



Bangchak Corporation Plc

Nov 22, 2022















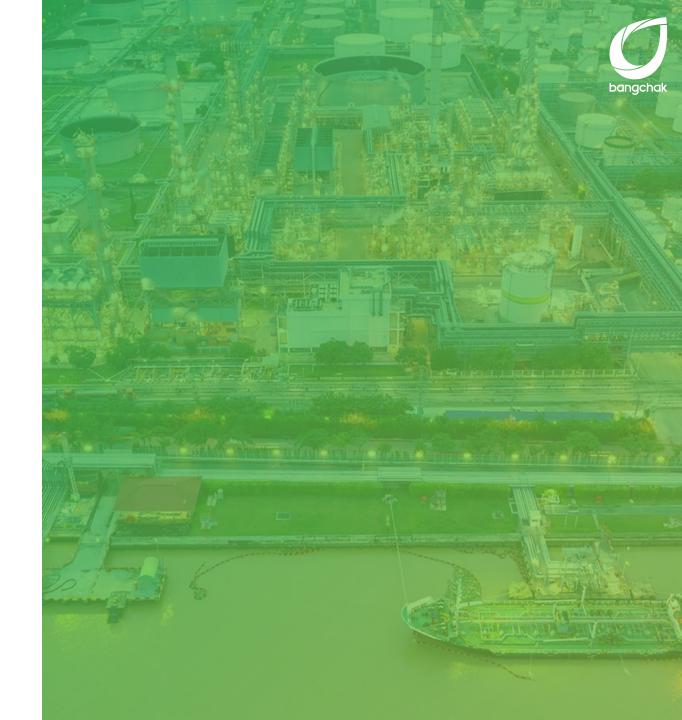


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Agenda





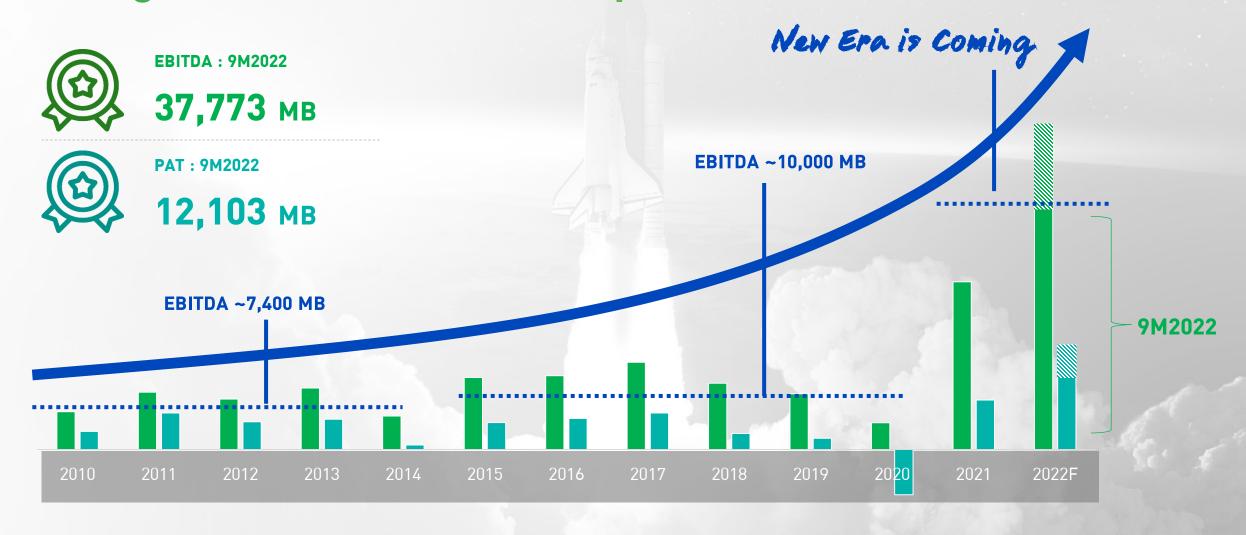


Bangchak Group Journey & Strategy

Sustainable Growth



Strong Market Fundamental, Optimization, Diversification



OKEA Consolidated Since Jul 2021

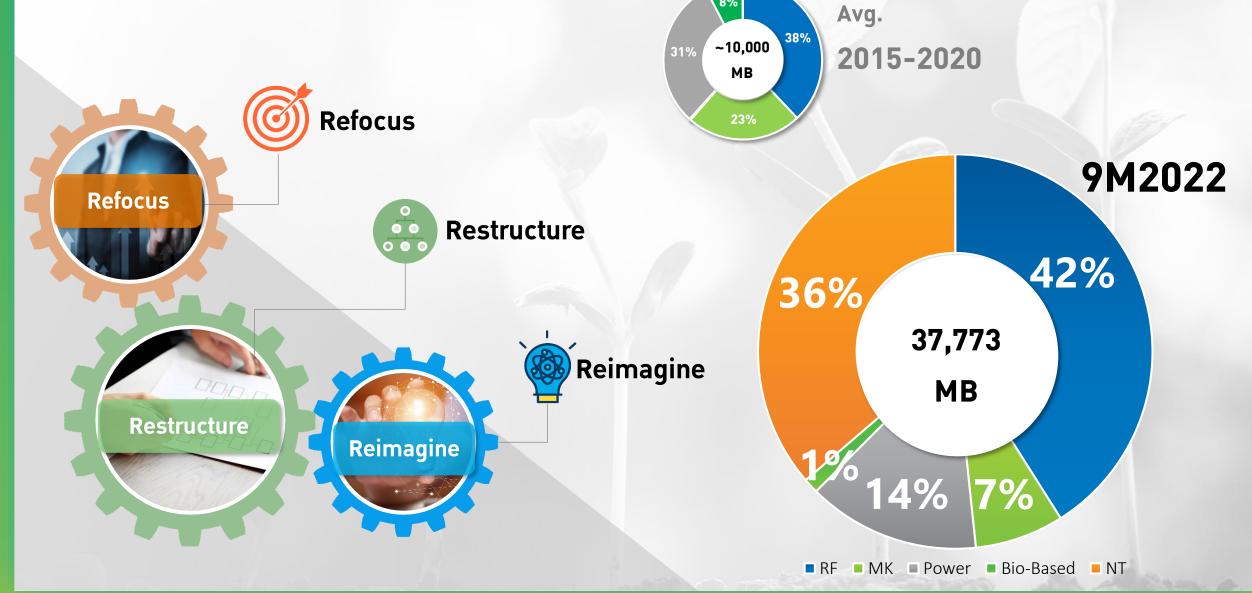
Come Back Stronger!





Moving toward New Era





Solid Fundamental with 'A' RATING





TRIS RATING

BCP : Bangchak Corporation

Oct.-22



Return

Risk Balanced
Investment

Quick-Win
Project



Ratio

Discipline & Healthy

Financial Ratio



Strong cash flow

from operation

Self-Funding

New S-Curve





Mission พันธกิจ

We commit to accelerate sustainable energy transition, while balancing energy security. We are energizing lives through greenovative solution and promoting ESG for all.

