

CHC Resources Corporation

December 20, 2023



Outline



I. Company Overview



II. Financial Overview



III. Operational Prospects



IV. Corporate Sustainability





I. Company Overview





Main Business

GBFS Cement Business



Resources Reutilization Business



II. Financial Overview

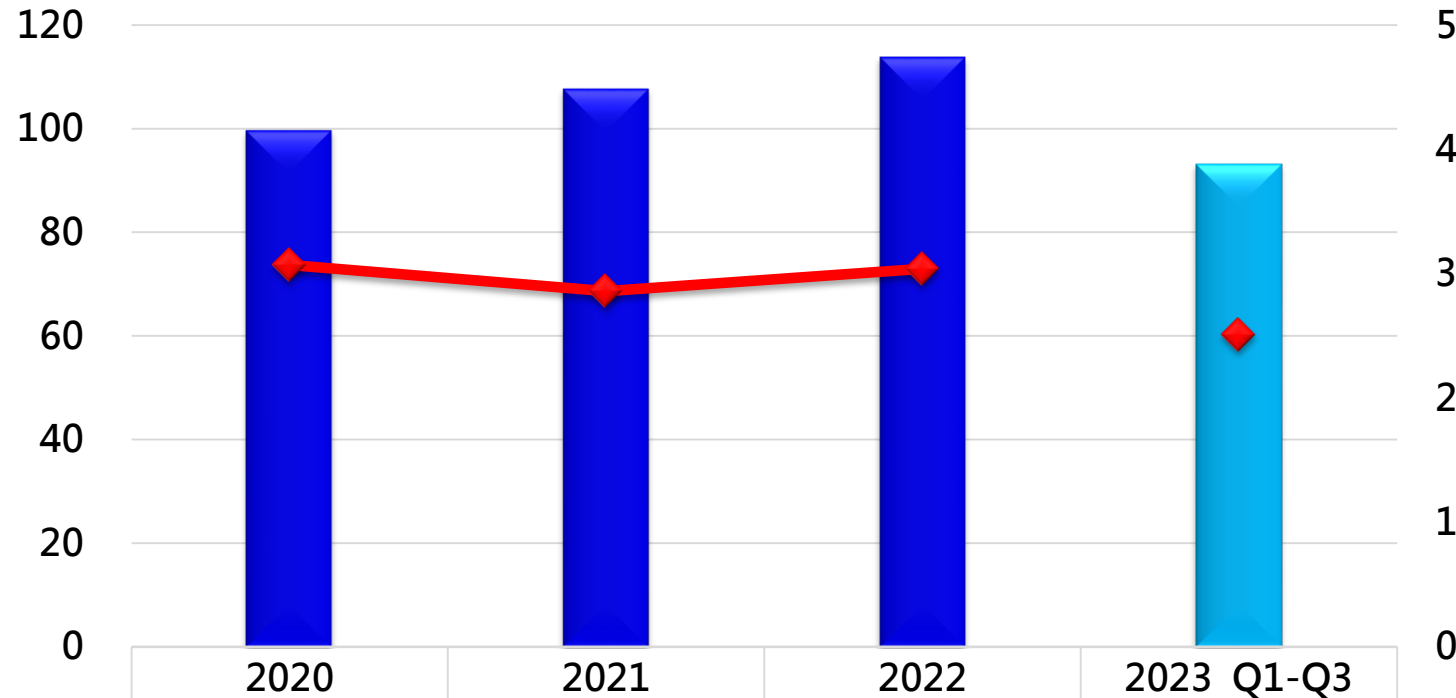
