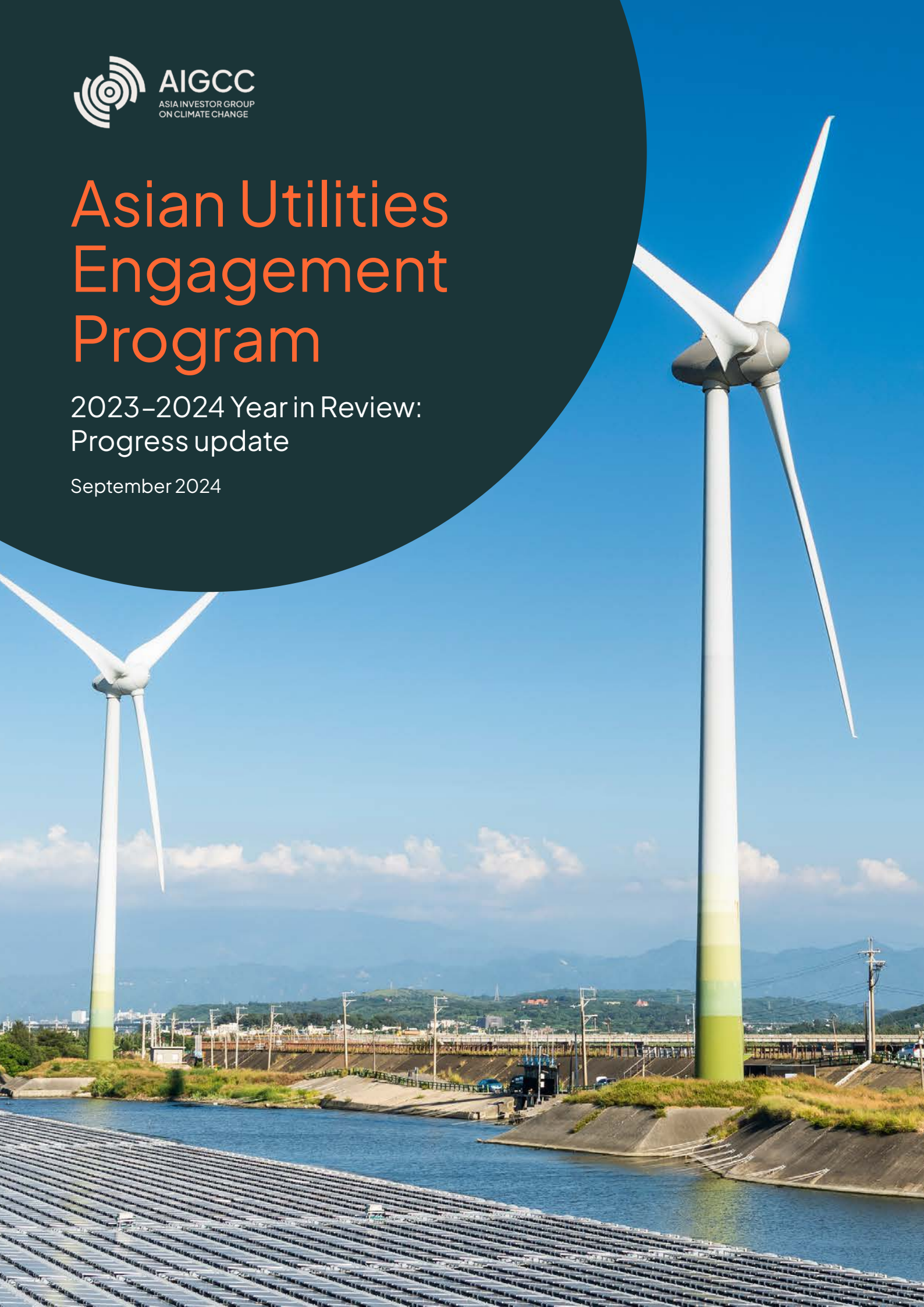
AIGCC
ASIA INVESTOR GROUP ON CLIMATE CHANGE

Asian Utilities Engagement Program

2023–2024 Year in Review: Progress update

September 2024



AIGCC
ASIA INVESTOR GROUP
ON CLIMATE CHANGE

About Us

The Asia Investor Group on Climate Change (AIGCC) is an initiative to create awareness and encourage action among Asia's asset owners and asset managers about the risks and opportunities associated with climate change and low-carbon investing. AIGCC provides capacity for investors to share best practice and peer-to peer learning on sustainable investment, risk management, corporate engagement and policy advocacy.

With a strong international profile and significant network, AIGCC represents the Asian investor perspective in the evolving global discussions on climate change and the transition to a greener economy.

AIGCC members come from 11 markets and with over USD 28 trillion in assets under management.

Find out more: aigcc.net

Acknowledgements

The success of the Asian Utilities Engagement Program relies on effort from senior staff of the participating investors, and we acknowledge their invaluable contribution.

Monica Bae and Anjali Viswamohanan lead the Asian Utilities Engagement Program within AIGCC. Serena Li, Firdaus Anuar, Nigel DeCoopman and Joy Wang manage the program.

Tara Climate Foundation and Sunrise are AUEP's philanthropic funders and we are deeply grateful for their support.

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Asian Utilities Engagement Program (AUEP) at a Glance[1]

7 focus companies

20 investor participants

with a total of USD11 trillion in AUM or advice[2]

10 meetings with companies

between August 2023 and July 2024

4 closed-door meetings with regulators and policymakers

399 GW electricity generation

total capacity of all focus companies[3]

90 GW renewable generation capacity[4]

1 All numbers in this section, and throughout the report, are valid between August 2023—July 2024.
2 Asian Utilities Engagement Program includes participation by some investors that are acting on behalf of their clients that have chosen to have their assets managed with the goal of achieving net-zero alignment.
3 Data as of the end of 2023, obtained from each company's disclosure, such as an annual report, integrated report, or sustainability report.
4 Renewable capacity, or some companies referred to as non-thermal generation capacity, was also obtained from each company disclosure. As a non-thermal generation capacity, this number also includes nuclear.

