Major players in the Australian coal industry and factors influencing thermal coal pricing for Japan

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1. Introduction

Coal—whether used as a fuel or in the steelmaking process—has been behind the scenes, powering the world economy and promoting the development of modern society for centuries. Its use has also come under increasing criticism over the last couple of decades as governments, private enterprises and other organizations have come to recognize anthropogenic climate change as a top priority and make efforts to reduce greenhouse gas emissions. However, coal's global abundance ensures supply stability, and as long as it retains its competitive edge over other energy sources, it is likely to continue playing a major role in the energy mix in Japan[1] and many other parts of the world for years to come. Growth in demand for steel may also make the use of coal in the blast furnace ironmaking process inevitable.

Focusing on Australia[2]—Japan's largest and most stable supplier of high quality coal—this essay outlines the history of the Australian coal industry and its major players before turning to focus on Japanese power utilities (JPUs), the largest thermal coal consumers in Japan. Australian thermal coal procurement by Japan and the pricing of this coal are also analyzed to gain an understanding of the sales and purchase process.

2. Brief history of the Australian coal industry

According to Australian government records, coal was discovered in Australia in 1791 by an escaped convict near the site of Newcastle[3] in eastern New South Wales (NSW). Coal mining commenced there in 1799 and Australian coal was first exported—from Newcastle to British-ruled India—the same year[4]. Although commercial coal production had commenced in every Australian state by 1898[5], the states of NSW and Queensland (QLD) became the centers of coal mining in Australia because of their more plentiful deposits[6].

Figure 1. Commonwealth of Australia

Source: CIA website

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[1] According to the 5th Strategic Energy Plan formulated by the government of Japan (approved by the Cabinet in July 2018), coal is expected to account for approximately 26% of Japan's power generation mix in 2030.

[2] Japan imported 192.84 million metric tons of thermal coal in Japanese Fiscal Year (JFY) 2017, of which 62% (119.13 million metric tons) was from Australia.
TEX Report; 2018 Coal Yearbook (written in Japanese), p.46

[3] M.B. Huleatt, Bureau of Mineral Resources; Geology and Geophysics, Australian Mineral Industry Quarterly, 34 (1981)

[4] Port Authority of New South Wales; Information for Students

[5] Productivity Commission; The Australian Black Coal Industry, Inquiry Report Volume 2: Appendices, Report No.1, 3 July 1998, p. C1.
https://www.pc.gov.au/inquiries/completed/black-coal/report/coal2.pdf#search=%27histrocial+coal+mine+developer+australia%27

[6] Productivity Commission; op.cit., p.C3.

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Japanese companies played key roles as buyers and financiers of the development of coal mines and in the sharp expansion of Australian coal production and export that began in the mid-to-late 1950s. Two primary factors powered the increase. First, the rebuilding of Japan after the Second World War led to the development of large mines in QLD, and coking coal exports to Japan started in 1959 to fulfill growing steel demand[7]. Mitsui & Co., a Japanese trading house, partnered with Thiess, an Australian company, and Peabody, an American company, in the 1963 development of the Moura mine, contributing financing and then selling the coal to Japanese consumers[8]. This was the first joint development project in Australia by a Japanese company and a model for later foreign investment in the Australian resource sector[9]. The second major factor that promoted the development of Australian coal production was surging oil prices during the two oil crises of the 1970s. This led to the rediscovery of coal as an alternative fuel and a rapid increase in Australian thermal coal exports[10].

3. Major players in the Australian coal industry over time

The roughly 230-year history of the Australian coal industry can be divided into five periods.

Figure 2. Development of the Australian coal industry

1790s to 1960s
Local companies (public enterprises and domestic private companies, such as shipping companies)
▼▼▼
1970s and 1980s
Overseas investment (entry of international companies, including major oil companies)
▼▼▼
1990s and early 2000s
Players change significantly (exit of major oil companies and entry of major resource companies)
▼▼▼
Late 2000s and early 2010s
Players change significantly again (entry of Asian companies)
▼▼▼
Mid 2010s to today
Divestment by major resource companies and investment by Asian companies, Glencore and pure Australian coal players

3.1 From 1790s to 1960s: local companies

Starting in the late 18th century, private companies were the leaders in developing and operating coal mines

