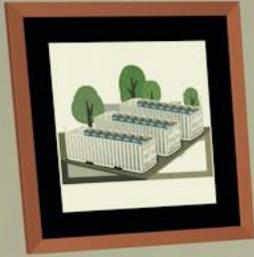




**TCC GROUP
2021 Q3
INVESTORS'
CONFERENCE**



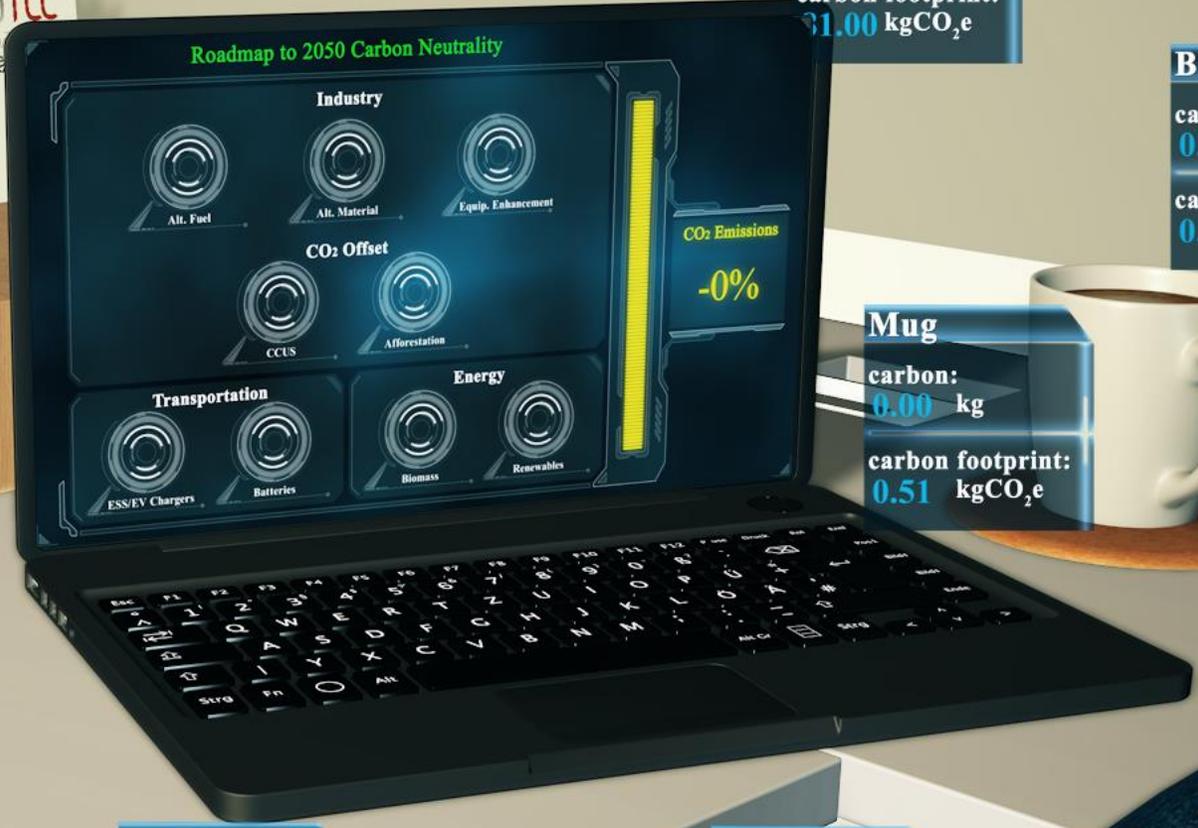


Potted Plant
 carbon:
0.00 kg
 carbon footprint:
0.49 kgCO₂e

Book
 carbon:
0.75 kg
 carbon footprint:
2.16 kgCO₂e

Cellphone
 carbon:
0.08 kg
 carbon footprint:
64.00 kgCO₂e

Pen
 carbon:
0.02 kg
 carbon footprint:
0.04 kgCO₂e



Laptop
 carbon:
0.81 kg
 carbon footprint:
31.00 kgCO₂e

Black Coffee
 carbon:
0.01 kg
 carbon footprint:
0.30 kgCO₂e

Mug
 carbon:
0.00 kg
 carbon footprint:
0.51 kgCO₂e



Desk
 carbon:
12.50 kg
 carbon footprint:
35.00 kgCO₂e

Human 70kg
 carbon:
12.60 kg
 carbon footprint:
10.77 MTCO₂e
 (TW)