Bottom right image: Created by Krisada, from the Noun Project

Summary and Progress Highlights

AIGCC's Asian Utilities Engagement Program, launched in 2021, sends a powerful signal to the region's most important energy companies: Investors expect them to urgently and ambitiously respond to climate change. This will ensure that jobs are created, livelihoods are protected, and returns are sustainable over the long term as economies transition.

Today, 20 investors responsible for USD11 trillion in assets under management or advice, all AIGCC members, are involved in this initiative.[5]

Investor engagement with Asian electric utilities will play a key role in addressing climate risk. The sector contributed approximately 25% of global greenhouse gas (GHG) emissions in 2022.[6] The Asian utilities sector has a young asset age profile, with some markets that have coal plants less than 15 years old on average[7] (compared to the technical lifetime of a coal plant, which is 40–50 years)[8] and represents more than USD200 billion of market capitalization in Asian stock markets.[9] This sector will also play a critical role in enabling the transition and decarbonization of other sectors dependent on utilities.

Progress highlights of the engagement in the third year

- **Governance:** Five AUEP focus companies have started to link directors' compensation to climate performance, with some having disclosed quantitative indicators.
- **Decarbonization strategy and targets:** Two AUEP utility companies have started to disclose their detailed plans for the phaseout of coal-fired power plants and their plans toward achieving their medium-term climate target in 2030. This year, Hong Kong's CLP has reviewed its climate strategy and updated its medium-term climate-related targets to decarbonize at a faster pace. Japan's J-POWER has also enhanced its medium-term management plan to include the closure timeline of its coal fired power plants.
- **Transparency and disclosure:** Except for China's Huaneng, all AUEP focus companies have published an annual disclosure based on recommendations from the Task Force on Climate-Related Financial Disclosures (TCFD). CLP prepared its revised version of Climate Vision 2050 based on the International Sustainability Standards Board's (ISSB) IFRS S2 Climate-Related Disclosures. Other companies are considering adopting the standard to their reporting in the next year.
- **Public policy:** Two AUEP companies have disclosed their willingness to start engaging regulators and policymakers on national climate policy.

The AUEP also includes significant engagement with policymakers who directly and indirectly set the economic incentives or barriers for companies to decarbonize. Beyond the corporate engagement work, AIGCC also held a series of in-person and hybrid policy engagement sessions with regulators in Japan, Indonesia, and Malaysia. They facilitate active dialogues among policymakers, institutional investors, and corporates in each of these markets on some of the more challenging issues of energy transition (i.e., transition pathways and national energy policies) and policy mechanisms (i.e., incentives and carbon pricing). Investors engaging in AUEP are also enhancing their understanding of credible utility-sector transition mechanisms through various AIGCC theme-specific and market-specific working groups.

5 AUEP includes participation by some investors acting on behalf of their clients who have chosen to have their assets managed with the goal of achieving net zero alignment.
6 IEA World Energy Outlook 2023. This percentage is calculated based on electricity and heat sector emission. See pages 280, 294.
7 MAS and McKinsey, 2023. Accelerating the early retirement of coal-fired power plants through carbon credits.
8 IEA (2022, p. 75). Coal in Net Zero Transitions: Strategies for rapid, secure, and people-centered change.
9 MSCI AC Asia Pacific Utilities Index (Apr 2024).

1. Electric Utilities Sector in Asia and AUEP Engagements

Context

The 28th United Nations Climate Change Conference (COP28) in Dubai, United Arab Emirates, in 2023 marked two important and historical milestones: countries agreed to transition from fossil fuels-based energy resources (e.g., coal, oil, and gas),[10] and pledged to triple renewable energy capacity (at least 11,000 GW) by 2030.[11] As the world continues to experience the hottest year on record every year, 2030 is a critical timeline. The Paris Agreement's overarching goal is to limit global warming to 1.5°C: GHG emissions must peak before 2025 at the latest and decline 43% by 2030.[12]

According to the International Energy Agency (IEA), the power generation sector contributes the largest sources of CO_2 emissions globally at 44%.[13] The Asia-Pacific region constitutes 49% of total global electricity production, with approximately 69% generated from fossil fuel-based sources like coal, oil, and natural gas.[14] Engaging Asian electric utilities to reduce their emissions and to align with the Paris Agreement goal is crucial.

AIGCC's Asian Utilities Engagement Program (AUEP)

The Asia Investor Group on Climate Change (AIGCC) launched the Asian Utilities Engagement Program (AUEP) in 2021 to increase the effectiveness of climate engagement in utility companies through five key Investor Expectations of Asian Electric Utilities Companies. Through the program, investors use Investor Expectations detailed below. The AUEP chooses its focus companies based on whether they have substantial GHG emissions and thermal power capacity and/or a strategic role in driving credible, science-based net zero emissions transition. The program complements and runs parallel with the global Climate Action 100+ initiative.

The consistent, long-term shared objective is to send a powerful signal: investors are asking and expecting that companies respond to climate change with greater urgency and ambition to ensure jobs are created, livelihoods are protected, and returns are sustainable over the long term as economies transition.

