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## ON THE COVER

Cat longwall shearsers offer high cutting and haulage power, ensuring operators get the most out of their operations. With unique machine features and state-of-the-art technologies, Cat shearsers achieve record-setting production in the toughest mining conditions. Powerful automation packages keep operators in the ‘safe zone’, away from the face, and deliver precise, efficient production. Improved face alignment and full 3D navigation, with advanced floor profile calculation for horizon control, further increase productivity and profits. For more information, visit: cat.com/mining
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MMD remains a group of committed and experienced professionals who have the skills and knowledge to provide dedicated after-sales service and technical support via a network of local offices. Discover how we can deliver the complete sizing solution for your specific needs.
The European energy crisis continues to dominate headlines and conversations throughout the coal and energy industries. We have now reached the point in time where predictions and forecasts of renewed demand, made over three months ago, are now coming to pass in real time. Indeed, recent reports from the BBC, Euronews, Reuters, Sky, The Washington Post, etc., have confirmed that several European countries are now turning to coal to meet their respective energy demands.

Of these countries, Germany has made one of the highest profile transitions back to coal, as it looks to re-balance its energy mix as part of EU-wide efforts to implement a strategy to reduce imports of Russian gas by two-thirds within a year – in response to the invasion of Ukraine.1 This action, in addition to Russia counter-action – namely the recent, sudden cuts to export volumes to Europe via the Nord Stream 1 pipeline – have created significant shortfalls in crucial gas supplies in Europe.2 These shortfalls have come at a time when stockpiles are usually built up in preparation for the spike in seasonal heating demand in winter, prompting concerns about a winter gas shortage and accusations of “very rogue moves” being made by the Putin administration.2 This, according to Robert Habeck (Germany’s Vice Chancellor, Federal Minister for Economic Affairs and Climate Action), has created a situation in which the German government has been forced to burn more coal for a “transitional period”.3 Habeck added, “[i]t’s bitter, but it’s simply necessary in this situation to lower gas usage”.4

Despite the need to broadly reintroduce coal into the European energy mix being accepted by governments across the continent as a necessity at this time, predictably, there has been a lot of pushback and concern regarding the impact on progress towards climate goals.5 As can be noted from the words of Habeck, as well as those of the German Chancellor, Olaf Scholz, quoted in a recent Deutsche Welle article, the message being pitched to assuage dissent has focused on the turn to coal being ‘transitional’ and ‘temporary’.5,6 Nevertheless, truly how temporary the situation is remains to be seen.

Right now, the market news is at least encouraging for the coal industry. Coal prices have seen a spike since Russia’s invasion of Ukraine began, and have subsequently remained on an upward trajectory – a trend which looks set to continue for the foreseeable future, as reported by Rystad Energy, “the prospect of additional demand from German coal-power restarts is certain to push imported coal prices beyond their current super-high levels.”6 Furthermore, with a ban on Russian coal imports looming, Bloomberg projects that thermal coal prices will remain well supported for 2022, and well into 2023 – maintaining levels that are already breaking records.7,8

While the energy industry has its eyes on Europe, we at World Coal have not forgotten coal is global. Make sure to read our latest regional report by Fitch Solutions to get the latest news from Asia and Australia. Also, check out our new range of technical articles, especially those from THIELE and Komatsu who return to our pages to share the latest insights into longwall mining chains and shovel, excavator, and dragline technology.

I hope you enjoy this new issue of World Coal. Make sure to pick up a hard copy if you are attending Electra Mining Africa, EXPO Katowice, or The Bluefield Coal & Mining Show.
EXHIBIT AT THE 2022 SHOW IN THE AREAS OF:

Underground Mining • Safety • Technology
Aggregate • Components • Equipment
Zululand Anthracite Colliery reached a two-year wage agreement with its mine employees on 30 June 2022. The agreement, which went into effect on 4 July 2022, ended a lengthy strike, which commenced on 20 April 2022. The agreement took into consideration inflationary costs faced by employees. Employees are being appointed in a staggered fashion to meet operational requirements. It is anticipated that all 402 workers who were on strike will be back at work by 1 September 2022, with full production scheduled to take place by 1 October 2022.