เรามุ่มมั่นขับเคลื่อน**การเปลี่ยนผ่านด้านพลัมมานอย่ามยั่มยืน** โดยคมไว้ซึ่ม**สมดุลแห่มความมั่นคมทามพลัมมาน** เสริมสร้ามคุณภาพชีวิตและความเป็นอยู่ที่ดี ด้วยนวัตกรรมโซลูซั่นสีเขียว ดำเนินธุรกิจด้วยความคำนึมถึม เศรษฐกิจ สิ่มแวดล้อมและการกำกับดูแลกิจการ อย่ามมีความรับผิดชอบต่อทุกภาคส่วน

Energy in Harmony with Nature









Environmental Sustainability





Energy Affordability





From Vision to Passion





















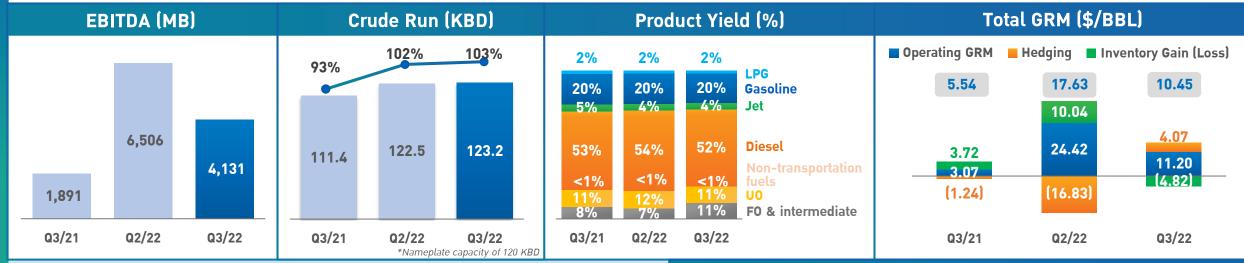


Bangchak Group Performance & Going Forward



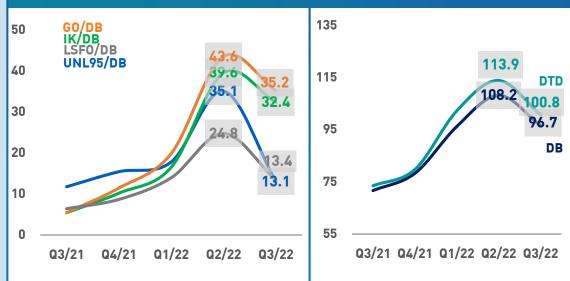
Refinery and Oil Trading Business





- Crude run remained high at 123 KBD (utilization rate of 103%)
- Operating GRM was recorded at 11.20 \$/BBL softened from the previous quarter; the market conditions slightly eased as continued economic uncertainty driven by inflationary pressures and china's lockdown slowed crude oil demand growth leading to a decline in refined products crack spread.
- Inventory loss of 4.82 \$/BBL but mostly offset by the hedging gain
- BCPT's Q3/22 trading transaction and gross profit increased from Q2/22 due to the continued market expansion.

Avg. Crack Spread & Oil Price (\$/BBL)

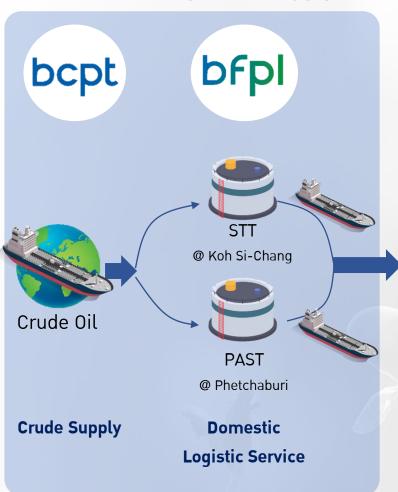


Refinery Business Group Value Chain

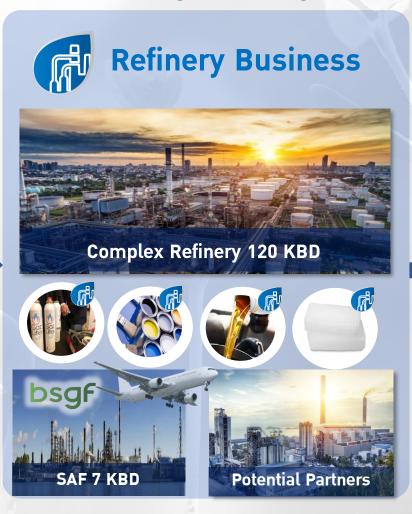
bangchak

"Affordable and Sustainable Energy for All"

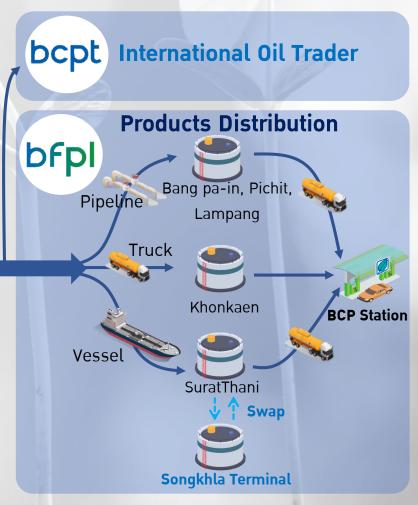
Crude & Component Supply



Refining & Blending



Product Trading & Distribution



Strategy: Sustainable Refinery & Niche Products



Core Business Growth

Niche Product Growth

Logistics & Trading
Business Growth

EBITDA Mix





Operating Expense Improvement for Cost Reduction



Variety of Crude Source for Flexibility & Product Yield Maximization

- From Far East, Middle East,
 Domestic, and others
- To maximize middle distillate & niche product yield





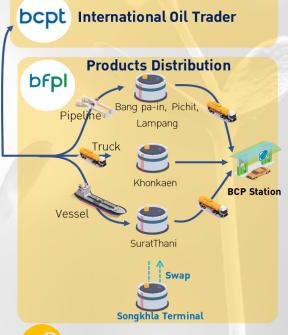




Sustainable Aviation Fuel (SAF) with initial production capacity of 1 million liters per day launched in 2024



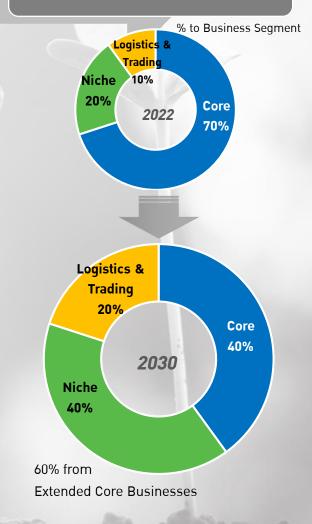
Unconverted Oil (UO) for export markets used as lubricant oil base







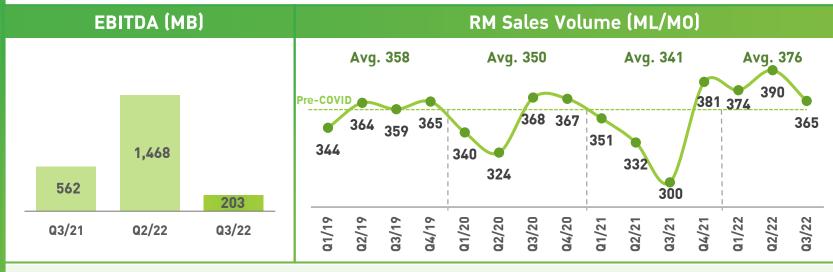
Integrated Logistics and Sales
Network via BFPL, mainly
cover the Central Part of
Thailand



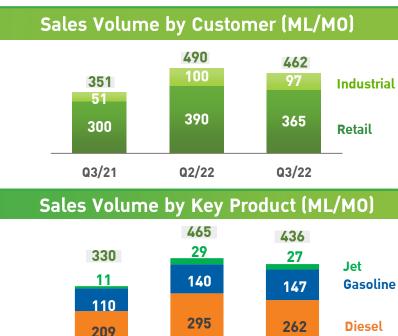


Marketing Business





- O Total sales volume slightly declined QoQ mainly from retail market being affected by less travel and transportation due to the rainy season and flooding in many provinces.
- O Nevertheless, industrial sales were slightly affected;
 - The continuously growing demand for gas-to-oil switching from the power plant sector as natural gas price remained at the historical high level
 - Expanded the distribution of into-plane jet fuel to Thai Viet Jet Airline
- Improved net marketing margin to 1.13 Baht/Litre
 - Lower product cost following crude oil price downward trend
 - Diesel supply shortage supported an increase in net marketing margin