Consolidated Revenue & EPS



NTD 100million

EPS 2.86~3.07 recent years

NTD per share



Consolidated Revenue	99.7	107.7	113.8	93.2
EPS	3.07	2.86	3.04	2.51

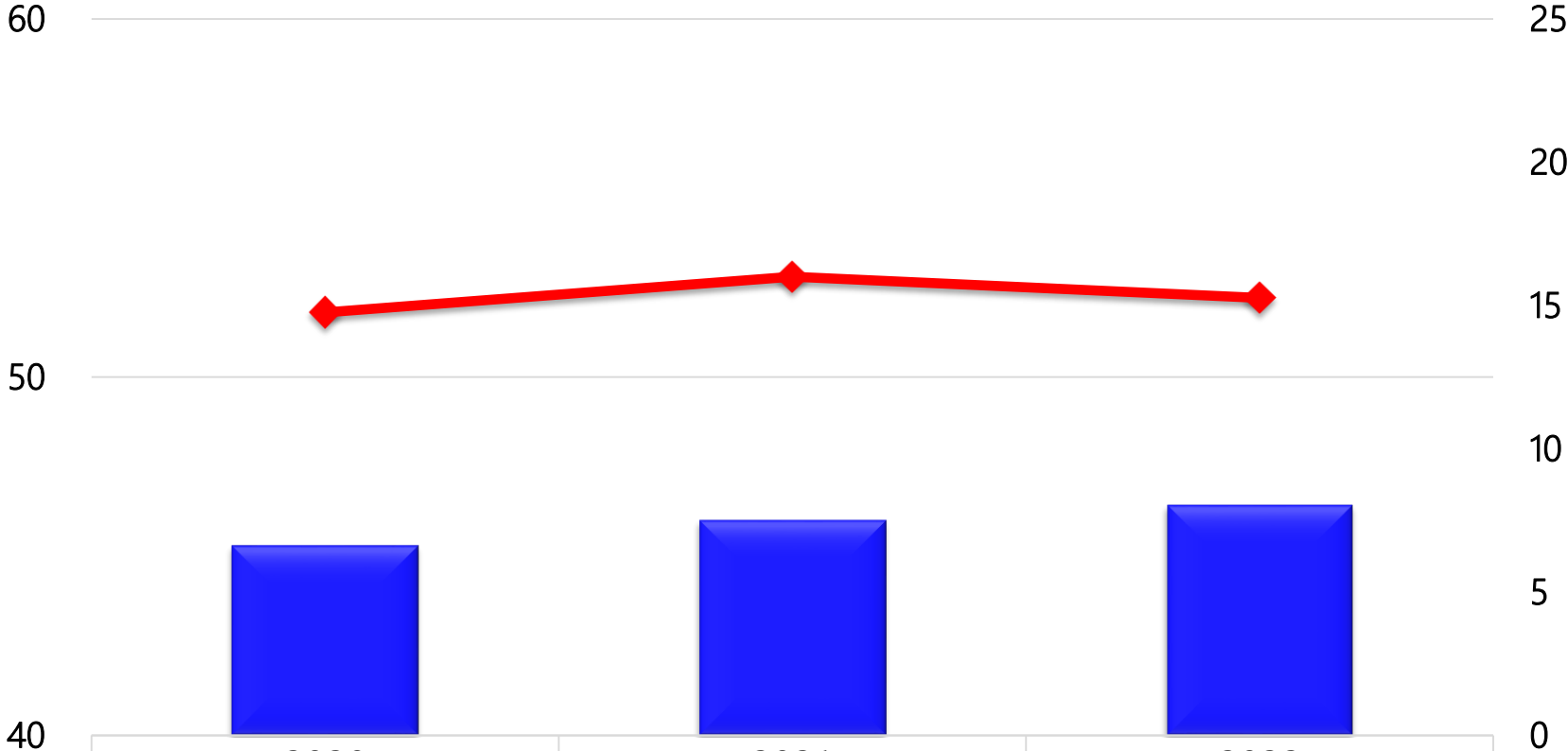


Stock Price & PE Ratio



NTD per share

PE Ratio

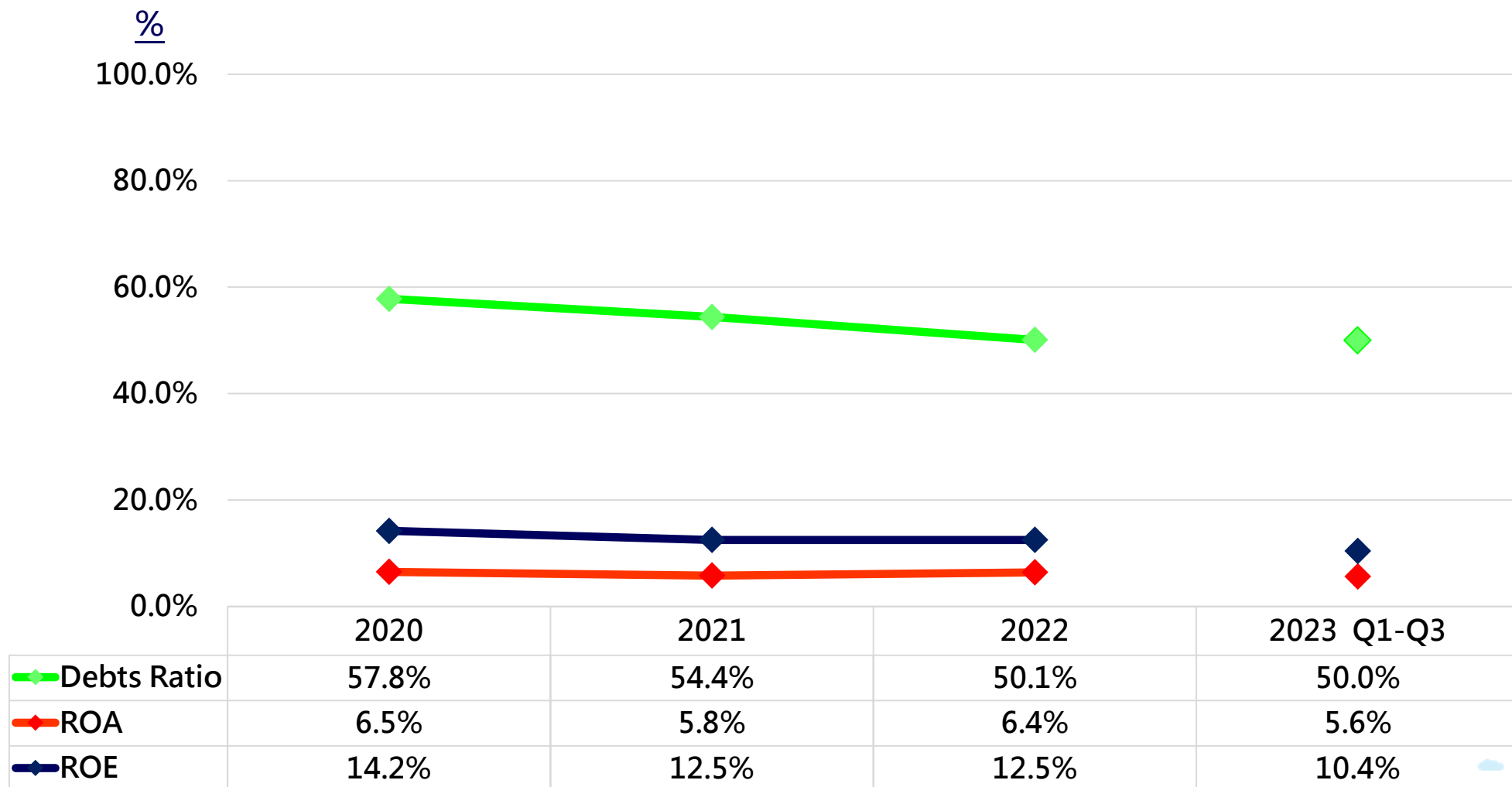


■ Stock Price (average)	2020	2021	2022
