Hanwha Solutions

Rights Offering Investor Presentation

2026.04.21

SUSTAINABLE SOLUTIONS FOR ALL,
FROM ENERGY TO MATERIALS

Hanwha Solutions

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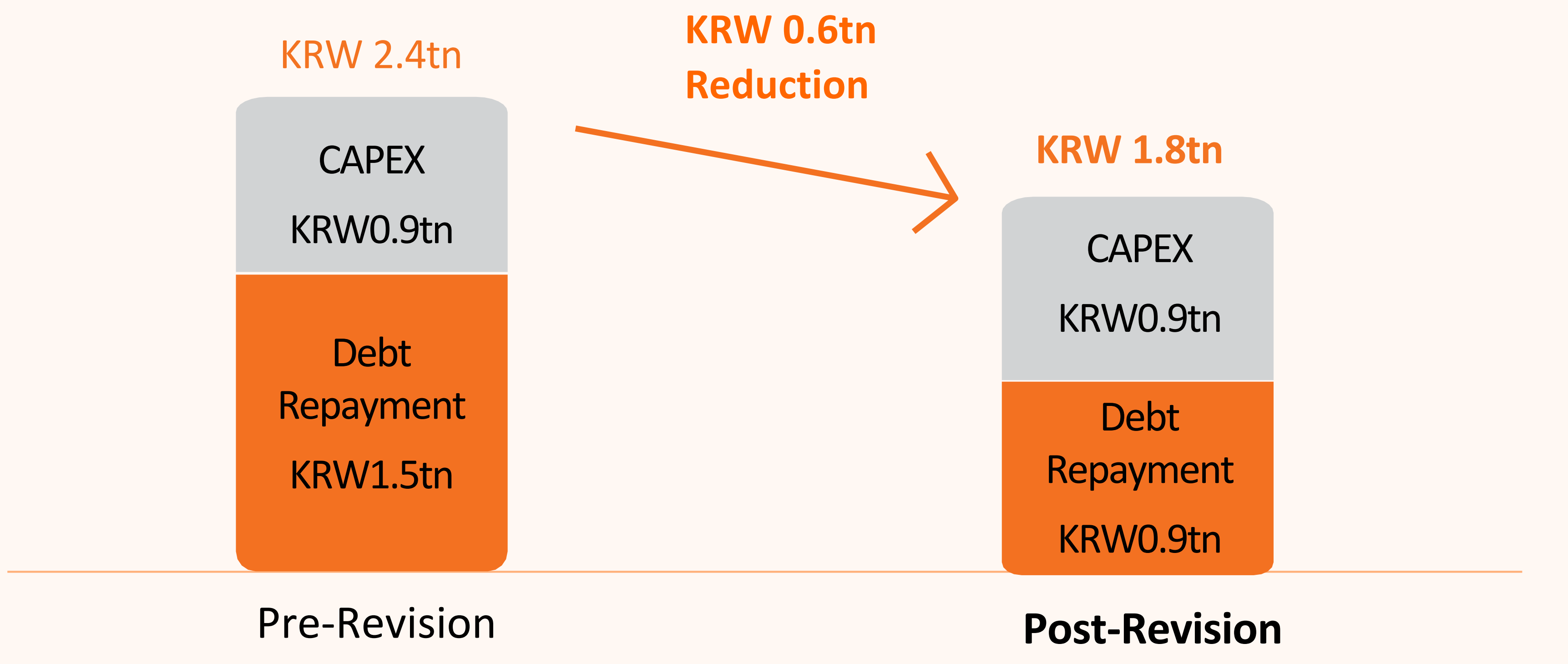
1. Overview

(1) Offering Details & Timeline

- The total offering size has been adjusted to **KRW 1.8tn**, following a KRW 0.6tn reduction in debt repayment. The capital increase will proceed via a rights offering to existing shareholders, followed by a public offering of any unsubscribed shares
- The proceeds from the offering will be used as follows:
  - Debt Repayment (KRW 0.9tn): Repayment of corporate bonds, short-term CP, and facility loans
  - CAPEX (KRW 0.9tn): Future growth investment (verification and establishment of Tandem mass production lines)
- The largest shareholder, Hanwha Corp. (holding a 36.3% stake), disclosed a board resolution on April 8th prior to the current reduction in offering size to subscribe to over 120% of allocated shares

Item	Details
Type of Shares	Hanwha Solutions Common Shares
Method of Offering	Rights Offering followed by a public offering of unsubscribed shares
Lead Underwriters	NH I&S, KB Securities, Korea I&S, Daishin Securities
Total Outstanding Shares(Pre-offering)	Common: 171,892,536 / Preferred: 2,575,349
Number of New Shares to be Issued	Common: 56,000,000
New Shares per Existing Share	0.2604656144 shares
Offering Size (Expected)	Approximately KRW 1.8tn
Use of Proceeds (Expected)	Debt Repayment (KRW 0.9tn) / CAPEX (KRW 0.9tn)
Discount Rate	20%
ESOP Allocation	20%
Participation of Hanwha Corporation	Committed to 120% subscription of initial allotment



Timeline

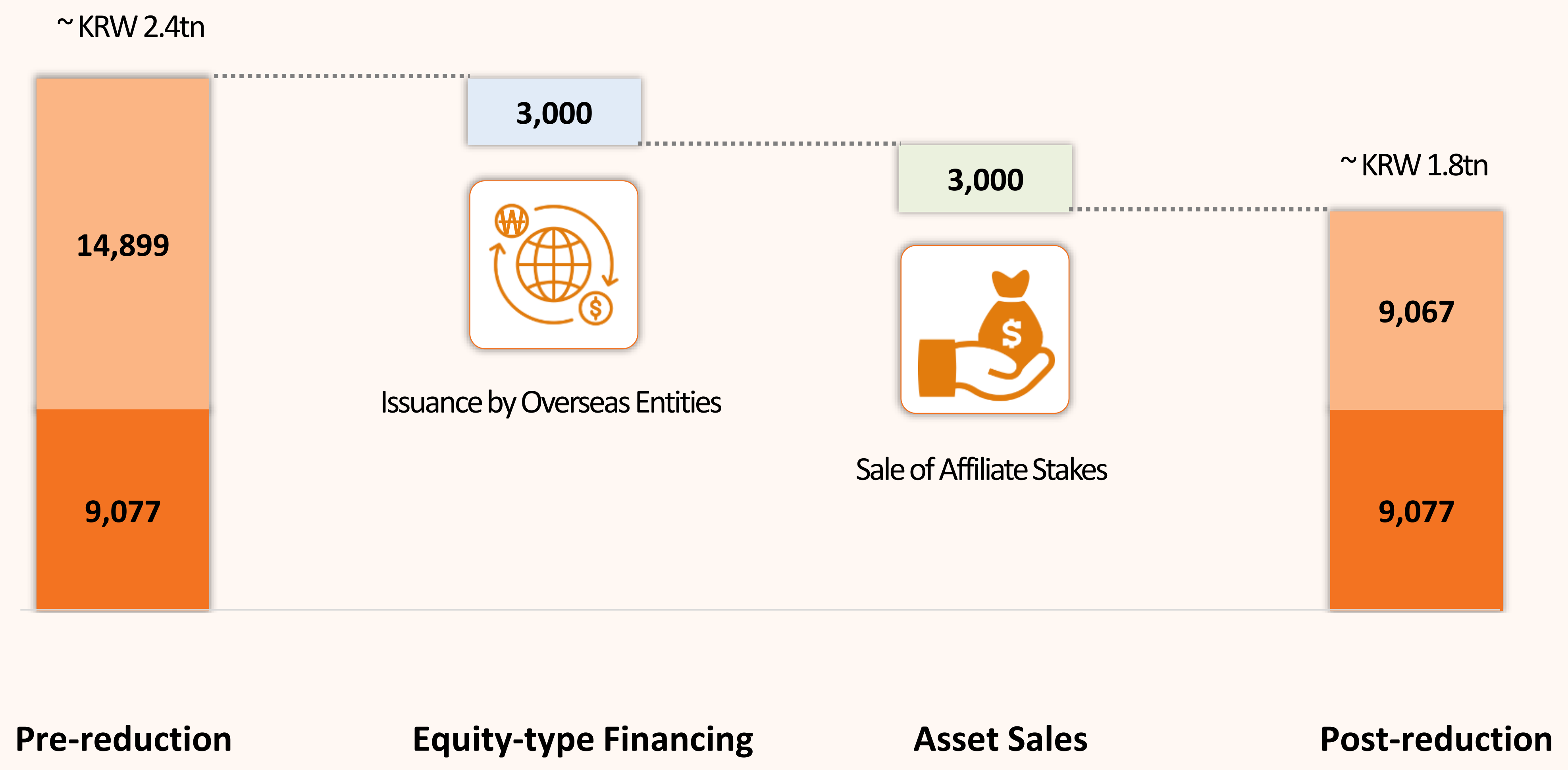
3/26(Thu)	Board Resolution & Public Disclosure
4/17(Fri)	Amended Board Resolution & Disclosure of Amended Report
5/14(Thu)	Record Date for New Share Allocation
6/17(Wed)	Final Offering Price Determination
6/5(Fri) – 6/11(Thu)	Listing Period for Subscription Rights
6/22(Mon) - 6/23(Tue)	Subscription Period for Existing Shareholders
6/25(Thu) - 6/26(Fri)	Public Offering Subscription Period
6/30(Tue)	Payment Date
7/10(Fri)	Listing Date of New Shares

1. Overview

(2) Self-Help Measures to Address the Funding Gap

- The ~KRW 600 billion reduction in the rights offering size will be addressed by 1) pursuing non-core asset sales within 2026 and 2) leveraging additional equity-type financing to fill the funding gap, thereby reducing reliance on the rights offering and improving the financial structure.
- Even with the reduced offering size, scheduled debt repayment will proceed as planned through alternative channels (KRW 300bn in equity-type financing and KRW 300bn in asset sales), maintaining the year-end 2026 total debt balance at a level comparable to initial estimates

Self-Help Measures following the Offering Size Reduction(Unit: KRW 100Mil)



Key Highlights by Initiative

Equity-type Financing (~ KRW 300 bil)

✓ Equity-type financing to be raised through overseas subsidiaries to fund debt repayment
→ Achieving capital structure improvement through enhanced liquidity and equity base reinforcement

Non-Operating Asset Sales (~ KRW 300 bil)