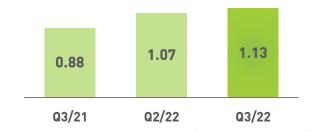




Q3/22

Q2/22

Q3/21



Note: *Net Marketing Margin of Bangchak and BGN (excluding inventory gain/(loss) and NRV)

Strategy: Greenovative Destination



Core Business Growth



Retail Experience Business Growth



Domestic Lubricant Market Share



Synergy with partners & Acquire new partners





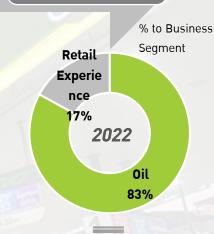


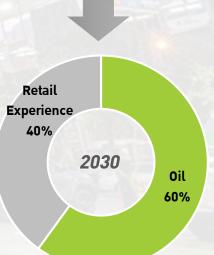






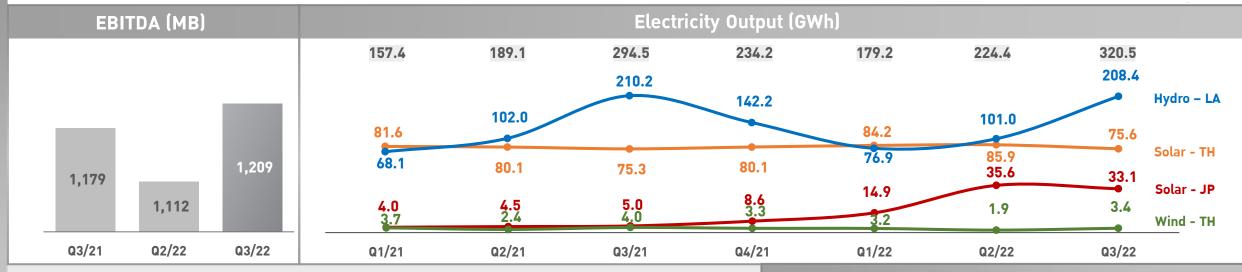
EBITDA Mix











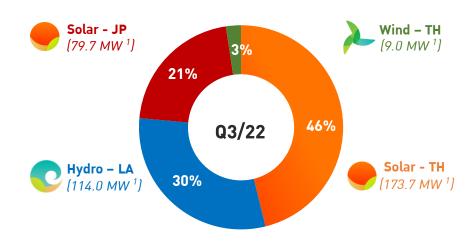
EBITDA improved **QoQ** from better electricity outputs from hydropower and Thai wind power.

Electricity sales +43% QoQ

- Laos hydropower electricity sales +106% owing to seasonal factor of hydro powerplants, which is high season in Q3/22.
- Thai wind power electricity sales +74% attributed higher wind speed due to seasonality and typhoon Noru.
- Thai & Japan solar power electricity sales -12% and -7% respectively from lower irradiation due to entering low season.

Noted: Adder scheme for a 30 MW Thai solar power plant ended in July 2022

Contracted Capacity Breakdown by Power Types



¹ Contracted Equity MW Capacity

Strategy: Green Power



Core Business Growth

Thailand

Capture New PDP
Opportunities



Penetrate Private PPA Market

Lao - Vietnam



Maximize Existing
Interconnection



Ensure SWAN Expansion

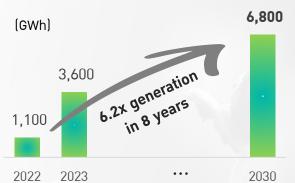
Taiwan 🍱



Leverage our Existence and Expand to New



Technologies



Peripheral Business Growth



Fast EV & Battery Market Growth

Renewable growth driven by COP26 in key strategic countries e.g., Taiwan and Lao PDR – Vietnam



Lithium offtake 6,000 tpa Leveraging LCE offtake for battery value chain (JVs in Thailand & Southeast Asia).

Frontier Business Growth



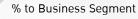
Energy-related Infrastructure

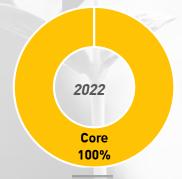
Some infrastructure already in the ground could be repurposed for technologies like hydrogen and carbon capture, and storage development.

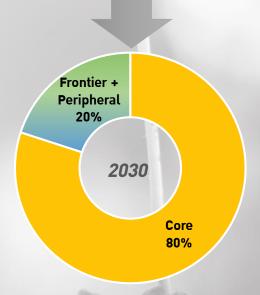
Investing in logistic platform for future green hydrogen (green ammonia) trading.

- To develop projects in pipeline: 718 MW in 3 years
- To acquire new investments:
 - Both Greenfield & Brownfield
 - Potential locations include Thailand, Vietnam, etc.

EBITDA Mix



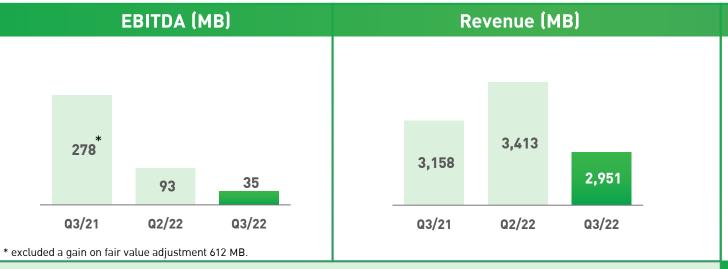






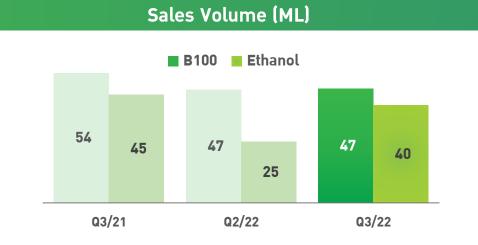
Bio-Based Products Business



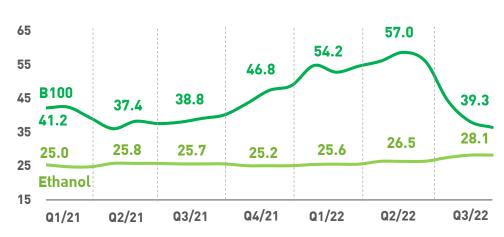




- O Demand for B100 has begun to increase, as a result of the Committee on Energy Policy Administration (CEPA) having announced an increase in biodiesel blending from B5 to B7 in Q4/22,
- O Ethanol price significantly increased QoQ, due to a shortage of cassava and molasses, the company manages sales maximization plan in accordance with ethanol prices in which have
- O been arranging lettern in the plan.



