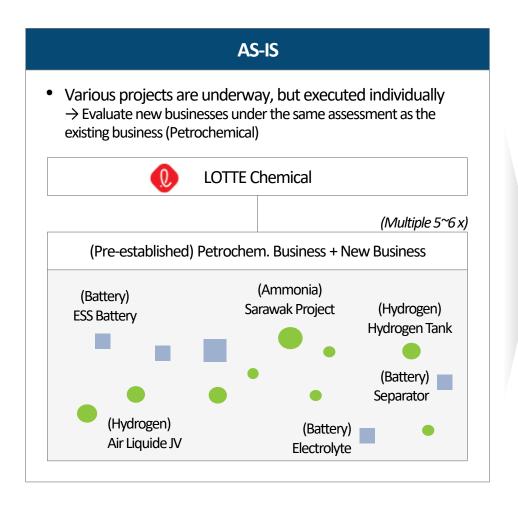
# [Recycle/BioPlastic] LOTTE Recycling Business Expansion Roadmap

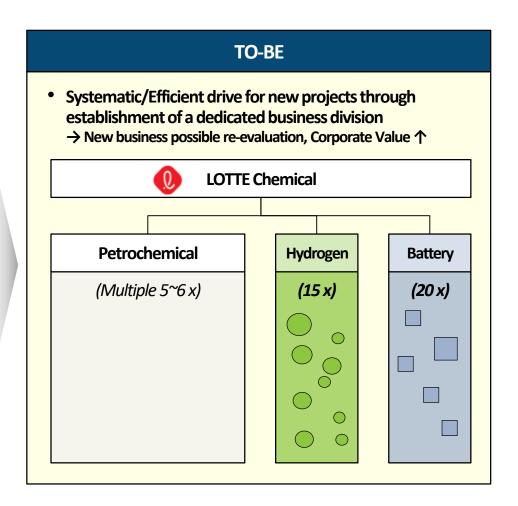
✓ 2030 Recycling / Bio-Plastic target sales of over 1 mill ton (Recycle 1 mill ton, Bio-Plastic 190 KTA)



#### [New Business] Value Creation through Establishment of a New Business Division

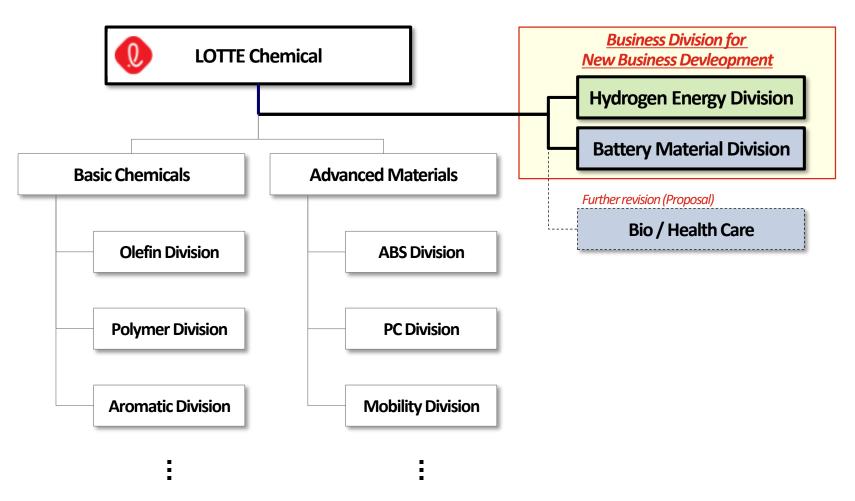
- ✓ Currently, new business developments are executed individually; Establishment of a new dedicated business organization will standardize strategies and systematically develop new projects
  - → Increase corporate value through re-valuation of new business opportunities