[7] Productivity Commission; op.cit., p.C2.
[8] Australian Trade and Investment Commission; Japanese Investment in Australia, July 2017, p.12. https://www.anzccj.jp/resources/Documents/Austrade%20-%20Japan%20Investment%20in%20Australia%20-%20launced%2028%20July%202017.pdf#search=%27Nippon+Steel+Australia+investment%27
[9] Mitsui & Co. https://www.mitsui.com/au/en/company/history/index.html
[10] Productivity Commission; op.cit., p.C2.
Bill McKay, Ian Lambert and Shige Miyazaki, Australian Geological Survey Organization; The Australian Mining Industry: From Settlement to 2000, October 2000. https://www.abs.gov.au/ausstats/abs%40.nsf/94713ad445ff1425ca25682000192af2/93136e734ff62aa2ca2569de00271b10!OpenDocument

while some public enterprises served complementary roles by operating some mines[11]. The capital injected was overwhelmingly local as late as the 1960s; little overseas investment had taken place other than England's investments when Australia was a British colony. During the 1950s and 1960s, the Australian coal industry saw widespread consolidation and a resulting aggregation of coal resources[12].

Several developments in NSW during this period affected the development of the Australian coal industry. The NSW colonial government established some coal mines during the 1810s and 1820s before selling them to the Australian Agriculture Company (AAC)—established in England—in 1830[13]. During the 1840s, Australian private companies, such as J. and A. Brown (JAS)[14], entered the market to challenge AAC's coal production monopoly. Shipping companies based on the Australian coast who transported coal by steamship invested in the development of coal mines, which required huge amounts of capital. Howard Smith[15], an Australian shipping company, purchased a British company called Caledonian Coal and founded Caledonian Collieries in Australia; it then promoted both shipping and coal mining as its core businesses. Another Australian shipping company, Adelaide Steamship, acquired a major share of coal mining operations in the Hunter region of NSW in the late 19th century and established Abermain Seaham Collieries (ASC) in 1922. The 1931 merger of ASC and JAS gave birth to J. and A. Brown and Abermain Seaham Collieries (JABAS)—the largest coal company in Australia throughout the 1950s. JABAS and Caledonian Collieries—a subsidiary of Howard Smith—were incorporated into Coal & Allied Industries (C&A), a major Australian coal company, in 1960[16]. The top three companies' share of coal production in NSW increased from 56% (BHP, C&A and a state-owned enterprise) in 1960 to 60% (a state-owned enterprise, BHP and Clutha) in 1970, and the aggregation of coal resources by major domestic companies in NSW likewise advanced[17].

3.2 1970s and 1980s: entry of international companies, including major oil companies

Australian companies continued to dominate the Australian coal industry during the 1970s and the 1980s. The current major mineral resource companies, BHP[18] and Rio Tinto (formerly CRA)[19], were already significant coal producers by this time. In NSW, domestic companies were responsible for about two-thirds of total coal production and C&A[20] was the largest producer during the 1980s[21].

International oil companies entered the Australian coal industry during this period in search of new opportunities to diversify in response to the drastically changed business environment in the wake of the first and second oil crises. The first major entrant was BP with its purchase of Clutha—the largest coal exporter in NSW—in 1977-78. Shell then acquired three Australian coal mining companies between 1977 and 1979[22]. Other oil companies, such as ExxonMobil (formerly Exxon), Chevron (formerly Caltex), ARCO (acquired by BP in 2000), Eni (formerly Agip) and Total, followed suit[23]. The first two entrants, BP and Shell, were the most

