Simon Nicholas, Energy Finance Analyst
Tim Buckley, Director of Energy Finance Studies
January 2019

Institute for Energy Economics and Financial Analysis
IEEFA.org

Briefing Note: Marubeni Update

Continuing Coal-fired Power Risks

In July 2018, IEEFA released a report on Japanese conglomerate Marubeni's coal-fired power business and the financial and reputational risks it is creating for the company.[1]

Less than two months later, Marubeni announced a change in policy on coal-fired power.[2] The company stated that it will cut its coal-fired power capacity of around 3 GW by half by 2030. Marubeni also said that it will not enter into any new coal-fired business "as a general principle" (although left a caveat which could allow them to do so under certain circumstances). Finally, Marubeni committed to increase the ratio of generation from renewables in its power portfolio from 10% to 20% by 2023.

We note this policy change does not apply to Marubeni's current coal-fired power projects already in the development stages which we summarised in our July 2018 report. The company has around 12 GW of coal-fired power proposals in various stages of development across nine countries. As such, Marubeni and its investors are still exposed to the risks encapsulated in these major new coal projects as the world increasingly turns away from coal and towards renewable energy.

This briefing note provides an update on events that have occurred since our July 2018 report and revisits Marubeni's current coal-fired power projects to highlight the continuing risks being faced by Marubeni and its investors.

Japan Shifting Further Away from Thermal Coal

Marubeni's coal policy announcement needs to be seen in the wider context of the significant shift starting to emerge from the major Japanese trading houses (the sōgō shōsha), power utilities, insurance companies and banks through 2018 that IEEFA summarised in a December 2018 release.[3]

In late 2018, two of Marubeni's fellow sōgō shōsha (Mitsubishi Corp. and Mitsui & Co.) divested their last remaining thermal coal mine holdings. In December 2018 it was announced that yet another domestic coal-fired power proposal had been cancelled – JFE Steel and Chugoku Electric Power's 1 GW project near Tokyo.[4] This was followed in January 2019 with the announcement that a 2 GW coal-fired power project to be built by Kyushu Power, Idemitsu and Tokyo Gas in Chiba prefecture

---

[1] IEEFA, Marubeni's Coal Problem: A Japanese Multinational's Power Business is at Risk, 30 July 2018.
[2] Marubeni, News Release, 18 September 2018.
[3] IEEFA, Early days, but momentum away from coal is building, 21 December 2018.
[4] Bloomberg, JFE Steel, Chugoku Electric Scrap Coal-Fired Power Plant Plans, 27 December 2018.

had been cancelled.[5] The first few months of 2019 has seen two more of the sōgō shōsha start their moves away from thermal coal. In February 2019, Itochu announced that it will no longer develop any new coal-fired power plants or thermal coal mines.[6] Then in March 2019 Sojitz Corp announced the divestment from its Indonesian thermal coal mine investment as part of its own shift away from thermal coal.[7]

Since our July 2018 report, more financial institutions have committed to stop lending to coal-fired power projects. In Japan, Sumitomo-Mitsui Trust Bank announced it will stop providing project finance for new coal-fired power stations "as a basic rule".[8] Overseas, Standard Chartered Bank – historically a very significant financier of Asian coal-fired power – announced an immediate, global cessation of lending to such projects.[9]

In November 2018, insurance giant Generali joined the likes of AXA, Allianz, Swiss Re and Munich Re in limiting insurance support for coal. Generali will no longer insure the construction of new coal plants or mines and will stop accepting coal companies as clients.[10] In January 2019, Barclays Bank committed to cease the financing of greenfield coal mines and coal-fired power plants in all countries.

A February 2019 IEEFA report found that over 100 global financial institutions are exiting the coal sector and, on average, a new institution now declares that it is moving away from coal every two weeks.[11]

Our July report highlighted how Japan's export credit and overseas development agencies have moved towards supporting renewable energy developments overseas. Historically, these agencies including the Japan Bank for International Cooperation (JBIC) and the Japan International Cooperation Agency (JICA) have enabled the construction of Japanese coal-fired power plants overseas through the provision of concessional finance, including to Marubeni coal projects. Although this support for coal is still occurring, a transition towards the support of renewable energy projects appears to have begun.