Thiess Rehabilitation has been awarded its first contract, a 3.5 year partnership with Idemitsu Australia’s Ensham Resources to deliver mine rehabilitation solutions that create areas for native bushland corridors and cattle grazing across more than 700 ha. of land. Working with the client at the Ensham Mine, east of Emerald in Queensland, Australia, the scope of works includes the detailed design and construction of the final rehabilitated landforms, topsoiling and seed bed preparation, and sowing of both pasture and native tree species. The team will apply industry leading landform design methodologies, as well as the implementation of technology for surveying and seeding to deliver the project.

NRW Holdings Ltd’s wholly owned subsidiary, Golding Contractors Pty Ltd, has executed a 5.5 year mining services agreement with Wonbindi Coal Pty Ltd at the Baralaba North Mine. The award is valued at approximately AUS$800 million and includes maintaining and operating a client-owned fleet of equipment, producing an ultra-low volatile PCI product. The mining services agreement commences on the 1 July 2022.

In May, the Solntsevsky coal mine switched to digital production management. This made it possible to quickly identify malfunctions in equipment (including fuel systems), reduce fuel consumption and time, and increase the average technical speed of dump trucks. The transition to digital production management has since delivered its first results, increasing the average productivity of coal mining by 10% in June. During the recent ‘Day of Increased Productivity’, when the control centre worked during the day and on the night shift, the Solntsevsky coal mine team reached a record daily production rate of rock mass – 470 000 t. In the future, the centre is planned to be transferred to a round-the-clock mode of operation.

This allows operators to quickly identify malfunctions in equipment (including fuel systems), reduce fuel consumption and time, and increase the average technical speed of dump trucks. Digitisation also speeds up the workflow without putting employees at risk.

Bowen Coking Coal Ltd has commenced coal mining at the Broadmeadow East Pit near Moranbah in Queensland’s Bowen Basin. Coal from Broadmeadow East is planned to be initially processed at the neighbouring Fitzroy coal handling and processing plant (CHPP), under an infrastructure sharing agreement with Fitzroy (CQ) Pty Ltd, and exported through the Dalrymple Bay Coal Terminal.

As the first producing pit of Bowen’s expanded Burton Complex, which includes the Burton and Lenton Pits 20 km to the north, Broadmeadow East coal will be processed through the Burton CHPP, following the completion of its refurbishment in early 2023.

After final approvals for the project were granted in March 2022, Bowen announced the appointment of BUMA Australia Pty Ltd as mining contractor in May.

The coal at Broadmeadow East has the flexibility to produce a primary metallurgical coal product of either high quality or high yield. In both of the primary product cases, the secondary energy coal created from the primary metallurgical coal discard has a calorific value of more than 6500 kcal/kg (ad), which is also a sought-after product for the export coal markets.

Broadmeadow East’s first coal follows the company’s first coal shipment from the Bluff Mine near Blackwater in June. First run-of-mine (ROM) coal is targeted for late 4Q22 from the nearby Burton Pit, as the company works towards a 5 million tpy ROM by 2024.
DIARY DATES

**MINES AND MONEY CONNECT**
30 August – 01 September 2022
Online
www.minesandmoney.com/online

**ELECTRA MINING AFRICA**
05 – 09 September 2022
Johannesburg, South Africa
www.electramining.co.za

**INTERNATIONAL FAIR EXPO KATOWICE**
06 – 09 September 2022
Katowice, Poland
www.expo-katowice.com

**THE BLUEFIELD COAL & MINING SHOW**
14 – 16 September 2022
Bluefield, West Virginia, USA
www.coastwvirginias.com/our-events/the-bluefield-show-mining-show