10 https://asia.nikkei.com/Spotlight/Environment/Climate-Change/COP28/Fossil-fuel-transition-in-the-spotlight-4-takeaways-from-COP28
11 https://asia.nikkei.com/Spotlight/Environment/Climate-Change/COP28/COP28-vow-to-triple-renewable-energy-by-2030-supported-by-118-nations
12 https://unfccc.int/process-and-meetings/the-paris-agreement
13 Latest IEA data as of 2021. See https://www.iea.org/world/electricity#what-is-the-global-climate-impact-of-electricity-generation
14 Latest IEA data as of 2021. See https://www.iea.org/regions/asia-pacific/electricity

The Investor Expectations of Asian Electric Utilities

AUEP engagements are based on AIGCC's Investor Expectations of Asian Electric Utilities Companies. Investors participating in the AUEP intend to work with the Board and senior management of focus companies to encourage them to commit to the following measures:

AUEP Key Investor Expectations

GOVERNANCE: Implement a strong governance framework that clearly articulates the Board's accountability for and oversight of climate change risks and opportunities.

- Mission Statement
- Top Management Oversight
- Board Expertise in Climate
- Executive Remuneration

DECARBONIZATION STRATEGY AND SCENARIO STRESS TESTING: Take action to reduce GHG emissions in line with the Paris Agreement. Companies should have clear decarbonization strategies with short-, medium- and long-term action plans. This includes timetables to phaseout coal-based emissions in line with 1.5°C temperature scenarios like that of IEA NZE2050. The IEA NZE2050 scenario specifies that unabated coal power will be phased out in advanced economies by 2030. At the latest, this should occur by 2040 in all other regions. Generation using natural gas without carbon capture starts falling by 2030 and is 90% lower by 2040 compared to 2020.

- Overall Climate Strategy
- Actual and Projected Generation
- Management and Phaseout of coal fired power plants
- Capital Expenditure
- Targets and Performance
- Scenario Analysis

TRANSPARENCY AND DISCLOSURE: Provide enhanced corporate disclosure in line with the ISSB.[15]

- Climate Disclosure

PHYSICAL RESILIENCE: Outline physical risks and relevant adaptation strategies for mitigating these risks.

- Physical Climate Risk Assessment
- Physical Resilience Analysis

PUBLIC POLICY: Engage with public policymakers and other stakeholders to support cost-effective policy measures that will mitigate climate-related risks and facilitate low-carbon investments in line with achieving net zero emissions by 2050 or sooner.

- Policy Position
- Policy Activity & Alignment

Engagement Topics

Overarching Decarbonization Strategy of Asian Power Utilities

Since its inception in 2021, the main important and recurring discussion in AUEP engagements has been on the focus company's overall climate and decarbonization strategy. This includes discussing the company's transition plan from fossil fuel-based energy to renewables, encouraging the company to set more ambitious climate targets and the phaseout of its coal fired power plants. Investors emphasize increasing renewable energy-based generation capacity and investing more in transmission grids and battery storage to reduce curtailment issues. Focus companies are also encouraged to review their climate strategy every few years, aim for more ambitious climate targets, and monitor their progress and performance.

The discussion on the phaseout of coal fired power plants in AUEP has evolved from having the company commit to building no new or extra coal fired power plants to implementing the phaseout plan of existing coal fired power plants within a specific timeframe. Utility companies have raised the issue that financing the phaseout of existing coal fired power plants has been a major barrier. To support

15 The original investor expectation was to "*provide enhanced corporate disclosure in line with recommendations of international frameworks, such as the Task Force on Climate-related Financial Disclosures (TCFD)...*". In October 2023, TCFD was disbanded and IFRS Foundation took over monitoring companies' progress on climate-related disclosures. Hence, we have changed the language to reflect the latest trends in climate-related financial disclosure.

the companies during the AUEP engagement, investors have explored potential financing mechanisms for early coal phaseout by leveraging various resources from other institutions. These include Glasgow Financial Alliance for Net Zero (GFANZ), Gold Standard, and MSCI Sustainability Institute, among others.

Other frequent topics of engagement include:

Role of Gas and Nuclear in Decarbonization Strategy

Natural gas and nuclear constitute 10.8% and 5.2% of electricity generation sources in the Asia-Pacific.[16] The increasing pressure on utilities to reduce their share of electricity generation from coal often leads to them considering replacing coal with gas. According to IEA, although natural gas emits less carbon than most other fossil fuels, it has a limited role as a transition fuel from coal to renewable energy sources.[17] Building more fossil fuel plants is uneconomical in the future. LNG assets could end up underutilized or stranded within 10 to 15 years if the prices of clean energy and batteries continue to fall as expected.[18] Investors will continue engaging utilities to expand their renewable capacity instead of investing in carbon-intensive infrastructure like gas-fired power plants. Investors hope this will prevent carbon lock-in[19] and stranded asset issues.[20]

Asian utilities have also often considered nuclear energy a reliable, low-emission energy source for generating electricity. In Japan, where nuclear power contributed at least 30% of electricity generation until 2011,[21] restarting nuclear power plants has been an important pillar in most utilities' decarbonization strategy to achieve their medium-term 2030 target, despite the restart timeline remaining uncertain. Hong Kong will rely on supply from China's nuclear generation capacity to meet their medium-term climate goal.[22] Other countries are exploring the feasibility of advanced nuclear technology, like small modular reactors (SMR), to meet their growing energy needs.[23] However, public opposition based on safety concerns, remain a big challenges to deployment. Investors will continue to discuss feasibility of nuclear and other technologies in company transition plan.

Asset-Level Physical Climate Risk Assessment and Adaptation Strategies

The power generation sector is vulnerable to a range of physical hazards. The sector is exposed to multiple chronic physical risks, including rising temperatures, sea-level rise, droughts, and floods. An S&P Global analysis in 2021 highlighted that utilities (including power generation) are the most exposed and vulnerable to physical climate impact due to the nature of their operation.[24]

Joint research by scientists in Australian and UK universities found that rainfall changes due to climate will affect billions of people—and Asia is facing the highest risk of extreme rainfall.[25] Asian utilities are highly exposed as thermal power plants and nuclear power plants are built along the coast and therefore vulnerable to rising sea levels. Meanwhile hydropower generation is deeply impacted by water stress and rainfall changes.[26] Considering the likely impact on these businesses, investors continue to engage Asian utilities for asset-level physical climate risk assessment and corresponding adaptation strategies and planning.