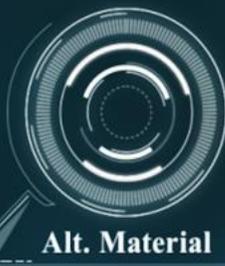


Roadmap to 2050 Carbon Neutrality

Industry



Alt. Fuel



Alt. Material



Equip. Enhancement

CO₂ Offset



CCUS



Afforestation

Transportation

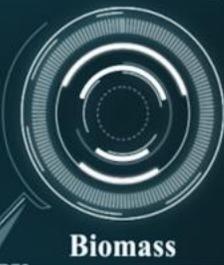


ESS/EV Chargers



Batteries

Energy



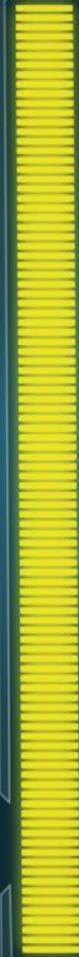
Biomass



Renewables

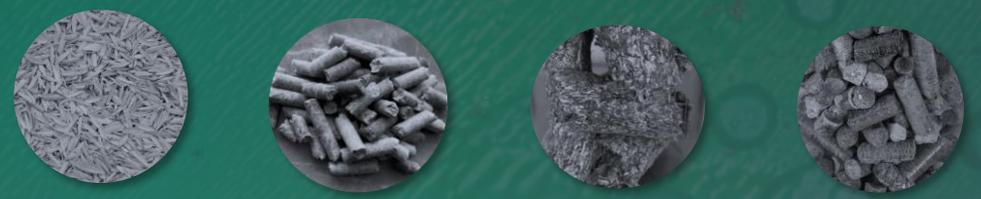
CO₂ Emissions

-0%



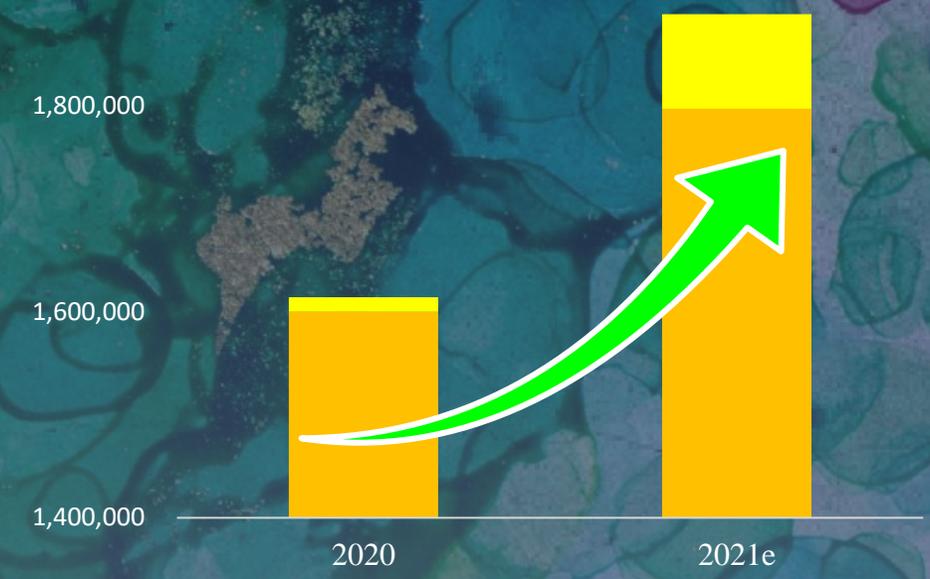
CO₂ Reduction Target
50%
By

Alternative Material & Fuel Usage



Unit: Ton
2,000,000

■ Alt. Material ■ Alt. Fuel



Year	Alt. Material	Alt. Fuel
2020	1,599,687	14,245
2021	1,797,105	91,531
Target	41,433,333	13,084,211

First Open Factory in Shaoguan, Guangdong

CO₂ Reduction Target

3%

By

Equipment Enhancement

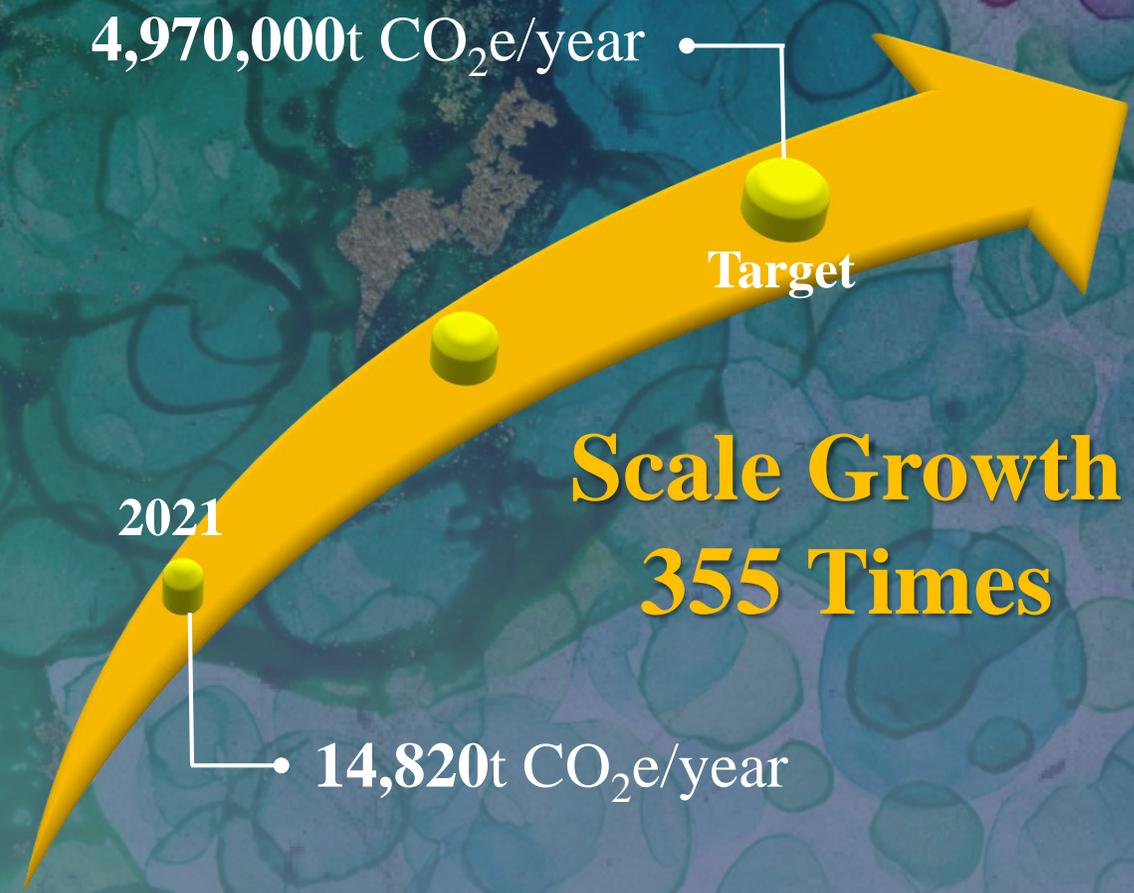


CO₂ Reduction Target

10%

By

Carbon Capture, Utilization and Storage
(CCUS)