Avg. Market Price (Baht/Litre)



Source: EPP0

Strategy: Bio-Based & HVP Products



Biofuel & Co-Product Growth

High Value Product (HVP) Manufacturing Growth

EBITDA Mix

% to Business Segment

Strengthening and Expanding:

- Operational Excellence
- Increase Capacity & Enlarge New Market







Refined Glycerin Expansion



UCOME

HVP Manufacturing Platform

- Strong Manufacturing **Capabilities**
- Partnership R&D and Networking for SynBio Technology



CDMO Platform



Sweetener Manufacturer



Sustainable **Aviation Fuel**



Bio Transformer Oil

HVP Sales & Marketing Growth

Market & Industry Intelligence





Distributing B2B & B2C

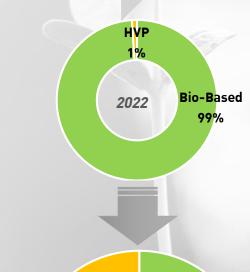


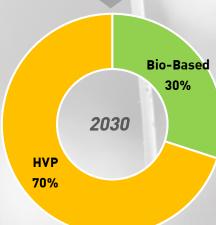




Probiotics

Sweetener





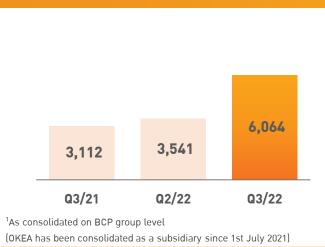


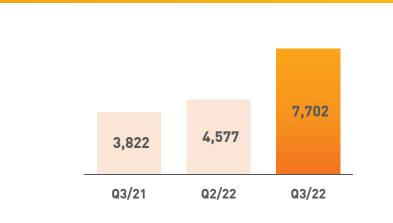
Natural Resources Business



EBITDA¹ (MB)

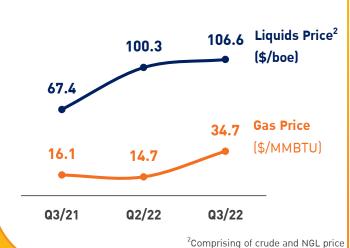
Revenues from Crude Oil and Gas Sales (MB)

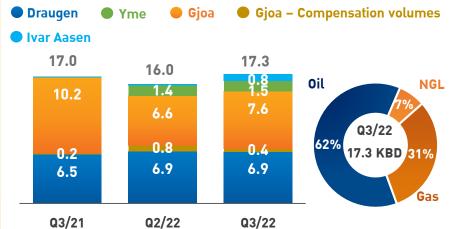




Realized Price

Sales Volumes (KB0EPD)





- OKEA delivered record-high operating income and EBITDA and generated solid cash flow from operations in the quarter.
- The average selling prices of all products continued their positive momentum, especially natural gas prices surged +136% QoQ due to
- Tight supply from the Nord Stream pipeline leakage exposed Europe's vulnerabilities as winter approaches.
- Higher demand for energy consumption amidst an ongoing uncertainty between Russia and Ukraine situation.



Strategy: Natural Resources and New Business



Natural Resource Growth

New Business

EBITDA Mix

New acquisition from Wintershall Dea **E** was completed on 1 November 2022







Brage 35.2%,

being the *Operator*

Increase WI from 2.77% to 9.24%

Nova 6%

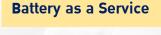
Hasselmus, the first tie-in to the Draugen, plans to start gas production of more than 4.4 KB0EPD in 4Q23.







Scale-up of OKEA both organic & inorganic growth and high potential locations to reach production of 100 KBOEPD (net to Bangchak) by 2030





The Leader in The Battery as a Service Ecosystem for EV-Bike

LNG



LNG/Gas business platform via

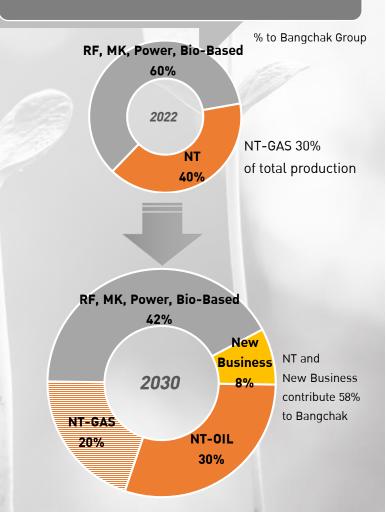
Climate Tech & Sustainable Energy



Blue/Green Hydrogen



Carbon Capture (CCUS)



Bangchak Group's Q3/22 Performance





2,470 MB

PAT (attributable to owners of parent)



11,487 MB

Accounting EBITDA





Refinery and Oil Trading Business

EBITDA 4,131 MB

- ✓ Maintained high crude run at 123 KBD in 3Q22 & achieved over 125 KBD in July
- ✓ Operating GRM 11.20 \$/BBL slightly softened as
 - Lower oil demand, pressured by economic slowdown and China's lockdowns
 - Higher supply due to the resumption of production from Asian refineries after undergoing maintenance in the previous quarter





Marketing Business

EBITDA 203 MB

- MKM 1.13 Baht/Litre up QoQ as diesel demand and margin from industrial sector remained high
- ✓ Despite low season, RM sales volume was better than average pre-Covid level

Avg. RM in 2019 - 358 ML/M0 Avg. RM in Q3/22 - 365 ML/M0



1,320



931 outlets



107 sites



Bio-Based Products Business

EBITDA 35 MB

✓ Despite stable sales volume of B100, sales prices was lower due to the over-supply situation.



Green Power Plant Business

EBITDA 1,209 MB

✓ Electricity sales significantly improved, mostly attributed to the high season of hydropower in Laos





Natural Resources

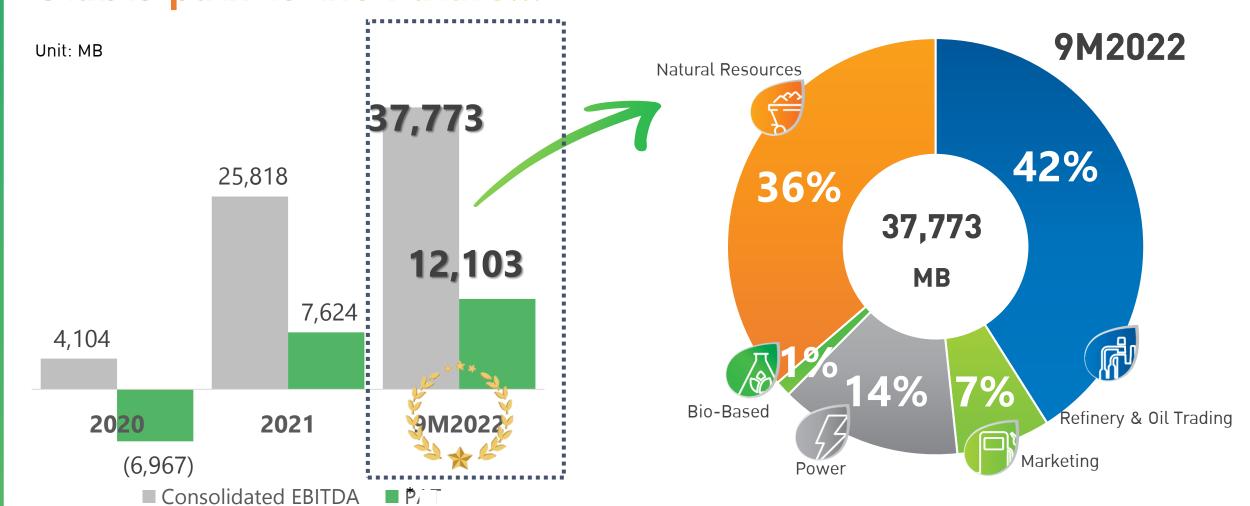
EBITDA 6,064 MB



- ✓ OKEA delivered record-high operating income and EBITDA as average selling prices of all products continued their positive momentum
- ✓ New acquisition from Wintershall Dea was completed on 1 November 2022.

Bangchak Group's New High Record, Stable path to the Future...