Just Transition Consideration in Company's Transition Planning

Another aspect of last year's engagement on coal phaseout plans and transition plans engagement included just transition[27] considerations: The impacts of moving to a lower-carbon business model on workers and communities. With utility companies starting to set closure timelines for their coal fired power plants, it is equally important to create robust phaseout plans that address any potential negative impacts on workers, communities, and other stakeholders vulnerable to transition effects. Investors engaging in AUEP recognize that financing a just transition will help maximize the social and economic opportunities of phasing out coal fired power plants and minimize or manage any related risks.[28]

16 https://www.iea.org/regions/asia-pacific/electricity
17 https://www.iea.org/energy-system/fossil-fuels/natural-gas
18 https://www.bloomberg.com/news/features/2024-06-26/is-natural-gas-a-fossil-fuel-trap-or-a-bridge-to-clean-energy
19 https://www.wri.org/insights/carbon-lock-in-definition
20 https://www.utilitydive.com/news/utilities-dont-see-stranded-assets-as-a-top-risk-should-they/572246/
21 Following the Fukushima Daiichi Nuclear Accident in March 2011, the Nuclear Regulation Authority suspended the operation of existing nuclear power plants in Japan. Currently, only six out of 20 nuclear plants in the country currently operate, and several plants are under periodic inspection to be restarted with no specific timeline.
22 https://www.bloomberg.com/news/articles/2024-08-06/hong-kong-s-clean-energy-future-will-be-mostly-nuclear-clp-says
23 https://www.straitstimes.com/singapore/st-explains-what-are-south-east-asia-s-nuclear-ambitions-and-why-should-singapore-care
24 https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/utilities-face-greatest-threat-as-climate-risks-intensify-66613890
25 https://www.nature.com/articles/s41467-023-44513-3
26 https://www.waterpowermagazine.com/analysis/make-the-right-decisions-now-11679849/?cf-view
27 https://www.ilo.org/resource/other/climate-change-and-financing-just-transition
28 https://www.cliffordchance.com/expertise/services/esg/esg-insights/just-transition-a-framework-for-investor-engagement.html

2. Engagement with the Focus Companies

Note: Focus companies below are listed in order of their thermal (fossil fuel–based) generation capacity as of 2023. Figures were obtained from each company's disclosure, e.g., an annual report, integrated report, or sustainability report.

Huaneng

Name: Huaneng Power International, Inc.
Market: China
Installed capacity (as of 2023): 106.5 GW (Thermal), 29.1 GW (Non-thermal)
Climate-related targets committed: No specific commitment, but the company recognizes China's goal for CO_2 emissions to peak before 2030 and achieve carbon neutrality before 2060.

Huaneng has the largest thermal-installed capacity among all AUEP focus companies. Huaneng is also one of China's state-owned enterprises. Although Huaneng supported China's commitment to reach carbon neutrality in 2060, it has no specific plans or roadmap, including specific medium-term targets.

As of July 2024, Huaneng remains under active monitoring by AUEP.

PLN

Name: PT Perusahaan Listrik Negara (Persero) (PLN)
Market: Indonesia
Installed capacity (as of 2023):[29] 64.2 GW (Thermal), 8.8 GW (Non-thermal)
Climate-related targets committed:
Long-term: Net zero CO_2 emissions by 2060
Medium-term:

- Increase renewable capacity by 20.9 GW by 2030
- Committed to supporting the Indonesian Government's programs to achieve the Nationally Determined Contribution (NDC) by 2030[30]

PLN is a state-owned enterprise in Indonesia and one of Southeast Asia's largest electric utility companies. Continuing with productive engagement from the previous year, the PLN engagement group had several focused discussions on the company's decarbonization strategy and early retirement of its coal fired power plants.

PLN has aspired to achieve net zero emissions by 2060 and increase its renewable energy capacity to 20.9 GW by 2030. Based on the company's most recent sustainability report, PLN's efforts to achieve its climate targets include reducing its generation capacity from coal, such as canceling coal fired power plants projects, totaling 13.3 GW and 1.3 GW coal fired power plants that already signed a power purchase agreement (PPA).

Last year, PLN stated that financing the energy transition, including the transmission and distribution network and grid, is a major roadblock in shifting from coal to renewable energy. In June 2024, Indonesian media outlets reported that PLN needed USD25 billion to build the renewable energy grid.[31] It has secured a USD581.5 million lending facility from a consortium of the World Bank, Canada Clean Energy & Forest Climate Facility and Clean Technology Fund, for increased access to electrification in the country, energy transition programs, and the company's digitization.[32]

Investors look forward to continuing to engage PLN on retiring its coal assets early and exploring potential structures for the coal phaseout transaction to propose to the company.