**COALTRANS ASIA**
18 – 20 September 2022
Bali, Indonesia
conferences.coaltrans.com/asia-2022

**CHINA MINING EXPO 2022**
18 – 21 October 2022
Xian, China
www.chinaminingexpo.com

**IMARC 2022**
02 – 04 November 2022
Sydney, Australia
www.imarcglobal.com

**4TH ANNUAL INDIA COAL CONFERENCE**
03 – 04 November 2022
New Dehli, India
icc-2022.com

**GLOBAL HYDROGEN CONFERENCE 2022**
16 November 2022
Online
www.globalhydrogenreview.com/ghc22

To stay informed about the status of industry events and any potential postponements or cancellations of events due to COVID-19, visit World Coal’s events page: www.worldcoal.com/events

WORLD NEWS

**AUSTRALIA** Oaky Creek continues to implement rehabilitation goals

Glenore’s Oaky Creek Coal complex in Central Queensland has secured a sign-off from the Queensland government on 433 ha. of rehabilitated mined land. It is the second successful application from Oaky Creek over the past two years, having previously achieved sign-off on another 133 ha. of rehabilitation in 2020, bringing the total at Oaky Creek to 566 ha.

The latest certification represents the ninth successful application for sign-off by a Glencore coal operation and the seventh at a Queensland site, following previous certification for 211 ha. at Newlands (2017 and 2021), almost 400 ha. at Rolleston (2018 and 2019), and 99 ha. at Collinsville (2020). New South Wales sites, Westside (38 ha. in 2020) and Ulan (52 ha. in 2020), have also achieved sign-off on areas of rehabilitation.

A number of Glencore sites in both states are currently preparing submissions for certification of further areas.

To achieve certification, rehabilitated mined land must meet key completion requirements, including soil stability and mature vegetation.

**USA** Hallador Energy Company invests in Knox County

Hallador Energy Company, through its wholly subsidiary, Sunrise Coal, has announced investment in Knox County, Indiana, with the reopening of the Freelandville Surface Mine. Mining activities are expected to commence immediately.

As such, Sunrise Coal is currently hiring 200 new employees in the area, seeking experienced and non-experienced personnel for both its underground and surface operations.

The Freelandville Mine is one of many new investments Hallador is making in the area. In February 2022, Hallador announced it would be acquiring the Merom Power Plant, located in Sullivan County, Indiana, subject to certain governmental and regulatory approvals.

Hallador anticipates completing the purchase in 3Q22 and has entered into a multi-year power purchase agreement with Hoosier Energy. It is expected, over time, that up to half of Sunrise’s coal production will be consumed annually at the Merom Power Plant, securing long-term demand for Sunrise’s large coal reserve base.

Earlier this year, Sunrise began operating its Russellville elevator, Illinois. This investment provides a closer location for employees located near the Russellville area to access the Oaktown II underground mine. Also, in Pike County, Indiana, Sunrise will begin new surface mining operations at its Prosperity Mine, near Petersburg, Indiana.
AUSTRALIA GAS-Santos JV granted new exploration permit

The Queensland Government has issued new exploration permit ATP 2068 to a State Gas Ltd (through its 100% subsidiary, State Gas (CQ) Pty Ltd) and Santos QNT Pty Ltd (100% subsidiary of Santos Ltd) joint venture (JV).

This new permit grant follows the appointment of State Gas and Santos as preferred tenderers of two areas under the recent Queensland Government Petroleum Land Release Program in May 2022. Constituting approximately 702 km², ATP 2068 (formerly PLR2021-1-2) is directly adjacent to State Gas’ Reid’s Dome (PL 231) and Rolleston-West Projects (ATP 2062) to the west and north, and the 50% Santos owned Warrinilla and Warrinilla North Projects (PL 451 and PCA 301) to the east.

The permit provides acreage connectivity between State Gas’ Reid’s Dome and the Santos interests to the east. The new permit area is highly prospective for coal seam gas in the Bandanna Formation, as well as containing targets for conventional gas. The Bandanna Formation is currently in production on Santos operated acreage to the east, and being tested by State Gas at its adjacent Rolleston-West Project.

