

Thailand Energy & Utilities

ความต้องการพลังงานอย่างเร่งด่วนในขณะที่ฤดูหนาวใกล้เข้ามา

- เราเชื่อว่าในอีกหลายเดือนที่กำลังจะมาถึงราคาถ่านหิน น้ำมันดีเซล น้ำมันเตา และ LPG น่าจะปรับขึ้นอย่างเห็นได้ชัดจากความต้องการที่ทะยานขึ้นในท่ามกลางการแย่งชิงเชื้อเพลิงเพื่อทำความร้อน
- เราคิดว่าการตัดอุปทานก๊าซที่ส่งไปยังยุโรปของรัสเซียเป็นปัจจัยที่สำคัญที่สุด
- หุ้นเด่นของเราประกอบด้วย PTTEP และ BANPU จากราคาน้ำมัน ก๊าซและถ่านหินที่เพิ่มขึ้น; ESSO และ TOP จาก Diesel-Dubai margin ที่อยู่ในระดับสูง; BGRIM, GULF, และ EA จากค่าเชื้อเพลิง (Ft) และยานยนต์ไฟฟ้า (EV) ที่สูงขึ้น.

การขาดแคลนเชื้อเพลิงและความต้องการน้ำมัน ถ่านหินและก๊าซชนิดคอขาดบาดตายเป็นปัจจัยบวกสำคัญ

เราเชื่อว่าในอีกหลายเดือนข้างหน้าราคาถ่านหิน น้ำมันดีเซล น้ำมันเตา และแม้แต่ว่า LPG น่าจะปรับขึ้นอย่างเห็นได้ชัด ในขณะที่ความต้องการแหล่งพลังงานทดแทนทะยานขึ้นเป็นทวีคูณในท่ามกลางการแย่งชิงเชื้อเพลิงทำความร้อนเพื่อให้พอสำหรับครัวเรือนทั้งหมดในประเทศในสหภาพยุโรป (EU) และเพื่อหลีกเลี่ยงการกักตุนของประชาชนที่อาจเกิดขึ้นจากการขาดแคลนเชื้อเพลิงและการเจ็บป่วยล้มตายเป็นจำนวนมากจากการทำความร้อนที่ไม่เพียงพอ ในขณะที่ปัจจัยทั้งในด้านอุปทานและอุปสงค์อยู่ในเกณฑ์สูงอย่างเห็นได้ชัดอันเป็นปัจจัยบวกสำคัญที่จะทำให้ราคาสินค้าโภคภัณฑ์ปรับตัวขึ้น เราคิดว่าปัจจัยสำคัญที่สุดที่จะผลักดันราคาน้ำมันจะอยู่ที่การตัดอุปทานก๊าซไปยังยุโรปอย่างสิ้นเชิงของรัสเซีย ซึ่งเราคิดว่าอาจเกิดขึ้นในเดือน ก.ย. 22 ก่อนฤดูหนาวที่กำลังจะมาถึงรัสเซียซื้ออุปทานก๊าซเป็นอาวุธสำคัญในการต่อสู้กับ EU

การขาดแคลนเชื้อเพลิงเป็นภัยคุกคามที่ใกล้เข้ามาสำหรับประเทศในยุโรปในฤดูหนาวที่กำลังจะมาถึง

จากข้อมูลของ Ofgem ซึ่งเป็นหน่วยงานกำกับดูแลด้านพลังงานของสหราชอาณาจักร การขาดแคลนเชื้อเพลิงหรือสภาวะที่ครัวเรือนไม่สามารถทำให้ที่อยู่อาศัยของตนมีความอบอุ่น (หรือความเย็น) ในอุณหภูมิที่เพียงพอจากราคาเชื้อเพลิงที่อยู่ในระดับสูงน่าจะเกิดขึ้นทั่วไปหลังค่าสาธารณูปโภครายปีเฉลี่ยของครัวเรือนในสหราชอาณาจักร ปรับตัวขึ้นถึง 80% เป็น £3,549 ต่อครัวเรือนตั้งแต่วันที่ 1 ต.ค. 22 Ofgem คาดว่าตัวเลขครัวเรือนที่ขาดแคลนเชื้อเพลิงในอังกฤษน่าจะกระโดดเพิ่มเป็น 9.2 ล้าน (38.9% ของครัวเรือนทั้งหมด) ในเดือน ต.ค. 22 ก่อนเพิ่มเป็น 10.5 ล้าน (44.4%) ในเดือน ม.ค. 23 ซึ่งอาจทำให้มีผู้เสียชีวิตมากถึง 11,400 รายในสหราชอาณาจักร ในช่วงฤดูหนาวที่กำลังจะมาถึง (ต.ค. 22 ถึง เม.ย. 23)

การปรับลดการบริโภคก๊าซอย่างรวดเร็วเกิดขึ้นจากกลุ่มอุตสาหกรรม

จากข้อมูลของกองทุนการเงินระหว่างประเทศ (IMF) เยอรมันได้บรรลุเป้าหมายในการลดการบริโภคก๊าซลง 15% และเพิ่มระดับก๊าซสำรองเป็น 82.74% ณ วันที่ 29 ส.ค. 22 อย่างไรก็ตามการบรรลุเป้าหมายดังกล่าวเกิดขึ้นส่วนมากจากการปิดโรงงานและการลดการใช้ก๊าซของผู้ใช้อุตสาหกรรมรายใหญ่ในเดือน มิ.ย. 22 ในท่ามกลางราคาก๊าซที่สูงมาก อย่างไรก็ตามการลดการบริโภคก๊าซที่มีต้นทุนที่สูงจากกิจกรรมการผลิตและการบริการที่หดตัวในเดือน ก.ค. เป็นครั้งแรกในรอบ 2 ปีซึ่งทำให้ IMF ปรับลดประมาณการเติบโตทางเศรษฐกิจของเยอรมันเหลือ 1.2% ในปี 2022 และ 0.8% ในปี 2023 ส่วนมากจากต้นทุนพลังงานที่สูงขึ้น

Commodity party ฟังจะเริ่มก่อนเทศกาลคริสต์มาสที่กำลังจะมาถึง

เราคงสมมติฐานราคาน้ำมันดิบ Dubai ไว้ที่ USD120/110/110 ต่อบาร์เรลและคาดว่าราคาน้ำมันดีเซลและ Diesel-Dubai margin จะปรับขึ้นเป็นกว่า USD180/บาร์เรลและ USD60/บาร์เรลตามลำดับภายในเดือน ธ.ค. 22 ในขณะที่ความต้องการน้ำมันดีเซลเพื่อเป็นเชื้อเพลิงทดแทนสำหรับก๊าซทำความร้อนและผลิตไฟฟ้าจะปรับขึ้นเป็นจำนวนมากในท่ามกลางสภาวะอุปทานที่ตึงตัวอยู่แล้ว หุ้นเด่นของเราประกอบด้วย PTTEP และ BANPU จากราคาน้ำมัน ก๊าซและถ่านหินที่ปรับขึ้น; โรงกลั่นอย่าง ESSO และ TOP จาก Diesel-Dubai margin ที่อยู่ในระดับสูง; และ BGRIM, GULF, และ EA จาก Ft และ EV ที่สูงขึ้น



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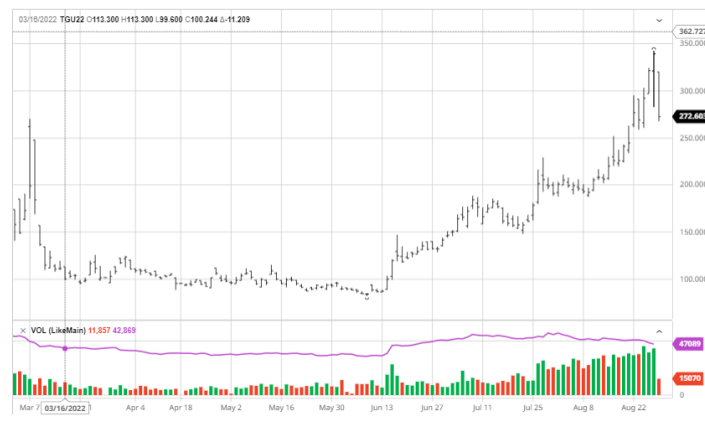
บทวิเคราะห์ฉบับนี้แปลมาจากบทวิเคราะห์ของ FSSIA ฉบับวันที่ 31 สิงหาคม 2022

Gas price spikes to drive the prices of coal and oil even higher

In the past few months, the price of energy, particularly the gas price in the European market, has skyrocketed to record highs driven by the loss of Russian gas supplies after the EU sanctioned Russia over its invasion of Ukraine that began on 24 Feb-22. The gas price index – Title Transfer Facility (TTF) – spiked to a €343/MWh high on 26 Aug-22 before declining to €272.6/MWh on 30 Aug-22 after Germany announced that it had restored its gas storage inventory to 85% of full capacity at a faster rate than expected, one month ahead of schedule.

Similarly, the UK natural gas price index shot up to a record high of £788/thermal and still stands at a high level as the UK gas market is now even tighter than in continental Europe as a result of the gas supply shortage and the sharp rise in gas prices procured from non-Russian sources.