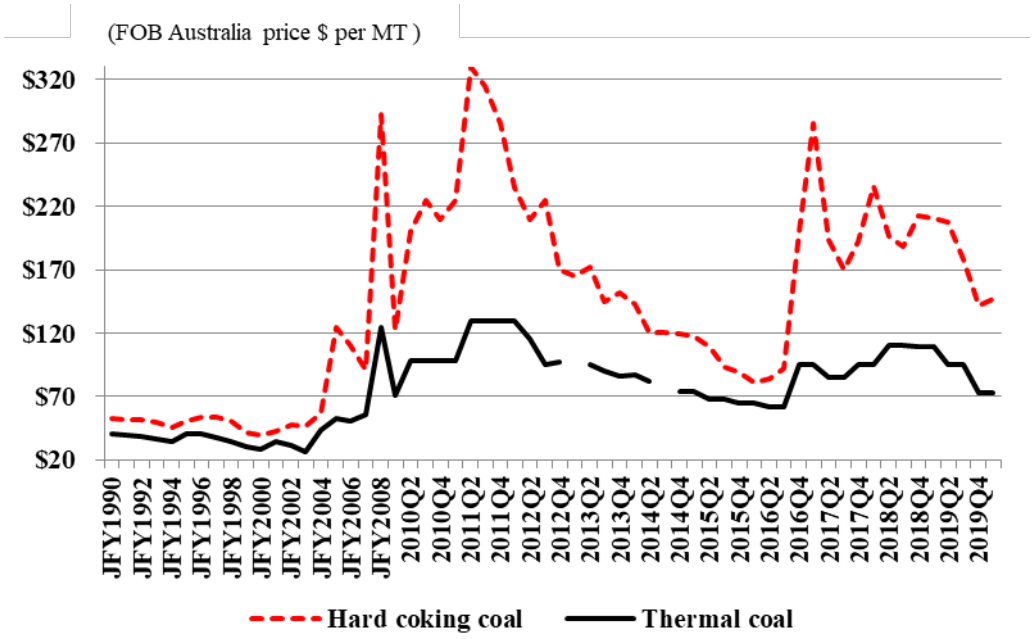
[11] John Wilkinson; Coal Production in New South Wales, Briefing Paper No 10/95, March 1995, p.7.
https://www.parliament.nsw.gov.au/researchpapers/Documents/coal-production-in-new-south-wales/Coal%20Production%20in%20New%20South%20Wales.pdf#search=%27Coal+Production+in+New+South+Wales%27
[12] John Wilkinson; op.cit., p.17.
[13] https://aaco.com.au/about-us/our-history
[14] John Wilkinson; op.cit., p.17.
[15] https://en.wikipedia.org/wiki/Howard_Smith_Limited
[16] John Wilkinson; op.cit., p.17.
[17] John Wilkinson; op.cit., pp.17-18.
[18] BHP Group Limited is the largest mining company in the world, mainly listed on the Australian Stock Exchange and the London Stock Exchange. BHP is an abbreviated expression of its original name, Broken Hill Proprietary Company Limited. It was originally founded as a copper mining company in Broken Hill, a city in southwestern NSW. In 2001, it merged with Billiton, a British mining company, and changed its name to BHP Billiton. In 2018, it changed its name again to BHP Group.
[19] CRA was a subsidiary of RTZ, a British mining company, and was originally listed on the Australian Stock Exchange. It merged with RTZ in 1995. The merged company, RTZ-CRA, was listed on London Stock Exchange and the Australian Stock Exchange and changed its name to Rio Tinto in 1997.
[20] C&A's largest shareholder in 1990 was Howard Smith with 42.1%. This changed when CRA purchased 70% of C&A's shares in 1991.
BXG, Inc. in association with Barlow Jonker, Pty. Ltd.; Australian Coal 1990 Update, p. II-43.
John Wilkinson; op.cit., p.18.
[21] John Wilkinson; op.cit., pp.17-18.
[22] Shell purchased interests in Austen & Butta and Thiess Holdings in 1977 and in Bellambi Coal in 1979. John Wilkinson; op.cit., p.18.
[23] NSW Department of Mineral Resources; Coal in New South Wales, Industry Profile 1984
NSW Department of Minerals and Energy; New South Wales Coal Industry Profile 1989, Statistical Information to June 1988
John Wilkinson; op.cit., pp.18-19.

aggressive. By 1982-83, they ranked third and fourth, respectively, in NSW coal production after Howard Smith and BHP[24]. However, they remained active in the Australian coal industry for very different lengths of time. BP left the market in 1989 when it sold its global mineral resource business—including its Australian coal business—to Rio Tinto[25]. Shell, by contrast, continued to be one of the top coal producers in Australia until the beginning of the 21st century.

3.3 1990s and early 2000s: exit of major oil companies and entry of major resource companies

By the mid-1990s, coal prices had stabilized at between $45 and $53 per metric ton (MT) FOB Australia for hard coking coal—the highest ranked coal for steelmaking purposes—and at $34 to $41 per MT FOB Australia for thermal coal. Coal supply and demand were well balanced in the market as producers increased coal supply in a timely fashion to meet growing demand, mainly in Asia.