CO₂ Reduction Target

5%

By

Afforestation for Carbon Sink



Absorbs **15kg** CO₂/year



Target



Reduce **2,490,000t** CO₂e/year

= 165,733,333 Trees

= 4.07 Taipei Cities

CO₂ Reduction Target

32%

By
Energy Strategies

- **Biomass**

Unit: Million Tons CO₂e



- **Renewables**



- **Energy Storage/EV Chargers**



- **Batteries**



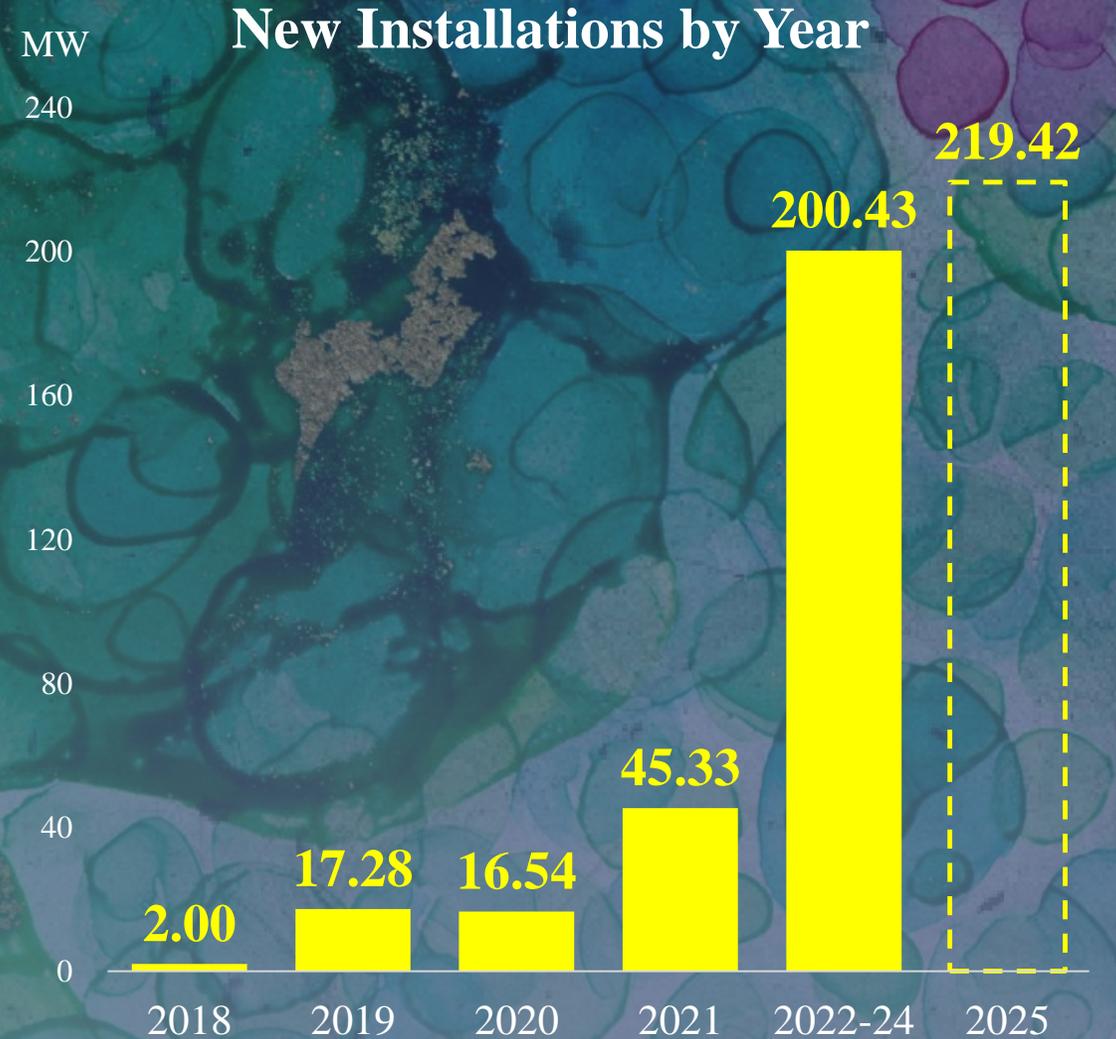
Renewables

2021

281.58 MW
Planning/Scheduled

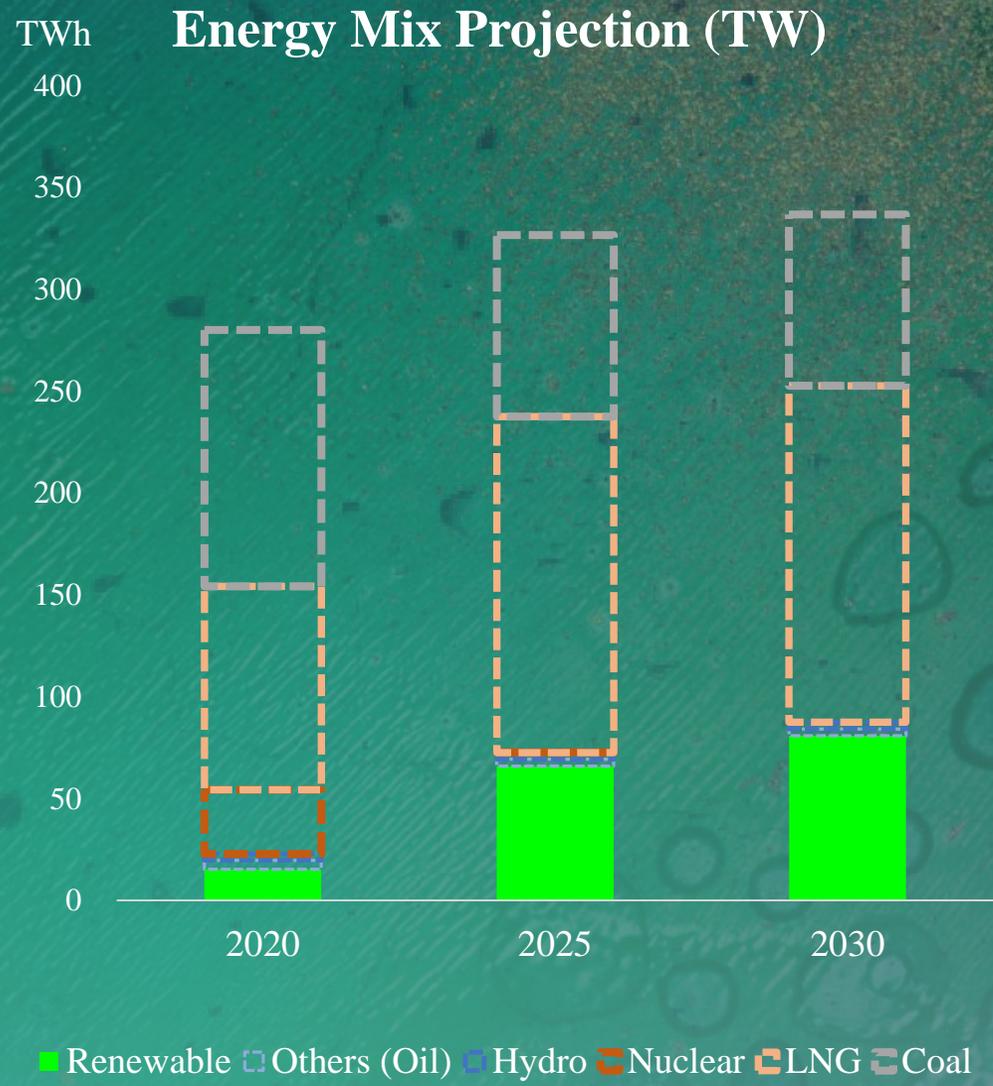
2025 Target

500 MW



Note: New installations by year include all TCC Group renewables projects

Renewables Expected to Grow



Source: Renewable Energy.org, Bureau of Energy, Industrial Technology Research Institute (ITRI)



10X Plan

- 1.7GWh of accumulated ESS installation by 2025
- Grow EV charging business



Synergy

- 200MWh EPC project in Western Australia
- Partnership with Synergy, state-owned power provider
- Operational by end of 2022



Atlante

- EV charging network in Southern Europe
- Support EU's *Fit for 55* policies

Energy Storage Systems (ESS)

2021
1.113GWh

2025 Target
2GWh

Australia

200.0

USA
(New England,
Guam)