Exhibit 1: Dutch TTF gas price Sep-22 (TGU22)



Source: [Barchart.com](https://www.barchart.com)

Exhibit 2: UK natural gas price Nov-22 (NFX22)

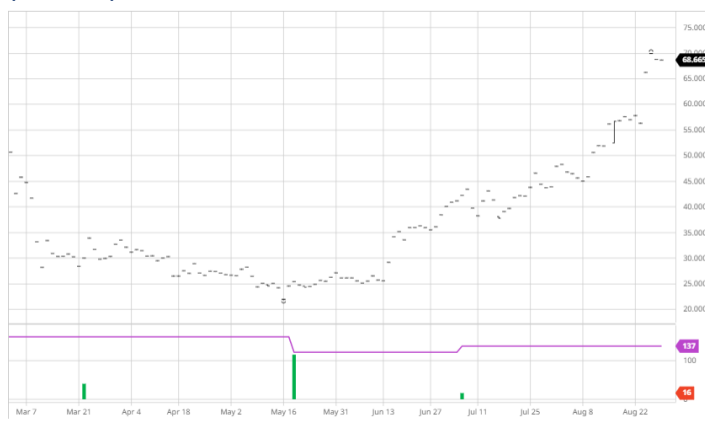


Source: [Barchart.com](https://www.barchart.com)

Asian and US gas prices have jumped along with the European gas price spike.

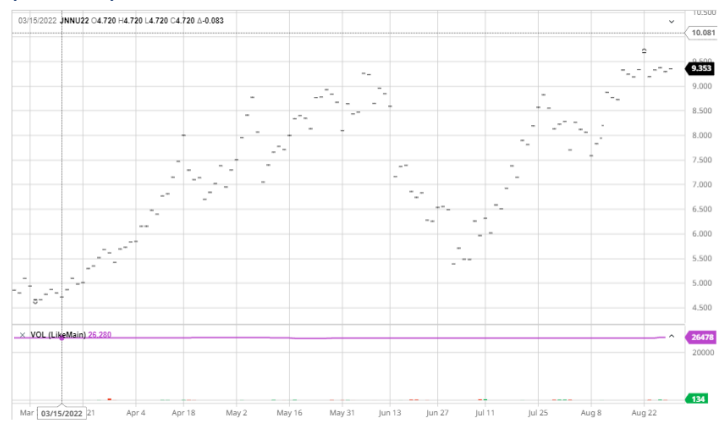
The impact of the tight gas supply and rising demand ahead of the coming winter in Europe has pushed gas prices in Asia and the US even higher. The LNG futures price from the Middle East to Southeast Asia jumped to a record high at USD68.7/mmbtu on 29 Aug-22, and Henry Hub gas futures rose to USD10.2/mmbtu on 29 Aug-22 before softening to USD9.4/mmbtu on 30 Aug-22.

Exhibit 3: LNG gas swap futures Southeast Asia Oct-22 (JKMV22)



Source: [Barchart.com](https://www.barchart.com)

Exhibit 4: Henry Hub natural gas swap futures Sep-22 (JNNU22)



Source: [Barchart.com](https://www.barchart.com)

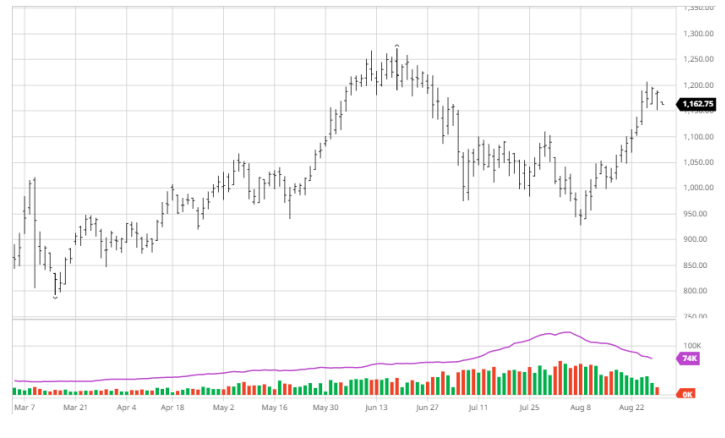
Coal and oil prices – two substitute fuels for gas – have risen substantially since Aug-22 due to the higher demand for inventory restocking by European countries to replace Russian gas imports ahead of higher winter demand. The Newcastle coal price index surged to a record high of USD469/t on 25 Aug-22 before dropping to USD415/t on 30 Aug-22.

Exhibit 5: ICE Newcastle coal price index Oct-22 (LQV22)



Source: [Barchart.com](https://www.barchart.com)

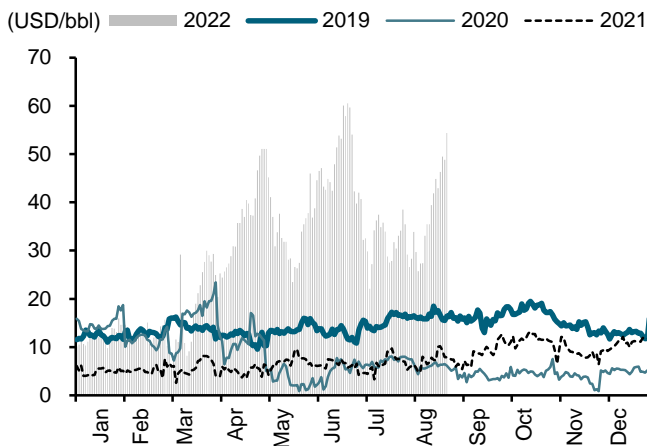
Exhibit 6: Low sulphur gasoil futures Sep-22 (LFU22)



Source: [Barchart.com](https://www.barchart.com)

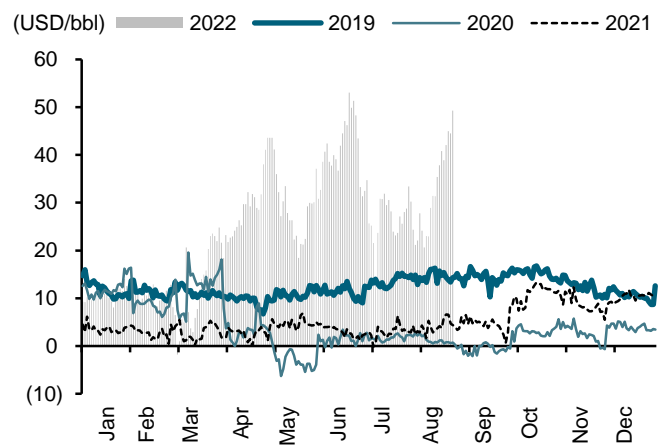
Meanwhile, the price of gasoil or diesel, a key substitute fuel for gas in electricity production, has continued to rise, with the diesel-crude margin now above USD47/bbl in the past month. We think the price of diesel is likely to surge further as the demand for diesel in the coming winter should go up as a key substitute fuel for gas in the EU.

Exhibit 7: Gasoil 0.5% Sulphur fob SG Spot price - Dubai crude oil price



Source: Bloomberg

Exhibit 8: Jet Kerosene fob SG Spot price - Dubai crude oil price

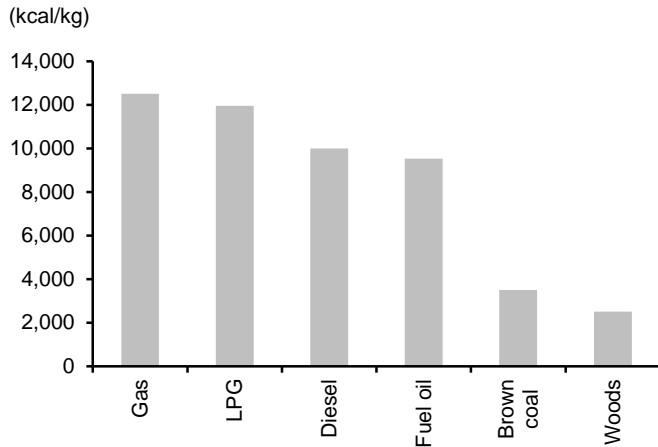


Source: Bloomberg

Based on the equivalent calorific value to produce one unit of electricity (1kWh), we estimate that the energy cost from gas should be 3-12x higher than the costs of other fuels used to produce the same amount of electricity. Although gas contains the highest heating value among all fuels, the surging gas price, and particularly the spot LNG price, has now made gas the most expensive fuel for generating electricity and heating purposes.

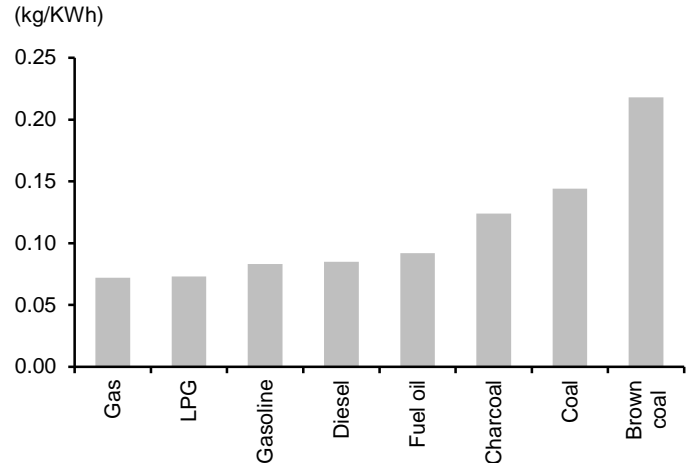
We believe in the next few months, the prices of coal, diesel, fuel oil, and even LPG, should rise markedly as demand for substitutes rises exponentially to ensure sufficient heating for all households in EU countries to avoid “fuel poverty” and possible mass casualties due to adequate heating.