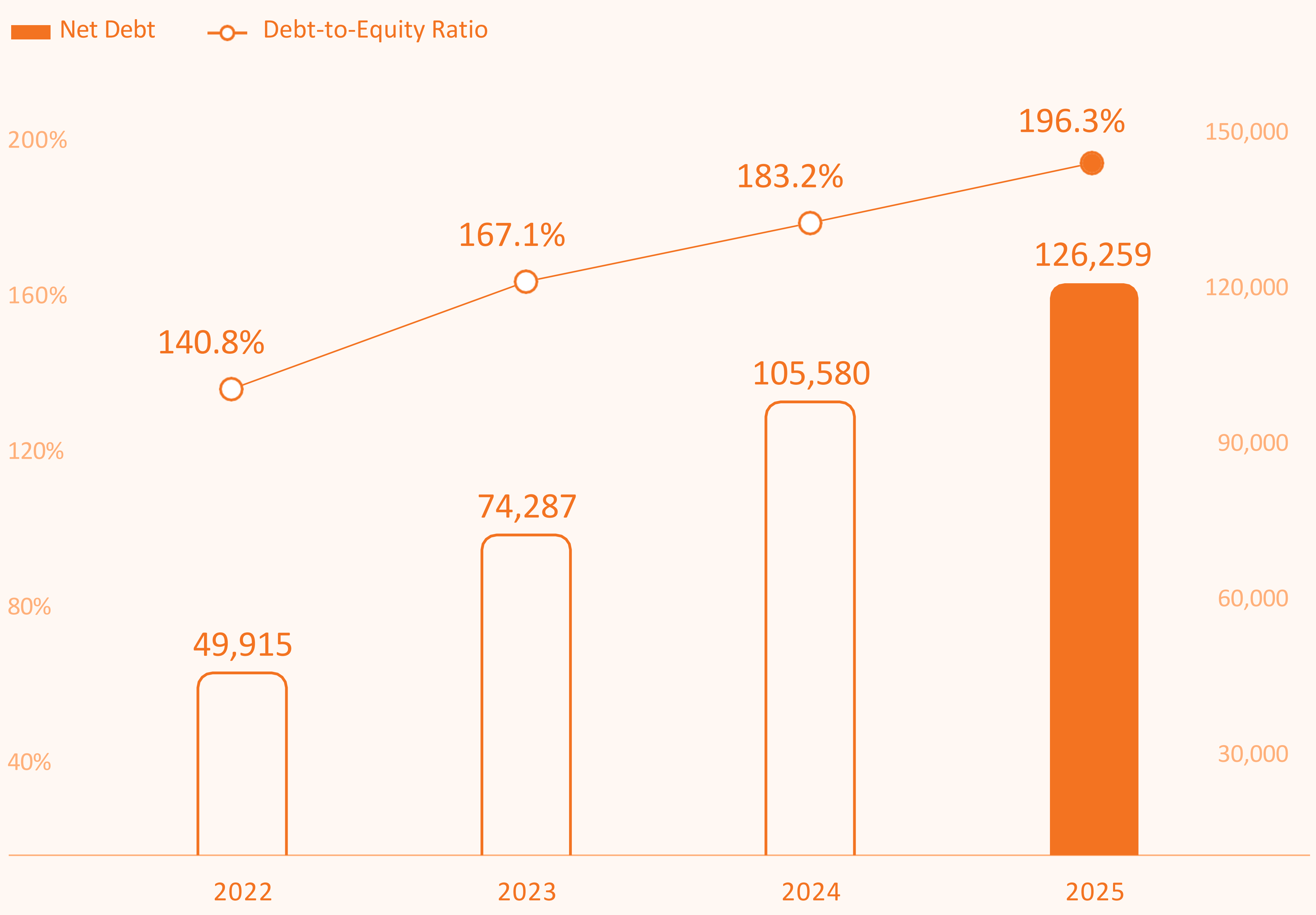
✓ Non-operating asset sales to be used for debt repayment
→ Although fair value asset sales by 1H26 were constrained at the time of the initial rights offering review, such divestments are being accelerated within the year alongside the offering to prioritize minimizing shareholder burden as the top priority

2. Background

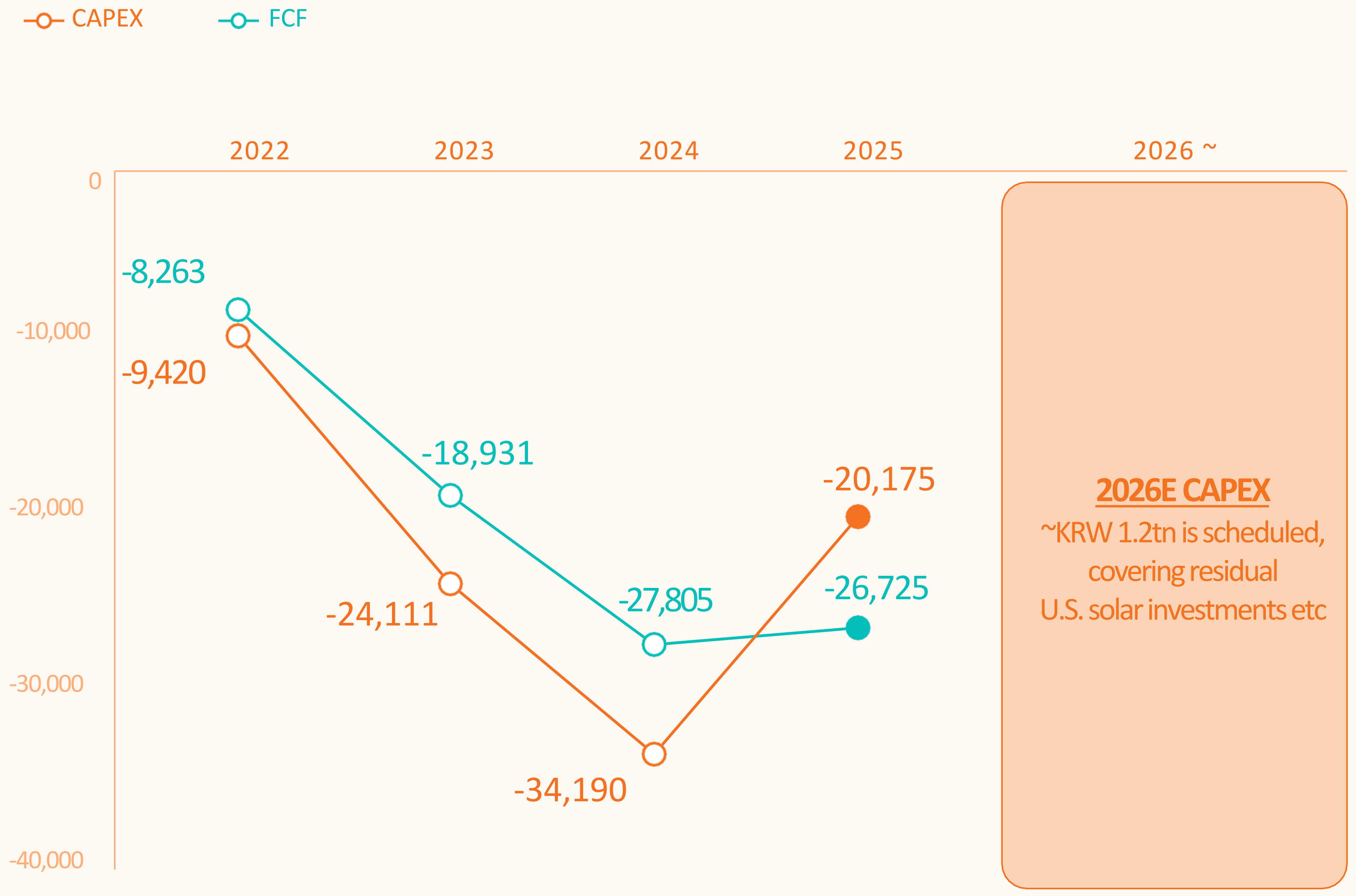
(1) Improving Capital Structure and Securing Investment Resources

- Continued investment in long-term competitiveness, combined with a downturn in the solar and petrochemical industries, has pressured profitability, with consolidated net debt reaching approximately KRW 12.6tn as of end-2025
- At the same time, securing additional investment funding for Perovskite-Tandem R&D, high-value specialty business transition, and future growth initiatives has become increasingly urgent
- Accordingly, a preemptive capital raise is being pursued to ensure long-term sustainability and normalize the capital structure

Net Debt and Debt-to-Equity Ratio (Unit: KRW 100Mil)



CAPEX and FCF (Unit: KRW 100Mil)



2. Background

(2) Limited Capacity for Further Large-scale Self-Help Measures Beyond a Rights Offering

- Hanwha Solutions has been continuously implementing intensive measures to improve the capital structure since 2024 to ensure long-term business sustainability

CAPEX Reduction

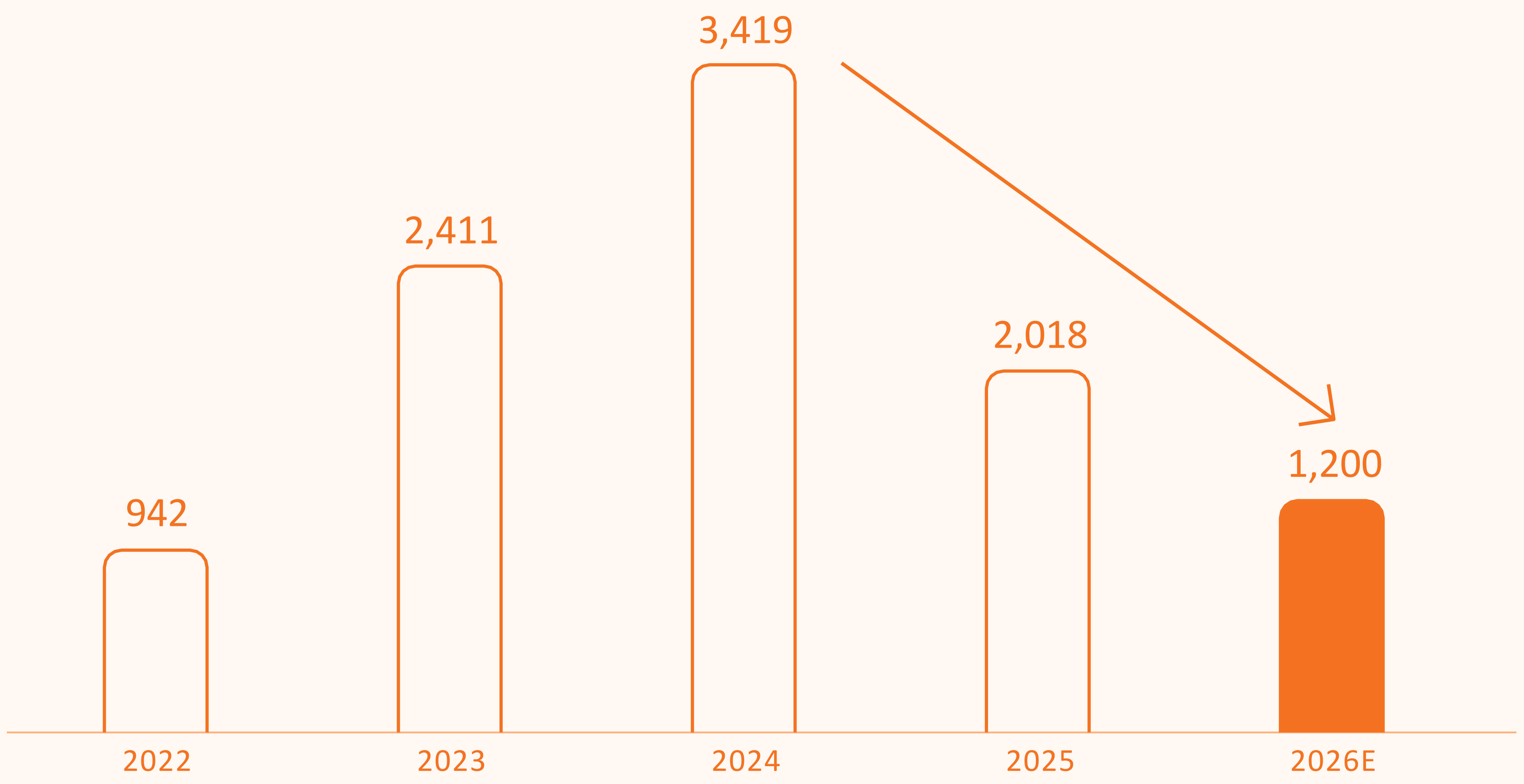
Annual CAPEX reduced from KRW 2.0tn in 2025 to KRW 1.2tn in 2026