Figure 3. Price movement in Australian term-contracted coal from 1990 to 2019



(Source) TEX Report; 2018 Coal Yearbook (in Japanese)
Energy Economic Center; Environment, Energy/Coal & Power Report (in Japanese)
IHS Markit; Australian Coal Report

[24] NSW Coal production in Australian Fiscal Year 1982/83 was 63.4 million metric tons. The top four producers were Howard Smith (15%), BHP (13%), BP (9%) and Shell (7%).
NSW Department of Mineral Resources; op.cit.
[25] John Wilkinson; op.cit., p.17.

Table 1. Top 10 coal producers in Australia in 1993

No.	Producers*1	Production share*2	Reference (Nationality / Major business area other than coal business, etc.)
1	BHP	25.2%	Australia / Iron ore, Non-ferrous metal ore, Petroleum
2	CRA	18.6%	Australia / Iron ore, Non-ferrous metal ore / Merged with its parent company, RTZ, in 1995 and renamed to Rio Tinto in 1997
3	Shell	7.6%	UK & Netherlands / Petroleum / Abandoned coal business in 2000
4	Powercoal	5.5%	Originally owened by the NSW state power / Acquired by Centennial Coal in 2002
5	Oakbridge	5.3%	Australia / Glencore acquired a major share in 2000
6	MIM	5.3%	Australia / Non-ferrous metal ore / Acquired by Glencore in 2003
7	Peabody	4.8%	USA / Withdrew from the Australian coal industry in 2001 and re-entered in 2002
8	ARCO	3.9%	USA / Petroleum / Abandoned coal business in 1998-99. Acquired by BP in 2000
9	Exxon	3.5%	USA / Petroleum / Abandoned coal business in 2000
10	Oceanic Coal	2.2%	Australia / Acquired by Glencore in 1999
Top 3 producers' share 51.5% / Top 5's share 62.3% ／ Top 10's share 81.9%			

***1: Company name in 1993**
***2: Total of thermal coal and coking coal on a saleable coal basis**
(Source) Australian Coal Report, COAL 1995

However, as a result of the Asian economic crisis in 1997, extreme oversupply emerged in the coal market. Hit hard by both significantly falling demand and prices, some producers underwent restructuring and sold their coal assets. Most of the major oil companies, such as Shell and Exxon, withdrew from the coal business around the year 2000. On the other hand, major resource companies like Rio Tino, Glencore and Anglo American believed that the market would recover and that coal demand would grow in the future, and used the low prices as an opportunity to actively purchase coal assets. The other major resource companies, BHP and Billiton, merged in 2001 to expand their bases of operations. The largest American coal miner, Peabody, is a unique example: it exited the Australian coal industry in 2001 but almost immediately re-entered in 2002 and it remains a player in Australian coal now.

Table 2. Top 10 coal producers in Australia in 2004

No.	Producers*1	Production share*2	Reference (Nationality / Major business area other than coal business, etc.)
1	BHP Billiton	23.5%	Australia & UK / Iron ore, Non-ferrous metal ore, Petroleum
2	Rio Tinto	19.1%	Australia & UK / Iron ore, Non-ferrous metal ore
3	Xstrata	18.5%	Glencore's subsidiary / Merged with Glencore in 2013
4	Anglo American	10.5%	UK / Non-ferrous metal ore, Precious metal / Acquired coal business from Shell in 2000
5	Centennial Coal	4.5%	Australia / Acquired by Banpu in 2010
6	Wesfarmers	3.4%	Australia / Conglomerate / Abondoned coal business in 2017
7	Idemitsu	3.2%	Japan / Petroleum / Merged with Showa Shell in 2019
8	Macarthur Coal	2.3%	Australia / Acquired by Peabody in 2011
9	Peabody	2.1%	USA / Withdrew from the Australian coal industry in 2001 and re-entered in 2002
10	Excel Mining	1.6%	Australia / Acquired by Peabody in 2006
Top 3 producers' share 61.0% / Top 5's share 76.0% / Top 10's share 88.6%			

***1: Company name in 2004**
***2: Total of thermal coal and coking coal on a saleable coal basis**
(Source) Barlow Jonker, COAL 2005

3.4Late 2000s and the early 2010s: entry of Asian companies

A quote attributed to the famous American writer Mark Twain applies well to the Australian coal industry: "History doesn't repeat itself, but it does rhyme."