Exhibit 9: Calorific value of various fuels



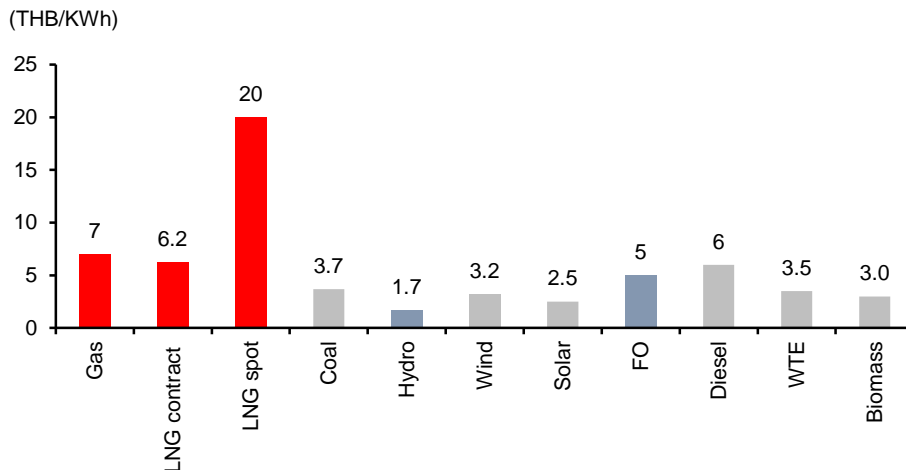
Source: [CNG Europe](#)

Exhibit 10: Fuel consumption for producing 1 kWh of electricity



Source: [CNG Europe](#)

Exhibit 11: Estimated cost of electricity production by fuel



Sources: Electricity Generating Authority of Thailand (EGAT); Energy Planning and Policy Office (EPPO); FSSIA estimates

Soaring energy bills in Great Britain risk widespread “fuel poverty”

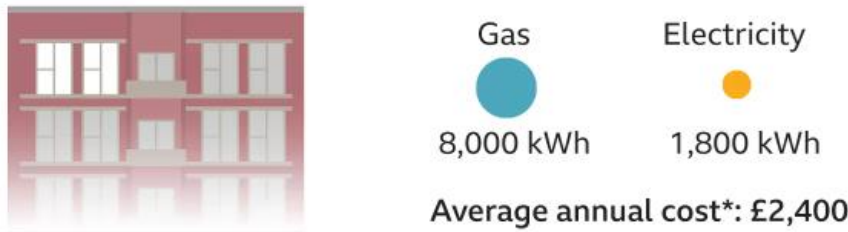
According to the Office of Gas and Electricity Markets (Ofgem), an independent energy regulator overseeing the monopoly utility companies running gas and electricity networks in the UK, the average annual cost of utilities for UK households is projected to rise by 80% to £3,549 per household starting on 1 Oct-22.

Ofgem sets the price cap based on how much energy companies themselves have to pay for the electricity and gas which they supply to households. The price cap is set every three months for Great Britain, which includes England, Scotland, and Wales, but excludes Northern Ireland, a part of the UK (Great Britain plus Northern Ireland).

Even with the price cap – the maximum amount that energy companies are allowed to charge households for each unit of energy they consume – under the UK government’s mandate for Ofgem, the energy bill for a typical UK household will rise when the new price cap, adjusted every three months, is introduced. The £3,549 amount is only the average value and could rise even further depending on the consumption of gas and electricity by each household.

Exhibit 12: Examples of the UK energy bill under different scenarios

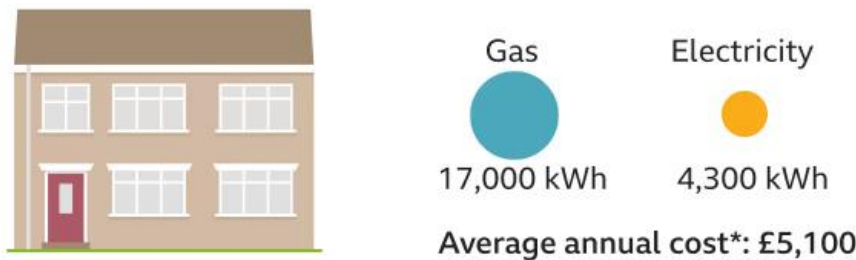
Low (flat or one-bedroom house) 1-2 people



Medium (three-bedroom house) 2-3 people



High (five-bedroom house) 4-5 people

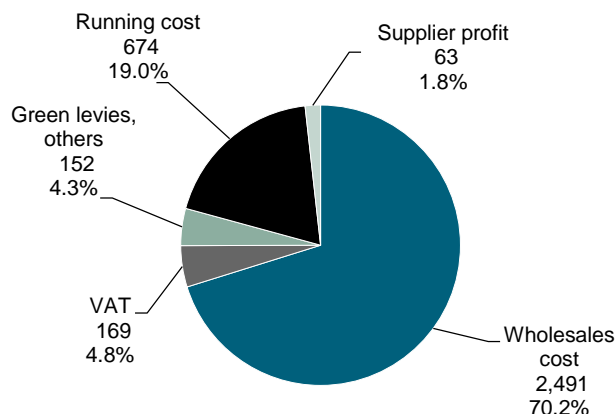


Examples are illustrative, with costs based on Ofgem price cap rates and customers with typical usage, paying for dual fuel by direct debit
Source: [BBC.com](https://www.bbc.com/news/health-61411111)

In Northern Ireland, the energy bill will be lower than in Great Britain (£2,500 in Northern Ireland vs £3,549 in Great Britain) due to its different regulations. Currently, the typical household energy bill under the existing price cap is £1,971 annually, or £2,017 for the 4.5m households with a pre-payment meter – a customer group whose financial capability to pay their energy bill is less than average.

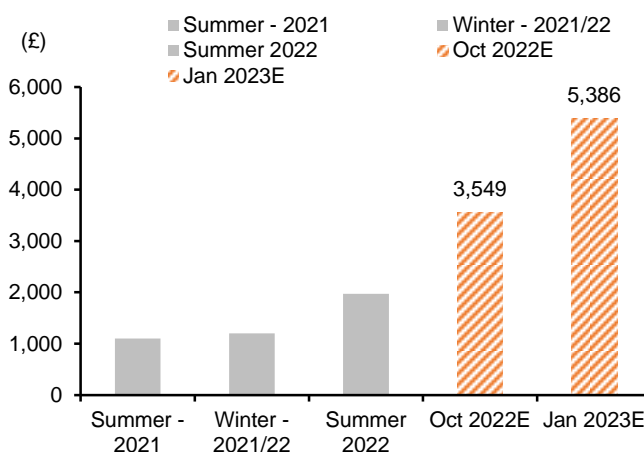
The spike in the energy bill in Oct-22 to £3,549 for normal households and £3,608 for those on pre-payment meters, will jump 80%, based on Ofgem's estimate. Ofgem forecasts that the household energy bill will rise further by 52% to £5,386 in Jan-23 based on the current gas prices.

Exhibit 13: Annual household energy bill (£3,549) breakdown starting 1 Oct-22



Source: Ofgem

Exhibit 14: Energy price cap forecast to rise to £5,386 in Jan-23



Source: Ofgem (26 August 2022)

Energy price rises are expected to throw many people in Great Britain into "fuel poverty", meaning that they cannot afford to keep their homes at an adequate temperature.

While the UK government plans to provide a one-off £400 discount on energy bills starting in Oct-22 with an additional £650 paid to more than 8m low-income households who receive benefits or tax credits, we believe the risk of mass casualties during the cold winter months due to insufficient heating in Great Britain remains extremely high.

Fuel poverty poses a looming threat to European countries in coming winter.

Fuel poverty is the condition by which a household is unable to afford to heat (or cool) their home to an adequate temperature, potentially caused by low income, high fuel prices, poor energy efficiency, unaffordable housing prices or poor quality private rental housing, according to Ofgem.

In England, the "Low Income, Low Energy Efficiency" indicator is used to determine official fuel poverty, under two conditions 1) living in a property where fuel poverty is due to a low level of energy efficiency; or 2) when they spend the required amount to heat their home and are left with insufficient residual incomes below the official poverty line.

However, in Scotland, Wales, and Northern Ireland, the definition of fuel poverty is more specific, meaning any household that spends more than 10% of their income on fuel costs and the remaining household income is insufficient to maintain an adequate standard of living.

The highlights of Ofgem's forecast are as follows:

- **3.16m in 2020** is the official number of households in fuel poverty in England
- **6.2m since 1 Apr-22** is the estimated total number of households in England that are now predicted to be in fuel poverty due to the latest price cap rise on 1 Apr-22
- **9.2m by Oct-22** is the estimated number of households across the UK in fuel poverty from 1 Oct-22, which could rise to **10.5m from Jan-23**
- **2.5m** is the number of households with children expected to be in fuel poverty from 1 Apr-22
- **11,400** is the estimated potential winter death toll

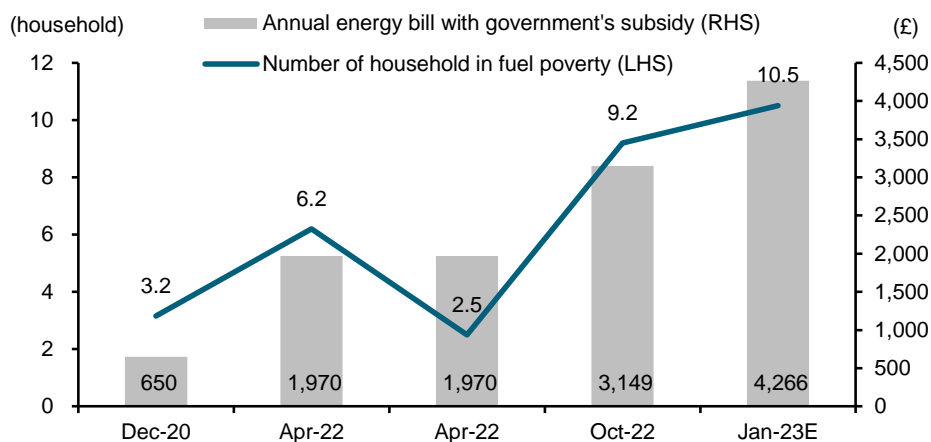
11,400 lives at risk this winter in Great Britain. Due to the uncertain nature of energy prices following the Russian invasion of Ukraine, the number of households in fuel poverty remains largely unsettled. However, significant risks remain for low-income people living in European countries due to the spikes in energy prices and potentially insufficient heating in the coming winter.