350.0

Unit: MWh

Taiwan

367.5

Mainland
China

195.2

UHPC Fire-Resistant Energy Storage Container

The first “Ultra-High Performance Concrete”
energy storage container in Taiwan



1

UHPC compressive strength can reach above 20,000 psi

2

Extremely weather-resistant, can replace traditional metal container

3

Long life span, can reduce waste and CO₂ emissions

4

Fire- and high-temperature resistant

5

Patent application in progress

➡ TCC ESS Market Competitiveness

International Investor Acknowledgement of TCC Energy Transformation

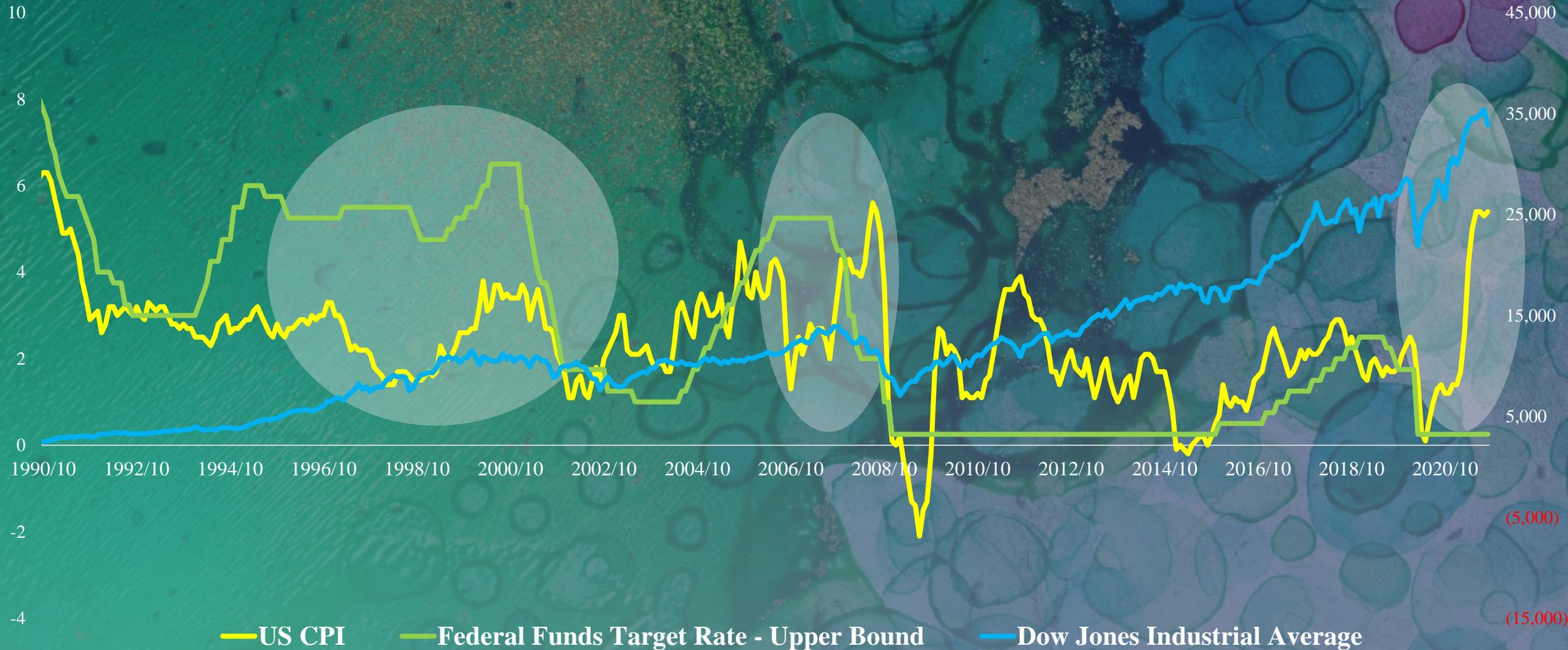
P/E Comparison with Peers



NHOA Market Cap



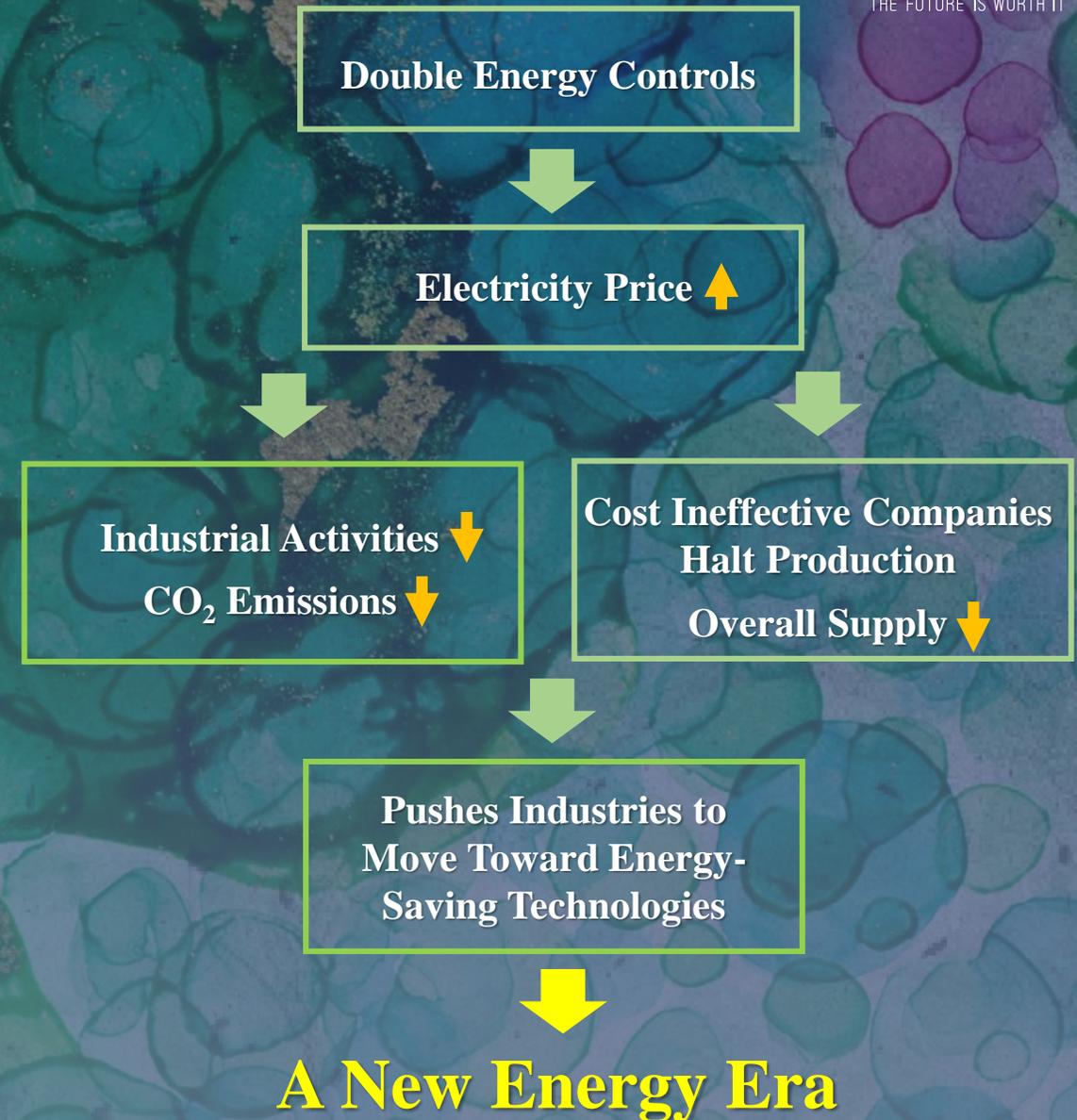
US Inflation: A Worrisome Matter



Mainland China Double Energy Controls

TCC Strategy :