# [New Business] Creating a New Business Division

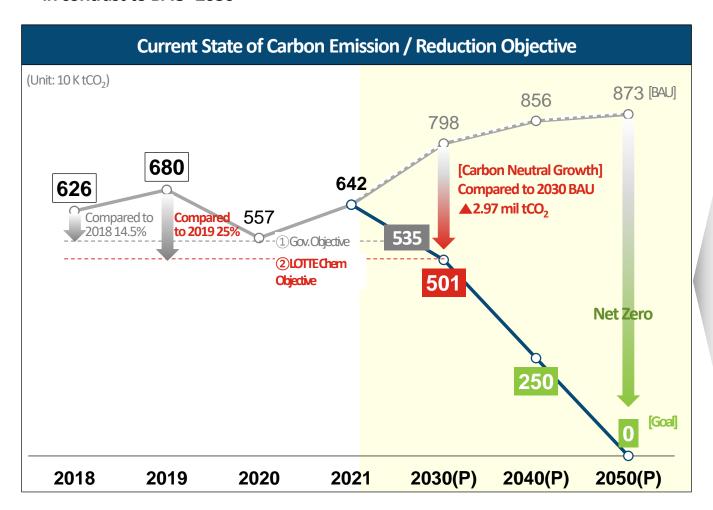
- ✓ Ensure consistency for all new projects / Establish a new business organization below LOTTE Group's Chemical Business Unit, under LOTTE Chemical
  - → Strategic and systematic development of new businesses/ laying the foundation for self-sufficient growth



## [ESG] 2030 Carbon-Reduced Growth, 2050 Net-Zero Goal

✓ Commit to higher objectives, compared to the government proposal¹ (2030: 25% reduction from 2019 emission level)

Short term – Improve energy efficiency, CCUS. Mid-to-Long term – Reduce 2.97 mil ton by introducing renewable energy, in contrast to BAU² 2030



#### **Strategies for reduction**

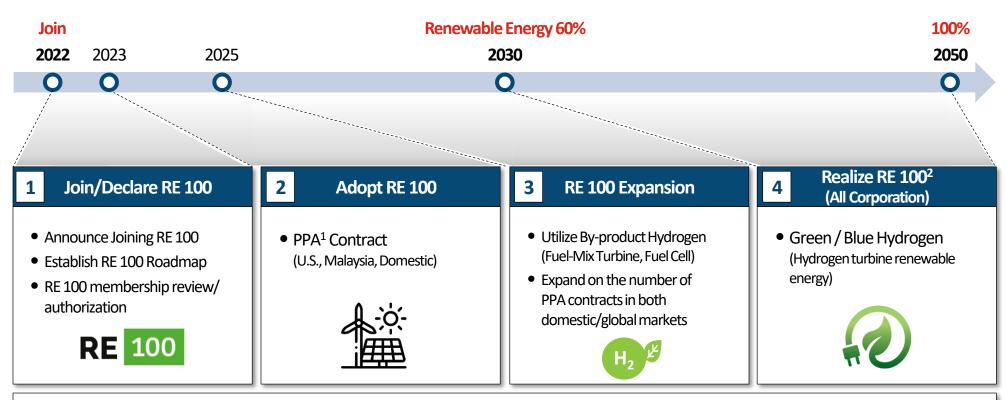
 In the short term, improve energy efficiency, and focus on CCUS application → Progressive phase into renewable energy

(Unit: 10 K tCO <sub>2</sub> )	2030	2050
Enhance Energy Efficiency <sup>3</sup>	39	330
Feedstock Alternatives <sup>4</sup>	28	43
CCUS Application	50	261
Renewable energy and others <sup>5</sup>	180	239
Total	297	873

- CCUS Application: CO<sub>2</sub> membrane capture, Carbonation process, Overseas deep ocean carbon storage
- Apply renewable energy: Install photovoltaics, Hydrogen fuel cells etc

# [ESG] Join Global Initiative for CO<sub>2</sub> Emission Reduction – RE 100

✓ Declare RE 100 in 2022/ Join membership (First in domestic petrochemical industry),
Convert to renewable energy by 60%, 100%, in 2030 and 2050 respectively, through PPA contract and hydrogen energy utilization in both domestic/global sites



Global Initiative RE 100: Convert into renewable energy 100% -

First in domestic petrochemical industry to advocate membership

Plan to achieve goals through signing PPA contracts and utilizing hydrogen energy in both domestic/global sites

# [ESG] Enhanced Shareholder Return Policy

- ✓ Announcement of set for 3 years 'Shareholder Return Policy' (2022~2024)
- ✓ Strengthening shareholder return policy (Interim Dividend / Acquisition of treasury stocks)

Strengthening Shareholder Return Policy



30% Annual dividend payout ratio
+ Starting from FY `22, implement interim
dividend, acquisition of treasury stocks¹

- Dividend payout ratio 30% (Basis on individual net income)
- Implement interim dividend<sup>2</sup> (Once a year, semi-annually)
- Acquire a total of 300 bill KRW in treasury stocks over the next 3 years, from FY `22-`24³