The Lehman shock in 2008 brought significantly reduced coal demand and prices to the Australian coal industry—very similar to the Asian economic crisis in 1997. It is noteworthy, however, that many of the companies that purchased coal assets in the aftermath of Lehman were originally from Asian countries such as China, Thailand and India.

Table 3. Major sales and purchases of Australian coal assets from the late 2000s to the early 2010s

	Buyer (Nationality)	Coal assets	Seller (Nationality)
2009	Yancoal (China)	Felix Resources	Felix's shareholders
2010	Banpu (Thailand)	Centennial Coal	Centennial's shareholders
	Sojitz (Japan)	Minerva mine	Yancoal (China)
	Adani (India)	Carmichael project	Linc Energy (Australia)
2011	Yancoal (China)	Gloucester Coal	Gloucester's shareholders
	Peabody (USA)	Macarthur Coal	Macarthur's shareholders
2012	Whitehaven (Australia)	Aston Resources	Aston's shareholders
2013	Jindal Steel & Power (India)	Gujarat NRE Coke	Gujarat (India)

In section 2 above, I mentioned the key role Japanese companies played as buyers and financiers in the development of the Australian coal industry. Korean companies began playing a similar role in the industry in the 1980s. Japanese and Korean companies participated in most coal-related projects as minor partners, but Asian companies did not usually seek to acquire greater than 50% equity—and therefore operational control—of projects. Idemitsu (starting around the 1990s) and Sojitz (since the 2010s) were exceptions to this. Post-Lehman, Asian companies often purchased controlling shares of companies or projects to gain operational control.

3.5 Mid-2010s to today: divestment by major resource companies and investment by Asian companies, Glencore and other pure Australian coal players

During this period, companies in the Australian coal industry approached changing investment and lending behavior in three ways, giving greater consideration to the ESG (environmental, social and governance) concerns of investors and lenders amid continuing low prices, particularly for thermal coal.

- Exiting the industry

Rio Tinto announced its decision in 2013 to sell its steaming coal assets because of the long-lasting price slump. Given the growing need for a low-carbon economy in the future, Rio decided to sell its coking coal assets as well and then sold all of its coal-related assets between 2014 and 2018, withdrawing from the coal industry. An Australian conglomerate, Wesfarmers, also sold off its coal assets and exited the coal industry.

- Continuing or expanding the coking coal business but quitting or downsizing the thermal coal business

BHP spun off its thermal coal business in South Africa and its coking coal business in NSW in 2015 to form South32 and is reportedly looking to sell its remaining thermal coal assets in NSW and Columbia.

South32 purchased 50% equity in a coking coal project in QLD in 2018 while working to sell its steaming coal assets in South Africa.

Although Anglo American remains in the coking coal business, it announced plans to sell off its steaming coal assets in 2015 and finally did so in 2016.

Some Japanese trading houses have sold their thermal coal assets while retaining or even trying to expand their coking coal businesses.

- Remaining in or entering the Australian thermal coal business

Glencore announced in February 2019 that it would expand its coking coal business and continue its thermal coal business, but that it would not increase thermal coal production from current levels in recognition of the growing need for a lower carbon economy[26]. Yancoal Australia, backed by a major Chinese coal company, purchased C&A from Rio Tinto and became the second largest thermal coal producer in Australia after Glencore.

Adaro Energy, a major Indonesian coal company, bought a coking coal mine in Queensland from Rio Tinto with the support of a private equity fund.

Salim Group, a major Indonesian business group, purchased a steaming coal project in NSW from Rio Tinto through its subsidiary, MACH Energy.

Pure Australian coal players such as New Hope and Whitehaven have expanded their business portfolios by purchasing existing coal mines and/or developing new mines.