- Accelerate the use of alternative fuel and material
- Expand renewable energy development



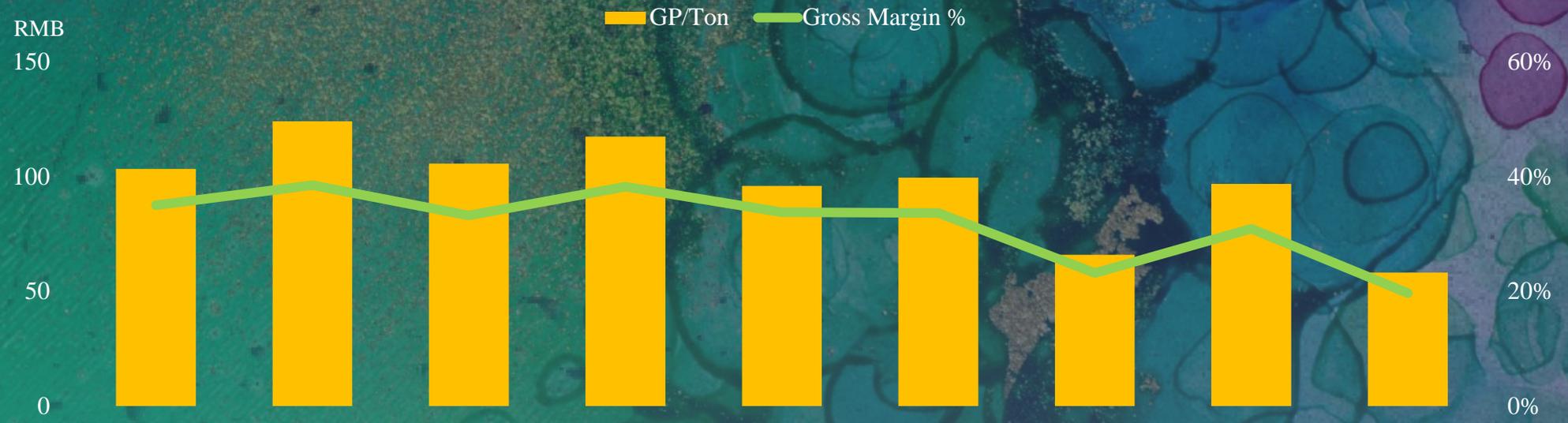
Mainland China Cement Market Analysis

TCC Strategy :

- **Cement internationalization**
- **Speed up energy business growth**

	Current	Future
Supply	<ul style="list-style-type: none">• Double energy control policies• Production volume ↓	<ul style="list-style-type: none">• Double energy control policies• Adjust production volume accordingly
Demand	<ul style="list-style-type: none">• Double energy control policies• Building material shortage, prices ↑• Property demand ↓• Infrastructure demand remains	<ul style="list-style-type: none">• Double energy control policies• May reach a new market balance