This trend has continued since our July 2018 report. In November 2018, JICA signed a loan agreement with the Government of India to fund the Turga pumped hydro and storage project in West Bengal in order to support increasing renewable energy capacity.[12]

---

[5] Kyushu Electric Power Company, Changes in the Thermal Power Plant Project in Sodegaura City, Chiba Prefecture, 31 January 2019
[6] Itochu Corp, Coal-related business policy, 14 February 2019
[7] Sojitz Corp, Sojitz Divests Interest in Thermal Coal Assets, BAU Coal Mine, in Indonesia, 11 March 2019
[8] Reuters, Japan's Nippon Life to stop financing coal-fired power, 23 July 2018
[9] Standard Chartered Bank, Here for good means saying no to coal, 25 September 2018.
[10] Insurance Business, Generali becomes latest insurer to ditch coal, 9 November 2018.
[11] IEEFA, Every two weeks a bank, insurer or lender announces new coal restrictions, 26 February 2019
[12] JICA, Signing of Japanese ODA Loan Agreement with India, 2 November 2018.

New Opportunities for the Sōgō Shōsha

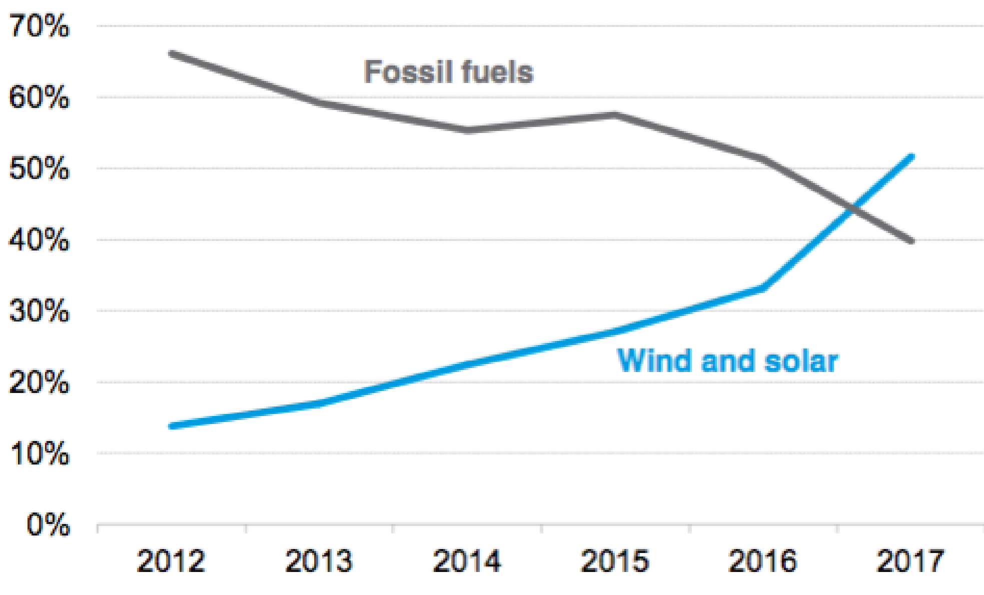
Facing a mature domestic market and with Japan's population in decline, overseas markets will become increasingly important drivers of growth for the sōgō shōsha. For Marubeni, given its higher focus on power generation development relative to the other trading houses, there will be increasing opportunity in renewable energy as the world moves away from fossil fuels and towards clean energy.

Marubeni won't move alone, other sōgō shōsha houses will be reviewing similar opportunities. In January 2019, it was announced that Sumitomo Corporation had acquired Australia's fourth largest retailer of solar PV systems, Infinite Energy.[13]

Much of the opportunity will lie in the developing world which is where all of Marubeni's current overseas coal-fired power projects are located. However, the idea that developing nations will meet growing electricity demand with coal-fired power generation is increasingly outdated.

Developing nations are now leading the transition to clean energy – in 2017 the large majority of zero-carbon power capacity was built in developing nations. Wind and solar accounted for just over half of all power capacity additions in developing countries in 2017 (Figure 1) as coal-fired power additions dropped to less than half the 2015 level.[14]

Figure 1: Share of Annual Power Capacity Additions in Emerging Markets



Source: Bloomberg New Energy Finance, Climatescope.

[13] Sumitomo Corporation, Distributed Solar Power Company Acquired in Australia, 24 January 2019
[14] Bloomberg NEF/Climatescope, Emerging Markets Outlook 2018, 27 November 2018.

The fact that the sōgō shōsha have been a key part of the Japanese economy for so long is testament to their ability to adapt quickly in the face of changing conditions (although there are now fewer sōgō shōsha now than there used to be). New technologies are a key area of interest for these companies. Marubeni has already identified electric vehicles as a major growth sector for its future.