Based on Ofgem's prediction, for every 1% increase in energy prices, an additional 40,000 homes would fall into fuel poverty. Based on Ofgem's latest forecast on 13 Jul-22, around 6.2m households are already in fuel poverty in England (26.2% of total households).

That number is projected to rise to 9.2m by Oct-22, as energy bills rise to an average of £3,549 in Oct-22 (or £3,149 if the government's planned household support is included) and £4,266 by Jan-23.

With an annual energy bill of £3,149, the number of households in fuel poverty in England is projected to jump to 9.2m (38.9% of total households) in Oct-22, rising to 10.5m (44.4%) in Jan-23. Under this scenario, we believe the risk of casualties for households in fuel poverty will be high for Great Britain next winter (Oct-22 to Apr-23).

Exhibit 15: Annual energy bill (inc. government subsidy) vs no. of households in fuel poverty in England



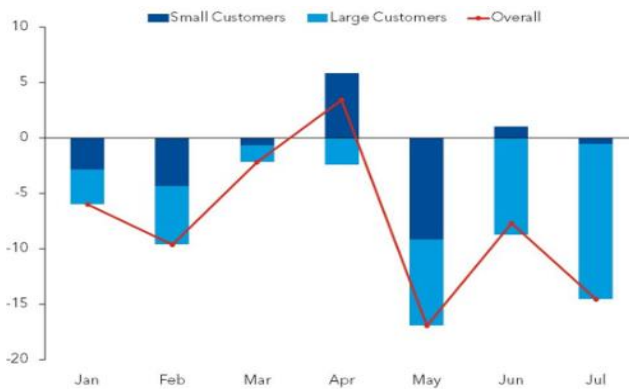
Source: Ofgem

Germany's Herculean cuts in gas consumption a Pyrrhic victory

In Germany, energy price inflation is less severe than in the UK, given that Germany has already achieved most of its targets to reduce reliance on Russian energy, particularly imported gas used for electricity production.

Russia has long supplied gas to Germany. Russian supplies accounted for 55% of Germany's total gas consumption in 2021, mainly via the Nord Stream 1 gas pipeline. Like other EU member states, Germany has agreed to cut gas consumption by 15% between Aug-22 to Mar-23 to avoid gas shortages and spiralling prices. According to the Energy Information Administration (EIA)'s Jul-22 estimate, a sudden cut in the Russian gas supply to Germany would result in up to a 3% reduction in GDP and raise the country's inflation rate substantially. The EIA added that the effect would be even worse in the winter.

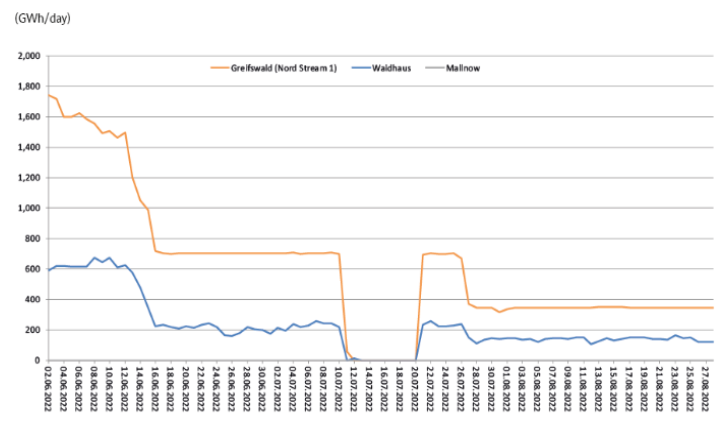
Exhibit 16: Monthly gas consumption in 2022 compared to the five-year average in 2017-21 (%)



Source: Trading Hub Europe and IMF staff calculations.
Note: Large customers are those with consumption greater than 1.5 GWh per year.

Source: [IMF](#)

Exhibit 17: Russian gas flow to Germany



Source: [Bundesnetzagentur](#)

Herculean cuts in gas consumption... According to the IMF's report on 12 Aug-22, Germany has already achieved its target of a 15% reduction in gas consumption, with gas consumption already down by 17% in May, 8% in June, and 15% in July, compared with the 5-year average.

The major driver for the successful 15% reduction in gas consumption was the lower gas usage by industrial users. Large businesses made severe cuts in Jun-22, with car manufacturers cutting their gas consumption by over 30% y-y.

... Come as a Pyrrhic victory. However, the cuts in gas consumption came with a heavy cost. Manufacturing and services activity contracted in July for the first time in two years, based on IMF estimates. As a result, the IMF has now lowered its forecast for Germany's GDP to 1.2% in 2022 and 0.8% in 2023 due largely to the higher energy costs.

How did Germany achieve its target of reducing reliance on Russian gas? Many steps have been implemented by Germany to reduce its Russian gas supply needs YTD.

Floating LNG storage and regasification units were Germany's first quick fix, allowing Germany to import LNG directly despite its lack of onshore LNG terminals. LNG suppliers to Germany are Qatar, Australia, and the US.

Levies on gas. Two levies were imposed to support imports of LNG, including a fund to defray the high gas procurement costs and another to help accelerate efforts to fill up storage facilities.

Coal as a substitute fuel. Germany has passed a law to bring oil- and coal-fired power plants back into the country's energy mix in case of a critical gas supply situation. This could add 10GW of reserve capacity on an interim basis in a deal that runs until Mar-24.

Nuclear power may stay longer. Germany's grid operators are now carrying out a stress test on behalf of the government to see whether the lifetime of Germany's three remaining nuclear plants, which account for 6% of total capacity, could be extended.

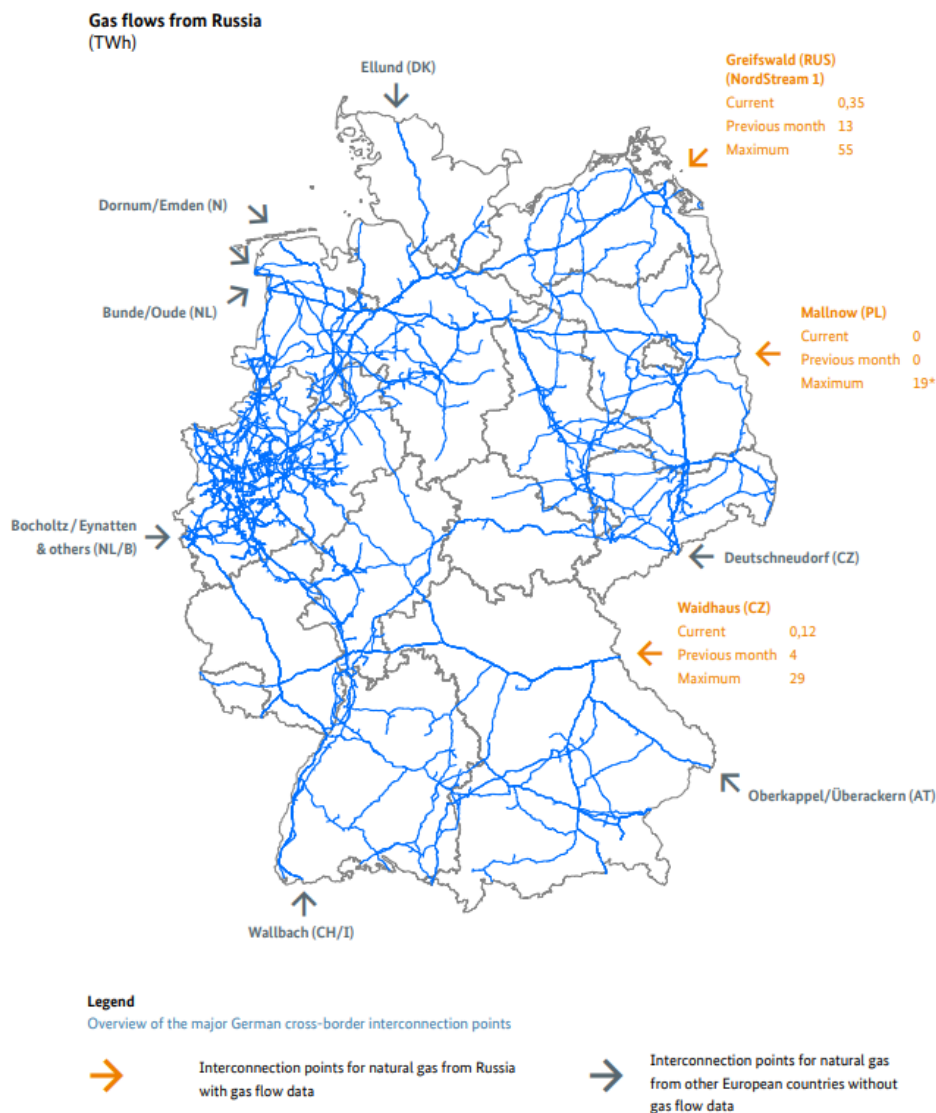
Gas storage. Germany is doing its best to fill its gas storage facilities as quickly as possible, with a target of 85% full by 1 Oct-22 and 95% by 1 Nov-22. The storage level stood at around 82% on 28 Aug-22, with 9.5% of the gas coming from Russia and the remainder from LNG imports.