29 Installed capacity in PLN system includes power plants the PLN own, independent power producers, and leased power plants.
30 https://climateactiontracker.org/countries/indonesia/targets/
31 https://www.thejakartapost.com/business/2024/06/05/pln-says-it-needs-25b-to-build-renewable-energy-grid.html
32 https://indonesiabusinesspost.com/insider/pln-secures-global-funding-forelectrificationrenewable-energy-development/

Chubu Electric

Name: Chubu Electric Power Co. Inc.
Market: Japan
Installed capacity (as of 2023): 57.2 GW (Thermal),[33] 9.2 GW (Non-thermal)
Climate-related targets committed:
Long-term: Net zero CO_2 emissions by 2050
Medium-term:

- 50% CO_2 emissions reduction or more derived from electricity sold to customers by 2030 compared to FY2013
- Expand renewable generation capacity by at least 3.2 GW by 2030

In 2019, Chubu moved all thermal power electricity generation business, including coal assets, to JERA,[34] a joint venture with Tokyo Electric Power Company (TEPCO). The Chubu Electric engagement group continued working actively with the company last year. This involved focusing on a detailed decarbonization strategy, especially on the feasibility of the ammonia and hydrogen co-firing strategy and progress on the restart plan of the Hamaoka Nuclear Power Plant and that of renewable expansion. Further to the decarbonization strategy, the engagement group discussed governance, physical resilience, and public policy with the company. As with the previous year, the engagement group was pleased to have Chubu and JERA representatives in the engagement meeting and share their perspectives with investors.

Chubu's decarbonization plan relies on renewable expansion and restarting the Hamaoka Nuclear Power Plant. With Chubu's coal assets sitting with JERA, the company is committed to decommissioning all inefficient coal fired power plants (supercritical or less) by 2030 and starting the full-scale operation of ammonia co-firing technologies in the 2030s.

This year, Chubu started using performance-based stock compensation for directors' remuneration. It used the volume of CO_2 emissions as one performance indicator, impacting 10% of total directors' remuneration. Chubu also disclosed its board of directors' skills matrix in their integrated report, which includes 'Technologies Contributing to Electric Power Supply & Environment' as one such skill. In April 2024, Chubu faced climate resolutions filed by non-governmental organizations (NGOs) on the disclosure of directors' competencies for the effective management of climate-related business risks and opportunities. While the proposal did not receive the two-thirds support hurdle needed for approval, it did receive over 20% shareholder support.[35] This demonstrates growing investor interest in seeing more board members with climate risk competencies. Investors are also increasingly interested in the assessment and selection criteria for directors' climate capabilities.[36]

The engagement group will continue working with Chubu Electric and JERA on feasibility and a detailed timeline to shift from coal to ammonia and to convey investor expectations for earlier coal phaseout, including overseas operations.

33 All thermal power assets are under JERA. Includes all JERA's domestic installed capacity as of March 31, 2023. Refer to https://www.jera.co.jp/static/files/corporate/CCB/JERA_report2023_EN_1115.pdf (p. 84)
34 Chubu Electric includes electricity procured from JERA as its Scope 3 emissions. Refer to https://www.chuden.co.jp/english/resource/esg/environment/initiatives/cdp/cdp2023cc_e.pdf (p. 1).
35 https://www.chuden.co.jp/resource/ir/ir_kabunushi/ir_sokai/100rinjihoukokusho.pdf
36 https://igcc.org.au/wp-content/uploads/2021/11/IGCC-Climate-Change-Board-Report.pdf

CRP

Name: China Resources Power Holdings Co Ltd (CRP)
Market: China
Installed capacity (as of 2023): 37.2 GW (Thermal), 22.6 GW (Non-thermal)
Climate-related targets committed:
Long-term: Achieve carbon neutrality before 2060
Medium-term:

- Add 40 GW of grid-connected installed capacity for clean energy by 2025

CRP is another state-owned enterprise that AUEP investors engage with and the engagement had a positive start. The engagement group discussed adopting TCFD disclosure and shared sector-specific guidance to facilitate discussion. In 2022, CRP announced plans for a spin-off, publicly listing its renewable assets to raise funds for capital expenditure. Due to changes in investor holdings, CRP was kept under active monitoring within AUEP.

In 2023, CRP followed through on its plans to spin out the renewable assets, announcing the public listing of China Resources New Energy Holdings Co Ltd on the Shenzhen Stock Exchange[37] to raise more funds for wind and solar power project expansions in China.

This year, investors plan to restart engagement with CRP, focusing on its decarbonization strategy and having the company set climate-related targets and other AUEP investor expectations.

37 https://m.in-en.com/article/html/energy-2324799.shtml

J-POWER

Name: The Electric Power Development Co Ltd (J-POWER)
Market: Japan
Installed capacity (as of 2023):[38] 16.1 GW (Thermal), 9.9 GW (Non-thermal)
Climate-related targets committed:
Long-term: Net zero emissions by 2050
Medium-term:

- 46% CO_2 emission (-22.5 million tons) reduction from FY2013 levels by 2030
- Increase 4 billion kWh per year of renewable power generation in Japan by 2030 (compared to FY2022)
- 9.2 million tons or more CO_2 reduction from FY2013 levels by 2025

The J-POWER engagement group continues to discuss its decarbonization strategy with the company, particularly on the phaseout of its domestic coal fired power plants and the feasibility of decarbonization technologies. In addition, they discussed the need to consider just transition aspects in the coal phaseout plan, the physical resilience of coal assets and the company's policy engagement with the Japanese Government.

It is positive to see that the company has incorporated investor expectations from past engagements. In an update of its medium-term management plan[39] published in May 2024, J-POWER announced it will close up to five low-efficient coal fired power plants units by 2030[40] as part of its target to reduce 46% of CO_2 emissions from the 2013 level. Several media outlets, including Reuters,[41] covered the news. This helped start momentum of coal phaseout discussions in the Japanese market. The company's medium-term plan also provided enhanced disclosure on their strategic investment allocation plan over the 2024–2026 period and contained a new renewables target that extends until 2030.

In terms of the company's climate governance, J-POWER introduced five non-financial evaluation indicators for performance-linked executive remuneration in 2023—these cover material issues such as responses to climate change and engagement with local communities. The percentage of performance-linked remuneration was raised from 10% to 20%, and a variable compensation component (performance-linked and stock-based compensation) was applied.