Marubeni has also continued its pivot into renewable energy since our last report. In November 2018, Oman awarded a 100 MW solar project to Marubeni and it is also part of a bidding consortium for another 500 MW Oman solar proposal. The following month, Marubeni began construction of an 83 MW geothermal plant in Kenya.

"No one thought the cost of renewable energy would drop this much."

The CEO of Marubeni's power generation business has said that the rapid fall in the cost of renewable energy technology has taken the company by surprise, stating "no one thought the cost of renewable energy would drop this much."[15]

Marubeni would do well to accelerate the realignment of its power business towards new clean technology in order to keep it relevant to future power markets and avoid further surprises and rising stranded asset risks.

Increasing Investor Focus on Coal

The sōgō shōsha, including Marubeni, are likely to see increased focus on carbon-emitting businesses from investors going forward.

In September 2018, IEEFA published a report addressing the difficult questions that Korean state-owned utility KEPCO can expect from investors after the company was included on the Climate Action 100 list.[16] The Climate Action 100 is an initiative by major investors to engage with carbon emitting companies and help drive the transition to clean energy. Currently 310 investors with US$32 trillion of assets under management have joined the initiative.

Marubeni is a partner with KEPCO in the proposed Thabametsi coal-fired power project in South Africa, the Nghi Son 2 coal-fired power project in Vietnam and the Cirebon 2 coal-fired power project in Indonesia.

With 2019 likely to be a year of heightened investor attention on KEPCO, the company can expect scrutiny of how its overseas projects match up to the changes to domestic energy policy with the planned move from coal and nuclear power towards renewables and LNG. This is likely to include tough questions over its overseas projects including the contentious Bylong Coal Project in Australia and the controversial Nghi Son 2 coal-fired power plant project in Vietnam. These projects require significant additional investment and have repeatedly raised red flags as

[15] Bloomberg, Surprised by Cheap Clean Energy, Coal Stalwart Adds Renewables, 5 December 2018.
[16] IEEFA, Korea's Clean Energy Challenge – Time for a Check Up, September 2018.

project fundamentals come under increased scrutiny given rapid changes in coal power markets.

This heightened investor scrutiny of increasingly controversial operations is also likely to be true for Marubeni going forward. Major global investors have started receiving heightened attention on their coal-related investments. Amongst others BlackRock and Vanguard, both major Marubeni shareholders, have been identified as global laggards when it comes to increasingly controversial coal investment holdings.[17]

Marubeni's major shareholders (see Annexure I) may be increasingly wary of the financial and reputational risks associated with being one of world's most significant builders of coal-fired power. This is despite the new coal policy announced by Marubeni in September 2018, as the company is continuing with its current coal-fired power projects which will, if completed, be in operation and hence at financial risk for many decades to come.

Current Coal Projects

In our July 2018 report we provided an overview of the Marubeni's current coal-fired power projects. Here we provide an update on the ongoing projects – investors in Marubeni should be aware of the continuing risks faced by these plans.

Japan

Marubeni, in a joint venture with Kansai Electric Power, has the Akita 1,300 MW coal-fired power proposal in development planning with an expected commissioning date of 2024.

This plan for a new coal plant comes within the context of declining power demand in Japan. Fossil fuel imports into Japan in 2018 dropped due to slow economic growth, population decline, increasing energy efficiency, nuclear reactor restarts and the continuing roll-out of renewable energy. Thermal coal imports declined 0.6% in 2018.[18]

These trends undermine the rationale for new coal-fired power plants in Japan. Renewable energy is about to be boosted by the prospect of Japanese offshore wind developments including TEPCO's January 2019 announcement of a Memorandum of Understanding with global offshore wind leader Ørsted.[19] TEPCO is aiming to build 6-7 GW of offshore wind in Japan and overseas.

Marubeni itself has signed an offshore wind cooperation agreement with Norway's Equinor (previously called Statoil) and even has two offshore wind projects off the same Akita coast where it's intending to build the coal plant.

---

[17] InfluenceMap, Who Owns the World's Fossil Fuels, December 2018.
[18] Reuters, Japan's 2018 crude imports fall to 39-year low as population shrinks, 23 January 2019
[19] Reneweconomy, Japan looks to offshore wind as TEPCO inks MoU with Ørsted, 24 January 2019

The major moves of Marubeni and other Japanese companies into offshore wind appears to further undermine the need for a new coal-fired power plant in a declining power market.