	45.3	46.0	46.4
◆ PE Ratio	15	16	15





Main Financial Index

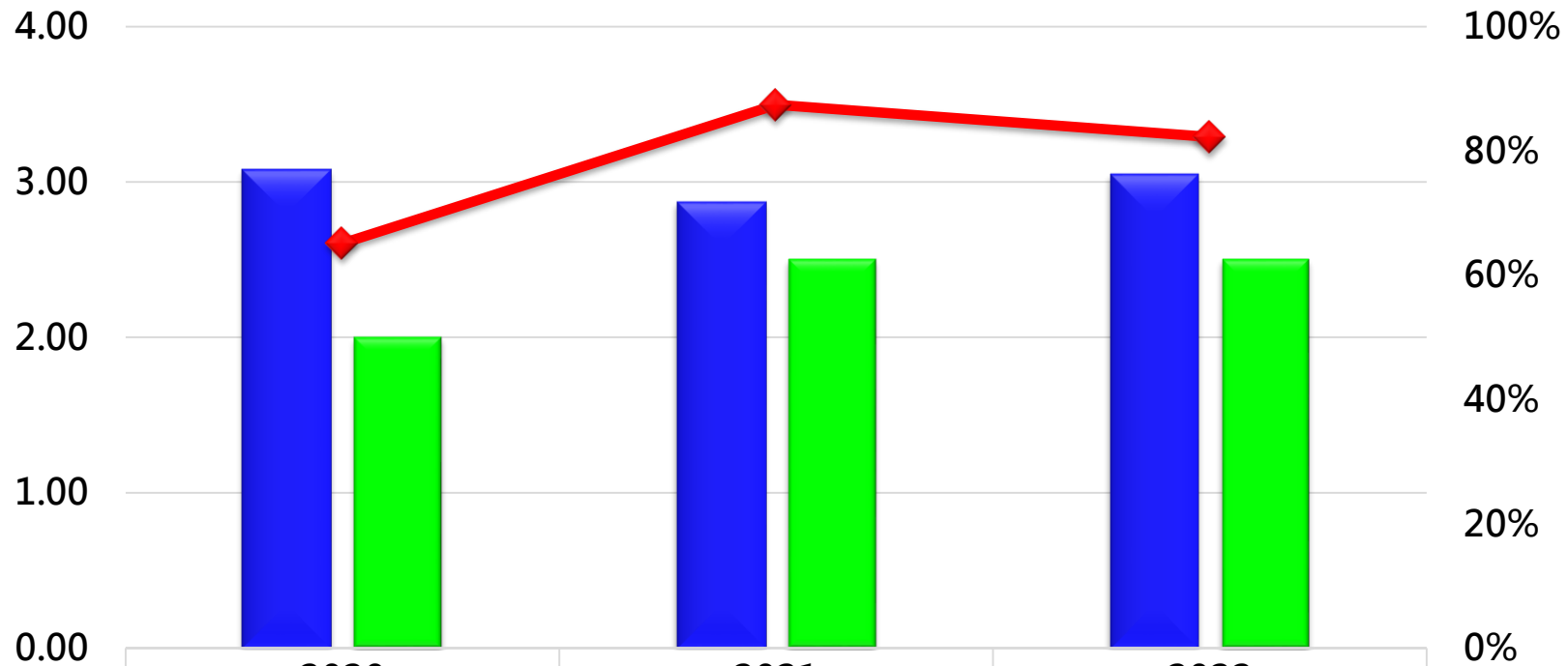


EPS & Dividend



NTD per share

Dividend payout ratio



EPS	3.07	2.86	3.04
Dividend	2.0	2.5	2.5
Dividend payout ratio	65%	87%	82%

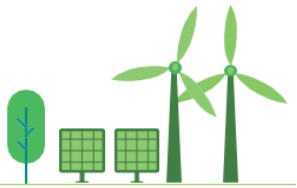
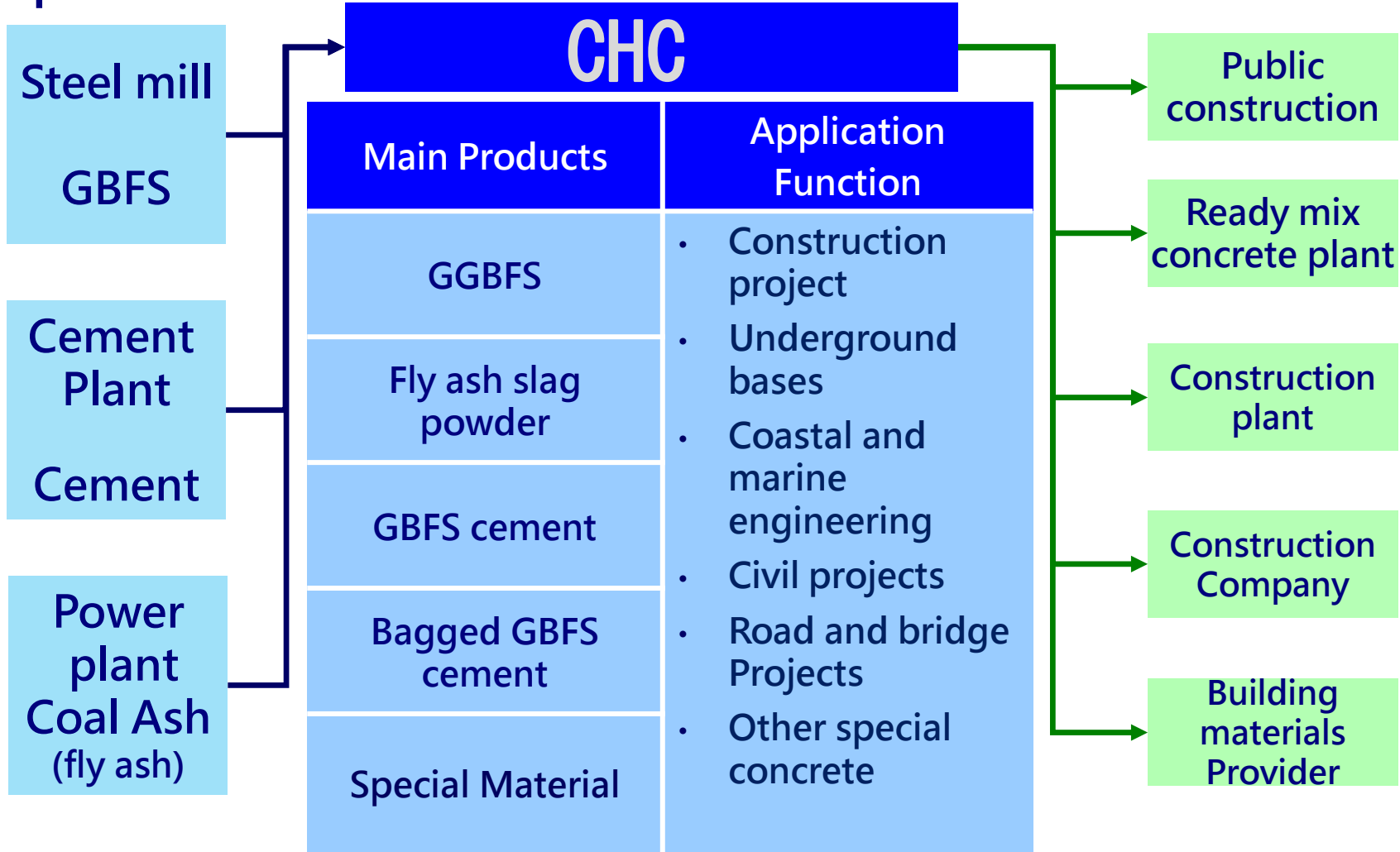