J-POWER's roadmap to achieving net zero emission by 2050—Blue Mission 2050—comprises three pillars: (1) expanding CO_2-free power sources through renewable energy and nuclear power, (2) achieving zero emission from power sources by converting coal-fired thermal power to coal gasification technology with carbon capture, utilization and storage (CCUS) or carbon recycling and producing CO_2-free hydrogen, and (3) power network enhancement. In line with the Blue Mission 2050 roadmap, J-POWER is working toward constructing and opening the Ohma Nuclear Power Plant, increasing its hydroelectric power capacity, completing the New Sakuma Frequency Converter Station, and investing more in battery storage.

Next year, the engagement group will continue working with the company on coal phaseout discussions. This will include overseas operations, adopting SBTi-aligned emission reduction targets, and discussing just transition considerations in its overall decarbonization strategy.

38 Based on owned capacity basis. Refer to https://www.jpower.co.jp/english/ir/library/pdf/2023/jpower_integrated2023_e_all.pdf (p. 106).
39 https://www.jpower.co.jp/english/ir/pdf/2405medium-termmanagementplan.pdf
40 Include two 250MW units in the Takasago Thermal Power Plant, one 500MW unit in the Matsushima Thermal Power Plant, one 1000MW unit in the Matsuura Thermal Power Plant, and one 700MW unit in the Takehara Thermal Power Plant.
41 https://www.reuters.com/sustainability/j-power-shut-2-coal-fired-power-plants-2025-2023-10-31/#

CLP

Name: CLP Holdings Ltd
Market: Hong Kong SAR, China
Installed capacity (as of 2023):[42] 15.8 GW (Thermal), 6.4 GW (Non-thermal)
Climate-related targets committed:
Long-term:

- Net zero GHG emissions across the value chain by 2050
- Phaseout coal-based assets by 2040

Medium-term:

- 59% reduction compared to the 2019 baseline in GHG emission intensity to 0.26 kg CO_2e/kWh by 2030
- 28% reduction compared to 2019 baseline in absolute Scope 3 (Category 11) emissions by 2030

CLP is the most progressive company in AUEP and the most aligned with AUEP's key expectations. In terms of the company's climate governance, CLP has shown its board of directors are competent in tackling climate risks and includes climate in its remuneration policy for executive directors and senior management. The performance measures of annual incentives include progress in meeting science-based GHG emissions intensity targets and phasing out coal-based assets.

This year, CLP has updated its transition plan, Climate Vision 2050,[43] with a strengthened target to decarbonize the company at a faster pace. CLP is committed to reducing the GHG emissions intensity of electricity sold to 0.26kg CO_2e/kWh by 2030, compared to the previous target of 0.3kg CO_2e/kWh. This will reduce the company's implied temperature rise from 1.81°C to 1.73°C. The Climate Vision 2050 report was prepared using the ISSB S2 Climate-Related Disclosures standard. The company is also committed to reviewing its targets for Climate Vision 2050 at least every three years.

On the managed phaseout discussion of its coal fired power plants, CLP mentioned it has provided financial assistance (e.g., subsidized energy) to people and community sectors in need. It provides ongoing support for those impacted by its coal fired power plants phaseouts and other structural changes to the energy system. EnergyAustralia, a CLP-owned power utility company in Australia, has also set a clear path to close Yallourn Power Station in mid-2028. It has given seven years' notice to enable thoughtful planning and support to staff and the local community.[44] Regarding the physical resilience of its assets, CLP has conducted asset-level physical climate risk assessments and developed adaptation measures to enhance individual asset resilience in each region. CLP works closely with the Hong Kong Government on the five-year development plan, supporting the company's ongoing decarbonization effort.

The engagement group will continue to work with the company on using carbon credits, climate key performance indicators (KPIs), remuneration, and early coal phaseout discussions.

42 Total generation on an equity plus long-term capacity and energy purchase basis. Refer to https://www.clpgroup.com/content/dam/clp-group/channels/sustainability/document/sustainability-report/2023/CLP_Sustainability_Report_2023_en.pdf (p. 176).
43 https://www.clpgroup.com/content/dam/clp-group/channels/sustainability/document/decarbonisation/clp-climate-vision-2050/full-report/CLP_CV2050_2024_en.pdf
44 https://reneweconomy.com.au/yallourn-coal-plant-workers-given-option-to-transition-to-offshore-wind-industry/

Tenaga Nasional Berhad

Name: Tenaga Nasional Berhad
Market: Malaysia
Installed capacity (as of 2023): 12.1 GW (Thermal), 4.0 GW (Non-thermal)
Climate-related targets committed:
Long-term:

- Net zero emissions by 2050 and reduction of 100% coal capacity by 2050 (compared to 2020 levels)

Medium-term:

- 35% reduction in Scope 1 emission intensity by 2035 (compared to 2020 level)
- 50% reduction of coal capacity by 2035 (compared to 2020 level)
- 8.3 GW renewable capacity by 2025, with accelerated renewable investment by 2050

Last year, Tenaga's engagement group actively discussed early coal phaseout, gas as a transition fuel, decarbonization technologies like CCUS and ammonia, physical risks, improved transparency, and the company's climate governance.

On the company's climate governance, in appointing its first chief sustainability officer and setting up its sustainability division in 2023, Tenaga established the Board Sustainability and Risk Committee. The committee will oversee the group's sustainability and risk management frameworks and commitments. Over the past two years, ESG-related KPIs have been elevated to Tenaga's C-suite. In 2023, sustainability linked KPIs were further enhanced with more detail on how they are incorporated into the Board and senior management's performance evaluation scorecard to align with the firm's sustainability objectives. Environmental KPIs include renewable energy growth and opportunities, carbon emission rating/score, battery storage (grid), and data center power usage effectiveness.