Botswana

Marubeni's Morupule B, 300 megawatt (MW) expansion project, a 50:50 joint venture with POSCO of Korea, has been on hold since the Botswanan government's decision not to provide the proponents with a US$800m guarantee to protect them from a future default on power purchase payments. The underlying power purchase agreement (PPA) has since expired.

Most recently, it has been reported that Botswanan government is now considering dropping the Morupule expansion project altogether.[20]

Since our July report there have been further developments in solar power in Botswana – a nation with high solar potential due to its low population density combined with high solar irradiance. This, combined with its relatively high sovereign credit rating[21], is likely to attract new clean energy investment going forward. In November 2018, the state-owned utility Botswana Power Corporation issued a request for proposals for 12 new solar PV projects.[22] Botswana also joined the International Solar Alliance in November 2018.

South Africa

Since the publication of our July 2018 report, the South African government has released its draft 2018 Integrated Resource Plan (IRP) that maps out the nation's energy future. The plan accepts that South Africa will become progressively less reliant on dramatically more expensive coal-fired power as old power stations are closed and low cost renewable energy is built. However, the construction of two new coal-fired power plants, including Marubeni's Thabametsi project were forced into the supposedly least-cost plan despite the major, ongoing project delays, public opposition, particularly high greenhouse gas intensity and rapidly escalating capital cost of these projects.[23]

In another key event since our July Marubeni report was released, a major South African bank ruled out providing funding for Thabametsi and the other proposed new coal-fired power plant - Khanyisa - in January 2019. Nedbank's initial proposal for funding these plants has lapsed and the bank has stated it will not be renewed.[24]

---

[20] Mmegi, Gov't could drop Morupule B P8bn expansion, 23 November 2018.
[21] S&P Global Ratings, Botswana Credit Rating Update, April 2018.
[22] Botswana Power Corporation, Request for Proposal – solar power projects, 26 November 2018.
[23] Ireland, Gregory & Burton, Jesse. 2018. "An assessment of new coal plants in South Africa's electricity future: the cost, emissions, and supply security implications of the coal IPP programme". Energy Research Centre, University of Cape Town, Cape Town, South Africa.
[24] Daily Maverick, Nedbank withdraws funding for new coal IPPs, 30 January 2019

As has been seen in other countries, when one major bank makes such a policy shift the other majors tend not to be far behind. This would significantly impact the ability of proponents to fund new coal-fired power proposals in South Africa.

Later in January 2019 it was revealed that another of South Africa's large banks had withdrawn from the Thabametsi project. FirstRand Bank stated that it had decided not to finance Thabametsi in November 2018.[25] Standard Bank – another of South Africa's largest – has also reportedly advised the developers of Thabametsi of its new corporate policy to no longer provide funding for the construction of coal-fired power plants.[26] It is unclear whether the bank has ruled out funding for Thabametsi or whether it only applies to new projects going forward.

Moreover, the Thabametsi project is still held up in a legal quagmire that is likely to last years. Some of the legal challenges still faced by the Thabametsi project, in relation to the authorisations it requires, are summarised below:[27]

1. A High Court review is challenging the Minister of Environmental Affairs' decision to uphold the environmental authorisation for the project.

2. Thabametsi needs to obtain an atmospheric emission licence – if it is issued, the decision will likely be challenged on appeal.

3. Thabametsi needs to obtain a water use licence – if it is issued, it will likely be challenged on appeal to the Water Tribunal.

4. Thabametsi needs to obtain an electricity generation licence from the National Energy Regulator – if issued, the licence will likely be challenged on review in the High Court.

Egypt

In our previous report we noted that Marubeni's proposed Marsa Matruh coal-fired power project is looking increasingly unlikely to happen now that Egypt is progressing with the 6.6 GW Hamarawein power proposal. The Hamarawein proposal has an expected build time of seven years at a cost of a claimed US$4.4bn – we consider this highly optimistic/unrealistic given that South Africa's badly delayed Medupi and Kusile coal-fired power stations (both 4.8 GW) are expected to cost more than US$20bn combined.

Since our report, a deal for the Hamarawein plant was signed in September 2018 by a Chinese-Egyptian consortium, making the Marsa Matruh an even more distant prospect.

---

[25] Daily Maverick, FirstRand joins exodus of banks funding new coal-fired power projects, 3 February 2019
[26] Daily Maverick, Funding of two new coal IPPs in South Africa under threat, 26 September 2018.
[27] CER, Why the coal-fired power station IPPs are unlikely to get out of the starting blocks, 20 September 2018.