Uniper bailout (UN01.DE). The government paid €15b to bail out Uniper, Germany's largest importer of Russian gas, to ensure that it can continue to operate and fulfil its contracts.

A 20% cut in gas consumption by consumers. Germany's citizens were advised to cut their gas consumption by at least 20% in 2H22 to avoid a national gas supply emergency. However, we think this is unavoidable, considering that the gas supply, even at full storage, is still inadequate for the entire winter period.

Gas rationing. German network regulator BNetzA, which would be in charge of energy rationing, is now drawing up a plan to determine gas usage and a list of sectors that would have to be switched off first based on certain criteria – company size, economic damage, and how long it would take to restart specific facilities.

Exhibit 18: Gas flows into Germany

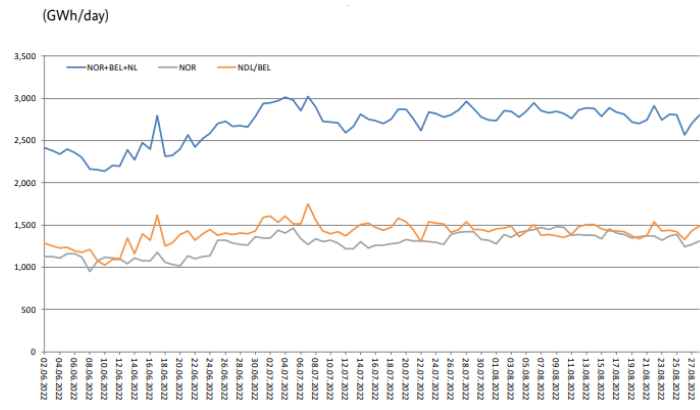


Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

Germany's gas supply status

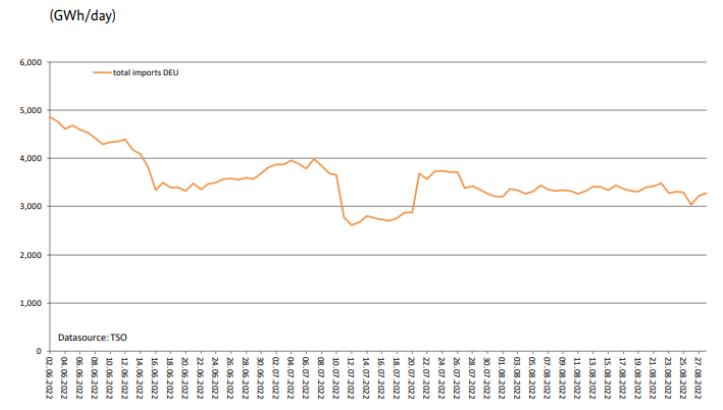
As of 29 Aug-22, based on Bundesnetzagentur reports, Germany has already filled up 82.74% of its storage capacity, even with the Russian gas flow to Germany via Nord Stream 1 at only 20% of its maximum 55bcm capacity.

Exhibit 19: Gas flows from Norway, the Netherlands and Belgium



Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

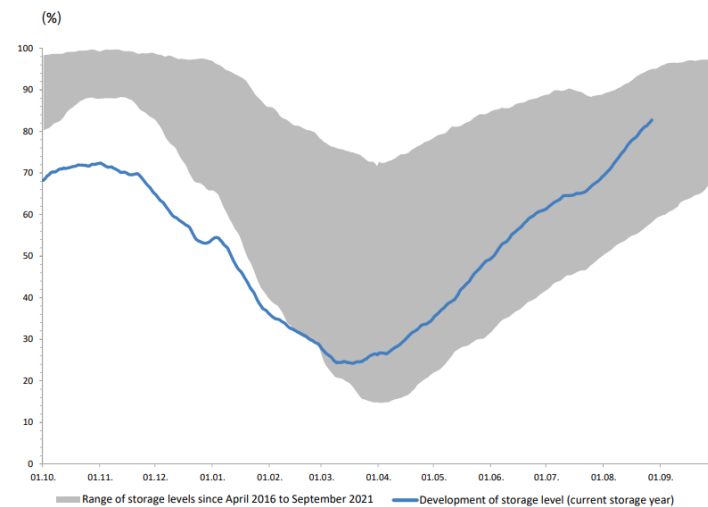
Exhibit 20: Gas imports to Germany



Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

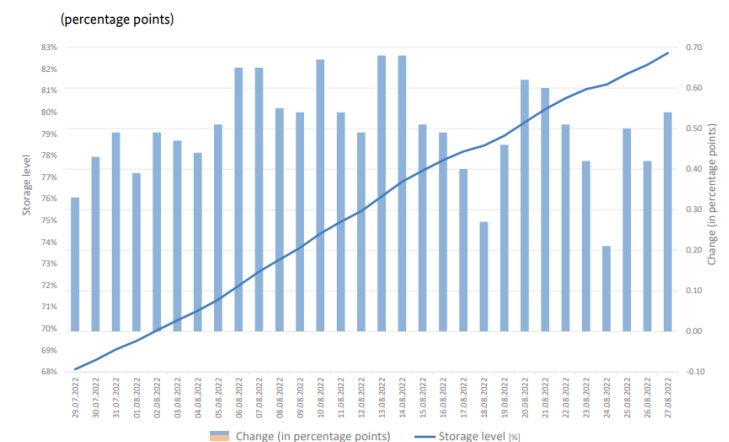
Gas storage levels. Gas supplied to Germany that can be used to replace Russian gas comes from Norway, the Netherlands, and Belgium. Germany continues to receive gas which is injected into storage ahead of the coming winter.

Exhibit 21: Gas storage levels in Germany



Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

Exhibit 22: Gas storage levels in Germany; daily storage level and change in storage levels

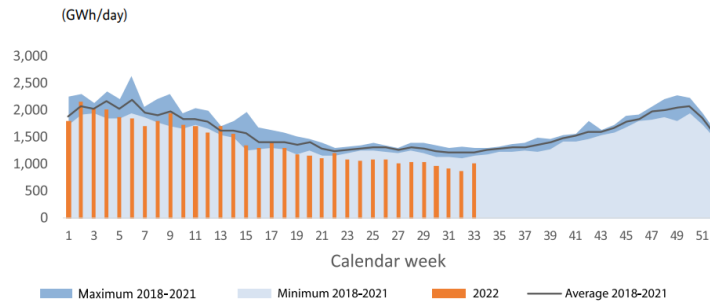


Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

Germany's gas consumption. Along with the increasing gas supply, Germany has cut its monthly gas consumption at increasingly higher rates. In 7M22, the consumption rate was 4.3% lower than the five-year average level in January, and down 21.3% in July. Monthly gas consumption has also been lower y-y from Jan-Jul 2022, thanks partly to the y-y higher temperature, which required lower gas consumption for heating.

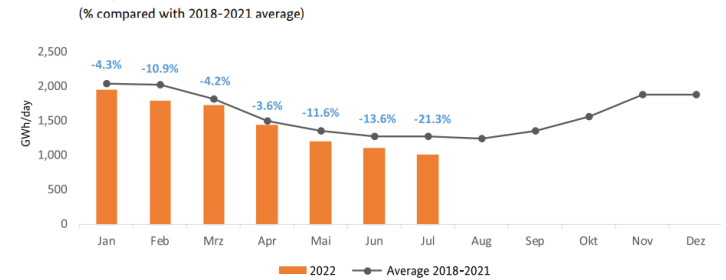
Similar to other EU countries, the gas price in Germany has spiked by over 4x from Jan to Aug 2022 and is likely to rise further as winter approaches.

Exhibit 23: Gas consumption by industrial users in Germany (weekly)



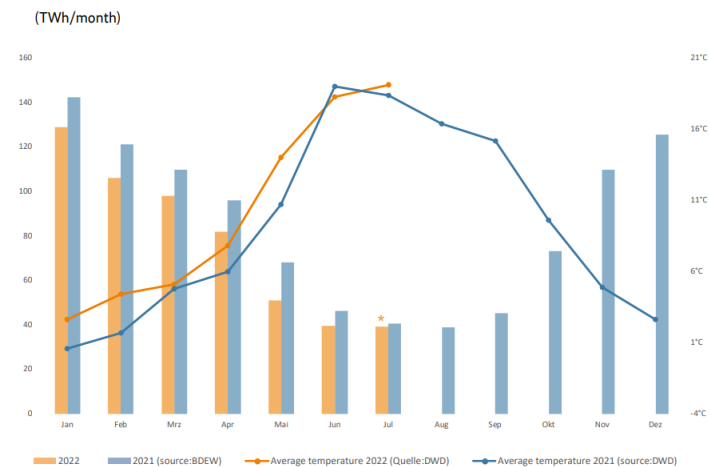
Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

Exhibit 24: Change in gas consumption by industrial users in Germany



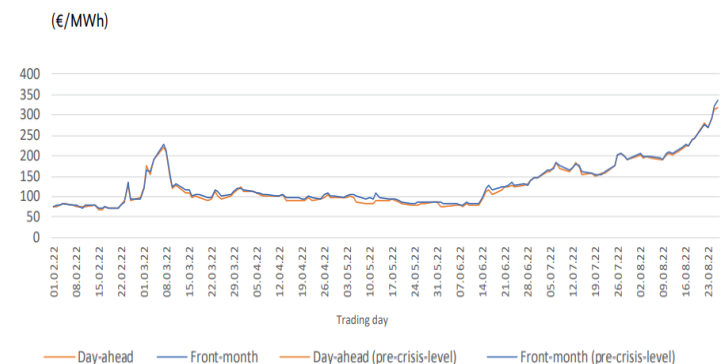
Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

Exhibit 25: Monthly gas consumption in Germany



Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

Exhibit 26: Gas price in Germany (daily settlement price)



Source: [Bundesnetzagentur](https://www.bundesnetzagentur.de)

A marathon march to commodity victory

We maintain our bullish assumptions for oil, coal, and gas in 2022-24 based on our projections of tighter supply and rising demand for heating and as substitute fuels in the coming winter, along with continued strong pent-up demand following the full reopening of the global economy.