Improving Capital Structure

Continuous efforts for proactive financial restructuring, including asset divestitures of approx. KRW 1.6tn and issuance of KRW 2.3tn in domestic and overseas equity-type securities during 2024–2025

- However, with most immediately executable non-core asset sales and equity-type financing largely completed, capacity for additional large-scale self-help measures is limited. Accordingly, a rights offering has been determined to be the most optimal funding solution to improve the financial structure and secure investment capital for medium-to-long-term growth in a timely manner.

CAPEX Reduction Plan (Unit: KRW bn)



Key Capital Structure Improvement Initiatives

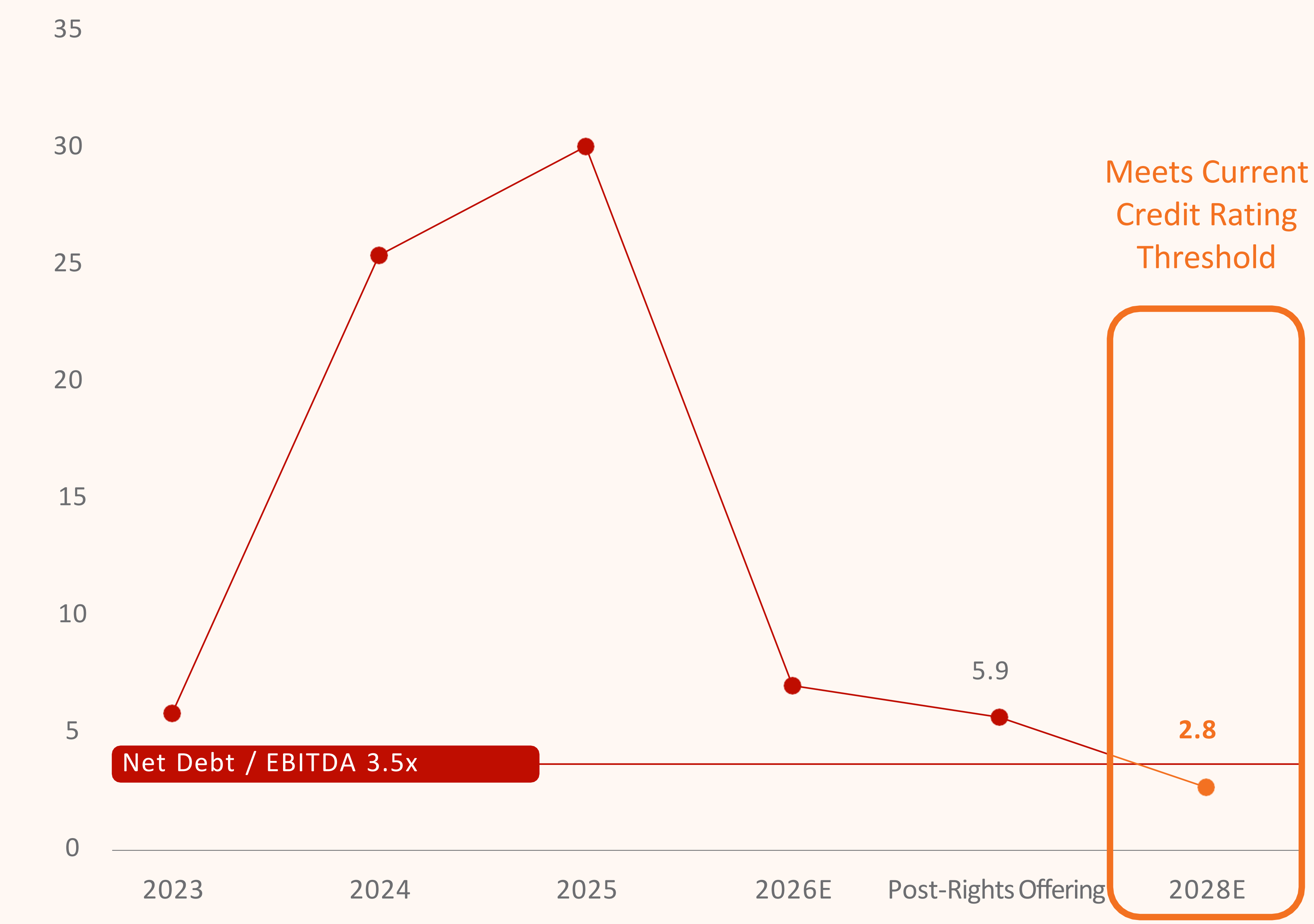
Item	Details	Amount
Asset	Divestiture of Hanwha Savings Bank Stake	KRW 179bn
Divestitures	Sale of Employee Housing Site in Ulsan	KRW 160bn
	Sale of Idle Land in Yeosu Industrial Complex	KRW 36bn
	Divestiture of EV Charging Business	KRW 25bn
	Sale of Renewable Energy Assets(Power Plants, etc.)	KRW 160bn
	Divestiture of Affiliates Stakes	KRW 1.1tn
	Subtotal	~KRW 1.6tn
Hybrid Bond	Hanwha Solutions 1st Hybrid Bond Issuance	KRW 700bn
	Overseas Equity-type Financing	KRW 1.6tn
	Subtotal	~KRW 2.3tn
	Total	**~KRW 3.9tn**

2. Background

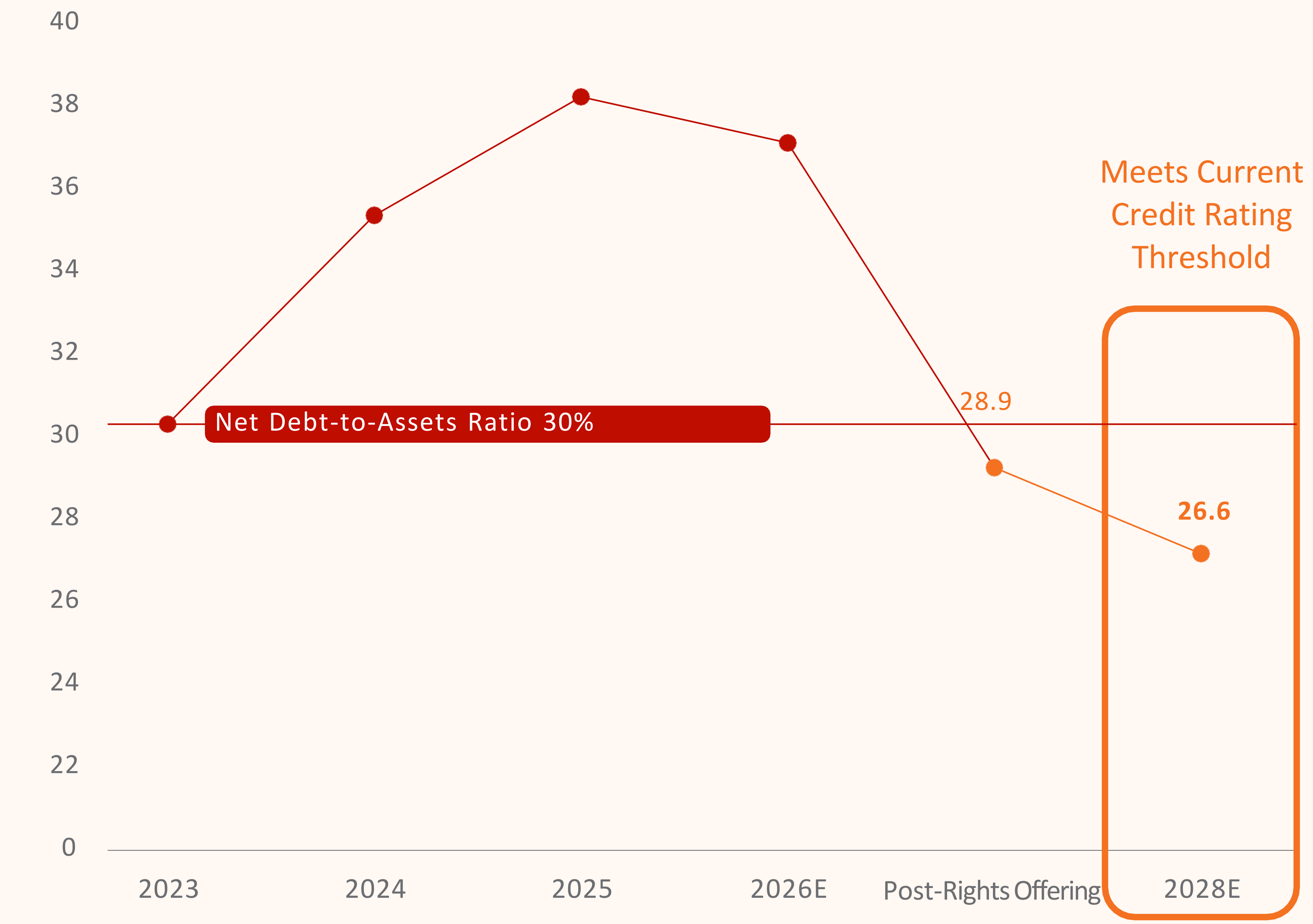
(3) Necessity of Preemptive Measures to Maintain Credit Rating

- Despite KRW 3.9tn in large-scale self-help measures since 2024, all downward rating triggers have been met since 2023, with continuous downward pressure on the credit profile (Current Rating: AA-, Negative Outlook)
- A credit rating downgrade would increase refinancing pressure on up to KRW 1.8tn in bonds maturing within the next two years (through end-1H 2028), while rising funding costs would heighten financial burden and pose risks to enterprise value.
- Accordingly, a rights offering is being pursued as a preemptive measure ahead of the June 2026 regular credit review to proactively defend the rating and strengthen financial stability.