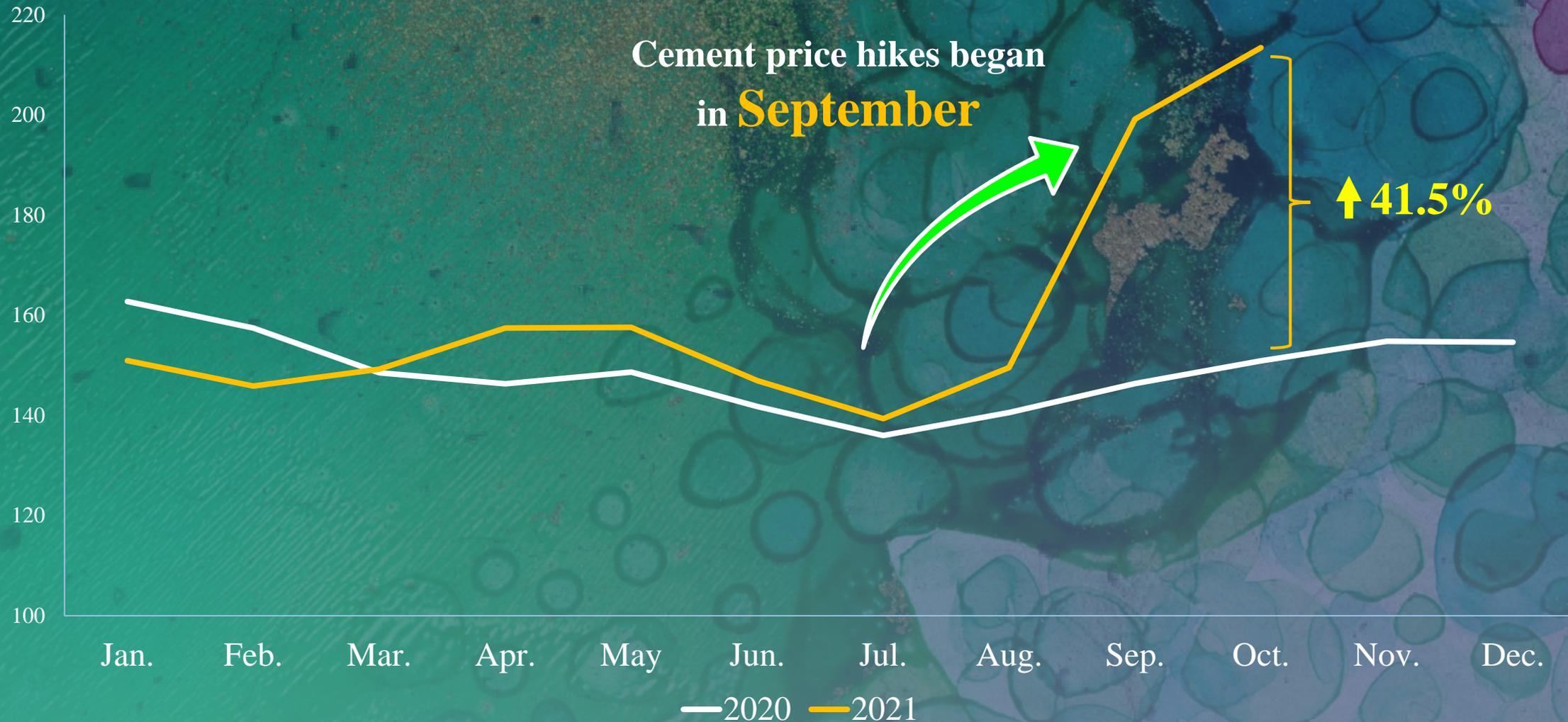
Mainland China Cement Market



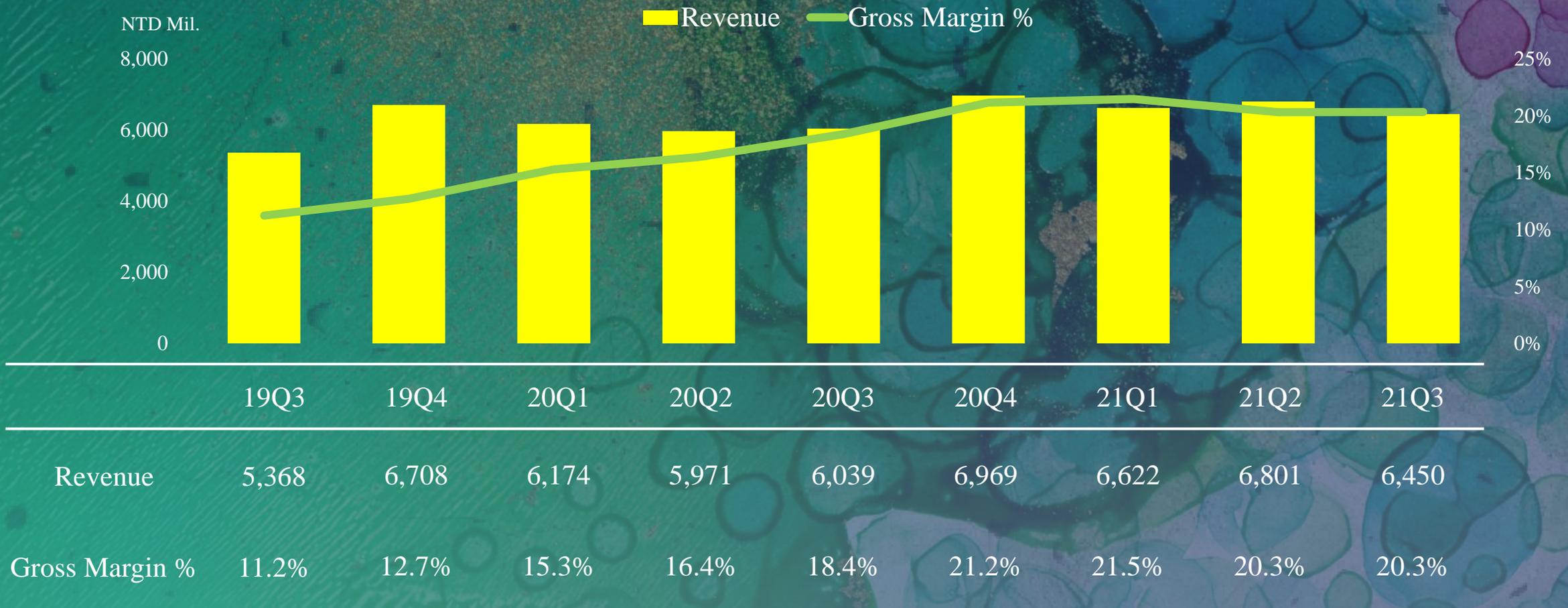
	19Q3	19Q4	20Q1	20Q2	20Q3	20Q4	21Q1	21Q2	21Q3
Sales Volume (Mil. Ton)	15.0	16.9	7.7	16.0	15.4	17.0	11.3	14.2	13.4
Revenue (RMB Mil.)	4,418	5,441	2,437	4,890	4,363	5,015	3,225	4,451	3,957
GP/Ton	103	124	106	117	96	100	66	97	58
Operating Profit (RMB Mil.)	1,075	1,642	541	1,444	1,122	1,243	436	991	448
Gross Margin %	35.0%	38.5%	33.2%	38.2%	33.8%	33.7%	23.2%	30.9%	19.7%

Operating Profit = (Revenue – COGS – Operating Expense)

Mainland China National Cement Price Index (CEMPI)



Taiwan Cement Market

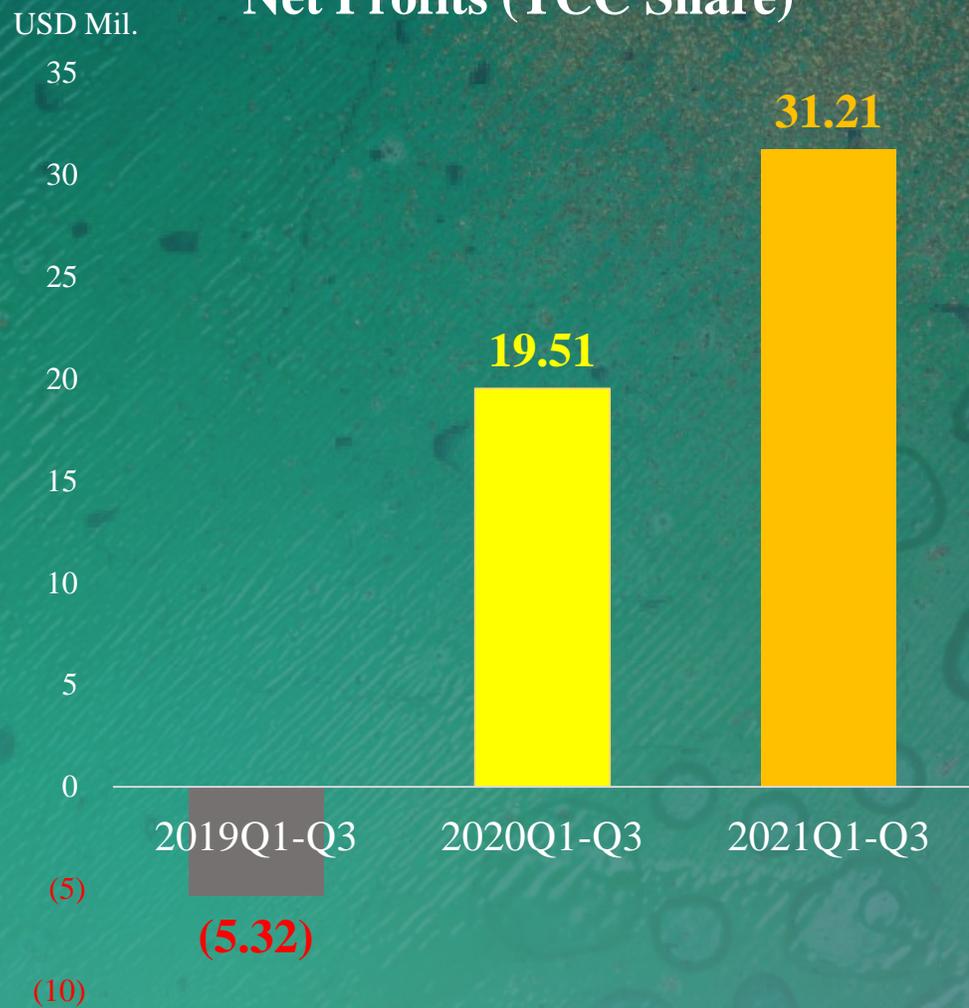


Gross Margin % = Gross Margin/Revenue

Note : Gross margin includes cement and RMC, due to different sales unit, no profit per unit provided