Exhibit 27: FSSIA's commodity price assumptions

	2022E	2023E	2024E
	(USD/t)	(USD/t)	(USD/t)
Newcastle coal price index	300	250	250
	(USD/bbl)	(USD/bbl)	(USD/bbl)
Dubai crude oil price	120	110	110
	(USD/mmbtu)	(USD/mmbtu)	(USD/mmbtu)
Henry Hub gas price	7.0	6.0	6.0
	(USD/mmbtu)	(USD/mmbtu)	(USD/mmbtu)
Spot JKM LNG price	20	15	15

Source: FSSIA estimates

We believe the prices of three major commodities – gas, coal, and oil – are likely to rise further in the coming winter (Oct-22 to Apr-23) after the price corrections in Jun-Jul 2022.

The key catalysts should come from both supply-side factors (low production increases from OPEC+ and US shale oil and gas, OPEC's low spare capacity, decreasing production from Russia, and lower exports from China) and demand-side factors (solid demand growth for diesel, HSFO, and jet).

However, the most critical factor to driving commodity prices higher will be Russia completely cutting off its gas supply to Europe, which we think could occur at any time within Sep-22 ahead of the coming winter as Russia is likely to deploy its gas supply as a key weapon against the EU.

Oil: We maintain our Dubai oil price assumptions of USD120/110/110 per bbl for 2022-24 as we think the low spare capacity, the supply risks for Russian oil, and the demand growth for jet, gasoline, and particularly diesel as a key fuel for heating and a substitute fuel for Russian gas, will likely drive up the oil price again. If China decides to reopen its economy and allow its people to travel abroad, we think this will be a surprisingly positive catalyst to support the Dubai oil price in 2022.

Diesel price: We project the diesel price and the diesel-Dubai margin to surge to over USD180/bbl and USD60/bbl, respectively, by Dec-22 as the surging demand for diesel as a substitute fuel for gas to produce heating and electricity should be substantial amid the already tight supply.

Coal: Our Newcastle coal price index assumptions of USD300/250/250 per tonne for 2022-24 are based on our expectation that stronger demand for coal from China and the EU could further tighten the demand-supply balance in 2022-24.

Gas: We maintain our assumptions for the Henry Hub gas price index at USD7/6/6 per mmbtu in 2022-24 to reflect the strong demand for LNG exports to the EU and the rising demand for gas in the domestic market. We also maintain our assumptions for the JKM spot LNG price at USD20/15/15 per mmbtu in 2022-24, supported by the impact of rising demand in the EU and the limited supply growth outside the US.

PTTEP and BANPU for upstream. We believe that the high prices of oil, coal, and gas will provide a strong impetus for investment in 2H22-2023. In the Thai energy sector, we reiterate our view on the upstream PTT Exploration and Production (PTTEP TB, BUY, TP THB180) and Banpu (BANPU TB, BUY, TP THB18.80) on their strong earnings upsides from the higher-for-longer prices of oil and gas.

IVL for petrochemical. In the downstream space, our most preferred stock is Indorama Ventures (IVL TB, BUY, TP THB65) given its share price correction due to investors' concerns over the impact of higher gas costs in Europe. We think this is unjustifiable given that IVL earned only 15-20% of its EBITDA from Europe vs over 50% from North America, the market where IVL is expected to enjoy high margins for its integrated oxides and derivatives product group.

Refineries are on a rally track: ESSO and TOP are our top picks. While we think the share prices of all refinery companies will outperform the market in Sep-22, we prefer Esso Thailand (ESSO TB, BUY, TP THB13) and Thai Oil (TOP TB, BUY, TP THB70) as our two top picks in the Thai refinery sector based on their strong earnings growth and attractive valuations.

Power is on a recovery track. We maintain B. Grimm Power (BGRIM TB, BUY, TP THB42), Gulf Energy Development (GULF TB, BUY, TP THB60), and Energy Absolute (EA TB, BUY, TP THB101) as our picks in the Thai utilities sector.

We estimate that BGRIM could earn up to THB1.5b in additional revenue from the recent THB0.69/kWh Ft hike which should more than offset the THB1.2b cost of the projected THB20-70/mmbtu higher gas prices in 2H22, which we think is the worst-case scenario for BGRIM. The gradual addition of five new small power producers (SPPs) in 2H22 and two new SPPs in 2H23 should further enhance BGRIM's operational competitiveness. We expect the company to gain an additional THB0.3b-1.0b in revenue when all seven new SPPs are complete and fully running by 1Q24.

GULF is likely to secure additional meaningful capacity growth from the soon-to-be-announced Power Development Plan 8 by Vietnam's government within 2022.

EA's share price has consolidated at THB80-85 in the past two months due to the delays in its e-bus deliveries from 1Q22 and 2Q22 to 2H22. However, in 3Q22, EA's earnings growth should accelerate markedly, driven by the delivery of 800 e-buses in 3Q22, and the deliveries of EVs should continue into 2023 thanks to its large backlog of both e-buses and e-trucks, based on management's guidance.

Exhibit 28: Summary of key valuations of companies under coverage

Company	-- Share price --				Up (down)	--- Recur profit ---		NP growth		---- P/E ----		---- PBV ----		----- 2022E -----		
			Current	Target	side	22E	23E	22E	23E	22E	23E	22E	23E	ROE	Div	EV/EBITDA
	BBG	Rec	(THB)	(THB)	(%)	(THB m)	(THB m)	(%)	(%)	(x)	(x)	(x)	(x)	(%)	(%)	(x)
Energy & Utilities						369,391	352,690	46.8	(4.5)	21.0	17.6	2.5	2.3	14.9	4.2	11.2
Oil & Gas						282,525	257,927	46.5	(8.7)	12.8	11.9	1.4	1.4	14.6	5.2	6.5
PTT PCL	PTT TB	BUY	38.00	50.00	32	118,570	128,103	32.9	8.0	9.2	8.5	1.0	0.9	11.4	3.9	5.0
PTT Explor & Prod	PTTEP TB	BUY	172.00	180.00	5	54,880	51,174	13.1	(6.8)	12.4	13.3	1.6	1.5	12.9	5.1	4.9
PTT Oil & Retail	OR TB	BUY	26.75	32.00	20	11,654	13,879	(1.1)	19.1	27.5	23.1	3.0	2.8	11.3	1.8	15.9
Bangkok Aviation	BAFS TB	BUY	28.75	36.00	25	120	408	nm	240.4	152.9	44.9	4.1	3.7	2.6	0.3	22.3
Thai Oil	TOP TB	BUY	63.00	70.00	11	16,765	13,654	33.3	(18.6)	7.7	9.4	0.8	0.8	12.0	15.9	7.6
Star Petroleum Refin	SPRC TB	BUY	13.20	14.60	11	15,451	6,881	697.5	(55.5)	3.7	8.3	1.2	1.1	37.0	3.0	2.2
Bangchak Corp	BCP TB	BUY	36.75	41.00	12	13,119	4,129	285.7	(68.5)	3.9	12.3	0.8	0.8	22.7	13.0	3.8
PTG Energy	PTG TB	BUY	15.10	18.30	21	1,784	2,263	77.3	26.8	14.1	11.1	2.7	2.4	20.3	1.3	4.9
Esso Thailand	ESSO TB	BUY	14.30	13.00	(9)	20,866	6,968	2,167.5	(66.6)	2.4	7.1	1.3	1.2	73.4	3.5	2.0
Susco	SUSCO TB	BUY	3.78	3.50	(7)	303	365	29.6	20.5	13.7	11.4	1.1	0.9	8.1	2.1	10.0
Scan Inter	SCN TB	BUY	2.34	3.10	32	118	225	70.0	91.5	23.9	12.5	1.0	1.0	4.3	2.1	22.7
Banpu	BANPU TB	BUY	14.90	18.80	26	28,728	29,682	20.7	3.3	3.7	4.5	1.0	1.0	30.4	15.0	3.8
WP Energy	WP TB	BUY	4.64	5.40	16	167	196	0.0	0.0	14.4	12.3	1.7	1.6	12.3	3.2	3.9
Petrochemical						73,258	80,594	4.0	10.0	8.0	7.1	1.0	0.9	14.0	7.1	6.4
Indorama Ventures	IVL TB	BUY	43.75	65.00	49	36,355	38,465	66.1	5.8	6.8	6.4	1.2	1.1	20.4	8.2	5.6
IRPC PCL	IRPC TB	HOLD	3.46	3.20	(8)	7,301	13,273	(55.6)	81.8	9.7	5.3	0.8	0.7	8.4	5.2	4.9
PTT Global Chem	PTTGC TB	REDUCE	47.50	40.00	(16)	29,027	28,054	(7.4)	(3.4)	7.4	7.6	0.7	0.7	9.1	6.8	7.4
Global Green Chem	GGC TB	BUY	15.20	13.50	(11)	576	802	(25.7)	39.4	27.0	19.4	1.5	1.4	5.7	2.0	11.9
Building materials						39,408	50,240	(23.3)	27.5	12.5	9.8	1.2	1.2	10.2	4.9	12.7
Siam Cement	SCC TB	BUY	359.00	466.00	30	35,011	46,340	(25.8)	32.4	12.3	9.3	1.1	1.1	9.4	4.7	12.9
Eastern Polymer Group	EPG TB	BUY	9.65	16.00	66	1,448	1,670	20.9	15.3	18.7	16.2	2.3	2.1	12.7	2.5	13.7
Tipco Asphalt	TASCO TB	BUY	16.60	22.50	36	2,949	2,230	(1.6)	(24.4)	8.9	11.8	2.0	2.1	20.7	10.8	8.2