Net Debt / EBITDA (x)



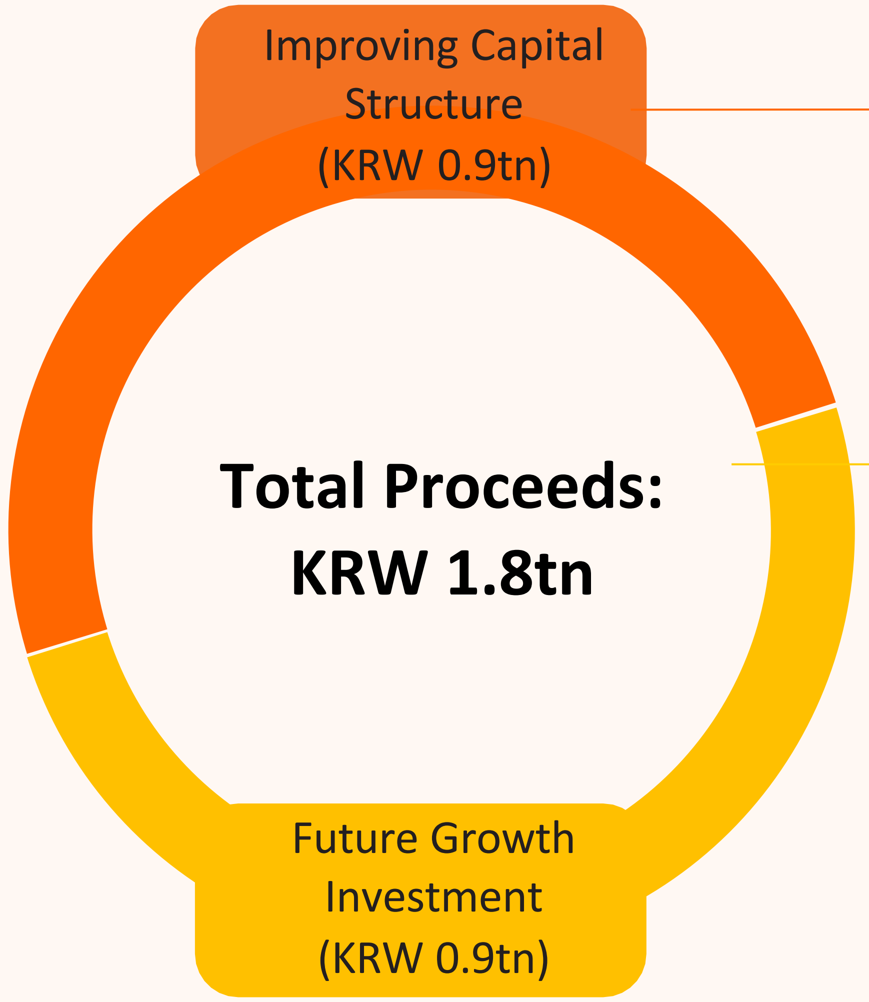
Net Debt-to-Assets Ratio (%)



3. Use of Proceeds

- Proceeds of ~KRW 1.8tn from the current rights offering will be allocated toward debt Repayment (KRW 0.9tn) and CAPEX (KRW 0.9tn)
- The KRW 0.9tn capex allocation has been maintained to support mid-to-long term growth of the renewable energy business and reinforce global leadership
- KRW 0.9tn in capex will be utilized for facility investments to transition to high-efficiency, high-output solar technologies, providing a foundation to accelerate preparations for new business applications such as space-based solar power

Use of Rights Offering Proceeds



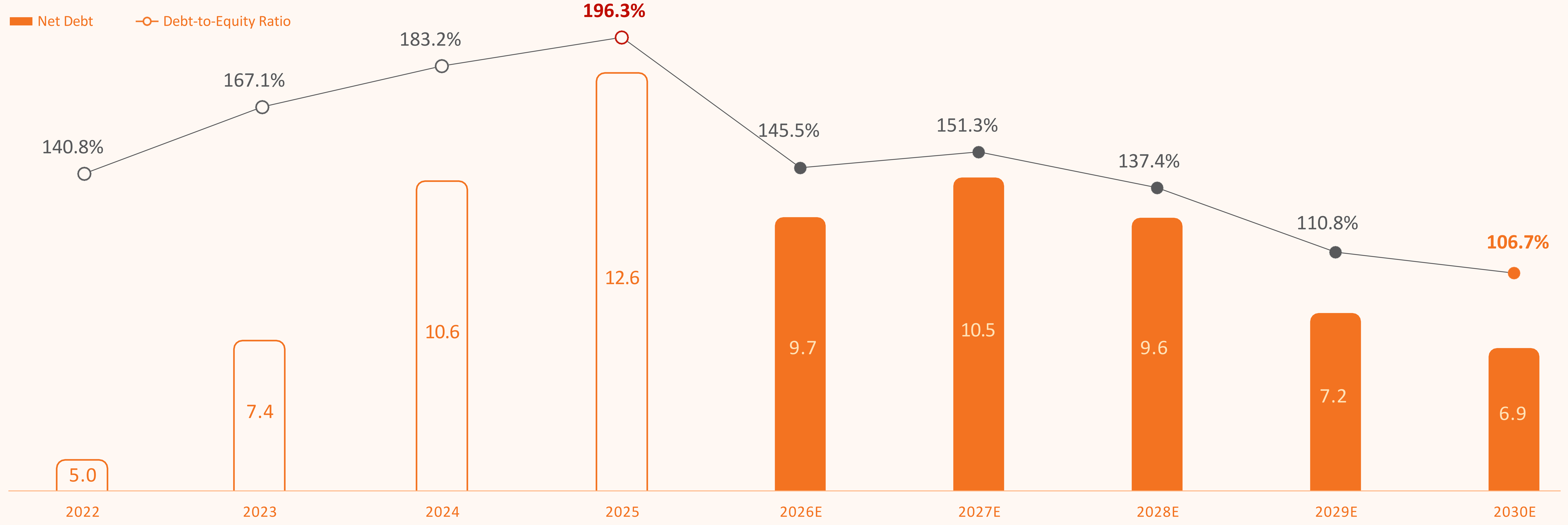
Priority	Use of Proceeds	Details	Timing	Amount	%
1	Debt Repayment	Corporate Bonds / CP / FRN	2026	KRW 593bn	32.7%
		CAPEX	2026	KRW 313bn	17.3%
		Subtotal		**KRW 907bn**	**50.0%**
2	CAPEX	Tandem Pilot Line	2026 - 2028	KRW 96bn	5.3%
		Tandem GW-scale Mass Production line + TOPCon Cell Line Expansion	2026 - 2028	KRW 811bn	44.7%
		Subtotal		**KRW 908bn**	**50.0%**
		Total		**KRW 1,814bn**	**100.0%**

4. Expected Benefits

(1) Strengthening Mid-to-Long-Term Balance Sheet : Net Debt & Debt-to-Equity Ratio

- The capital raised through the rights offering is expected to strengthen the financial structure, providing a foundation for managing the consolidated debt-to-equity ratio at a stable level over the medium-to-long term
- With a debt-to-equity ratio of 196.3% and net debt of approximately KRW 12.6tn as of year-end 2025, the rights offering and related measures are expected to bring the consolidated debt-to-equity ratio below 150% and net debt down to approximately KRW 9tn by 2026
- Over the long term, the capital secured through this offering is expected to support a continued reduction in leverage, targeting a consolidated debt-to-equity ratio below 110% and net debt around KRW 7tn by 2030

Medium-to-Long-Term Net Debt and Debt-to-Equity Ratio (Unit: KRW tn, %)