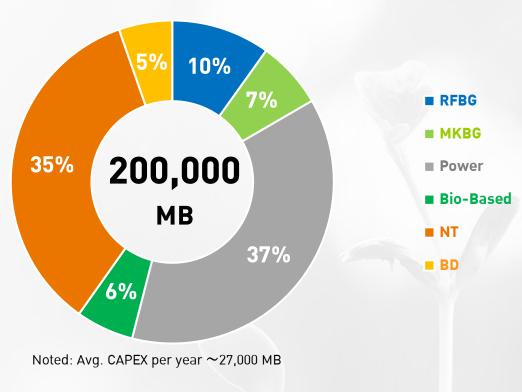
*OKEA Consolidated since Jul 2021

Sustainable Investments for **OX**





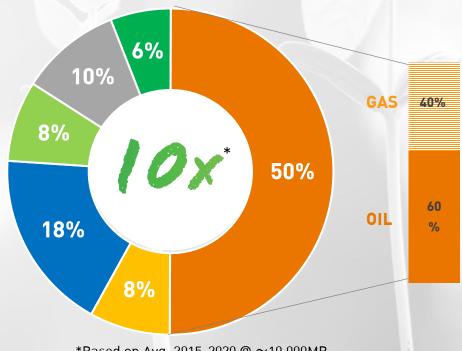
CAPEX 2023-2030





45,600 MB

EBITDA 2030

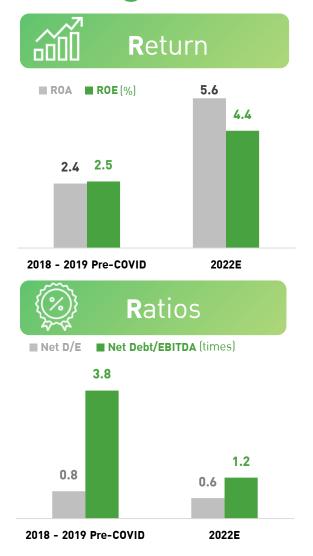


*Based on Avg. 2015-2020 @ ~10,000MB



Strong Financial Status Going Forward



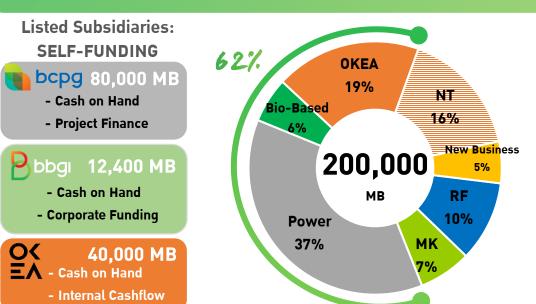






Remark: [1] Including short-term investment

CAPEX Plan (2023-2030)



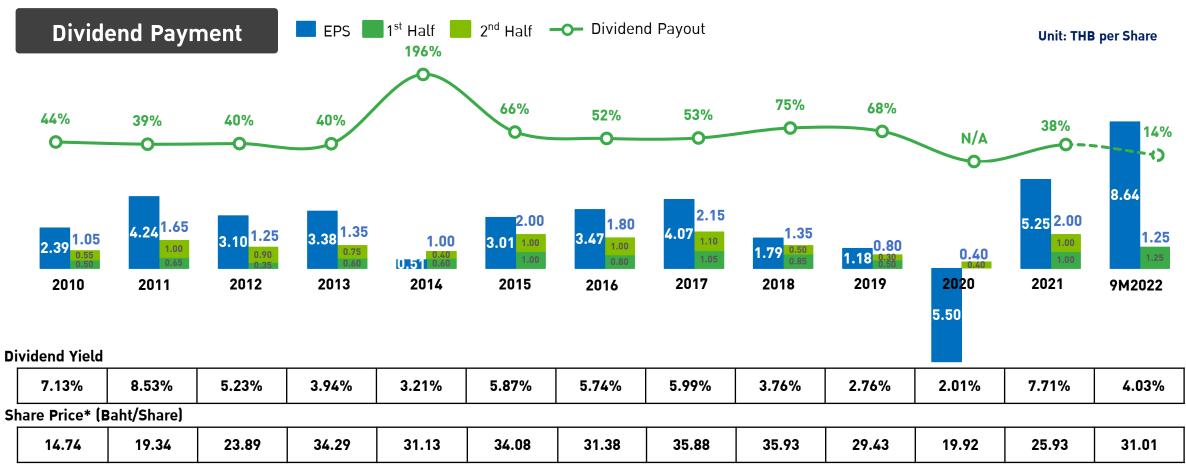
Strong Cashflow
from Operation
with Leverage
Headroom

Bangchak's Historical Dividend



Dividend Policy: ≥ 30 percent of net profit after deduction of allocation of legal reserve

However, this is subject to the economic situation, the Company's cash flow and investment plans of the Company and its subsidiaries according to the necessary, appropriation and other concerning as the Board of Directors' consideration.



^{*}Average share price of the period



Crafting a Sustainable World with Evolving Greenovation



Heading Toward the New Era 2030

Refinery & Oil Trading



- Niche product growth (Unconverted Oil as lube oil base)
- Increase competitiveness of core business (Energy Intensity Index, TAM cycle extension to 4 years, cost reduction)
- **Trading Growth & Logistics Optimization**



Marketing

- 1,900 Service Stations / 3,000 Inthanin Outlets
- **Unique Design Service Stations**
- **High Quality Product**
- **Customer Engagement via Digital Experience**
- Scalable our Non-Oil Offerings by Partnership and Franchise Scheme



Green Power

- 6,800 GWh Electricity Generation (3,900 GWh net to Bangchak)
- **PDP Opportunities and Penetrate Private PPA**
- EaaS, Battery Value Chain
- Low Carbon Business



Bio-Based

- 70% EBITDA from HVP
- **Health & Well-Being Products**
- SynBio Manufacturing (CDMO)
- **SAF** from Ethanol



Natural Resources

- 100 KBOEPD net to Bangchak
- Mid-to-late life assets
- Capability enhancement from OKEA and high potential locations



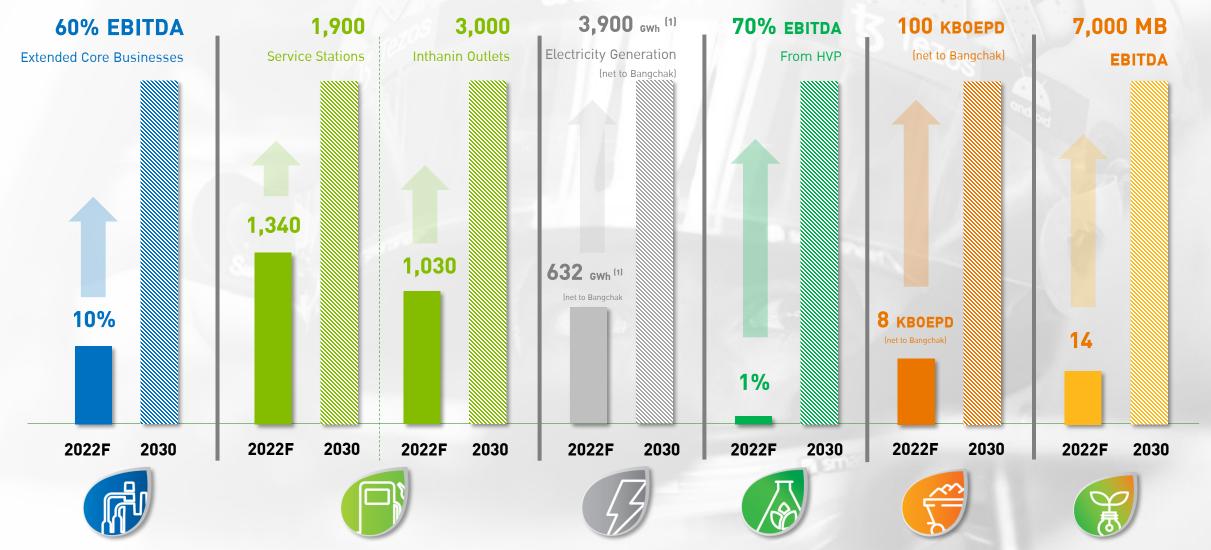
New Business

- + 7,000 MB EBITDA
- Winnonie Battery as a Service
- Leader in LNG Business for Non-pipeline & Transport
- New S-Curve and frontier business