Share prices as of 30 Aug 2022

Sources: Bloomberg; FSSIA estimates

Corporate Governance report of Thai listed companies 2021

EXCELLENT LEVEL – Score range 90-100										
AAV	BCPG	CPALL	GCAP	K	MSC	PLANET	SAMART	SPI	THRE	TVD
ADVANC	BDM5	CPF	GFPT	KBANK	MST	PLAT	SAMTEL	SPRC	THREL	TVI
AF	BEM	CPI	GGC	KCE	MTC	PORT	SAT	SPVI	TIPCO	TVO
AH	BGC	CPN	GLAND	KKP	MVP	PPS	SC	SSSC	TISCO	TWPC
AIRA	BGRIM	CRC	GLOBAL	KSL	NCL	PR9	SCB	SST	TK	U
AKP	BIZ	CSS	GPI	KTB	NEP	PREB	SCC	STA	TKT	UAC
AKR	BKI	DDD	GPSC	KTC	NER	PRG	SCCC	STEC	TMT	UBIS
ALT	BOL	DELTA	GRAMMY	LALIN	NKI	PRM	SCG	STI	TNDT	UV
AMA	BPP	DEMCO	GULF	LANNA	NOBLE	PROUD	SCGP	SUN	TNITY	VGI
AMATA	BRR	DRT	GUNKUL	LH	NSI	PSH	SCM	SUSCO	TOA	VIH
AMATAV	BTS	DTAC	HANA	LHFG	NVD	PSL	SDC	SUTHA	TOP	WACOAL
ANAN	BTW	DUSIT	HARN	LIT	NWR	PTG	SEAFECO	SVI	TPBI	WAVE
AOT	BWG	EA	HMPRO	LPN	NYT	PTT	SEAOL	SYMC	TQM	WHA
AP	CENTEL	EASTW	ICC	MACO	OISHI	PTTEP	SE-ED	SYNTEC	TRC	WHAUP
ARIP	CFRESH	ECF	ICHI	MAJOR	OR	PTTGC	SELIC	TACC	TRU	WICE
ARROW	CHEWA	ECL	III	MAKRO	ORI	PYLON	SENA	TASCO	TRUE	WINNER
ASP	CHO	EE	ILINK	MALEE	OSP	Q-CON	SHR	TCAP	TSC	ZEN
AUCT	CIMBT	EGCO	ILM	MBK	OTO	QH	SIRI	TEAMG	TSR	
AWC	CK	EPG	INTUCH	MC	PAP	QTC	SIS	TFMAMA	TSTE	
AYUD	CKP	ETC	IP	MCOT	PCSGH	RATCH	SITHAI	TGH	TSTH	
BAFS	CM	FPI	IRPC	METCO	PDG	RS	SMK	THANA	TTA	
BANPU	CNT	FPT	ITEL	MFEC	PDJ	S	SMPC	THANI	TTB	
BAY	COM7	FSMART	IVL	MINT	PG	S & J	SNC	THCOM	TTCL	
BBL	COMAN	GBX	JSP	MONO	PHOL	SAAM	SONIC	THG	TTW	
BCP	COTTO	GC	JWD	MOONG	PLANB	SABINA	SPALI	THIP	TU	
VERY GOOD LEVEL – Score range 80-89										
2S	ASIMAR	CHOW	FLOYD	IT	LOXLEY	OCC	RPC	SKY	TCC	TVT
7UP	ASK	CI	FN	ITD	LRH	OGC	RT	SLP	TCMC	TWP
ABICO	ASN	CIG	FNS	J	LST	PATO	RWI	SMIT	TEAM	UEC
ABM	ATP30	CMC	FORTH	JAS	M	PB	S11	SMT	TFG	UMI
ACE	B	COLOR	FSS	JCK	MATCH	PICO	SA	SNP	TFI	UOBKH
ACG	BA	CPL	FTE	JCKH	MBAX	PIMO	SAK	SO	TIGER	UP
ADB	BAM	CPW	FVC	JMART	MEGA	PJW	SALEE	SORKON	TITLE	UPF
AEONTS	BC	CRD	GEL	JMT	META	PL	SAMCO	SPA	TKN	UPOIC
AGE	BCH	CSC	GENCO	KBS	MFC	PM	SANKO	SPC	TKS	UTP
AHC	BEC	CSP	GJS	KCAR	MGT	PMTA	SAPPE	SPCG	TM	VCOM
AIT	BEYOND	CWT	GYT	KEX	MICRO	PPP	SAWAD	SR	TMC	VL
ALL	BFIT	DCC	HEMP	KGI	MILL	PPPM	SCI	SRICHA	TMD	VPO
ALLA	BJC	DCON	HPT	KIAT	MTSIB	PRIME	SCN	SSC	TMI	VRANDA
ALUCON	BJCHI	DHOUSE	HTC	KISS	MK	PRIN	SCP	SSF	TMILL	WGE
AMANAH	BLA	DOD	HYDRO	KOOL	MODERN	PRINC	SE	STANLY	TNL	WIJK
AMARIN	BR	DOHOME	ICN	KTIS	MTI	PSG	SFLEX	STGT	TNP	WP
APCO	BROOK	DV8	IFS	KUMWEL	NBC	PSTC	SFP	STOWER	TOG	XO
APCS	CBG	EASON	IMH	KUN	NCAP	PT	SFT	STPI	TPA	XPG
APURE	CEN	EFORL	IND	KWC	NCH	QLT	SGF	SUC	TPAC	YUASA
AQUA	CGH	ERW	INET	KWM	NETBAY	RBF	SIAM	SWC	TPCS	
ASAP	CHARAN	ESSO	INSET	L&E	NEX	RCL	SINGER	SYNEX	TPS	
ASEFA	CHAYO	ESTAR	INSURE	LDC	NINE	RICHY	SKE	TAE	TRITN	
ASIA	CHG	ETE	IRC	LEO	NRF	RML	SKN	TAKUNI	TRT	
ASIAN	CHOTI	FE	IRCP	LHK	NTV	ROJNA	SKR	TBSP	TSE	
GOOD LEVEL – Score range 70-79										
A	BGT	CITY	GIFT	JTS	MDX	PK	SGP	SUPER	TQR	YGG
AI	BH	CMAN	GLOCON	JUBILE	MJD	PLE	SICT	SVOA	TTI	ZIGA
AIE	BIG	CMO	GREEN	KASET	MORE	PPM	SIMAT	TC	TYCN	
AJ	BLAND	CMR	GSC	KCM	MUD	PRAKIT	SISB	TCCC	UKEM	
ALPHAX	BM	CPT	GTB	KK	NC	PRAPAT	SK	THMUI	UMS	
AMC	BROCK	CRANE	HTECH	KKC	NDR	PRECHA	SMART	TNH	UNIQ	
APP	BSBM	CSR	HUMAN	KWI	NFC	PTL	SOLAR	TNR	UPA	
AQ	BSM	D	IHL	KYE	NNCL	RJH	SPACK	TOPP	UREKA	
ARIN	BTNC	EKH	IIG	LEE	NOVA	RP	SPG	TPCH	VIBHA	
AS	BYD	EMC	INGRS	LPH	NPK	RPH	SQ	TPIPL	W	
AU	CAZ	EP	INOX	MATI	NUSA	RSP	SSP	TIPIPP	WIN	
B52	CCP	F&D	JAK	M-CHAI	PAF	SABUY	STARK	TPLAS	WORK	
BEAUTY	CGD	FMT	JR	MCS	PF	SF	STC	TPOLY	WPH	

Disclaimer:

The disclosure of the survey results of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey results may be changed after that date. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such survey results.