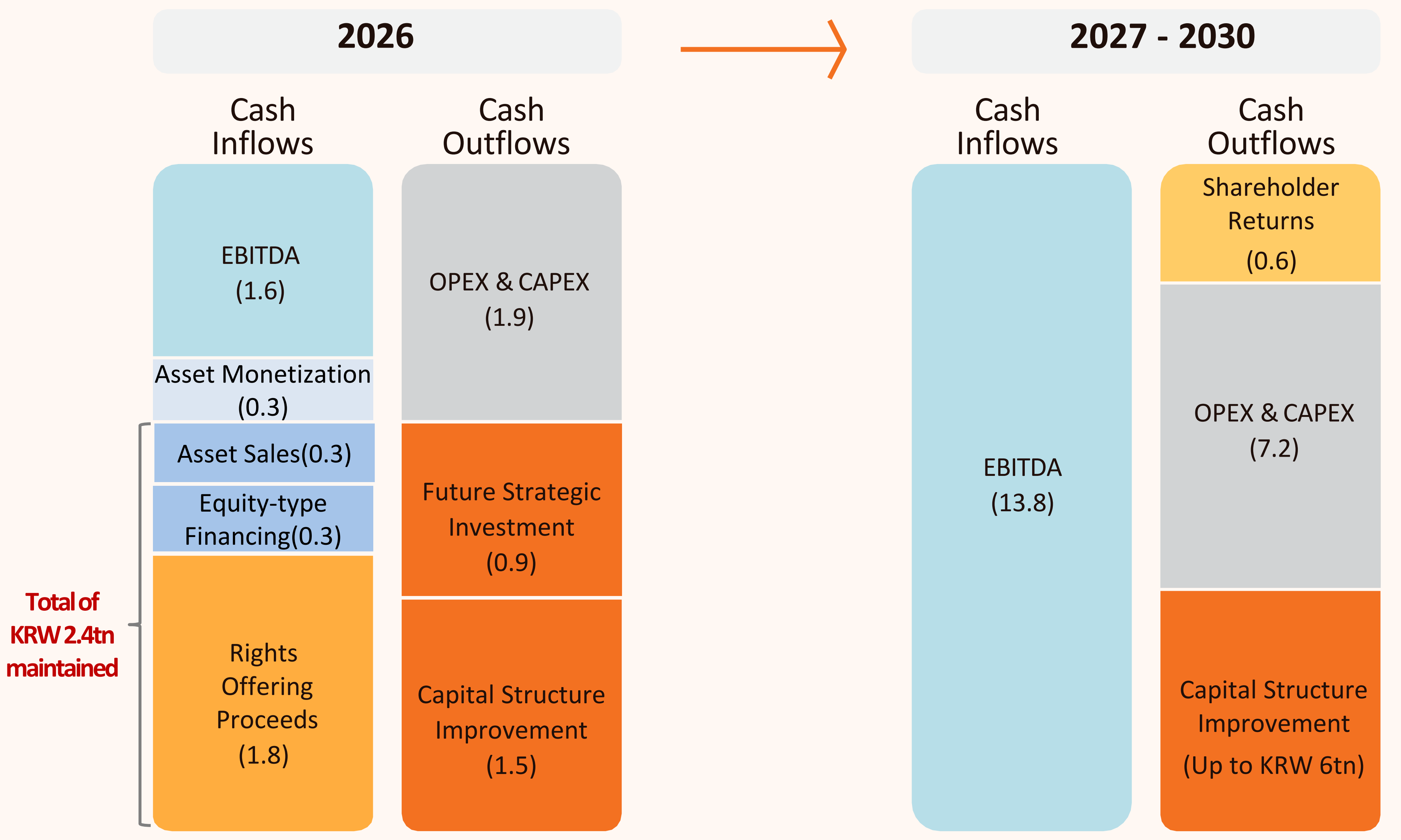


4. Expected Benefits

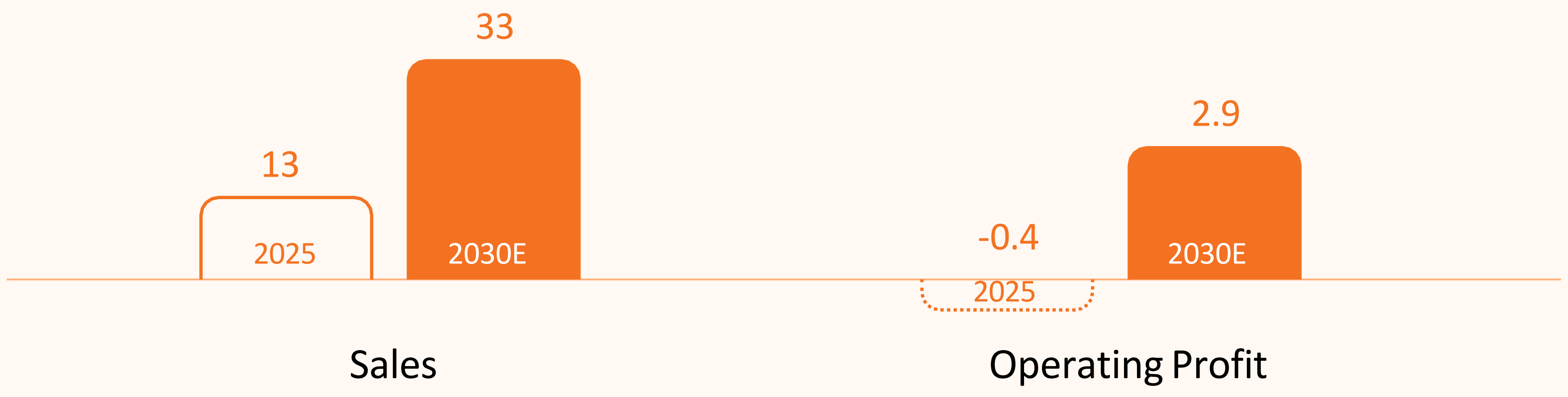
(1) Strengthening Mid-to-Long-Term Balance Sheet : Capital Allocation

- Rights Offering proceeds will be used to selectively improve the financial structure in 2026 (KRW 0.9tn) .while securing resources for future growth investments (KRW 0.9tn). An additional KRW 0.6tn in financial improvement is to be pursued through self-help measures
- Building on a medium-to-long-term Capital Allocation strategy, sustaining investments in core growth businesses such as renewable energy, targeting KRW 33tn in sales and KRW 2.9tn in operating profit by 2030 on a consolidated basis
- Leveraging projected EBITDA of KRW 13.8tn over the next four years ('27–'30) to gradually reduce debt, aiming to strengthen the balance sheet while expanding shareholder returns in line with business growth

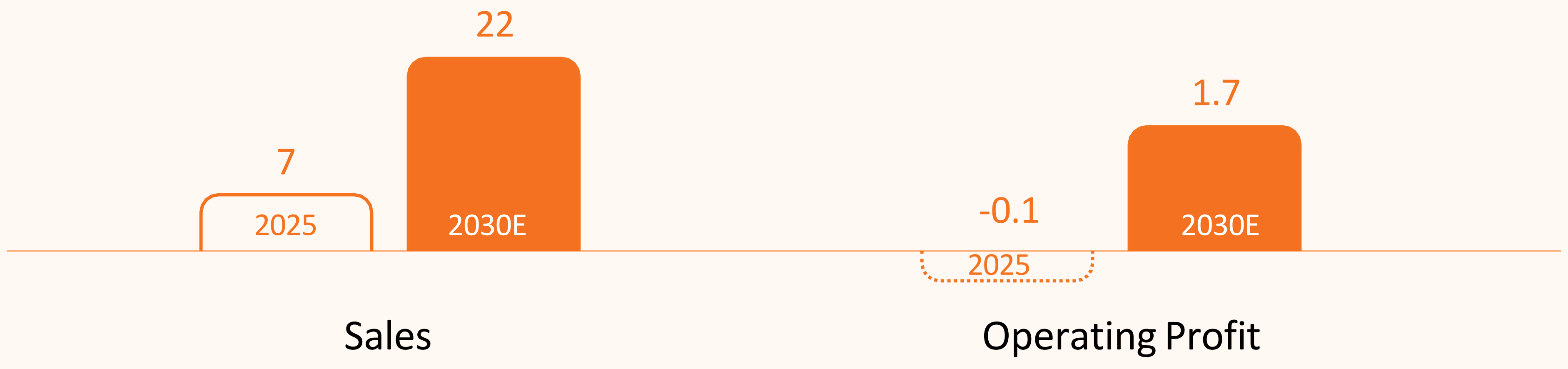
Medium-to-Long-Term Capital Allocation(Post-Offering) (Unit: KRW tn, %)



Medium-to-Long-Term Performance Outlook (Unit: KRW tn, consolidated)



Renewable Energy Performance Outlook (Unit: KRW tn, consolidated)



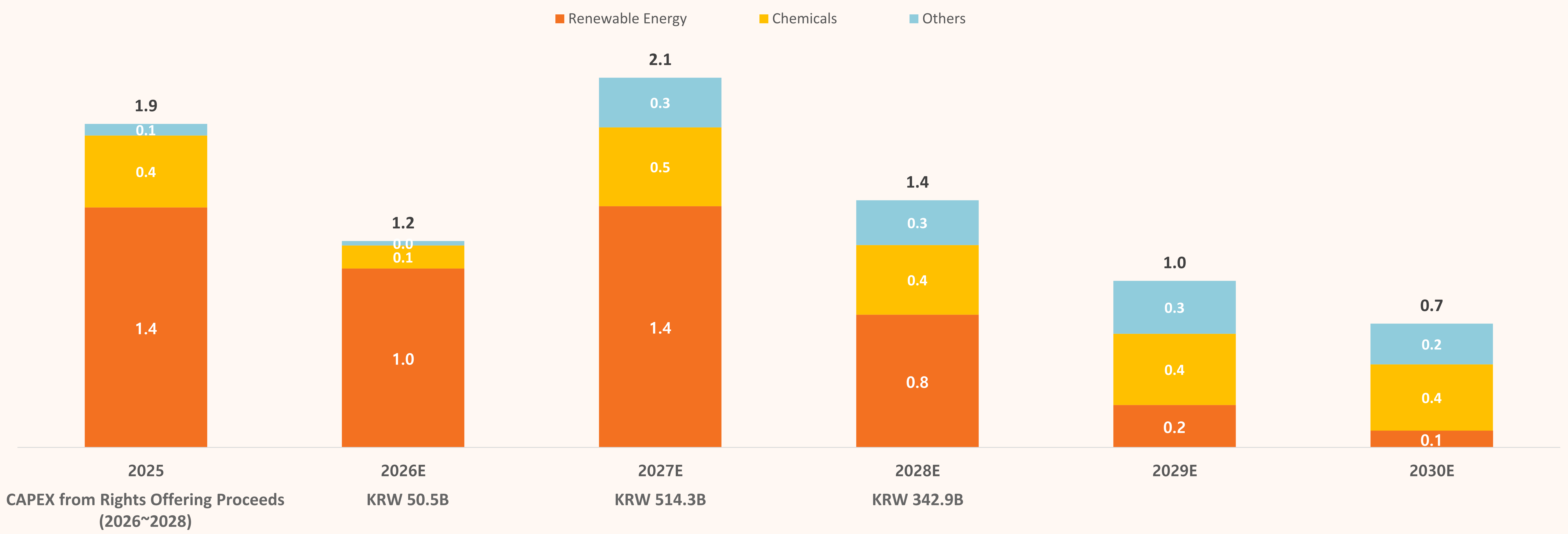
4. Expected Benefits

(2) CAPEX Outlook

: Including Planned Deployment of Rights Offering Proceeds

- Total renewable energy CAPEX of KRW 3.5tn planned for 2026–2030
- Offering proceeds (KRW 0.9tn): Korea Tandem pilot line upgrade (KRW 0.1tn), TOPCon conversion (KRW 0.4tn), Tandem mass production (top/bottom cells and modules) (KRW 0.4tn)
- CAPEX funded through operating cash flow (KRW 2.6tn): remaining construction payments for Cartersville, large-format conversion and TOPCon cell transition investments in the U.S. and Malaysia, and other R&D and systems (MI, ESS) development investments
- (Effect — Offering proceeds) TOPCon production ramp-up driving higher AMPC and improved ASP from 2028; Tandem mass production contributing to revenue uplift from 2029
- (Effect — Total) Module production capacity to grow from 8.5GW ('26) to 13.5GW ('30), with large-format conversion of existing facilities, completion of TOPCon transition, establishment of Tandem mass production infrastructure and commercialization foundation, and a strategic shift toward differentiated renewable energy businesses (EPC, financing, and systems)

Consolidated CAPEX Plan (Unit: KRW tn)