Tenaga refreshed its 'Reimagining TNB 2.0' strategy in 2023 with a focus on three strategic pillars: energy sources, energy vector, and energy usage. Tenaga's decarbonization plan spans the entire value chain. It includes decarbonizing energy sources, enhancing the transmission grid to support 70% renewable energy by 2050 in Malaysia, and empowering customers with green solutions. While investors continue to push for additional enhancement on the 8.3GW renewable energy target by 2025, Tenaga is on track to achieve it. Forty-eight percent was already achieved as of mid-2023. To support Malaysia's National Energy Transition Roadmap (NETR) released in 2023, Tenaga has led large-scale renewable energy and clean technology initiatives across floating solar, hydrogen, and ammonia (co-firing) projects.

In efforts to enhance transparency around transition and physical risk, Tenaga has performed a physical climate risk assessment for three types of power generation assets (e.g., coal, gas, and hydropower) and substation assets in Malaysia, against seven physical climate risks: coastal inundation, extreme wind, forest fire, river flooding, soil movement, surface water flooding and heat (dry spells). The company actively collaborates with the Malaysian Government to shape Malaysia's energy policies, such as the NETR and National Adaptation Plan. The company was a key stakeholder at the AIGCC-Capital Markets Malaysia Energy Transition Roundtable in May 2024.

Investors will continue engagement with Tenaga in the coming year with key engagement objectives involving the 2040 coal exit, the transition from coal to renewable energy, further transparency, developments on climate KPIs in executive remuneration and greater transparency and disclosure on climate.

3. Beyond Company Engagement

Policy Engagements

The AUEP includes policy engagement because national policies are a major influence on the economic and trading conditions that either accelerate corporate decarbonization, or hinder it.

Building on last year's series of policy engagements, AIGCC held several in-person, virtual, and hybrid engagement sessions between investors and regulators in Japan, Indonesia, and Malaysia. Investors and regulators discussed current and upcoming energy transition–related policies while also deliberating on how to accelerate the energy transition effectively.

Japan Energy Transition Roundtables

This year, AIGCC has hosted and organized two policy roundtables in Japan. They brought together key government bodies responsible for formulating policies on energy transition, climate, and environmental regulation; domestic and international investors; industry bodies; and a prominent Japanese research institution to discuss its national energy policy and investor needs for coherent transition and climate change policy. In March 2024, AIGCC and the Climate Bonds Initiative co-organized a C-suite closed-door roundtable to discuss the country's upcoming Seventh Strategic Energy Plan. In May 2024, AIGCC co-hosted a closed-door roundtable with the Principles for Responsible Investment (PRI)to discuss investor needs for transition and climate change policies.

Key highlights from both roundtable discussions include:

- **Role of asset owners:** Emphasis was placed on the role of asset owners to encourage and support asset managers. For financial institutions, it was noted that mandated approaches to measuring financed emissions and defining "avoided emissions"[45] would influence investor behavior.
- **Role of recent GX government initiatives:** Investors used this roundtable to understand the role of recent government initiatives, including the GX Economic Transition Bond and the newly established Asia GX Consortium.
- **Role of decarbonization technologies:** While much investment could be utilized to spur renewable energy development, participants also mentioned that policymakers and investors must consider the economic feasibility of decarbonization technologies.
- **Role of policy environments that support credible transition:** Investors emphasized the role of a stable policy environment. They noted the sustainability of future industries depends on policies that incentivize the purchase and availability of green electricity.
- **Increasing support for renewables would provide more opportunities for Japan:** Investors raised Japan's potential for renewables, particularly offshore floating wind. However, investors were concerned that even with current capacity, government appetite could result in insufficient deployment. Investors have raised the issue that more opportunities arise with expanded applications of renewable energy globally. These include electric vehicles and supporting high-emission sectors in their transition pathways.
- **Sustainability-Related Disclosure and Carbon Pricing:** Participants discussed the importance of sustainability-related disclosure and carbon pricing for companies, particularly high-emitters, to support their transition.
- **Clarity on GX Economic Transition Bond:** Investors expressed concern about the lack of clarity around using proceeds for future issuances of the GX Economic Transition Bond and Japan's relatively slower speed and scale of policy implementation compared to other markets. Participants raised the idea that efforts to address these could attract further international investment.
- **Relationship between climate-related policies in Japan and effort for renewable deployment:** Policymakers provided perspectives on the relationship among upcoming climate-related policies in Japan: The Seventh Strategic Energy Plan,[46] NDCs, GX 2040 Vision, and the Plan for Global Warming Countermeasures. Government efforts to understand models for renewable energy deployment were highlighted, including creating 100 Decarbonization Leading Areas by fiscal year 2025.[47]
- **The Seventh Strategic Energy Plan will substantially impact companies' transition, especially utilities:** During the engagement with utilities, companies mentioned they could not commit beyond policies set by the government. This again highlights the importance of an ambitious national energy policy.
- **The importance of having coherent policymaking:** Investors particularly emphasized merging climate targets with Japan's energy plans. This includes the need for alignment among the Strategic Energy Plan, sectoral transition plans, and NDCs.

Discussants from both roundtables raised the need to incorporate multiple energy transition scenarios into the Strategic Energy Plan, particularly those proposing higher renewable energy targets. Both roundtables ended by acknowledging that a more granular pathway and specific roadmap are needed for the Strategic Energy Plan. This would be supplemented by short-, mid-, and long-term goals, including the consideration of 2035 and 2040 energy targets.