Under the JV, State Gas holds 35% of the new permit, with Santos holding the remaining 65% and appointed operator. In addition to the economies of scale available from coordinating operations with Santos, the JV is expected to benefit from Santos’ extensive experience in producing from Bandanna coal formations in the area.

The grant of ATP 2068 to the State Gas–Santos JV, to be followed (once native title processes are concluded) by the permit for PLR2021-1-3, results in an alignment of the partners’ ownership interests across the gas resource in the majority of the southern Bowen Basin, providing the opportunity for coordinated and synergistic development of the whole region.

The rapid grant of the permit, less than two months after appointment of preferred tenderers, will enable the parties to move quickly to commence activities on the area. Its proximity to existing projects and infrastructure will facilitate its development in due course.

AUSTRALIA Bowen Coking Coal commences mining at Broadmeadow East

National Group has been awarded a three-year (plus two) mining services contract at Yancoal’s Moolarben coal mine in the Western coalfields of New South Wales (NSW).

National Group’s contract-mining arm – National Mining Services – will provide works that include the safe pre-stripping of a minimum of 15 million bcm of overburden each year at Moolarben coal mine, near Ulan, about 220 km northwest of Sydney.

National Mining Services will use National Group’s ultra-class mining equipment on the contract, including Liebherr R9800 excavators, Liebherr T282 dump trucks and other ancillary equipment. The contract will create 75 jobs.

The Moolarben contract continues a strong period of growth for National Group in the coal industry. In January 2022, National Group extended an equipment contract for Anglo American Australia on its two expanding opencast coal mines at its Capcoal operation in the Bowen Basin in Central Queensland (Lake Lindsay and Oak Park).

The Moolarben contract expands National Group’s footprint in NSW. In 2021, Newcrest awarded National Group a surface-mining contract at its Cadia gold mine in central NSW. National Group is supplying Caterpillar 994K and 988K Large Wheel Loaders, Caterpillar 793 Dump Trucks, and the Hitachi ZX890 Excavator. Up to 40 National Group employees are maintaining the equipment.

National Mining Services is well-positioned to take on more work in mining services by providing mining and infrastructure services to National Group’s major opencast mining clients.

The business has extensive capabilities in large scale mining projects, meeting production requirements in excess of 3 million bcm per month of waste and coal.
WHAT’S IN STORE FOR COAL?
Nick Trickett, Fitch Solutions, UK, provides insight into what the future holds for coal in Asia and Australia.

Coal will remain the dominant source of power for most of Asia and Australia for at least the next decade, which will support coal mining and trade in the region. Coal remains the most practical means to stimulate affordable electricity generation growth at the pace and scale needed to support continued economic growth, or rapidly respond to shortfalls of supply from other sources.

Nevertheless, stricter environmental standards in Asia will continue to hurt coal miners by increasing compliance costs and delaying project development. Reducing carbon footprints has gained significant impetus since 2020; as governments commit to their Nationally Determined Contributions of the Paris Agreement and balance energy security needs against emissions reduction, the shift to a low-carbon economy will have a significant impact on the regulatory frameworks of most major mining markets in Asia and Australia. Asia-Pacific governments will face considerable challenges on this front, where major mining countries – including China, India, Australia, and Indonesia – will remain largely reliant on fossil fuels (primarily coal) for energy generation. Fitch Solutions forecasts production for Asia and Australia to grow an average of 1.3% y/y, rising by 812 million t for 2022 – 2031. Expected lost exports from Russia, due to sanctions, are unlikely to negatively affect supply in the region because of more aggressive efforts to ramp up thermal coal output in China, as well as the new Australian government’s willingness to continue supporting coal projects.