III. Operational Prospects

GBFS Cement Business
Upstream

Midstream

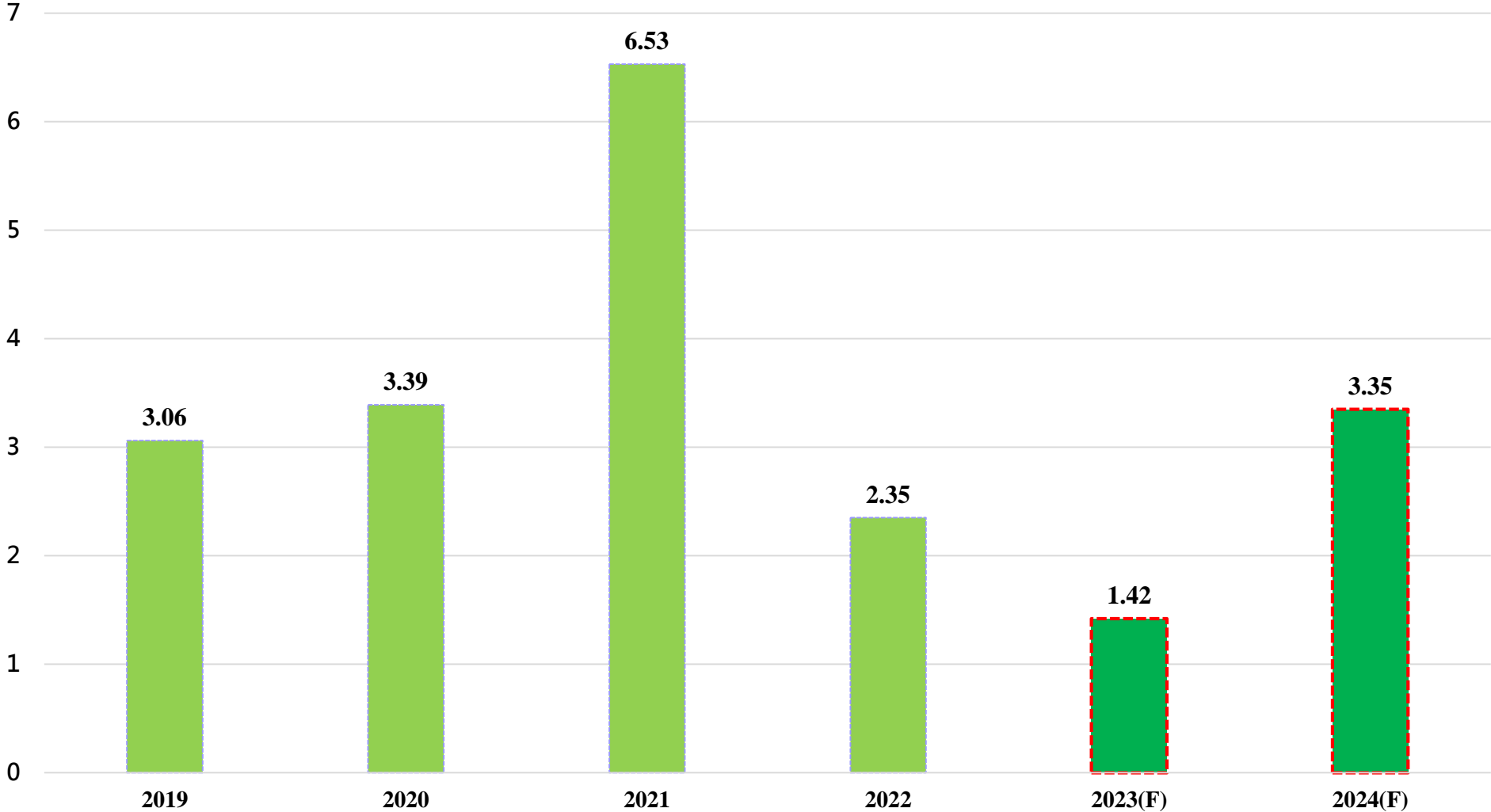
Downstream



Domestic Market



Economic growth rate (%)