45 https://www.enecho.meti.go.jp/en/category/special/article/detail_191.html
46 https://www.meti.go.jp/english/policy/energy_environment/review/index.html
47 https://policies.env.go.jp/policy/roadmap/preceding-region/

Malaysia Energy Transition Roundtable

AIGCC partnered with Capital Markets Malaysia to host a roundtable discussion on Malaysia's energy transition. Participants included representatives from various government ministries and bodies,[48] institutional investors, research organizations, and utility companies. The session began with a context-setting presentation by a research organization. This covered the upward trend of investment into the global energy transition, declining costs of energy storage systems and renewables, limitations of ammonia, hydrogen used for baseload power generation, Malaysia's historic reliance on fossil fuels and Malaysia's current energy transition investment. Considering these factors, several key solutions were proposed to address these issues: reforming the energy market, introducing carbon pricing, and developing the ASEAN grid for cross-border energy transmission.

Key discussion highlights from the roundtable include:

- **Feedback on Malaysia's National Energy Roadmap:** Participants provided perspectives on enhancing and supporting Malaysia's implementation of its NETR.[49] They deliberated on factors to consider in drafting the anticipated Natural Gas Roadmap for Malaysia.
- **Discussion on challenges in Malaysia's energy transition and potential approaches to address those challenges:** Roundtable participants raised that Malaysia faces several challenges in its energy transition, namely, its exponential energy growth, insufficiency of domestic gas for future energy security, PPAs that hinder increased deployment of renewables, and lack of a market that supports developing energy storage solutions. Participants raised possible approaches to address these challenges:
  - implementing a more robust emission reduction target under the NETR
  - deploying more rooftop solar PVs and microgrids
  - investing in grid efficiency and energy storage solutions
  - aligning its long-term gas strategy with decarbonization commitments
  - encouraging stakeholder consultation for the country's landmark Climate Change Bill
  - employing sufficient carbon pricing to promote investment in decarbonization solutions
  - supporting renewable energy availability to attract further foreign direct investment.

Working Groups at AIGCC

The engagement in AUEP with participating investors, focus companies, and policymakers is complemented by various thematic and market-based working groups at AIGCC.

Via AIGCC's **Engagement & Policy Working Group** and **Physical Risk & Resilience Working Group**, AUEP investors understand how they can channel efforts in corporate engagement and policy advocacy while integrating physical risk and resilience considerations in their engagement. AIGCC's **Energy Transition Working Group (ETWG)** also actively linked and supplemented AUEP engagements. Established in February 2023, the ETWG has focused discussions this past year as a dynamic forum for AIGCC investors to exchange ideas on the best practices and views for managed coal phaseout as part of energy transition challenges in Asia. Relevant sessions included the managed coal phaseout, the role of decarbonization technology (e.g., CCUS and hydrogen), investors' fossil fuel investment policy, and exploring the feasibility of financing mechanisms for coal phaseout (e.g., transition credits).[50]

Japan Working Group (JWG) was convened in October 2022 and was the first market-based working group in AIGCC. AUEP investors are engaging two Japanese utilities. Some Japanese market-focused discussions in the JWG are relevant to AUEP investors, including climate shareholder resolution trends in Japan, the transition finance framework of Japanese banks and the Seventh Strategic Energy Plan.

Recently, AIGCC launched the **Asset Owner Working Group (AO WG)** to support Asia-headquartered asset owners[51] in transitioning to net zero. The AO WG is designed to mobilize and support asset ownersto build their capacity in net zero investment. This includes investing in climate solutions and infrastructure like electrical grid investments and new technology in electric generation.

48 This includes the Ministry of Energy Transition and Water Transformation, the Ministry of Natural Resources and Environmental Sustainability, the Ministry of Economy and the Energy Commission, the Securities Commission, and Bursa Malaysia.
49 https://www.ekonomi.gov.my/sites/default/files/2023-09/National%20Energy%20Transition%20Roadmap_0.pdf
50 https://rmi.org/transition-credits-are-gearing-up-to-support-global-energy-transformation/
51 This includes pension funds, sovereign wealth funds, insurance, endowments, and foundations.

4. Looking to 2025

Climate change is now widely recognized as a systemic financial risk that significantly affects all long-term investors' portfolios and cannot be divested from. To support the full implementation of the Paris Agreement, major companies must move swiftly to address the risks and pursue the opportunities that climate change and the transition to net zero emissions present.

With this corporate engagement initiative entering its fourth year, investors in AUEP will continue to push for faster and more ambitious climate commitments from focus companies. They will also focus on implementing company strategies to meet net zero goals, with short-, medium-, and long-term emissions reduction aligned with the Paris Agreement. Given the urgency of the climate crisis and to address growing systemic risk, institutional investors aim to contribute to the climate finance solution for phasing out coal and other fossil fuels in favor of clean energy technologies. They intend to become more active in engaging with Asian power utility companies and energy users to accelerate the transition and avoid stranded assets and environmental costs.

By considering both the region's supply and demand[52] side of electricity, AUEP investors will continue to engage with companies under the AUEP to build a science-based decarbonization strategy and transition plan. Investors will also focus on other AUEP investor expectations: climate governance, transparency and disclosure, physical resilience, and public policy in the engagement for next year. In addition to strengthening dialogues with focus companies on the investor expectations of AUEP, AIGCC will continue to facilitate engagement between policymakers, companies, and investors to identify and deploy targeted policy support that accelerates and facilitates higher adoption of renewable energy and enable credible decarbonization strategies.

52 The forecast of rising electricity demand in Asia due to increasing artificial intelligence use and expansion of regional data center facilities will also add pressure and urgency to Asian utilities to minimize their environmental impact by expanding their renewable capacity and transitioning faster to achieve their net zero goals. Refer to https://asia.nikkei.com/Spotlight/The-Big-Story/AI-s-looming-climate-cost-Energy-demand-surges-amid-data-center-race

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