Indonesia

Marubeni is the largest member of the consortium that owns the Cirebon coal-fired power station in Indonesia. Other major consortium members include Korea Midland Power, a subsidiary of KEPCO. Two extensions to the Cirebon plant have been planned (Cirebon 2 and 3).

Whilst the Cirebon 2 project has reportedly begun construction (although legal challenges are ongoing), the Cirebon 3 proposal now seems to have been shelved. At an October 2018 Korean National Assembly hearing, the CEO of Korean Midland Power disclosed that the Cirebon 3 coal-fired power proposal has been suspended and it will instead be converted into a renewable energy project.[28]

Even in a coal resource-rich nation like Indonesia, the window for construction of even domestic sourced coal-fired power plants appears to be rapidly closing.

Vietnam

At the same Korean National Assembly hearing, the CEO of Korean Western Power, another KEPCO subsidiary, disclosed that it was considering turning its Quang Tri 3 coal-fired power project in Vietnam into a renewable energy project.

This is of relevance because KEPCO is in a consortium with Marubeni to build the Nghi Son 2 coal-fired power plant in Vietnam at a time when KEPCO appears to be getting to grips with the global energy transition in the face of Korean domestic energy policy to move away from coal and nuclear, and towards LNG and renewables.

Originally intended to come on line in 2018, the Nghi Son 2 project has faced significant delays; the latest in a series of completion push-backs has the project set for completion in 2022. The project has been criticised for using out-of-date supercritical technology; Marubeni have ruled out moving to the latest, most efficient but materially more expensive technology, stating that this would require an additional environmental impact assessment.[29] Coal-fired power continues to be increasingly unpopular in Vietnam and subject to protest as is also being seen across Asia, including Indonesia and Myanmar.

During the project's delays the outlook for renewable energy in Vietnam has changed significantly. The year 2018 was notable for the volume of solar and wind power announcements in the country as renewables appeared to go through a tipping point. Joining the many solar and onshore wind developments announced in 2018 in our July report, an ambitious 3.4 GW offshore wind project was announced in December 2018 to be built in 600 MW phases.[30]

---

[28] Electric Times, 중부발전, 찌레본 석탄화력 신규 발전사업 중단하나, 23 October 2018.

[29] Bloomberg, Surprised by Cheap Clean Energy, Coal Stalwart Adds Renewables, 5 December 2018.

[30] Offshorewind, Giant Wind Farm Proposed Offshore Vietnam, 11 December 2018.

Mongolia

Marubeni won a tender to build the 450 MW Talvan Tolgoi coal-fired power plant in 2016, with part of the planned output to power the Oyu Tolgoi copper and gold mine. Since then there does appear to have been any publicly available update on the proposal.

The project now appears unlikely to proceed as in December 2018, Rio Tinto announced the signing of a Power Source Framework Agreement with the Mongolian government[31] for its own, alternative 300 MW power project which would seem to make the Talvan Tolgoi proposal surplus to requirements.

Thailand

Marubeni is part of a consortium replacing a number of units of Thailand's Mae Moh lignite-fired power plant. The new units were expected to be operational in 2018 but it is not clear whether this has been achieved. The Electricity Generating Authority of Thailand is now planning to replace further old units of the plant. Marubeni will presumably be involved in this next phase given its was a constructor of the original plant and the current replacement units.

Myanmar

Marubeni has previously stated an intention to build a 1.8-2 GW coal-fired power station in Tanintharyi, Myanmar and began a feasibility study in 2015. As with our previous report, no update since then appears to be available and it is presumed this project has been shelved or abandoned.

Conclusion

Since our July 2018 report on Marubeni's power business most of the company's current coal-fired power projects have been even further stalled, shelved, locked in legal battles or threatened with cancellation or conversion into renewable energy projects. At the same time, the continued progress of renewable energy in developing countries has closed the window of opportunity for new coal-fired power plants even further.

These projects are likely to hang over the company's reputation for years to come.

Major investors are becoming increasingly concerned about the financial and reputational risks surrounding thermal coal businesses. As a leading, diversified conglomerate with a focus on expansion into new technologies and new markets, Marubeni is in a strong position to rapidly move away from coal-fired power whilst positioning its power business for energy markets of the future.

Marubeni's September 2018 coal power policy revision is a good step in this direction. However, with its current coal-fired power projects apparently unaffected

[31] Rio Tinto, Oyu Tolgoi power solution progresses, 31 December 2018.

by this new policy, Marubeni should prepare itself for difficult questions from its investors as they become ever more sensitive to carbon and reputational risk. With long construction times and slow or little progress on the ground in many cases, these projects are likely to hang over the company's reputation for years to come.