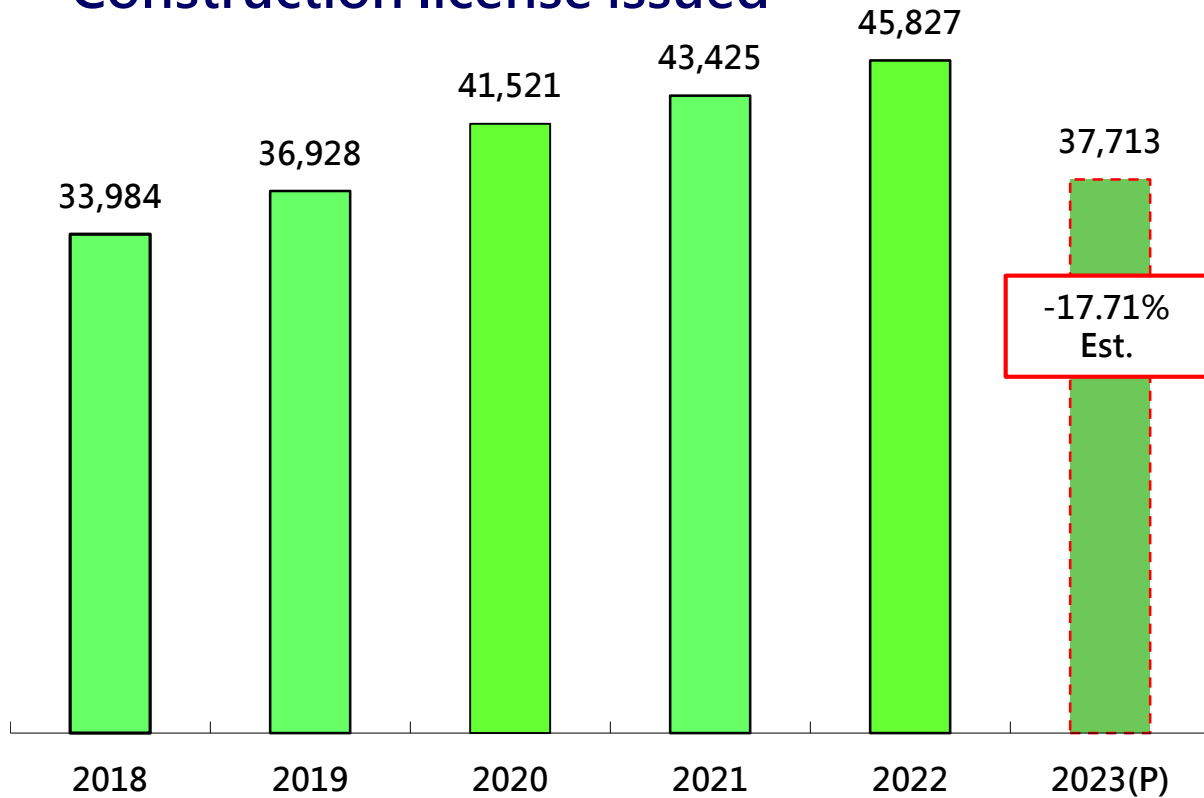
(Source: 2023.11.28 Directorate General of Budget, Accounting and Statistics)



Domestic Market

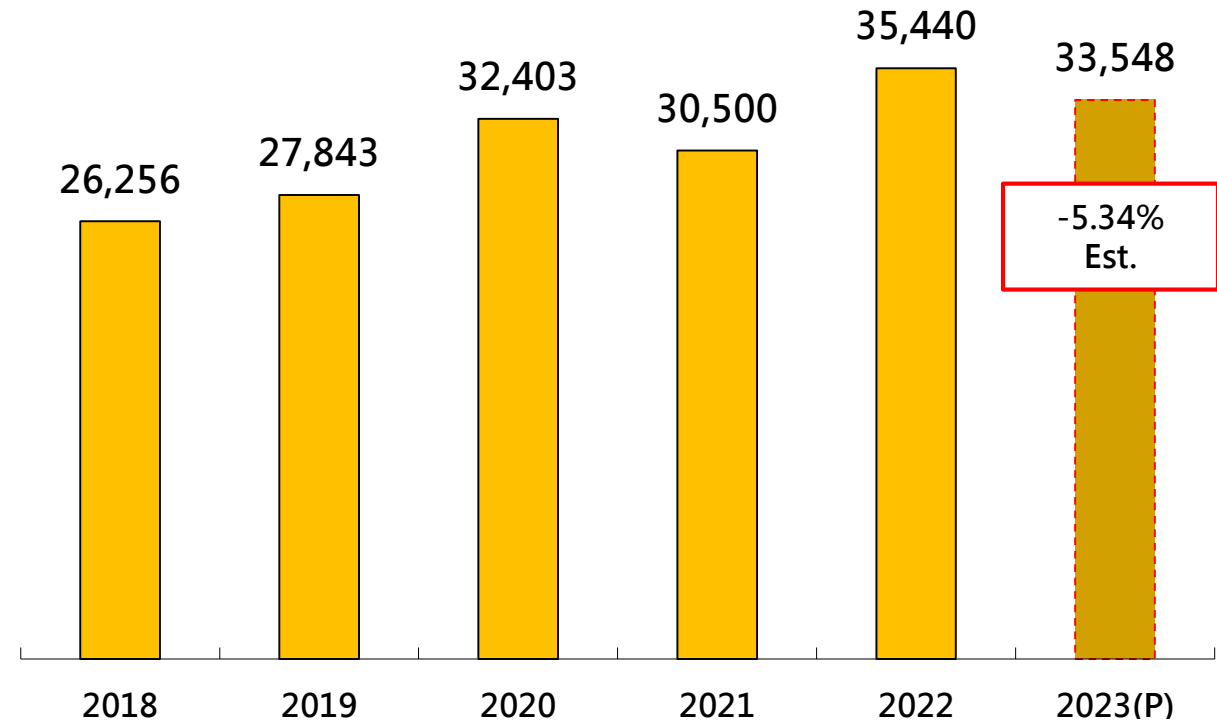


Construction license issued



Total floor area - thousand M²

Operation statistics



Total floor area - thousand M²

(2018-2023 source : National Land Management Agency, MOI)