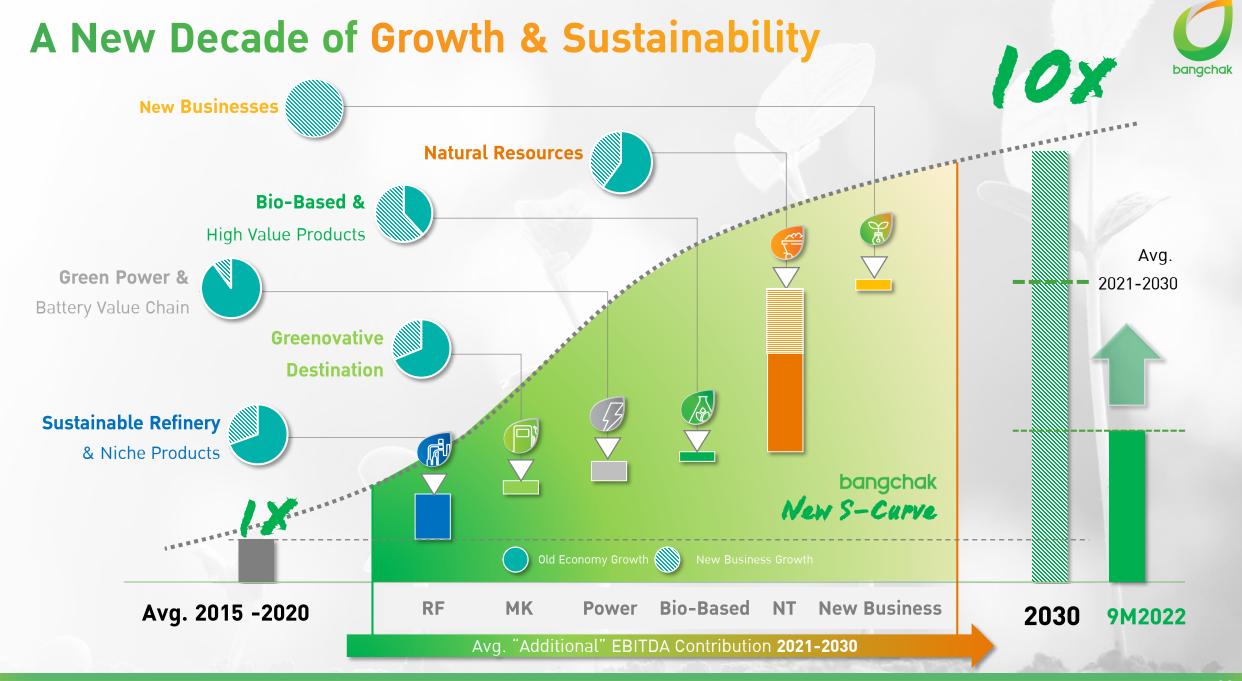


On the Pathway to Our Ambition





Note: (1) Calculated based on equity portion at 57.42% in BCPG





Green Business



Green Production





Sustainability



Pathway to Net Zero 2050







Efficiency and Process Improvement = 30%

Conserving Nature and Society

Green and Blue Carbon = 10%

Target Carbon Neutrality by

Target Net Zero by

Proactive Business Growth and Transition

6

Green Portfolio, Future Technology and Carbon Offset = 60%

BCP NET **Strategy**



Net Zero Ecosystem NET

Ecosystem Creation



SCAN to visit our website www.carbonmarketsclub.com & Join us now (free of charge)

Bangchak New Corporate Identity



รังสรรค์โลกจังจันด้วจนวัศกรรมสีเขียว Crafting a Sustainable World with Evolving Greenovation



THANK YOU











Appendix

Refinery and Oil Trading Business: Refinery





Marketing Business: Service Stations and Inthanin



Service Stations (as of 30 Sep 2022)



1,320 Sites

Standard Type

704 Site:

CO-OP Type

6 / 6 Sites

Network Expansion

Focus on high potential areas, with service stations of distinguished character, harmoniously customized to customer needs

Unique Design Service Stations



Sites



"The first impression"

Deliver the best customer experience.

Developing unique design service station is one of the main strategy to make BCP service stations more appealing to customers



Non-Oil Business

Coffee Business





"THE FRESH QUALITY ECO-COFFEE IN THAILAND",

serve 100% Arabica coffee beans roasted with specific process while giving back to the community and environment nationwide

9 3 Stores **567 sites in S/S 364 sites out S/S** (as of 30 Sep 2022)

EV Charging Business





Total installed
Service Stations

bcpg

BCP holds 57.42%

An integrated power generation company and service provider of smart energy system focusing on renewable and clean power. Listed in SET since September 2016





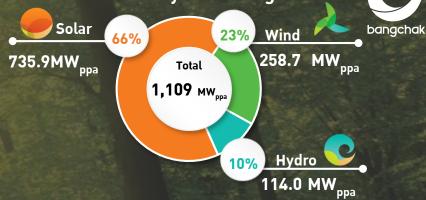
Operating

230.0 MW Developing

Production Capacity



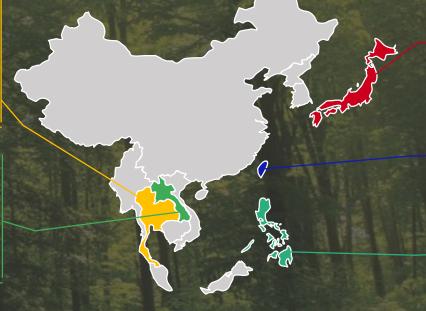
Generation by Technologies



















Ethanol Business

Operates under BBGI-BP

Kanchanaburi

Kanchanaburi

300,000 L/D

BBGI holds 100%

150,000 L/D

+200.000 L/D

BBGI holds 100%

(Currently under construction) Operates under BBGI-NP

Khonkaen

Molasses

Molasses

Flagship for Biofuel and HVP in Health & Well-Being



Listed in SET since March 2022

BCP holds 44.99%

Khonkaen

Biodiesel Business

Ayutthaya

Crude palm oil

1,000,000 L/D

Refined Glycerin

27.000 Tons/Yr

Operates by BBGI-BI

BBGI holds 70%

Upstream

convert sugar into natural ingredients



Engineered Microbes

"Farming in Fermenter"

BBGI's Dividend Policy ≥ 40% of net profit of Company's separate

financial statements after deducting any reserve funds as required by law and other concerning as the Board of Directors' consideration.

1st dividend payment of 0.15 Baht/share in Jun 2022

2nd dividend payment of 0.05 Baht/share in Sep 2022

Our Growth Opportunities

Leading and Pioneering in Thailand "Synthetic Biology"

Midstream

Partnering with world class

professional of CDMO

Manufacturer

Exclusive

Manufacturing

License and

Distributor in

Partnering with (MANUSBIO Advanced bacteria fermentation tech to

Precision Fermentation

Downstream

Distributing HVP both B2C & B2B















F BNaturePlus

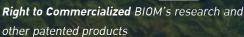












1.8

Chachoengsao

Ayutthaya

☑ Ethanol Expansion Capacity

0.6

1.0

■ Biodiesel Capacity

Cassava

Chachoengsao

150,000 L/D

Operates under BBGI-PS BBGI holds 85%

Biofuel Production Capacity (Unit: ML/D)

*currently under construction

Ethanol Capacity



Right to Commercialized BIOM's research and

OKEA ASA

• A Norway-based oil company engaged in the oil and gas exploration and production industry



Listed in Oslo Stock Exchange

• Mid-to-late-life operator • Listed in Oslo Stock Exchange since June 2019

BCPR holds 45.44

Current Assets in Production



Draugen 44.56% Operator: OKEA



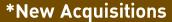
Gjoa 12%



Yme **15%**









Brage

35.2% Operator: OKEA

First Oil - 1 Aug 2022

Nova

*Transactions completed on 1st Nov 2022

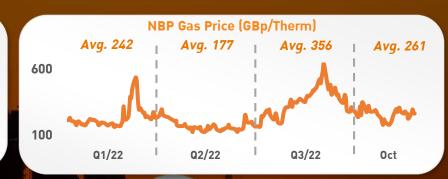
Strengthening a more robust and diverse production portfolio in the North Sea