Key views
- Asia will remain highly dependent on coal for power generation in the coming decade at least, which will in turn support the coal mining sector and coal trade in the region, despite growing decarbonisation pressures.
- China and India will be the leaders of coal production in absolute terms and will decrease their import dependence in the next decade.
- Vietnam’s coal production will outperform regional players in Southeast Asia, while Thailand and Myanmar will remain laggards in the coal mining sphere.
Malaysia and Cambodia will continue relying on coal imports, with muted growth for domestic mining.

China and India to dominate regional thermal coal production in absolute terms, Indonesia and Australia dominate exports

China and India will continue to produce the bulk (approximately 82%) of total thermal coal output in the Asia-Pacific region. These countries will also continue to account for approximately 62% of global coal production in the coming decade. The outlook for thermal coal production in China and India is bolstered by government support, domestic needs, and strong demand from coal-fired power plants in the region. Nevertheless, while absolute production levels will remain elevated over the coming decade at least, production growth will slow in the long term due to weak coal prices and rising environmental regulations. Fitch Solutions forecasts that China and India's thermal coal consumption will peak by 2027 and 2030 respectively, after which they begin to decline. China's thermal coal consumption is forecast to grow an average of -0.2% y/y for 2022 – 2031, while India's consumption is forecast to grow an average of 1.4% y/y due to stronger short-term demand growth.

China

In regard to China, thermal coal production will continue to grow over the next decade, boosted by shorter-term policies reacting to sanctions on the Russian economy and seeking to replace thermal coal imports from Russia and Australia. Coal production growth will average 1% y/y for 2022 – 2031, with output rising significantly from 4 billion t in 2022 to 4.5 billion t. Government plans will continue to consolidate the coal sector, with the hope of making the achievement of environmental targets and enforcement of regulations easier as efforts are made to reduce coal use for domestic power generation, expanding the role of state-owned enterprises that are controlled by provincial governments.

In December 2021, the government set a target to increase domestic output by 300 million t in order to ensure adequate security of supply in response to the energy crisis experienced in 2H21, following shortfalls in natural gas supply. The Xinjie thermal coal mine (owned and operated by China Shenhua Energy Co.) is the largest driver of output gains from new projects, projected to produce 62 million tpy once fully operational. Coal's share of power generation is expected to decline from 61.7% in 2022 to 46.8% in 2031.

India

India's thermal coal production will grow significantly faster than China's, but from a much lower absolute base as policies and the private sector pursue greater self-sufficiency and investment into clean coal. Coal production growth will average 3.5% y/y for 2022 – 2031, with output rising from 741 million t in 2022 to 1 billion t in 2031. Growth is being led by state firms, with ongoing delays to reform attempts to open up the sector for more private investment due to pressure from trade unions. State-owned Coal India has committed to spending US$16.8 billion for excavation and clean coal projects by 2023 – 2024, the largest ongoing CAPEX commitment of any coal miner in India. Policies pose downside risks in the short-term, as authorities have cut the mandated volumes of domestically-produced coal available for power plants headed into summer, increasing India's dependence on imports and negatively affecting domestic miners’ short-term CAPEX plans. Coal is forecast to account for 69.5% of electricity generation in 2022, and will decline to 65.8% by 2031.

China and India

Both China and India will continue to depend on imports to satisfy domestic needs, but see their import dependence decline over the next decade. China and India’s forecast import needs will contract an average of 7.4% and 4.5% respectively, halving cumulatively from 1.2 billion t in 2022 to 600 million t in 2031. China and India only possess 11 new coal projects of the 177 recorded globally in the Fitch Solutions Global Mining Database. Rising production in China and India will ultimately reduce their respective importers’ dependence on supplies from Indonesia and Australia.