Domestic Market

Infrastructures Budget



NTD 100million

(Source: Directorate General of Budget, Accounting and Statistics)

Item	2023	2024(Draft)	Difference
Public construction plan	1,630	1,928	+298(+18.3%)
The special budget for the Forward-Looking Infrastructure Project	832	844	+12(+1.4%)
Planned public construction by the budget of subsidiary units of operation and non-operation special funding	3,415	3,114	-301(-8.8%)
Total	5,877	5,886	+9(+0.2%)



Energy Industry



Harbor Engineering



Traffic Construction





Domestic Market Prospects

■ Demand :

- Based on the aforementioned market statistics, although the forecasted economic growth rate continues to **go up** next year, and the forecasted Infrastructures Budget will be same **compared** to this year, both the forecasted issuance of construction licenses and the operation statistics of this year have **declined** compared to last year. This indicates an anticipated **downward trend** in the construction market for the coming year.
- In recent years, **Energy-Saving, and Carbon-Reduction (Carbon-Neutrality)** have become such an international trend. Fly-Ash made from thermal power plant also decreases year by year. Therefore, **the demand for low-energy-consumption construction materials (GGBFS) is expected to increase.**





Domestic Market Prospects

Supply :

- Some expansion plans of the domestic competitors will increase market uncertainty.
- **Due to the Energy-Saving, and Carbon-Reduction (Carbon-Neutrality) trend**, the production of GBFS would decrease as the number of the blast furnace is going to be replaced by electric arc furnace. This phenomenon would directly impact on the long term GBFS supply.
- Enterprises are improving in energy conservation, and carbon reduction. Those have led to rising manufacturing costs and an increase in the price of GBFS. Coupled with the carbon tax imposition in 2025, it is expected that the cost of various construction materials will increase significantly.

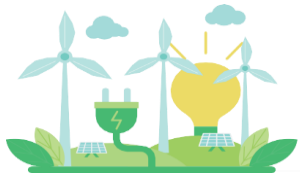




Overseas Market- CHCV Operation

■ Operating Status

- In the first half of 2023, due to soaring raw material prices and rapid interest rate hikes by Vietnam Central Bank, the construction market in Vietnam was sluggish with many constructions suspended and disruption in construction funds, which also caused a decline in demand for cement and GGBFS. Through strategies such as **product differentiation, market development in the emerging Mekong River region and cost reduction**, the sales volume and profit of GGBFS products have gradually increased.
- In the second half of the year, with stabilization in raw material prices, market interest rates and the continued implementation of the aforementioned strategies, as of Q3 this year, cumulative revenue from GGBFS products has increased compared to the same period last year and **turned the financial result from loss to profit.**