Strong, credible relationship with capital market and shareholders



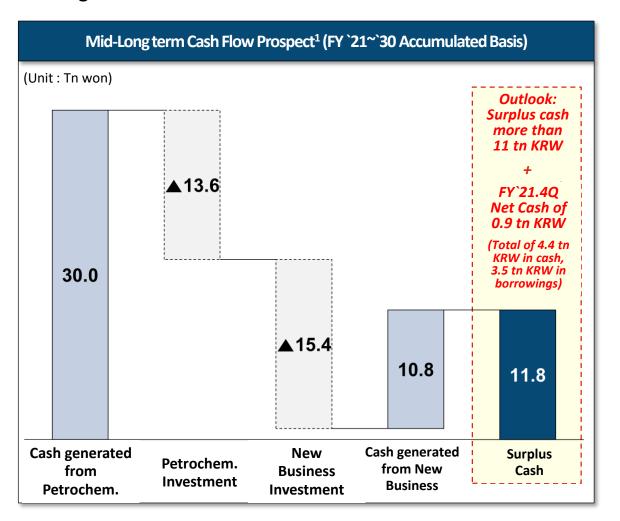
Announcement of 3-years-set dividend return policy, insiders share buying, engage in active communication with shareholders

- Increase long-term predictability by informing mid-long term return policy (Announcement for FY `22-`24)
- C-Level or higher management to purchase company shares for the next 3 years<sup>4</sup>, contributing to a sustainable, governance-responsible management



# **Financial Target**

✓ Utilize financial assets from petrochemical business to not only search for new business opportunities, but also strengthen shareholder value



#### **Future Cash-Utilization Plan**

Strategic Investment

Search for New Specialty business opportunities

(Bio Material/Component/Equipment, Semiconductor chemical, etc)

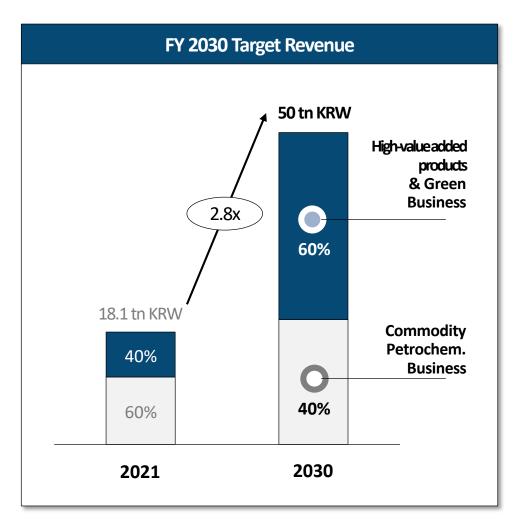
Shareholder Return

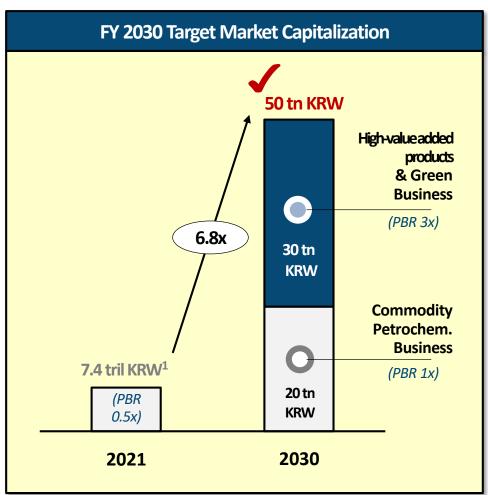
 Dividend payout ratio 30% (Standard: Parent Company Net Profit),
 Acquisition of treasury stocks, and others

Strategic investment and shareholder return to be fully realized, with more than 10 tn KRW in surplus cash (Expected)

# **Financial Target**

✓ Revaluation of corporate value expected, through the expansion of high-value added products and eco-friendly green businesses + establishment of a new business division







#### Vision 2030 Financial Objective Non-Financial Objective Revenue 50 tril won **Low-Carbon Growth** Strengthen **Respond to New Specialty Existing business ESG** trend **Product** Feedstock Respond to Not related Enhance-Diversifi-Enter Demand for to preburgeoning **Opportunities** cation Recycling ment existing Hydrogen in Battery Business Region market Market Portfolio Prepare for (Bio Healthcare, Diversifiin advance Semiconductor Optimization **Bio-Plastic** chemical) cation Organizational structure, and Governance for optimized operations



# 사랑과 신뢰를 받는 제품과 서비스를 제공하여 인류의 풍요로운 삶에 기여한다

We enrich people's lives by providing Superior products and services that Our customers love trust