Healthy balance between growth and dividends

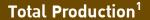


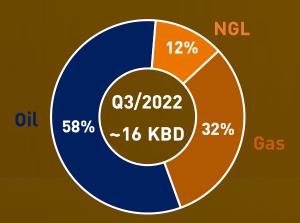




Natural Resources Business: OKEA ASA







Total Sale Volume¹



Total Sale Volume¹ (Unit: KB0EPD)

Assets	2P Reserves ² (MMB0E)	2019	2020	2021	Q2/21	Q1/22	Q2/22	Q3/22
Draugen	27.9	9.9	7.9	6.9	7.0	6.6	6.9	6.9
Gjoa	7.5	9.5	7.6	8.1	6.0	7.0	6.6	7.6
Ivar Aasen	2.1	0.06	0.3	0.7	0.03	0.04	0.1	0.8
Yme ³	10.7	0.0	0.0	0.04	0.0	1.0	1.4	1.5
3 rd party volume available for sale ⁴	-	0.0	0.0	0.1	0.0	0.8	0.8	0.4
Total	48.2	19.5	15.9	15.8	13.0	15.4	16.0	17.3

Note:

¹ Net to OKEA

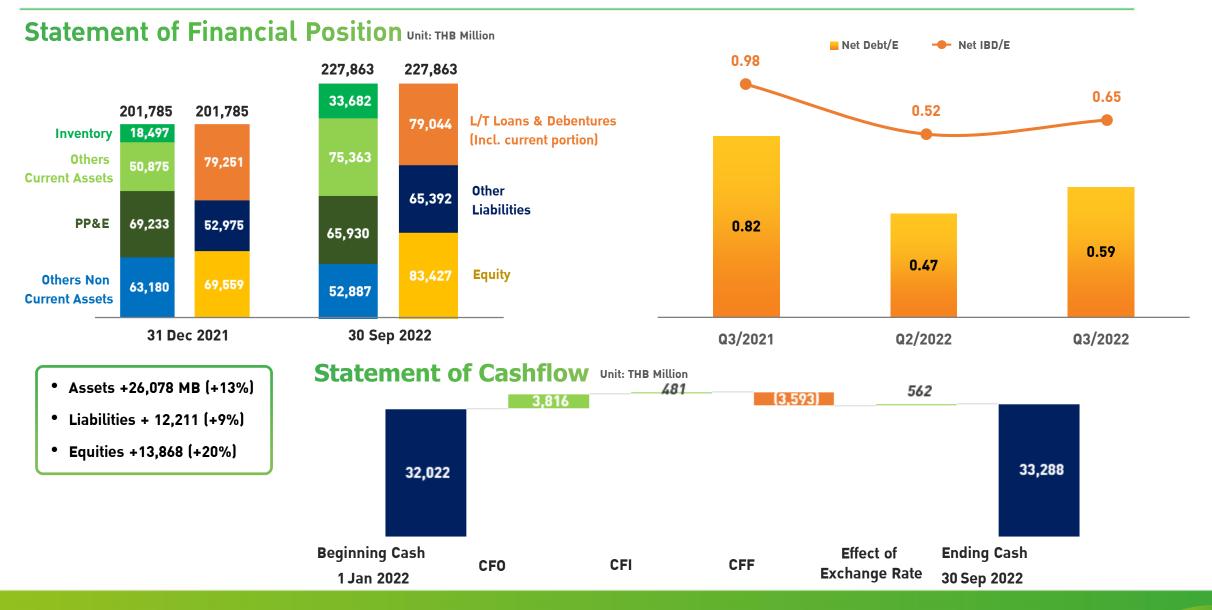
² OKEA reserves as of 31 December 2021, except reserve from Ivar Aasen which was as of 1 January (2.777% working interest)

³ Yme First oil on 25 October 2021. Net production ~5-6 KB0EPD for the first 12-months, and 8.4 KB0EPD at plateau in 2022

⁴ Compensation volume from Duva received (tie-in to GjØa)

Bangchak's Financial Position (Consolidated) as of 30 Sep 22







EBITDA Structure (Consolidated)

Unit: THB Million	Q3/2022	Q2/2022	QoQ	Q3/2021	YoY	9M2022	9M2021	YoY
Total Revenue	74,767	83,796	-11%	47,649	57%	227,619	132,655	72 %
Accounting EBITDA	11,487	12,572	-9%	7,531	53%	37,773	16,537	128%
Refinery and Trading Business ^{1/}	4,131	6,506	-37%	1,891	118%	15,658	6,279	149%
Marketing Business ^{2/}	203	1,468	-86%	562	-64%	2,789	2,359	18%
Green Power Business ^{3/}	1,209	1,112	9%	1,179	3%	5,396	3,155	71%
Bio-Based Product Business ^{4/}	35	93	-63%	890	-96%	471	1,607	-71%
Natural Resources Business ^{5/}	6,064	3,541	71%	3,112	95%	13,856	3,418	305%
Others	(155)	(148)	-4%	(102)	-52%	(397)	(281)	-41%
Profit attributable to owners of the Company	2,470	5,276	-53%	1,820	36%	12,103	5,868	106%
Basic earnings (loss) per share (Baht)	1.73	3.79		1.25		8.64	4.05	

Note: 1/ EBITDA from Refinery and Trading Business of the company (BCP), BCP Trading Pte. Ltd. (BCPT), Bangchak Fuel Pipeline and Logistic Co., Ltd. (BFPL) and others

^{2/} EBITDA from Marketing Business of the company (BCP), Bangchak Green Net Co., Ltd. (BGN), Bangchak Retail Co., Ltd., (BCR) and others

^{3/} EBITDA from Green Power Business of BCPG Plc. (BCPG Group)

^{4/} EBITDA from Bio-Based Product Business of BBGI Plc. (BBGI Group)

^{5/} EBITDA from Natural Resources Business of OKEA ASA (OKEA), BCP Innovation Pte. Ltd. (BCPI) And BTSG Co., Ltd. (BTSG) and others



Profit and Loss (Consolidated)

Consolidated Statement of Income (THB Million)	Q3/2022	Q2/2022	QoQ	Q3/2021	YoY	9M2022	9M2021	YoY
Revenue from sale of goods and rendering of services	74,767	83,796	-11%	47,649	57%	227,619	132,655	72%
Cost of sale of goods and rendering of services	(65,492)	(65,579)	-0.1%	(41,613)	57%	(187,872)	(118,271)	59%
Gross Profit	9,276	18,218	-49%	6,036	54%	39,747	14,384	176%
Other income	455	472	-4%	777	-41%	1,276	1,051	21%
Selling and administrative expenses	(2,109)	(2,074)	2%	(1,652)	28%	(5,852)	(4,686)	25%
Exploration and evaluation expenses	(68)	(95)	-29%	(133)	-49%	(509)	(172)	195%
Gain (loss) from derivatives	1,460	(6,422)	N/A	(777)	N/A	(6,282)	(1,407)	N/A
Gain (loss) on foreign exchange	215	(516)	N/A	103	N/A	(241)	326	N/A
Gain (loss) from fair value adjustment of investment	5	5	N/A	575	N/A	10	618	N/A
Gain from sale of investment	-	-	N/A	122	N/A	2,031	120	N/A
Loss from impairment of assets	(2,214)	4	N/A	(13)	N/A	(1,647)	400	N/A
Profit (loss) from operating activities	7,019	9,592	-27%	5,037	39%	28,534	10,633	168%
Finance costs	(1,093)	(1,043)	5%	(748)	46%	(2,971)	(1,731)	72%
Impairment gain (loss) in accordance with TFRS 9	1	(20)	N/A	0	N/A	(404)	(1)	N/A
Share of profit (loss) of associates and joint ventures								
accounted for using equity method	42	(6)	N/A	177	N/A	183	884	N/A
Profit (loss) before income tax expense	5,969	8,522	-30%	4,466	34%	25,342	9,785	159%
Tax income (expense)	(3,062)	(3,033)	1%	(1,904)	61%	(11,442)	(2,507)	356%
Profit (loss) for the period	2,907	5,489	-47%	2,562	13%	13,900	7,278	91%
Owners of parent	2,470	5,276	-53%	1,820	36%	12,103	5,868	106%
Non-controlling interests	437	213		742		1,797	1,410	
Basic earnings (loss) per share (Baht)	1.73	3.79		1.25		8.64	4.05	