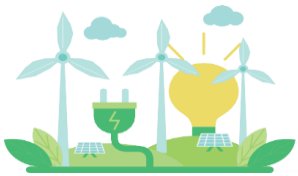




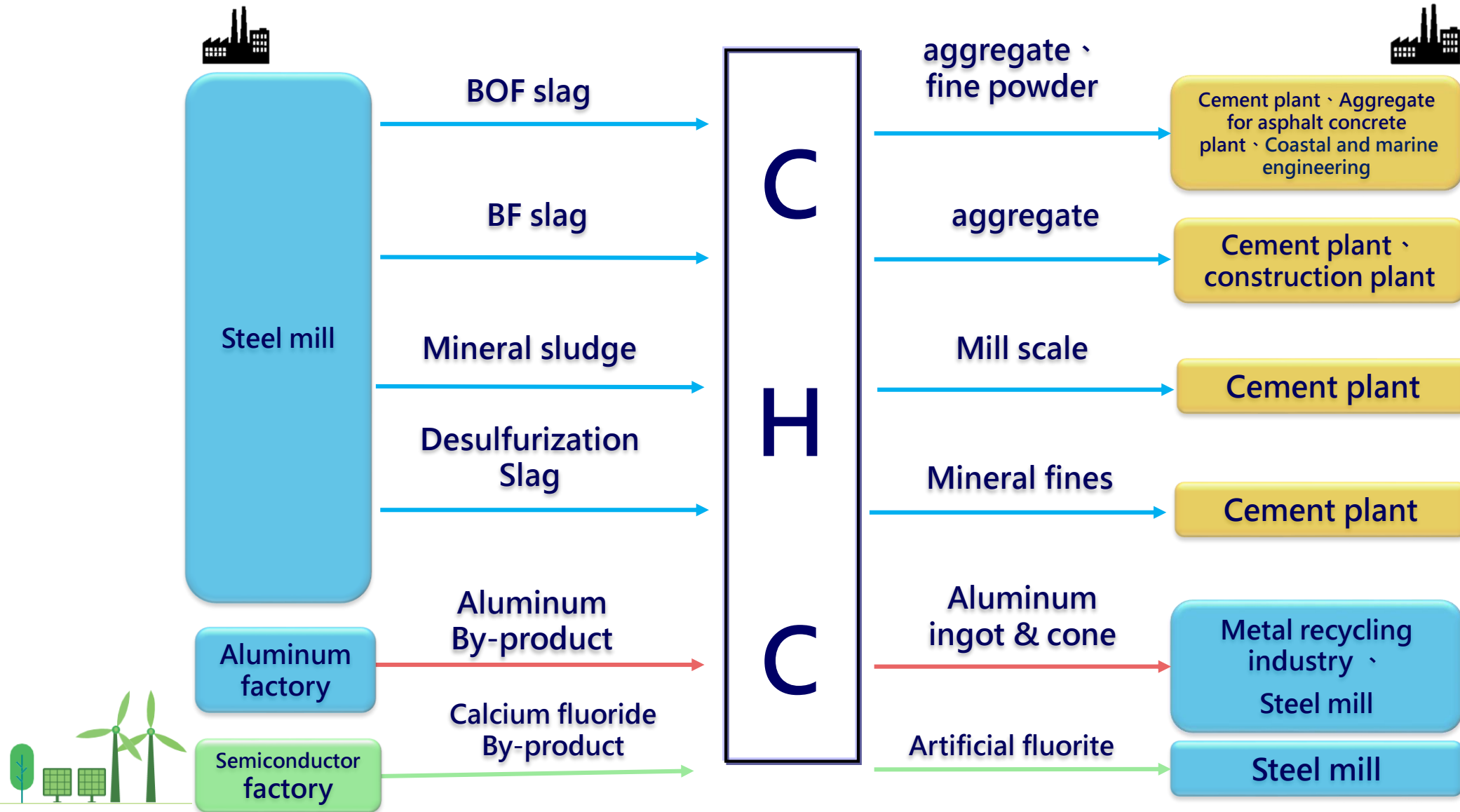
Overseas Market- CHCV Operation

■ Prospect

- Vietnam's economic outlook for 2024: Due to suffering economic slump in construction market, Vietnam government will invest funds in infrastructure in order to boost domestic demand. This may have some impact on the overall economy; **CHCV will continue to develop ready mix concrete plant and cement plant customers for public constructions, aiming to sustainably enhance operational momentum.**



Resources Reutilization Business





Create Circular Economy Value Cross Industries

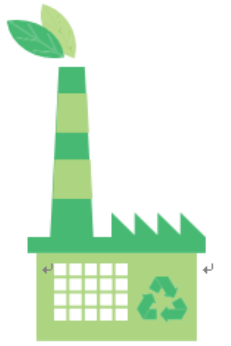


Steel mill

Steel mill By-product

CHC RESOURCES 中聯資源

Mineral fines	BFS	Mill scale	BOFS



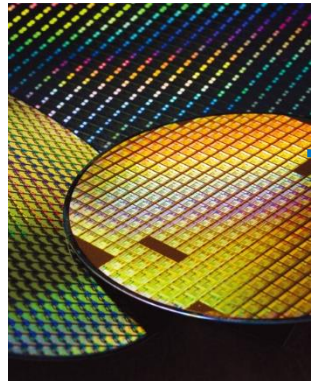
Recovered products are used as cement raw meal and help cement plant to meet CO₂-emission reduction target