* CGR scoring should be considered with news regarding wrong doing of the company or director or executive of the company such unfair practice on securities trading, fraud, and corruption SEC imposed a civil sanction against insider trading of director and executive

Sources: Thai Institute of Directors Association (IOD); FSSIA's compilation; data as of 26 October 2021

Anti-corruption Progress Indicator

CERTIFIED										
2S	BCH	CPALL	GC	K	MFC	PE	QLT	SNP	THCOM	TU
7UP	BCP	CPF	GCAP	KASET	MFEC	PG	QTC	SORKON	THIP	TVD
ADVANC	BCPG	CPI	GEL	KBANK	MILL	PHOL	RATCH	SPACK	THRE	TVI
AF	BE8	CPN	GFPT	KBS	MINT	PK	RML	SPALI	THREL	TVO
AI	BEYOND	CSC	GGC	KCAR	MONO	PL	RWI	SPC	TIDLOR	TWPC
AIE	BGC	DCC	GJS	KCE	MOONG	PLANB	S & J	SPI	TIPCO	U
AIRA	BGRIM	DELTA	GPI	KGI	MSC	PLANET	SAAM	SPRC	TISCO	UBE
AKP	BJCHI	DEMCO	GPSC	KKP	MST	PLAT	SABINA	SRICHA	TKS	UBIS
ALPHAX	BKI	DIMET	GSTEEL	KSL	MTC	PM	SAPPE	SSF	TKT	UEC
AMA	BLA	DRT	GUNKUL	KTB	MTI	PPP	SAT	SSP	TMD	UKEM
AMANAHA	BPP	DTAC	HANA	KTC	NBC	PPPM	SC	SSSC	TMILL	UOBKH
AMATA	BROOK	DUSIT	HARN	KWC	NEP	PPS	SCB	SST	TMT	UPF
AMATAV	BRR	EA	HEMP	KWI	NINE	PR9	SCC	STA	TNITY	UV
AP	BSBM	EASTW	HENG	L&E	NKI	PREB	SCCC	STOWER	TNL	VGI
APCS	BTS	ECL	HMPRO	LANNA	NMG	PRG	SCG	SUSCO	TNP	VIH
AQUA	BWG	EGCO	HTC	LH	NNCL	PRINC	SCN	SVI	TNR	WACOAL
ARROW	CEN	EP	ICC	LHFG	NOBLE	PRM	SEAOL	SYMC	TOG	WHA
AS	CENTEL	EPG	ICHI	LHK	NOK	PROS	SE-ED	SYNTEC	TOP	WHAUP
ASIAN	CFRESH	ERW	IFEC	LPN	NSI	PSH	SELIC	TAE	TOPP	WICE
ASK	CGH	ESTAR	IFS	LRH	NWR	PSL	SENA	TAKUNI	TPA	WIIK
ASP	CHEWA	ETE	ILINK	M	OCC	PSTC	SGP	TASCO	TPP	XO
AWC	CHOTI	FE	INET	MAKRO	OGC	PT	SINGER	TBSP	TRU	ZEN
AYUD	CHOW	FNS	INSURE	MALEE	ORI	PTG	SIRI	TCAP	TRUE	
B	CIG	FPI	INTUCH	MATCH	PAP	PTT	SITHAI	TCMC	TSC	
BAFS	CIMBT	FPT	IRC	MBAX	PATO	PTTEP	SKR	TFG	TSTE	
BAM	CM	FSMART	IRPC	MBK	PB	PTTGC	SMIT	TFI	TSTH	
BANPU	CMC	FSS	ITEL	MC	PCSGH	PYLON	SMK	TFMAMA	TTA	
BAY	COM7	FTE	IVL	MCOT	PDG	Q-CON	SMPC	TGH	TTB	
BBL	COTTO	GBX	JKN	META	PDJ	QH	SNC	THANI	TTCL	
DECLARED										
AJ	CHG	DDD	ETC	JR	MAJOR	NUSA	RS	SSS	TQM	YUASA
ALT	CPL	DHOUSE	FLOYD	JTS	NCAP	NYT	SAK	STECH	TSI	ZIGA
APCO	CPR	DOHOME	GULF	KEX	NCL	OR	SCGP	STGT	VARO	
B52	CPW	ECF	III	KUMWEL	NOVA	PIMO	SCM	TKN	VCOM	
BEC	CRC	EKH	INOX	LDC	NRF	PLE	SIS	TMI	VIBHA	

Level	
Certified	This level indicates practical participation with thoroughly examination in relation to the recommended procedures from the audit committee or the SEC's certified auditor, being a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) or already passed examination to ensure independence from external parties.
Declared	This level indicates determination to participate in the Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC)

Disclaimer:

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, FSS International Investment Advisory Company Limited does not confirm, verify, or certify the accuracy and completeness of the assessment results.

Note: Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of 26 October 2021) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

Sources: The Securities and Exchange Commission, Thailand; * FSSIA's compilation

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Suwat Sinsadok, CFA, FRM, ERP FSS International Investment Advisory Securities Co., Ltd

The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s) was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

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Company	Ticker	Price	Rating	Valuation & Risks
B.Grimm Power	BGRIM TB	THB 35.50	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) unplanned shutdowns of its SPPs.
Gulf Energy Development	GULF TB	THB 50.50	BUY	The downside risks to our SoTP-based TP on GULF include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) delays in project commercial operation dates.
Energy Absolute	EA TB	THB 82.25	BUY	Downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand; 2) lower crude prices; and 3) lower-than-expected demand for batteries.
PTT PCL	PTT TB	THB 38.00	BUY	Risks to our SoTP-based valuation are the oil price and potential earnings downsides from government intervention.
PTT Explor & Prod	PTTEP TB	THB 172.00	BUY	Risks our TP, which is based on EV/EBITDA, are a sharp decline in oil price and a potential earnings downside from government intervention.
PTT Oil and Retail Business	OR TB	THB 26.75	BUY	The downside risks to our SOTP-based TP include: 1) lower-than-expected demand for petroleum products; 2) a lower marketing margin; and 3) weaker-than-expected jet demand.
Bangkok Aviation Fuel Services	BAFS TB	THB 28.75	BUY	Downside risks to our SoTP-based target price include a slower-than-expected vaccination rate, leading to slower demand in tourism activities, and uncertainty in the fuel volume demand in the north, which could lead to volatility in Fuel Pipeline Transportation Limited (FPT)'s income.
Thai Oil	TOP TB	THB 63.00	BUY	Downside risks to our EV/EBITDA-based TP are 1) a sharp fall in oil price; 2) weak demand for refined oil products; 3) customer concentrations; 4) currency risk; 5) interest rate risk; and 6) a raw material shortage.
Star Petroleum Refining	SPRC TB	THB 13.20	BUY	TP is based on EV/EBITDA. Downside risks are a sharp rise in oil price and weak demand for refined oil products.
Bangchak Corp	BCP TB	THB 36.75	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for petroleum products; 2) higher crude premiums; and 3) unplanned shutdowns of the company's refinery plants.
PTG Energy	PTG TB	THB 15.10	BUY	The downside risks to our SoTP-based TP include 1) a government cap on oil prices; and 2) weaker demand for diesel and gasoline.
Esso Thailand	ESSO TB	THB 14.30	BUY	The downside risks to our SoTP-based TP on ESSO include 1) lower-than-expected demand for petroleum products; 2) a higher crude premium; and 3) unplanned shutdowns of its refinery and petrochemical plants.
Susco	SUSCO TB	THB 3.78	BUY	The downside risks to our SOTP-based TP include: 1) lower-than-expected demand for petroleum products; 2) a lower marketing margin; and 3) weaker-than-expected jet fuel demand.
Scan Inter	SCN TB	THB 2.34	BUY	The downside risks to our SOTP-based TP include 1) a sharp decline in oil prices; and 2) weaker demand for NGV and delays in new NGV projects.
Banpu	BANPU TB	THB 14.90	BUY	We see downside risks to our SoTP-based TP from lower coal prices, higher diesel costs and any unplanned shutdowns of its power plants.
WP Energy	WP TB	THB 4.64	BUY	The downside risks to our SOTP-based TP include: 1) lower-than-expected demand for LPG gas; and 2) a lower marketing margin.
Indorama Ventures	IVL TB	THB 43.75	BUY	The key downside risks to our EV/EBITDA-based TP are weaker-than-expected margins for PX-PTA and PET-PTA, lower demand for polyester, and delays in IVL's projects.
IRPC PCL	IRPC TB	THB 3.46	HOLD	Key upside risks to our neutral view and EV/EBITDA-based target price are rising margins of PP-naphtha, SM and ABS-benzene, and a higher market GRM, while downside risks are weak demand for refinery and petrochemical products and a higher naphtha price.
PTT Global Chemical	PTTGC TB	THB 47.50	REDUCE	The key upside risks to our EV/EBITDA-based TP are a stronger-than-expected HDPE price and HDPE-naphtha margin.
Global Green Chemicals	GGC TB	THB 15.20	BUY	Downside risks to our EV/EBITDA-based target price include: 1) a sharp decline in crude palm oil price; 2) a change in government policy for biodiesel from the current B7; and 3) a narrower fatty alcohol margin due to the new supply in the US

Siam Cement	SCC TB	THB 359.00	BUY	Downside risks to our SOTP based TP include 1) a lower-than-expected demand for chemicals, CBM, and packaging; 2) rising coal costs for its cement and packaging units; and 3) weaker demand from the automobile industry that could erode the demand for SCC's chemical unit and its dividend contributions.
Eastern Polymer Group	EPG TB	THB 9.65	BUY	Downside risks to our EV/EBITDA-based target price include 1) a sharp rise in feedstock prices, driven mostly by a higher oil price; and 2) lower-than-expected demand for plastics used for insulators and the automobile and packaging industries.
Tipco Asphalt	TASCO TB	THB 16.60	BUY	Downside risks to our EV/EBITDA multiple based TP include 1) a lower asphalt margin due to a oversupply in Asia on the back of faster recovery of utilisation rate for global refiners; and 2) a lower-than-expected supply of alternative crudes and asphalt.

Source: FSSIA estimates

Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finansia Syrus Securities Public Company Limited

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All share prices are as at market close on 30-Aug-2022 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

Stock ratings are based on absolute upside or downside, which we define as (target price* - current price) / current price.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause a temporary mismatch between upside/downside for a stock based on market price and the formal recommendation.

* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

Industry Recommendations

Overweight. The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

Neutral. The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

Underweight. The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

Country (Strategy) Recommendations

Overweight (O). Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Neutral (N). Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Underweight (U). Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.