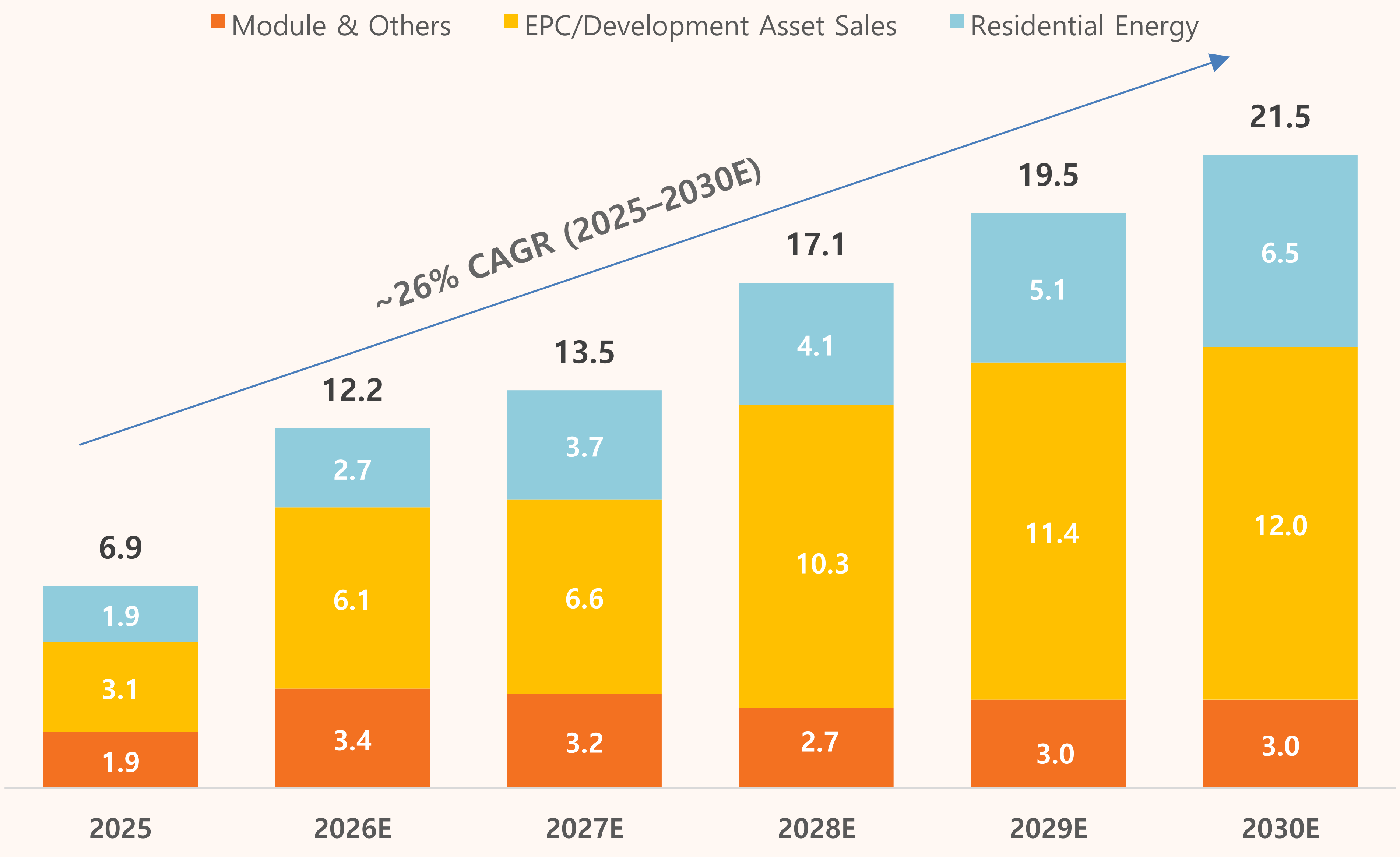


4. Expected Benefits

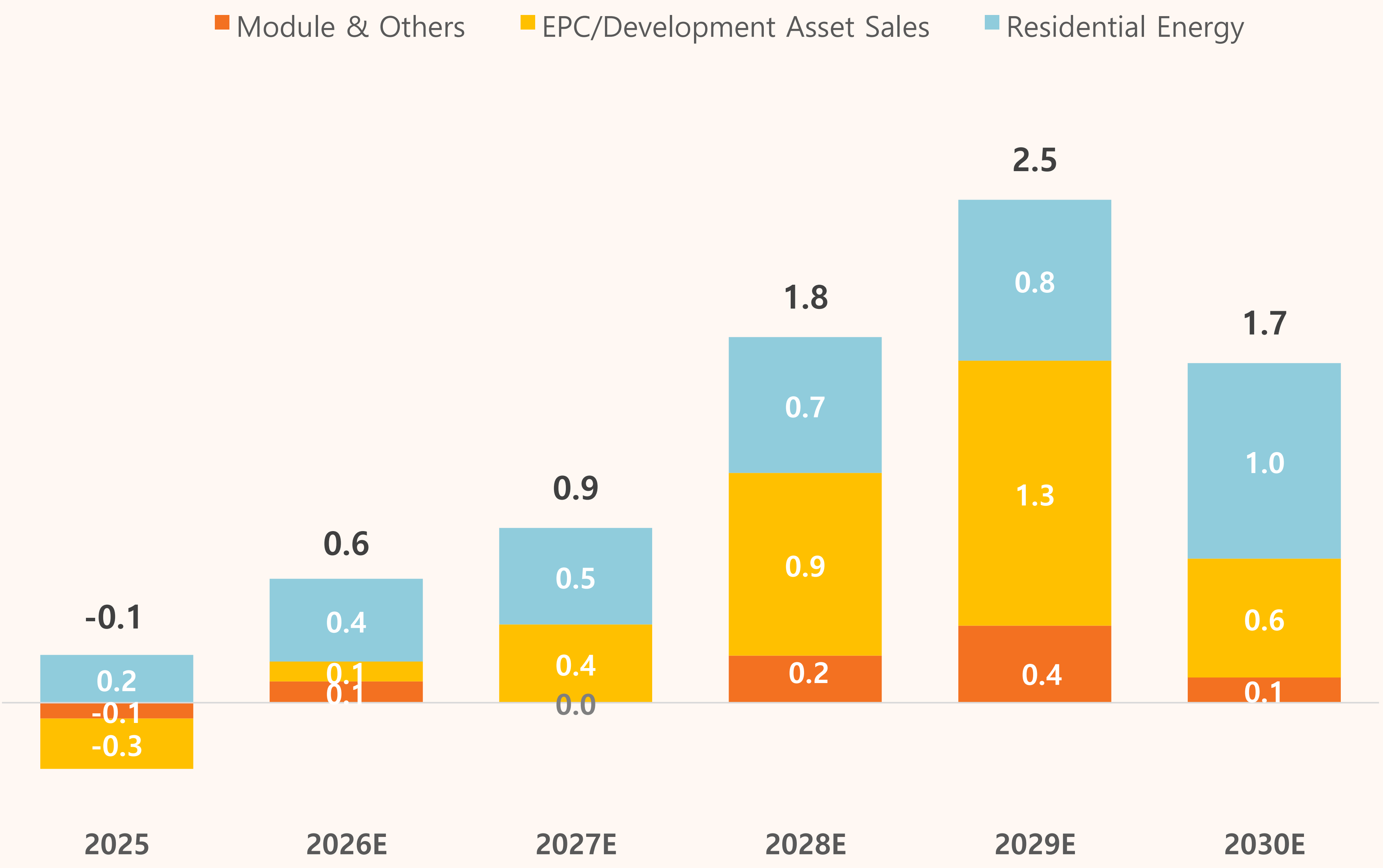
(3) Mid-to-Long Term Performance Outlook : Renewable Energy

- Following the normalization of module production in 2026, growth will be driven not only by increased production and sales of large-format, high-output modules such as TOPCon and Tandem and the expansion of domestic-made product premiums, but also by additional growth drivers including growth in EPC projects utilizing the company's own modules, expansion of residential TPO business, and increased system product sales
- Revenue is projected to grow at a CAGR of approximately 26% from KRW 6.9tn in 2025 to KRW 21.5tn in 2030, with operating profit targeted to reach KRW 2.5tn by 2029
- While the expiration of the ITC is expected to result in a year-over-year decline in operating profit in 2030, solid profitability in high-value residential energy will be sustained through TPO channel diversification and other initiatives, while margin improvement will be pursued by penetrating high-margin markets with Tandem products.

Renewable Energy Revenue Forecast (Unit: KRW tn)



Renewable Energy Operating Profit Forecast (Unit: KRW tn)



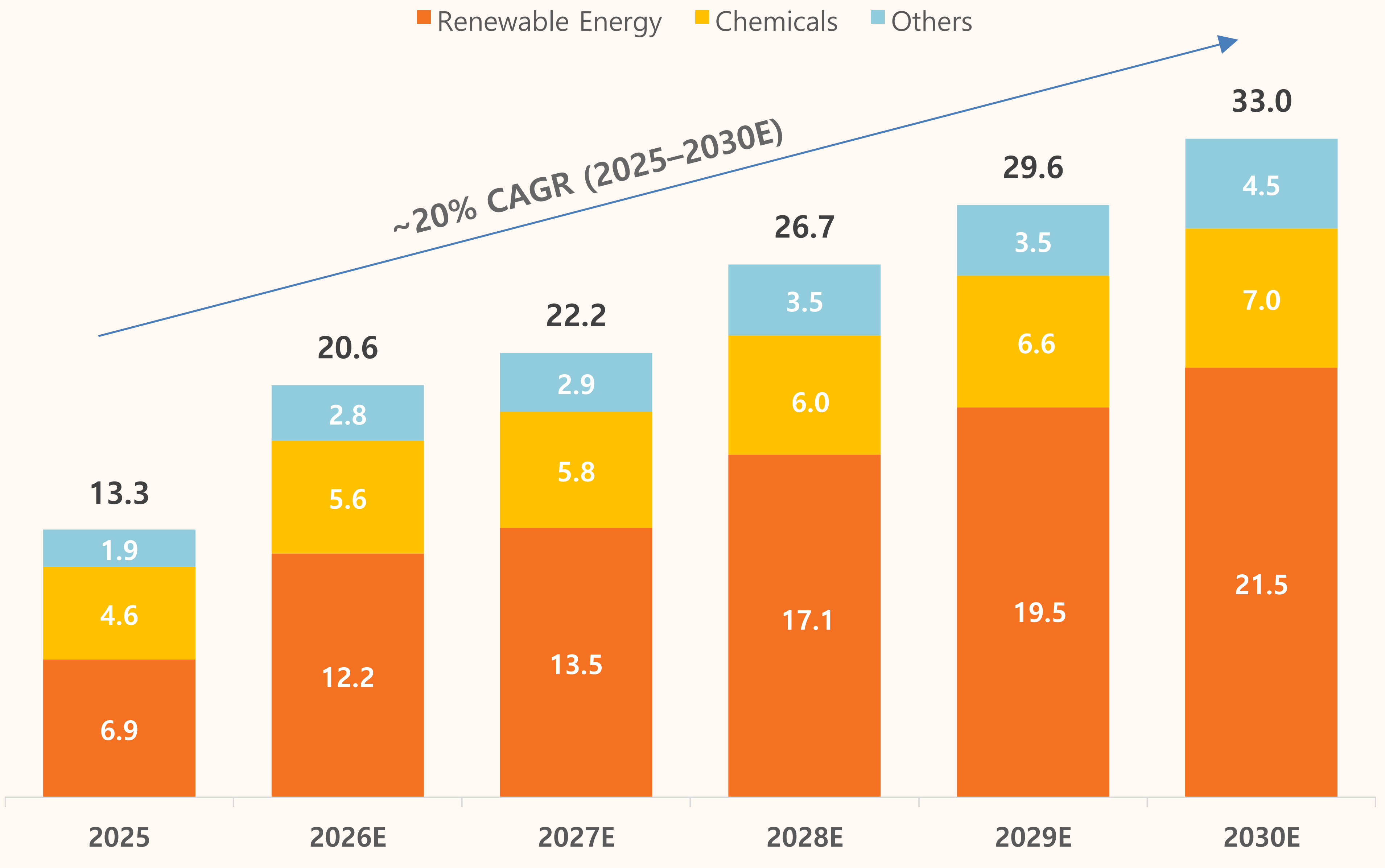
- Modules & Others: module sales, systems hardware sales, AMPC included
- EPC/Development Asset Sales: EPC projects (incl. in-house module sales), development asset sales, AMPC included
- Residential Energy: residential finance/installation (incl. in-house module sales), commercial development, AMPC included