Cement Raw Meal



Cement plant

Create Circular Economy Value Cross Industries



Semiconductor factory



Aluminum factory

Calcium fluoride By-product

Aluminum By-product

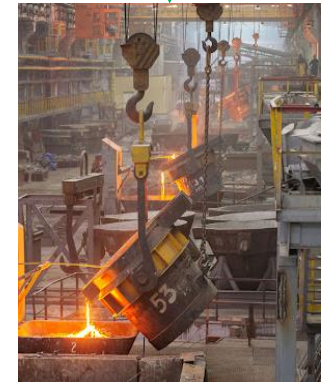
 **中聯資源**
CHC RESOURCES

Artificial fluorite Aluminum cone



Reduce natural raw material mining and promote circular economy

Steelmaking raw materials



Steel mill





IV. Corporate Sustainability

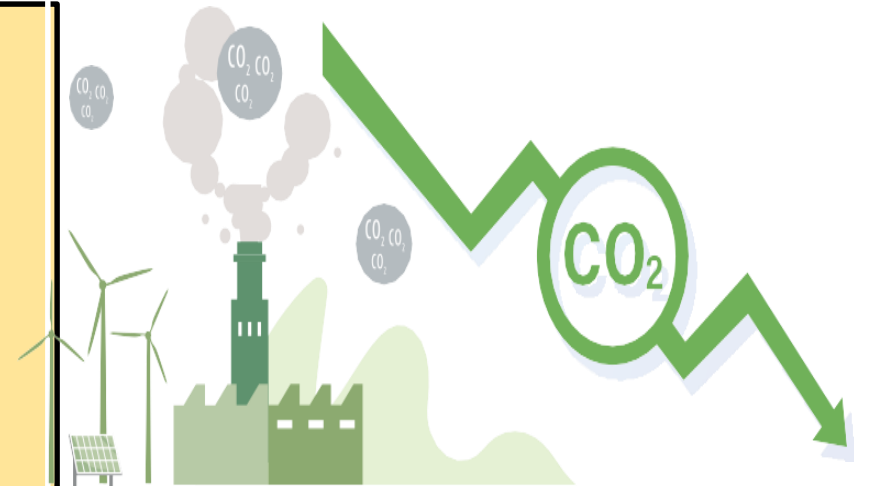


Circular Economy

- BS8001-- Value Creation

business opportunities of low-carbon emission

- Low-Carbon Construction materials
- Low-Carbon Cement
- Low-Carbon Steel



Circular Economy - Value Creation



NO.	Business Model	Value Creation
①	The Utilization of BOF Slag in Raw Meal	BOFS mainly composing of CaO, Fe ₂ O ₃ is an alternative option as raw meal
②	The Utilization of BOF Slag in Land Reclamation	BOFS graded aggregates are nationally certified environmentally friendly product and can be applied for land reclamation
③	The Utilization of Ground Granulated Blast-Furnace Slag in Building Materials	GGBFS Powder and GGBFS Cement have become indispensable and high-value green materials for construction industry
④	The Utilization of Mineral Fine Aggregate in Raw Meal	Mineral Fine Aggregate and Iron Slag are high calcium oxide and iron oxide products respectively, which can help cement plant to meet CO ₂ -emission reduction target
⑤	The Utilization of Iron Slag in Raw Meal	
⑥	The Utilization of Calcium Fluoride Sludge in Artificial Fluorite	Calcium fluoride By-product produced in high-tech industry can be used to make Artificial Fluorite which are utilized as fluxes in the steelmaking processes.
⑦	The Utilization of Aluminum Slag in Aluminum Product	Aluminum slag can be made into hot metal desulfurization blending agents, which effectively solves the problem of reusing aluminum slag





Low-Carbon Construction materials-

GGBFS Carbon-Reduction effect

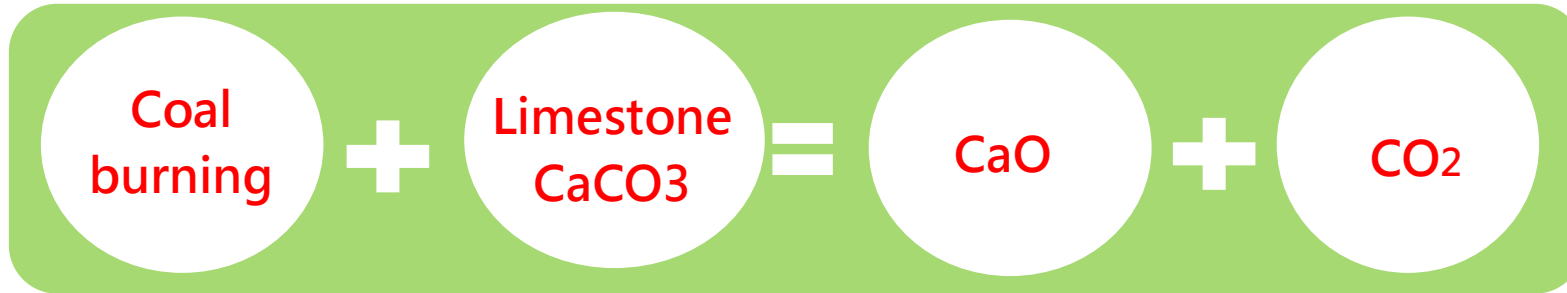
In Taiwan, the cement carbon footprint emission factor is approximately 800kgCO₂e/ton. When CHC Resources Corporation produced GGBFS, its Carbon footprint factor is around 50kgCO₂e/ton.

By producing 3 million tons GGBFS to replace cement, CHC Resources Corporation reduced 2.25 million tons CO₂e annually. That is equivalent to the CO₂e of 5,800 Da-an Forest Park reduced each year. **In the future when carbon fees are imposed, the potential value of GGBFS would be apparent.** ◦

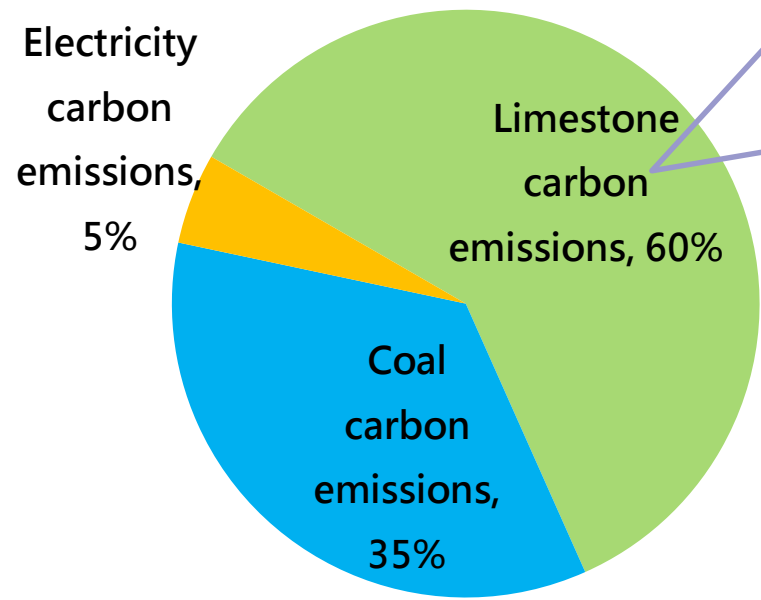


Low Carbon Cement-

Carbon reduction benefits of resource reutilization products



Proportion of carbon emissions from cement production



Introduce **low-carbon alternative raw materials** to reduce carbon emissions produced by calcining limestone.

Low-carbon products as alternative raw materials include: **mineral sludge, mineral fines, air-cooled BF slag, BOF slag**, etc.

It is estimated that the cement industry can reduce carbon emissions by 180,000 tons per year (equivalent to the CO₂ absorption of 467 Daan Forest Parks), and cooperate with In line with the government's 2050 net-zero emission policy, CHC will continue to promote relevant low-carbon products to cement plant customers to **increase product value and develop carbon reduction business opportunities**.





Benefit of low-carbon emission

➤ Accomplish carbon reduction

Steel industry feeds low-carbon iron resources will decrease fuel consumption and CO₂ emission. Iron content Quality and CO₂ emission are positively correlation.

➤ Quality improvement and quantity promotion

Procedure improvement and Technology innovation will be implemented to ramp up iron content and quantity which will be positive to carbon-reduction.



low-carbon iron resources



Vision

Commit to Resources Sustainability and Value Innovation

Become an Excellent Enterprise of Circular Economy



中聯資源



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