[26] https://www.glencore.com/media-and-insights/news/Furthering-our-commitment-to-the-transition-to-a-low-carbon-economy

Table 4. Major sales and purchases of Australian coal assets from the mid-2010s to today

	Buyer (Nationality)	Coal Assets	Seller
2014	Glencore (Switzerland) / Sumitomo Corporation (Japan)	Clermont mine (50.1%)	Rio Tinto
2015	Investors	South32 spin-off	BHP
2016	New Hope (Australia)	Bengalla mine (40%)	Rio Tinto
	MACH Energy (owned by Salim Group in Indonesia)	Mt. Pleasant project	Rio Tinto
	Trust Fund Management (Australia)	Foxleigh mine	Anglo American
	Batchfire Resources (Australia)	Callide mine	Anglo American
2017	Yancoal	C&A	Rio Tinto
	Glencore	C&A's Hunter Valley mine (49%)	Yancoal
	Coronado Coal (USA)	Curragh mine	Wesfarmers
2018	Glencore	Hail Creek mine, etc.	Rio Tinto
	Adaro Energy (Indonesia), etc.	Kestrel mine	Rio Tinto
	New Hope	Bengalla mine (40%)	Wesfarmers

4. Marketing and pricing of Australian thermal coal for Japan

As mentioned above, JPUs are the largest thermal coal consumers in Japan. At the third ministerial meeting of the International Energy Agency (IEA) held in May 1979 after the second oil crisis, the "Principles for IEA Action on Coal" were agreed upon while the building or replacement of oil-fired base load power plants by the IEA member countries was prohibited[27]. To accommodate the IEA's decision and meet increasing demand for electric power, JPUs created action plans to build coal-fired power plants which started coming online in 1986. Demand by JPUs and their need for stable long-term supplies have strongly supported the operations of Australian coal suppliers. Due to the magnitude of their demand, coal procurement by JPUs and the prices they pay have impacted both overseas buyers and Japanese industrial users.

4.1 Thermal coal procurement by JPUs

Thermal coal procurement is affected by a JPU's power generation and coal consumption plans, coal procurement policy (i.e., securing a stable and economically efficient coal supply while diversifying supply sources, etc.), market conditions, the many supply options (producing countries, shipping ports, coal suppliers, etc.) and the percentage of term contracts (annual and multiple-year contracts) and spot contracts. Prior to the liberalization of electric power sales in Japan[28], JPUs prioritized coal supply stability and purchased coal under

[27] The Ministry of Foreign Affairs; Diplomatic Bluebook 1980 (written in Japanese)
https://www.mofa.go.jp/mofaj/gaiko/bluebook/1980/s55-2020501.htm

[28] Wholesaling of electric power was liberalized in 1995. This caused independent power producers (IPPs) to enter the power generation business to supply electric power to JPUs. The process of liberalizing electric power retailing began in March 2000, enabling retail sales to large customers with contracted power of over 2,000kW (e.g., large factories, department stores and office buildings). This also caused power producers and suppliers (PPSs) to enter the electric power retail market. In April 2004 and April 2005, the liberalization of electric power retailing expanded to medium-sized customers with over 500kW and over 50kW in contracted power, respectively. In April 2016, the liberalization process was completed with its expansion to small customers with less than 50kW in contracted power.
Agency for Natural Resources and Energy (written in Japanese)
https://www.enecho.meti.go.jp/category/electricity_and_gas/electric/electricity_liberalization/what/

term contracts, procuring very limited quantities through spot tenders[29].

4.2 Pricing of Australian thermal coal for JPUs

The prices paid by JPUs for Australian thermal coal had been determined by benchmark pricing since Japanese Fiscal Year (JFY) 1987. The champion negotiators for buyers and sellers were selected from among the various JPUs and Australian coal suppliers, respectively, and they then discussed a fixed price (benchmark) for each JFY. Once a benchmark for a year was agreed, the other JPUs and Australian suppliers accepted it as the contract price. J-Power assumed the role as the first champion negotiator for the JPUs and was followed by Chugoku Electric Power. Chubu Electric Power worked as the third champion negotiator between JFY1990 and 1997. When Chubu was the buyers' champion negotiator, the suppliers' champions were Shell (the supplier of Drayton coal), Ulan (Ulan coal) and MIM (Newlands coal)[30].

In the mid-1990s, TPC (Taiwan Power Company) and KEPCO (Korean Electric Power Corporation) increased their coal procurement through tenders, concluding spot or term contracts (the contract periods of TPC's term contracts were from one to seven years[31]) at bids lower than the benchmark. The JPUs responded by introducing tenders themselves. However, the JPUs contracted for limited quantities through tenders, instead purchasing higher quality coal (higher energy, lower sulphur, lower nitrogen, lower ash, etc.) than Taiwanese and Korean buyers mostly from the contract suppliers.