4. Expected Benefits

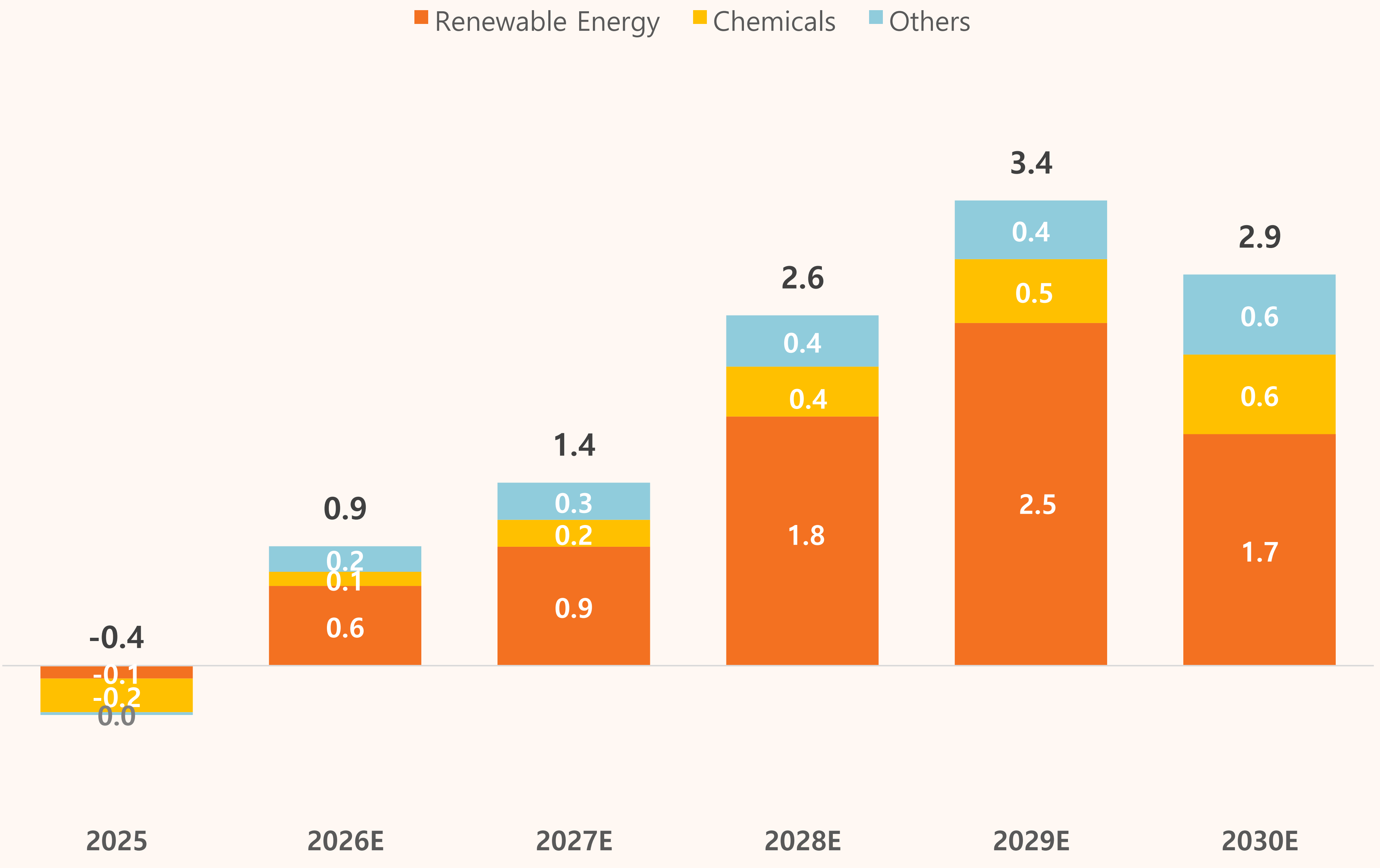
(4) Mid-to-Long Term Performance Outlook

- Building on a medium-to-long-term capital allocation strategy, sustaining investments in core growth businesses such as renewable energy, targeting KRW 33tn in sales and KRW 2.9tn in operating profit by 2030 on a consolidated basis
- Consolidated revenue is forecast to grow at a ~20% CAGR from KRW 13.3tn (2025) to KRW 33tn (2030), with the renewable energy segment driving the majority of top-line growth
- Consolidated operating profit is expected to turn profitable in 2026 and grow consistently toward KRW 2.9tn with an 8.8% margin by 2030

Consolidated Revenue Forecast (Unit: KRW tn)



Consolidated Operating Profit Forecast (Unit: KRW tn)



5. Tandem Technology Development and Commercialization

- The global solar industry is rapidly shifting from a capacity-driven competition to a technology-driven one, with high-efficiency solutions taking center stage
- Against this backdrop, as the structural limitations of PERC-based technology become apparent, a strategic roadmap for transitioning to Perovskite-Tandem technology has been established
- Proceeds from this offering will be used to establish the pilot validation and mass production infrastructure for Tandem commercialization, including a GW-scale Tandem production line and TOPCon cell line, reinforcing technological leadership and a dominant position in high-value solar markets

Tandem Technology Development Timeline

- **2019** Lab-scale Tandem R&D initiated
- **2023** Maximum efficiency 29.9% (small-area cell) officially certified by European solar cell performance verification institute
- **2024** Large-area cell efficiency officially certified by Fraunhofer Institute for Solar Energy Systems (ISE), Germany (world's first third-party certification on M10 standard)
- **2026** Large-area cell/ module long-term reliability certification expected (IEC/UL, M10 standard, world's first); LEO (low-earth orbit) satellite cell development initiated
- **2027** G12 top-cell optimization underway
- **2028** G12 mass production module recipe finalized

Tandem Commercialization Timeline

- **2024** Korea Pilot line (M10) construction / operation
- **2026** GW-scale mass production investment, top/bottom cell and module plant design (FEED) initiated
- **2027** Pilot line (G12) upgrade, Korea/U.S. commercial test bed construction, Tandem cell/module equipment development
- **2028** Tandem specialty high-voltage systems, EPC engineering development
- **2029** G12 GW-scale mass production launch, commercialization initiated

Expected Outcomes

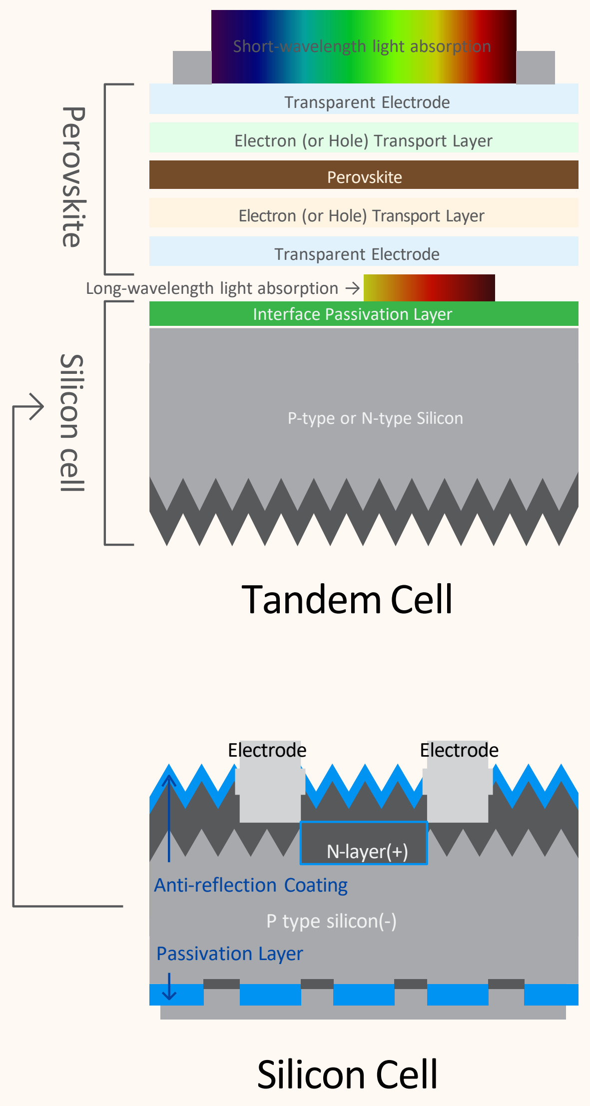
- Pilot line operations to rigorously validate GW-scale Tandem manufacturability across process stability, yield, and quality, with ongoing long-term reliability assessment and certification
- Concurrent development of high-voltage compatible systems (inverters, ESS, and arrays) optimized for Tandem integration
- Translating world-leading R&D achievements into commercial applications to reinforce and sustain technological leadership
- Transition to high-efficiency, high-output ground-mounted products expected to drive profitability improvement, with further expansion into space solar applications including satellite power and space data centers

[Reference: Technological Advantages of Tandem Solar]

Compared to conventional silicon-based cells (PERC, TOPCon), Perovskite-Tandem technology combines a Perovskite top cell with a silicon-based bottom cell. By absorbing different portions of the solar spectrum through two cells with different bandgaps, the structure overcomes the theoretical e fficiency ceiling of single-junction silicon cells, achieving production efficiency of 30%+ and a theoretical maximum of up to 44%.