Australia

With regards to Australia, the coal industry will experience virtually no production growth for 2022 – 2031, but will benefit from declining domestic consumption. Coal production growth in Australia will average -0.01% y/y during 2022 – 2031, with output decreasing minimally from 299 million t in 2022 to 297.7 million t in 2031.
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solutions >> Refined
As investors become wary of climate change issues and global energy consumption patterns shift away from coal, established players will increasingly leave the high-cost Australian coal market, while smaller players enter. Anglo American, Peabody Energy and Vale have all started liquidating their Australian coal portfolios, with Rio Tinto having completely exited the coal market. In place of these established players, smaller, lesser known players, mostly private equity, have entered the market, some of whom have no prior mining experience.

The new Labor government has committed to backing coal projects deemed economically viable, protecting exporters’ competitiveness, and increasing public investment into renewable energy infrastructure by at least AUS$20 billion. Fitch Solutions forecasts coal will account for 70.9% of Australia’s power generation in 2022 and decline to 65.5% by 2031, with potential for more rapid declines due to the new government in power. Australia’s annual thermal coal output will rise due to increasing production at MACH Energy’s Mount Pleasant mine (10 million tpy), and Sojitz and U&D Coal’s Orion Downs mine (1.5 million tpy). The ramp-up at Whitehaven Coal’s Vickery mine, which started in 2019, will take approximately six years to reach its annual rated capacity of 8 million tpy. The Carmichael project is also expected to produce 8–10 million tpy of thermal coal, with a total CAPEX allocation of US$13 billion. The project delivered its first shipments of coal in January 2022.

Environmental issues and protectionism will also continue to pressure Australia’s coal sector in the coming years, despite a softened political stance from the new Labor government. As a case in point, though the Queensland government has approved Adani Group’s Carmichael coal, rail and port projects, the group has had to fund 100% of the project, as announced in November 2018. In November 2020, the group rebranded its Australian unit as Bravus Mining and Resources. Banking giants HSBC and Deutsche Bank, as well as European banks such as BNP Paribas, Crédit Agricole and Société Générale, refused to bankroll the expansion due to intense lobbying by environmental activists. Australia will be at risk of a sudden tightening of environmental regulations, placing in limbo numerous new coal mining projects in the pipeline. As per Fitch Solutions’ Global Mines Database, 80 of the 177 new coal projects globally are situated in Australia, although not all of them will reach fruition going forward.

Indonesia

Indonesia will see weak growth for thermal coal production over 2022 – 2031, but domestic needs and politics will continue to support the coal industry. Coal production growth will average just 0.3% y/y for 2022 – 2031, rising from 473.1 million t in 2022 to 488 million t in 2031. Coal will remain a key fuel for Indonesia’s power expansion and a key generation source over the coming decade, as supplies remain abundant and cheaper in the market – thanks to a commitment by the government to protect its coal mining industry. The relatively low cost of the feedstock means that coal will remain the fuel of choice to meet surging power demand in the country. The government aims to boost domestic coal demand and support coal prices, as it expects lower demand internationally when more markets move towards cleaner generation sources. Coal power generation will account for approximately 75.8% of Indonesia’s power mix in 2022, and this figure will rise slightly to 77.2% by 2031.
Vietnam to outperform regional peers in Southeast Asia, while Thailand and Myanmar lag behind

**Vietnam**

Vietnam’s coal mining sector will outperform in the coming decade in comparison with other countries in Southeast Asia (excluding Indonesia). Coal production growth in Vietnam will average 1% y/y during 2022 – 2031, with output increasing from 38.9 million t in 2022 to 43.2 million t in 2031. The resource industry in Vietnam is largely state-led and heavily regulated by the government. State-owned miner Vinacomin is the largest coal producer in the country at present. It accounts for 95% of domestic coal production and has a production capacity of approximately 40 – 45 million tpy. The bulk of its coal reserves are located in the northern area of the Quang Ninh province and the Red River Delta Basin. The country is rapidly developing new coal-fired power plants, which will bode well for the coal mining sector. In July 2017, the government tasked the Ministry of Industry and Trade with developing a roadmap for the coal mining sector, in order to ensure sustainable supplies and a more competitive marketplace. Official forecasts put coal consumption over 100 million tpy by 2031, and coal’s share of power generation has already risen from 40.5% in 2018 to a projected 52.3% for 2022. Nevertheless, the mining sector will continue to be dampened by decreasing coal prices in the long term, higher natural resources tax (which was implemented in July 2016), and higher production costs due to the depletion of coal layers, which are easier to access. In fact, traditionally an exporter, Vietnam turned into a net importer of coal in 2016.