Portugal and Turkey

Net Profits (TCC Share)



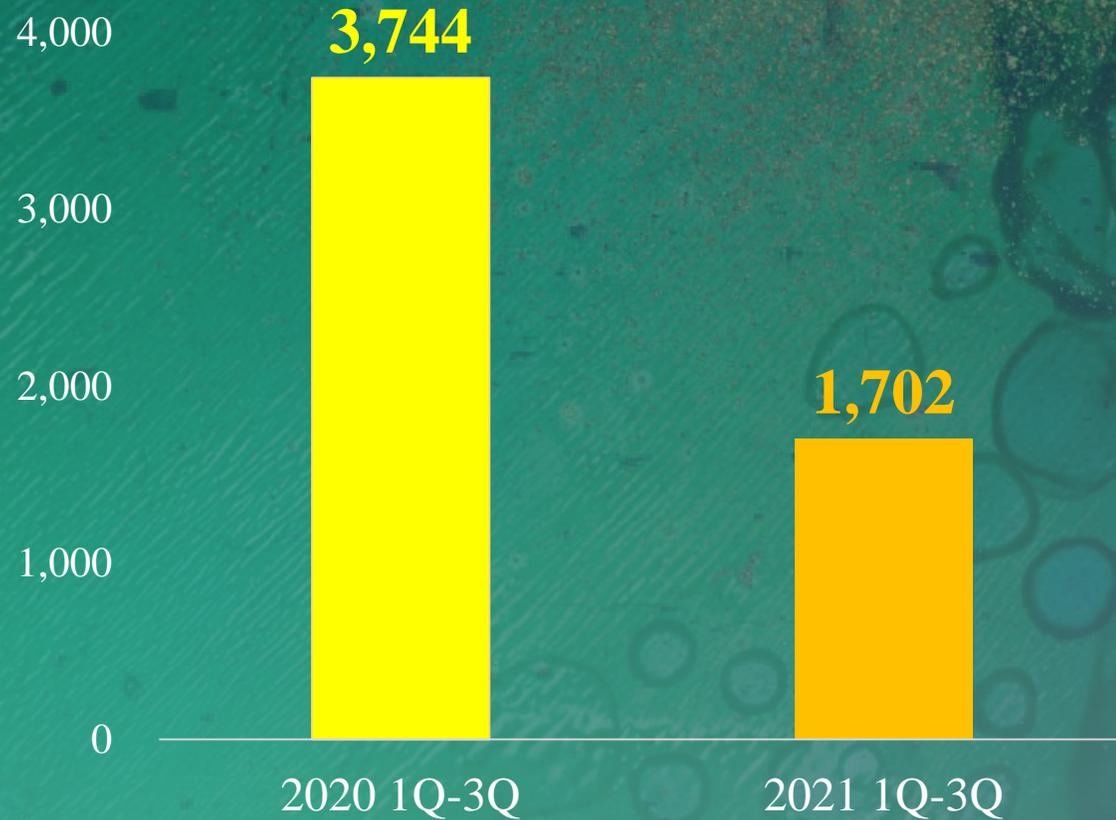
Turkey Domestic Grey Cement Price



Hoping Power

Net Income (TCC Share)

NTD Mil.



- Fewer working days due to equipment enhancements for safety and environmental protection.



- 2021 high coal price will be reflected in 2022 power tariff.

Group Net Income

NTD Bil.