Technology of Perovskite-Tandem

Perovskite cell layered on top of silicon cell



Perovskite-Tandem (Silicon-Perovskite Tandem)

Technology Overview

Perovskite-Tandem is a next-generation high-efficiency solar cell technology featuring a multi-junction structure, in which a Perovskite top cell is stacked on a silicon-based bottom cell.

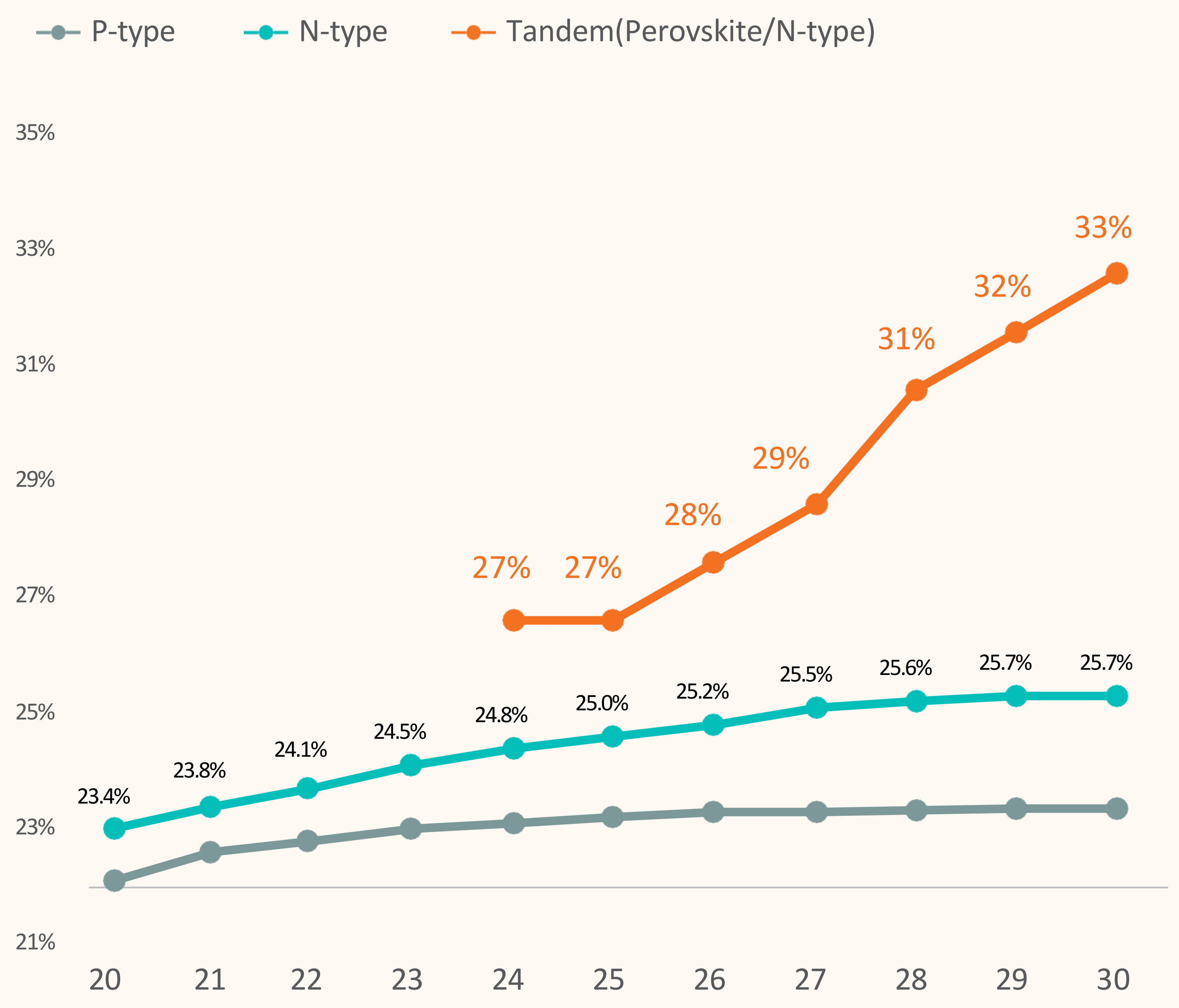
Two cells with different bandgaps absorb different wavelengths of the solar spectrum, maximizing energy utilization.

Structural Characteristics

The silicon bottom cell primarily absorbs long-wave length light, while the Perovskite top cell primarily absorbs short-wavelength light, sharing current through a 2-terminal series connection structure.

This enables high efficiency that surpasses the theoretical efficiency limit of single-junction silicon cells.

Average cell efficiencies by technology (Source: S&P Global)



6. Shareholder Return Policy

- Established a shareholder return policy that directly links corporate value appreciation driven by a stable business foundation, capital structure improvement, and growth investments through the rights offering to shareholder returns

FY2026 – FY2030 Shareholder Return Plan

Shareholder Return Policy

Max

10% of Net Profit,

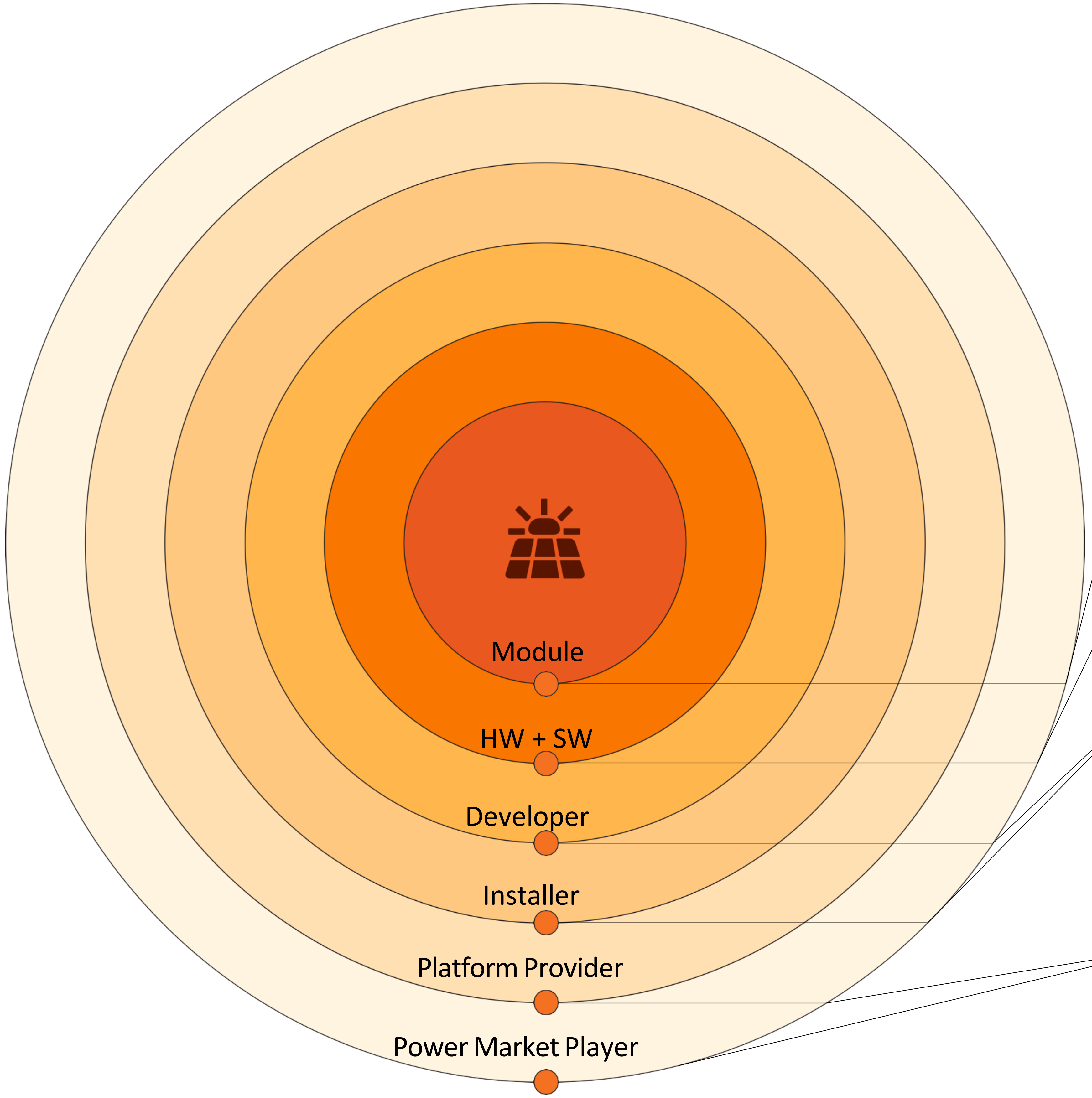
KRW 300 per Common Share

- 10% of annual consolidated net profit to be allocated toward shareholder returns (dividends or share buybacks/cancellations)
- In the event that 10% of annual consolidated net profit falls short of the minimum dividend of KRW 300 per common share, a minimum dividend of KRW 300 per common share will be paid.

Appendix
_Energy Business Strategy

Total Energy Solution Provider

Building on differentiated product competitiveness to drive growth as a Total Energy Solution provider



Technology Leadership — Advanced Module Technology

- Maximizing module leadership advantage based on high-efficiency TOPCon modules and next-generation Perovskite-based Tandem modules
- Building a vertically integrated Value Chain anchored by North America's largest solar manufacturing complex, the "Solar Hub"

System HW & SW Integration — Smart Energy Systems

- Delivering Smart Energy Systems that integrate core energy hardware — including MLPE, inverters, and ESS —energy management software

Market-Tailored Downstream Solutions — From Residential to Utility

- Offering market-optimized Downstream solutions for each segment based on differentiated product competitiveness
- Providing integrated distributed energy solutions spanning from asset development to construction and operations, and executing large-scale PV and BESS Turnkey EPC projects.

Financing & Energy Services — Beyond Downstream

- Providing solar financing and energy management solutions that extend beyond manufacturing and installation, positioning as a full-spectrum energy solutions provider across the entire power market

Appendix
_Materials Business Strategy

Building a sustainable growth platform by bolstering the competitive edge of existing business

Reinforcement of Business Competitiveness

- Achieve Global Top in W&C
- High-content EVA expansion
- Business Improvement at Ningbo PVC Operations

Expansion of technology -based high-value /eco-friendly business

- Expand eco-friendly plasticizers
- Bio-based products
- Recycled material-based products

Discover new growth engines for the future

- Bio-ENG
- Development of water electrolysis system

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FROM ENERGY TO MATERIALS

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