Financial Ratio (Consolidated)

Profitability Ratios (%)	Q3/2022	Q2/2022	Q3/2021
Gross Profit Margin	12.41%	21.74%	12.67%
EBITDA Margin	15.36%	15.00%	15.80%
Net Profit Margin	3.89%	6.55%	5.38%
Return on Equity ^{1/} (ROE)	24.11%	23.40%	12.37%
Efficiency Ratio (%)			
Return on Assets (ROA)	15.76%	16.66%	7.43%

1/ Profit and total equity attributable to owner	are of the narent

	30-Sep-22	30-Jun-22	30-Sep-21
Liquidity Ratios (Times)			
Current Ratio	2.46	1.97	1.76
Quick Ratio	1.38	1.19	1.03
AR Turnover	31.02	24.03	23.87
Collection Period (Days)	12	15	15
AP Turnover	25.67	14.67	22.33
Payment Period (Days)	14	25	16
Financial Policy Ratios (Times)			
Debt to Equity	1.73	1.81	1.94
Interest bearing Debt to Equity	1.13	1.03	1.30
Net Interest bearing Debt to Equity	0.65	0.52	0.98
Release of Debenture Ratio (Times)			
Net Interest bearing Debt to Net Equity	0.59	0.47	0.82

9M2022	9M2021
17.46%	10.84%
16.59%	12.47%
6.11%	5.49%

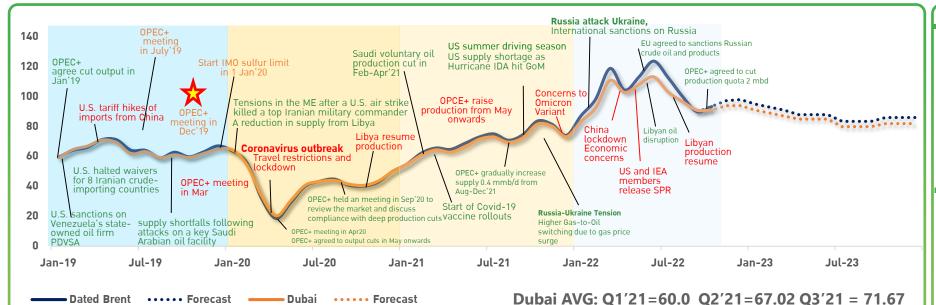


Crude Oil Price Outlook: Crude price move around 93-98 \$/BBL in Q4'22, slightly higher than current. Oil Outlook Crude Oil Price Outlook: Crude price move around 93-98 \$/BBL in Q4 22, slightly higher than current.

Crude oil supply will be disrupted as OPEC+ agreed to cut production quota 2 mbd while EU sanction on Russian crude will take into effect from Dec. However, concerns over global economic recession and China's weak economy pressured global demand.



10.0





Dated Brent, Dubai Crude Price (\$/BBL)

150.0

Focus on Q4'22:

- Fears of global recession
- Dollar strengthens, US further big rate hikes
- Weak demand in China, as (Zero-COVID policy persisted and deepening property sector crisis drag on its economy
- US extended SPR release to end of year
- Global refinery runs to pick up following seasonal higher demand.
- OPEC+ agreed to cut production quota 2 mbd from Nov'22
- Uncertainty on Russian exports as EU's sanctions take effect
- Expectation that China crude import will increase corresponding to its huge products export quota

Market Highlights in 2023:

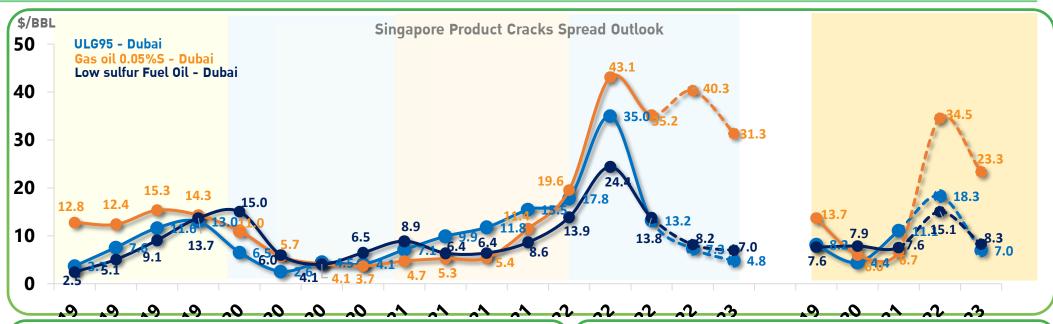
- Slowing economic growth temper global oil demand outlook.
- Iran nuclear deal could lead to higher Iranian oil output.

\$/BBL 04'21 = 78.35 \$/BBL

- Chinese oil demand is expected to recover.
- Refinery crude oil demand will remain healthy with little risk of significant run cuts.
- Uncertainty on Russian exports as sanctions take effect
- OPEC+ policy to control production to balance oil market
- Q4'22 spread is likely to strong due to EU imposes sanction on Russian crude, strong demand from refinery which runs at high rate and expectation that all French refinery strikes end then crude demand return
- Higher light sweet crude from increasing US production, additional crude supply from Norway which planed to start in Dec. While, Dubai expected to stronger from China crude demand increase

Strong gasoil crack as the seasonal demand in winter boosted by heating oil amid supply uncertainty and low level of middle distillates stock, however more export from China and concern over recession have weighed on market sentiment. Weaker gasoline crack as low seasonal gasoline demand in winter and rising supply from refineries keep high run rates with OIL OUTLOOK continued increasing export from China amid high level of light distillates stock. Lower low sulfur fuel oil crack as higher to the continued increasing export from produce assoling and higher VI SEO export queta from China. supply shift away from produce gasoline and higher VLSFO export guota from China





Focus on Q4'22:

- Gasoline crack will be pressured by rising supply from massive export from China and high refinery runs lead to high level of Asian light distillates stock amid low seasonal gasoline demand and concern over recession weighed on the demand outlook
- Gasoil crack will be supported by seasonal demand in winter amid supply uncertainty and ongoing Russian oil sanction in Europe with the global middle distillate stocks remain at low levels. However, the upside is limit due to increasing supply from China's export and refineries keep high runs
- Low Sulfur Fuel oil crack will be softened due to rising supply as producers moves to produce more LSFO and Chinese VLSFO export is projected to increase after government grant new round of VLSFO export guota this year

Market Highlights in 2023:

- Concern over recession weighed on the global demand
- Global oil supply trend to higher as new capacity ramp up and high refinery runs
- The Low Sulfur Fuel Oil's supply as adequate supplies available and less lucrative in gasoline market lead to add supply from refiners away from FCC run
- Expected continued demand recovery to pre-COVID levels as relax restrictions and further border reopening
- Europe sanction Russian oil imports will implement on Feb'23 lead to global supply uncertainty
- The more resumption of air travel after lifting of travel international and expected China's easing restrictions