20

18.41

1.39

3.72

13.30

14.84

1.87

1.59

11.38

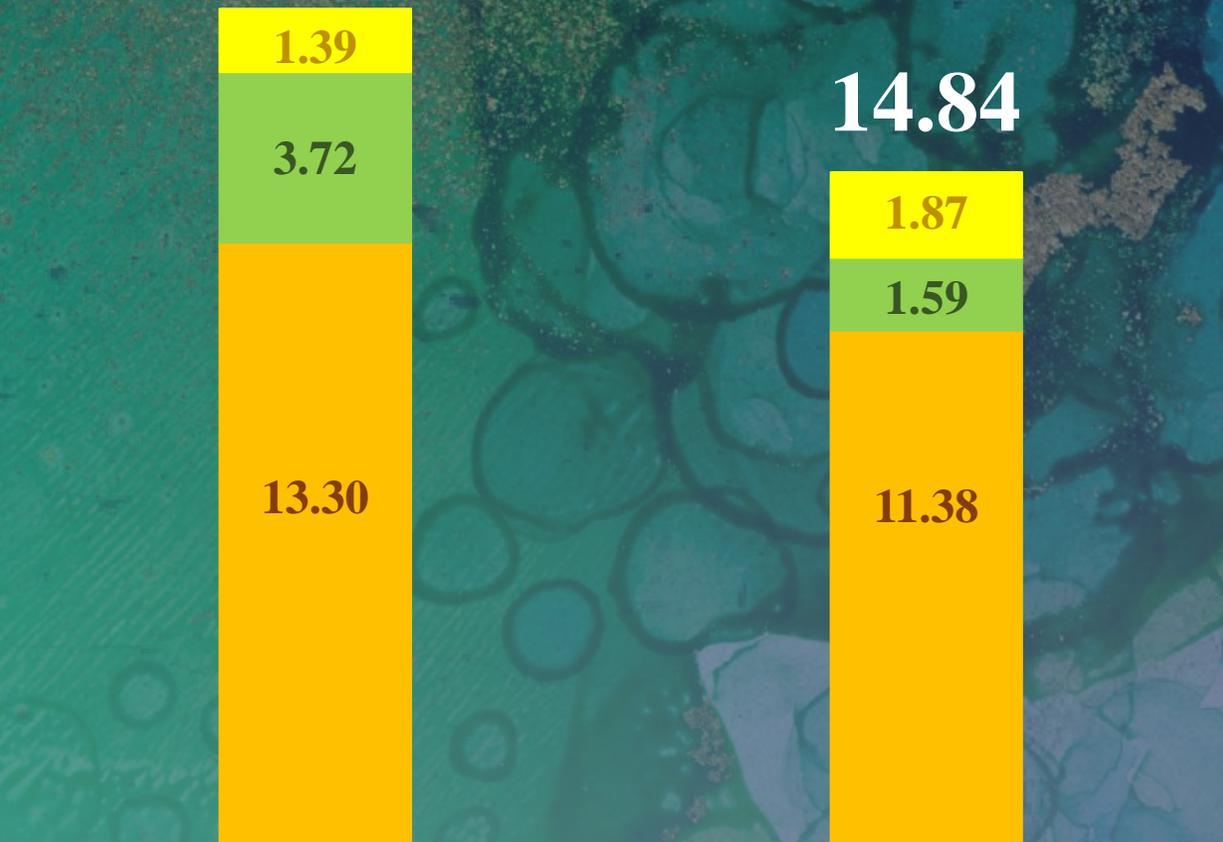
10

0

2020 Q1-Q3

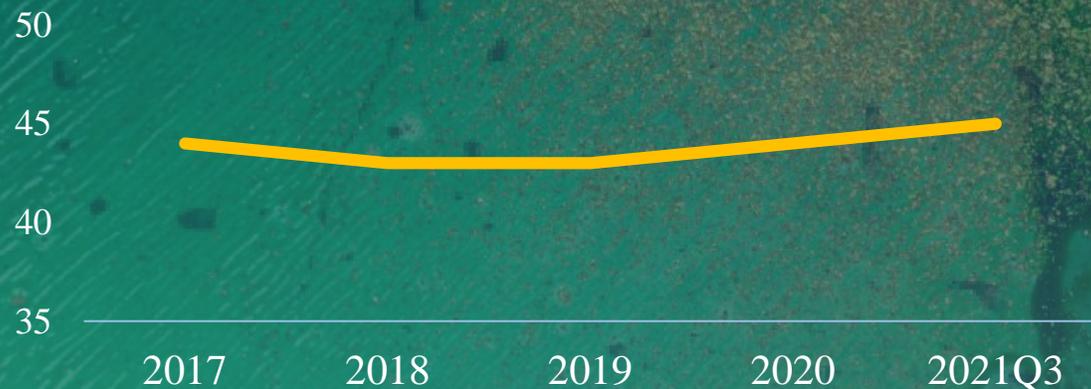
2021 Q1-Q3

- Others
- Electricity
- Cement



Financial Ratio

Debt Ratio (%)



Interest-Bearing Debt Ratio (%)



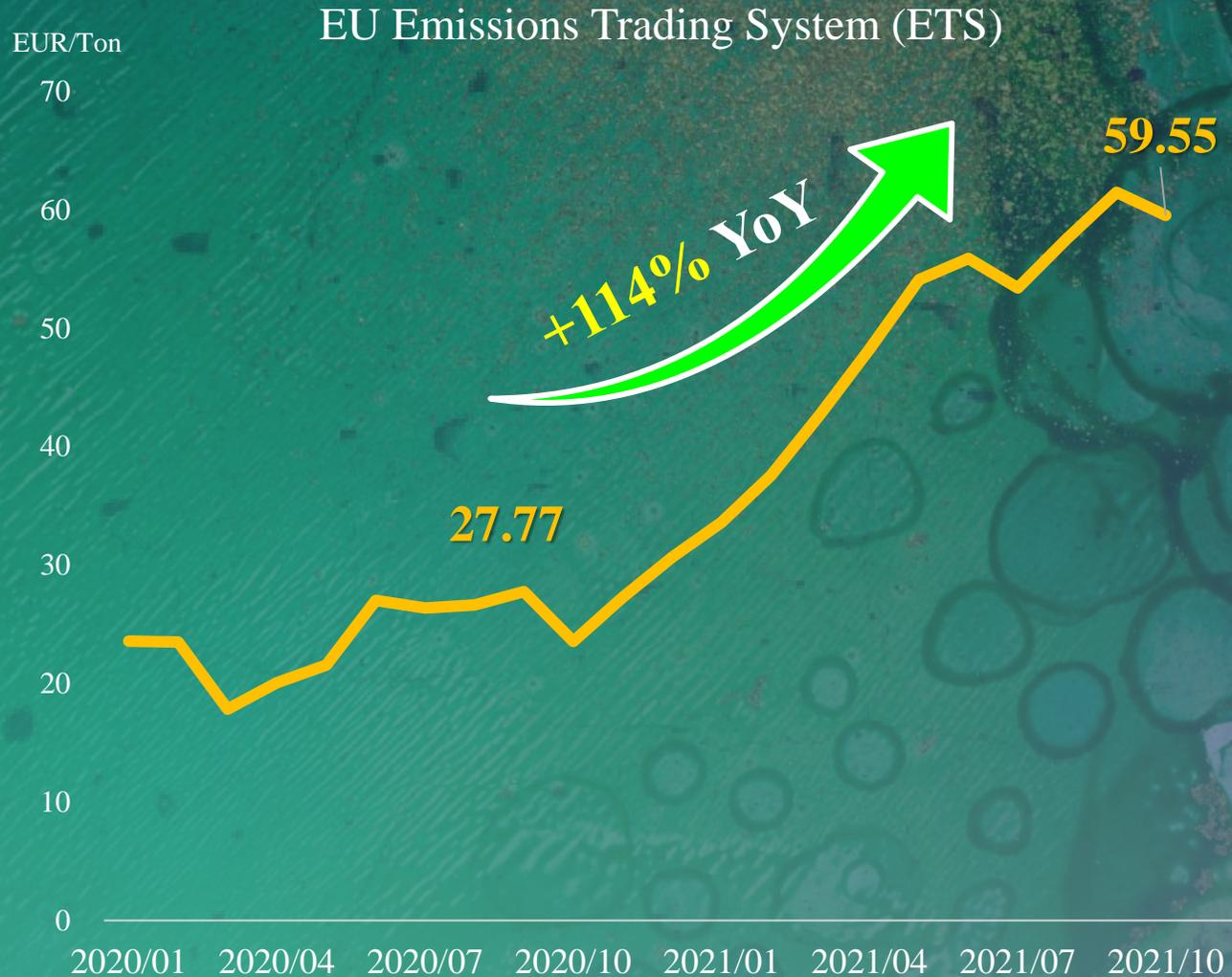
Book Value per Share (NTD)



Current Ratio



An Incentivized and Punitive Carbon Trading System



- 1 Carbon Footprints and Carbon Labels on Products
- 2 Carbon Quota or Allowance
- 3 Carbon Fee and Tax
- 4 Carbon Trade

Roadmap to 2050 Carbon Neutrality

Industry



Alt. Fuel



Alt. Material



Equip. Enhancement

CO₂ Offset



CCUS



Afforestation

Transportation



ESS/EV Chargers



Batteries

Energy



Biomass



Renewables

CO₂ Emissions

-100%

Thank You for Listening!
Join Us in Carbon Reduction!

Disclaimer

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