**Thailand and Myanmar**

Thailand and Myanmar will continue to incorporate the least amount of coal in their power mix compared with other countries in Asia in the coming decade. Thailand’s coal-fired power, as a percentage of total electricity generation from all sources, will amount to only 17 – 19%, while Myanmar’s figure will remain within 6 – 9% during 2022 – 2031. This is compared with 30 – 60% of the power mix for the rest of Southeast Asia and Australia. This will be the main factor constraining coal mining investment and production to remain small in the coming years.

**Thailand**

The outlook for Thailand’s coal mining industry is far from positive. Coal production in Thailand will contract an average of -0.2% y/y during 2022 – 2031, with output increasing minimally from 25 million t in 2022 to 24.3 million t in 2031. Depleting domestic coal reserves will see Thailand increasing imports to fuel its reliance on coal for power generation instead of relying on domestic production. Due to coal being the most cost-effective fuel source, it will still account for a substantial portion of power generation over the coming years. However, public distrust towards coal-fired power generation over environmental and health issues will continue to rise, limiting investment in coal mining. Currently, the majority of the electricity generated in Thailand comes from gas.

**Myanmar**

Myanmar’s electricity also comes mainly from gas, with coal mining to remain limited in the long term. Coal production growth in Myanmar will average 5.3% y/y during 2022 – 2031, with output increasing from 2.9 million t in 2022 to 4.8 million t in 2031. Additionally, with the political upheaval in Myanmar – which started with the coup on the government in February 2021 by the Tatmadaw (Myanmar military) – expected to last for many years, investment in the mining sector will see a sharp decline as international firms seek to leave the market. For now, mining operations are running smoothly, although firms will increasingly exit the market as international pressures rise. Currently, most coal mining in Myanmar is done in Shan State, with Eden Group operating the largest coal mine in Tigyit with a capacity of 828 000 tpy. Ngwe Yee Pearl Co. and the Tatmadaw also have a 25 year coal mining deal in the Hsipaw, Tang Yan, and Mong Tai townships in Shan State. Additionally, Min Shwe Hlwar Co. has also operated coal mines 500 km off the Nam Ma and Nar Nang villages since early 2019. However, most coal mines in the Shan State are located underground, beneath residential homes, and there is significant social backlash as blasts create noise pollution and waste flows into the Nam Pang River, contaminating the largest tributary of the Than Lwin River. According to a 2008 law, the central government has the sole authority to mine natural resources, granting coal mining permits to entrepreneurs without the consent of locals. Outside of Shan State, Tun Thwin Mining Co. Ltd and No. 1 Mining Enterprise operate the Paluzawa coal mine in Kalewa, Sagang Region.

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Figure 5. Global coal mine production by region (million t) shows Asia’s share of global production to grow.
public opposition, the outlook for the coal mining sector in Myanmar remains bleak.

**Philippines to continue relying on coal, despite significant challenges to domestic coal mining**

Coal mining will come under significant pressure in the Philippines in the coming years, as the Philippine government declared a moratorium on coal power projects in October 2020 and will no longer approve the construction of any new coal power plants. The government has stressed that coal will remain the dominant power generation source for years to come, with several projects in the pipeline that were already approved prior to the announcement. Coal projects with environmental compliance certificates and permits from local governments will also be excluded from the ban. Coal production growth in the Philippines will stagnate during 2022 – 2031, with output remaining around 14 million t throughout the period. In recent years, coal mining and coal-fired power projects have been facing very strong and increasing public opposition, including the involvement of several religious associations who signed a manifesto to advance the coal divestment movement and to disallow investments into new ‘dirty’ assets.