Annexure I

Top 40 Marubeni Shareholders

Investor Name	% Shareholding	Country
Asset Management One Co., Ltd.	4.78%	Japan
Mitsubishi UFJ Trust and Banking Corporation	3.27%	Japan
Sumitomo Mitsui Trust Asset Management Co., Ltd.	3.25%	Japan
Nomura Asset Management Co., Ltd.	3.20%	Japan
Meiji Yasuda Life Insurance Company	2.41%	Japan
The Vanguard Group, Inc.	2.39%	United States
Sompo Japan Nipponkoa Insurance Inc	2.30%	Japan
Mizuho Bank, Ltd.	1.73%	Japan
BlackRock Institutional Trust Company, N.A.	1.63%	United States
Nikko Asset Management Co., Ltd.	1.52%	Japan
Tokio Marine & Nichido Fire Insurance Co., Ltd.	1.43%	Japan
BlackRock Fund Advisors	1.38%	United States
Daiwa Asset Management Co., Ltd.	1.36%	Japan
Norges Bank Investment Management (NBIM)	1.18%	Norway
Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	1.04%	Japan
Northern Trust Investments, Inc.	0.87%	United States
Aeon Co Ltd	0.81%	Japan
AQR Capital Management, LLC	0.56%	United States
Mitsubishi UFJ Kokusai Asset Management Co., Ltd.	0.55%	Japan
Sumitomo Mitsui Trust Bank, Limited	0.54%	Japan
Grantham Mayo Van Otterloo & Co LLC	0.53%	United States
CPP Investment Board	0.46%	Canada
TD Asset Management Inc.	0.45%	Canada
Merian Global Investors (UK) Limited	0.39%	United Kingdom
BlackRock Advisors (UK) Limited	0.35%	United Kingdom
Geode Capital Management, L.L.C.	0.33%	United States
Nuveen LLC	0.33%	United States
BNY Mellon Asset Management North America	0.31%	United States
APG Asset Management	0.30%	Netherlands
Citizen Watch Co Ltd	0.30%	Japan
Dimensional Fund Advisors, L.P.	0.29%	United States
Okamoto Industries Inc	0.25%	Japan
California Public Employees' Retirement System	0.25%	United States
JPMorgan Asset Management U.K. Limited	0.24%	United Kingdom
BlackRock Japan Co., Ltd.	0.23%	Japan
BlackRock Life, Ltd.	0.21%	United Kingdom
MUFG Bank, Ltd.	0.21%	Japan
Caisse de Depot et Placement du Quebec	0.21%	Canada
Konica Minolta Inc	0.21%	Japan
Sumitomo Warehouse Co Ltd	0.20%	Japan
Quantitative Management Associates LLC	0.20%	United States
Aberdeen Asset Investments Limited	0.19%	United Kingdom
Charles Schwab Investment Management, Inc.	0.18%	United States
Nisshin Seifun Group Inc	0.18%	Japan
State Street Global Advisors (US)	0.18%	United States
INVESCO Asset Management (Japan) Ltd.	0.17%	Japan
Swedbank Robur Fonder AB	0.16%	Sweden
Showa Denko KK	0.16%	Japan
DWS Investment GmbH	0.16%	Germany
Amundi Asset Management	0.15%	France

Source: Thompson Reuters.

About IEEFA

The Institute for Energy Economics and Financial Analysis conducts research and analyses on financial and economic issues related to energy and the environment. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy. http://ieefa.org

About the Authors

Simon Nicholas

Simon Nicholas is an energy finance analyst with IEEFA in Australia. Simon holds an honours degree from Imperial College, London and is a Fellow of the Institute of Chartered Accountants of England and Wales. He has 16 years' experience working within the finance sector in both London and Sydney at ABN Amro, Macquarie Bank and Commonwealth Bank of Australia

Tim Buckley

Tim Buckley, IEEFA's director of energy finance studies, South Asia/ Australia, has 30 years of financial market experience covering the Australian, Asian and global equity markets from both a buy and sell side perspective. Tim was a top-rated Equity Research Analyst and has covered most sectors of the Australian economy. Tim was a Managing Director, Head of Equity Research at Citigroup for many years, as well as co-Managing Director of Arkx Investment Management P/L, a global listed clean energy investment company that was jointly owned by management and Westpac Banking Group.