4.3 Changes in JPU coal procurement and pricing

The JPUs have changed their approaches to coal procurement and price negotiation in response to substantial changes in both the wider business environment and the thermal coal market (e.g., fierce competition resulting from the liberalization of electric power sales, abolition of the total cost system for retail pricing of electric power[32], expansion of the spot coal market, penetration of the spot thermal coal price index into the market[33] and increased coal price volatility.

The first major change was the end of the champion negotiator system, which left JPUs to negotiate with coal suppliers individually. However, Chubu Electric had served as the champion negotiator for many years, unintentionally bequeathing it a great deal of influence over the thermal coal market. This meant that the price to which Chubu agreed with Australian coal suppliers for each JFY was regarded as a "Reference Price" (RP) by other market participants in their own price negotiations. However, as it was no longer the benchmark, the prices contracted by other JPUs could differ slightly from the RP depending on the market situation and the contract conditions.

Chubu and Tohoku Electric Power negotiated the JFY2002 price with Australian suppliers separately and simultaneously. Negotiations were prolonged by very large differences in the prices the parties were seeking. The two JPUs finally agreed to different prices with suppliers[34]. Although the JFY2002 price negotiations became a catalyst for later individual price negotiations, it is believed that the RP system has continued up to the present with slight changes in style.

JPUs have been making a number of coal procurement efforts to ensure economic efficiency and supply stability in the rapidly changing business environment and thermal coal market. The following are some

[29] In those days, each of JPUs purchased coal on a spot basis only when testing new coal resources for trial combustion at its power plant(s) or in the event of additional coal demand due to failures in its own non-coal-fired power plant(s) or another company's power plant(s).
[30] Agency for Natural Resources and Energy; Coal Notebook 1996, p.131. & Coal Notebook 1997, p. 127 (written in Japanese)
[31] Productivity Commission; op.cit., p. D14
[32] https://www.enecho.meti.go.jp/category/electricity_and_gas/electric/fee/stracture/pricing/
[33] In 2001, eight coal consumers and suppliers including Anglo American, BHP, Glencore, Rio Tinto, J-Power, Enel and Uniper jointly established globalCOAL in London. globalCOAL provides an online coal transaction platform (https://www.globalcoal.com/) for its member companies and announces a spot coal price index. Currently, its price index for thermal coal shipped from Newcastle (globalCOAL NEWC) is the principal index for Australian thermal coal prices for Japan.
[34] In early May of 2002, Chubu Electric agreed with its Australian suppliers at $31.85 per MT FOB Australia. In mid-May, Tohoku Electric agreed with its Australian counterparts at around $28.75 per MT.
TEX Report; Coal Yearbook 2003, p. 6 (written in Japanese)

examples.

a) Diversification of contract periods

The general practice in JPU coal procurement for many years had been to follow the JFY calendar, with contracts commencing on the first day of April and expiring on the last day of March of the following year. In response to greater coal price volatility, JPUs began including contracts beginning in July, October and January in their portfolios. Although no quantitative analysis has been conducted, JPU coal procurement contracts commencing in April are still said to account for the largest percentage, followed by contracts commencing in October. For contracts commencing in April and October, the prices agreed by Tohoku Electric and the major Australian suppliers (usually, Glencore) have been regarded as the RPs by other participants in the market.

b) Introduction of index-linked prices (floating prices)

JPUs have been trying to increase their use of floating price contracts linked to spot price indices to mitigate the price volatility risks posed by fixed contract prices. Some JPUs conclude risk-hedging contracts with financial institutions that give them the option of fixing floating prices whenever they choose. They pay close attention to the movement of the price indices and exercise their options when they expect a price increase.

5. Views on the use of coal

Despite the growing headwinds facing the use of coal, global energy demand is increasing due to the growth of the world economy. The future of coal use should be determined in light of its economic efficiency, among its many other superior characteristics (e.g., abundant resources throughout the world, supply stability, etc.). If coal cannot sustain its competitive edge in light of the environmental costs in competition with other energy resources, it would be difficult to justify its continued use. On the other hand, the continued use of coal for power generation as well as steelmaking would contribute to the diversification of energy resources and reduce dependence on specific resources or technology. It is necessary to maintain the economic efficiency of coal use by decreasing its environmental costs through technological developments (e.g., eco-friendly use of coal, carbon capture, utilization and storage (CCUS)) in addition to reducing both coal production costs on the supply side and consumption costs on the demand side.

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