In May 2020, more than 42 faith-based institutions, including Catholic churches, have announced that they are divesting US$1.4 billion from fossil fuels. This follows the launch of Church-CSO Empowerment for Environmental Sustainability (ECO-CONVERGENCE), where various church leaders and civil society groups have jointly urged domestic banks to stop funding new coal-fired power projects. In September 2019, more than 50 civil society groups and people’s organisations participated in a nationwide protest, urging President Rodrigo Duterte to impose a moratorium on new coal-fired power plants. Several key utilities in the Philippines, such as AC Energy and MERALCO, have also signalled intentions to shift away from coal. Despite this, Fitch Solutions expects coal consumption to grow an average of 5.2% y/y for 2022 – 2031 (from 40.13 million t to 66.8 million t), since coal remains the most reliable fuel to quickly ramp up during natural gas supply shortfalls or surges of demand. Coal currently provides roughly 57% of power, but Prime Infrastructure Holdings announced plans on 8 June 2022 to build an 850 MW solar project with storage capacity intended to reduce coal consumption by 1.4 million t. Should this and similar projects emerge and progress, consumption growth may be dented significantly.

**Malaysia and Cambodia to remain reliant on coal imports**

Malaysia and Cambodia will see coal’s share in the power mix to rise steadily over the coming decade at least, but both countries will mainly rely on imported coal rather than domestically mined coal. Both Malaysia and Cambodia rely on coal imported from Indonesia at present, and there will be little change in this dynamic.

**Malaysia**

Malaysia has a very small coal mining sector, located in the state of Sarawak. Malaysia’s coal production will continue to stagnate at 2.6 million t for the foreseeable future. Despite the prevalence of gas in the power mix, the Malaysian government is hoping to diversify its primary energy sources so that the rising power demand can be met without having to rely too heavily on dwindling domestic gas supplies. Hence, the government is keen to expand coal-fired power generation and production from renewable energy sources. However, environmental opposition to coal is rising, with Malaysia’s CIMB announcing detailed plans to end coal financing by 2040, making it one of the banks in the region with the strongest climate policy at present. This follows after major banks in the region have signalled intentions to start moving away from financing coal. Malaysia’s Maybank and RHB Bank still appear to remain committed to financing coal projects around the region, despite their new environmental, social, and governance policies.

**Cambodia**

Cambodia does not produce any coal, and this will remain the case in the longer term. In Cambodia, the lack of sound infrastructure continues to be a major hurdle for miners, particularly for the development of bulk commodities such as coal. Similar to other countries in the region, there is also significant social and environmental opposition to coal mining in Cambodia. Additionally, foreign investors are also not allowed to own land under Cambodia’s Constitution and are only able to lease the land for a period of up to 70 years, with the option to renew thereafter. However, the country’s investment law allows foreign companies to own 100% of their mining investment, in addition to the fact that foreign-owned assets will not be nationalised.

**Conclusion**

Asia will remain dependent on coal for its power needs for at least the coming decade, as China and India increase domestic thermal coal production in pursuit of energy security. Though Fitch Solutions expects output to rise in smaller producer and consumer countries, their contribution to net changes in production and demand are marginal. Fitch Solutions forecasts China and India’s share of regional production will rise slightly from 79.7% in 2022 to 80.7% in 2031, while producers (excluding China, India, Australia, and Indonesia) will see a marginal share increase from 5.8% to 6.3% over the same period. The coming peak of coal power and steel demand in China by 2027 – 2028 will lead to a trend of structural decline, one likely to accelerate in the 2030s due to the large expansion of nuclear power output expected in China in the next 15 years. Output in Australia and Indonesia will remain flat, limited by investor preferences to divest from coal and political risks. In the next decade, however, decarbonisation pressures will do little to affect coal’s centrality across the Asia-Pacific for both power and metallurgical needs.
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