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# Firing Down

## THE ROLE OF ASSET MANAGEMENT COMPANIES IN EARLY RETIREMENT OF COAL-FIRED POWER PLANTS

**BY YING QIAN**

## EXECUTIVE SUMMARY

A 70 percent reduction in total coal-fired power generation by 2030 and a 96 percent reduction by 2050 are needed to meet the 1.5C warming threshold of the Paris Agreement. The 2023 United Nations Climate Change Conference (COP28) signaled the "beginning of the end" for the fossil fuel era, and prioritized a swift, fair transition with significant emissions reductions and increased financial support.

Transitioning coal-fired power plants involves managing various issues, including political support and collaboration with operators, planning and prioritizing the transition, ensuring a just transition for affected stakeholders, reconsidering electricity and grid planning, managing legal and institutional aspects, and ensuring transparency and accountability for climate and social outcomes. Transition financing is also crucial and needs to focus on finding suitable financing/refinancing options, concluding power purchase agreements, optimizing debt and equity, managing cash flows and providing just transition financing along with institutional and technical support.

Asset management companies (AMCs) with expertise in handling non-performing assets can effectively apply their experiences to scale up and expedite the process of early retirement of coal-fired power plants. For transition management, AMCs play vital roles in planning and executing plant transitions, establishing new business processes, identifying and mitigating risks, advocating for stakeholders and integrating environmental, social and governance considerations into all operations. Regarding transition financing, AMCs can take the lead in restructuring loans, negotiating agreements, renegotiating public-private partnerships (PPP) and power purchase agreements



(PPA), formulating portfolio strategies, conducting investment analysis and asset valuation, allocating capital and providing investment and financing solutions, ultimately leading to asset disposition.

AMCs follow two main processes for the early retirement of coal-fired power plants, addressing financially unviable and viable plants. Both processes involve acquiring a substantial share of the plant's debt and equity and gaining management control to enable the AMC to be involved in various aspects of the early retirement process.

AMCs' approach and alternative early retirement initiatives complement each other in various roles. While most initiatives use a top-down process with high-level policy agreements, AMCs may lack the authority for high-level policy changes but can influence the process by applying practical experience. Unlike other institutions undertaking early retirement programs, AMCs have a proven record in change management through debt restructuring. Blended finance is often mentioned in other programs without specific details, while AMCs excel in offering optimal finance packages. While most initiatives rely on ex-ante risk management, AMCs can engage in both ex-ante and ex-post, choosing to exit deals early when risks are known, and business processes are established.

Multilateral development banks (MDBs) can contribute by offering technical assistance, facilitating knowledge sharing among AMCs and stakeholders across countries and enhancing the governance and transparency of AMCs. MDBs have the potential to integrate AMCs into distressed debt resolution efforts within a country, implementing climate-friendly distressed debt swap initiatives and enabling the participation of AMCs in projects funded by multinational programs.

## INTRODUCTION

Globally, over 2,000 gigawatts (GW) of coal power plants are in operation, contributing to around one third of global carbon dioxide ($CO_2$) emissions (Birol 2021). New coal plants are not in line with climate targets, and existing ones are increasingly facing the possibility of early retirement (Nedopil 2022). Estimates from the Intergovernmental Panel on Climate Change (IPCC) suggest that to stay below the 1.5C warming threshold of the Paris Agreement, total coal-fired power generation needs to decrease by 70 percent by 2030 and 96 percent by 2050 (Clark 2023).

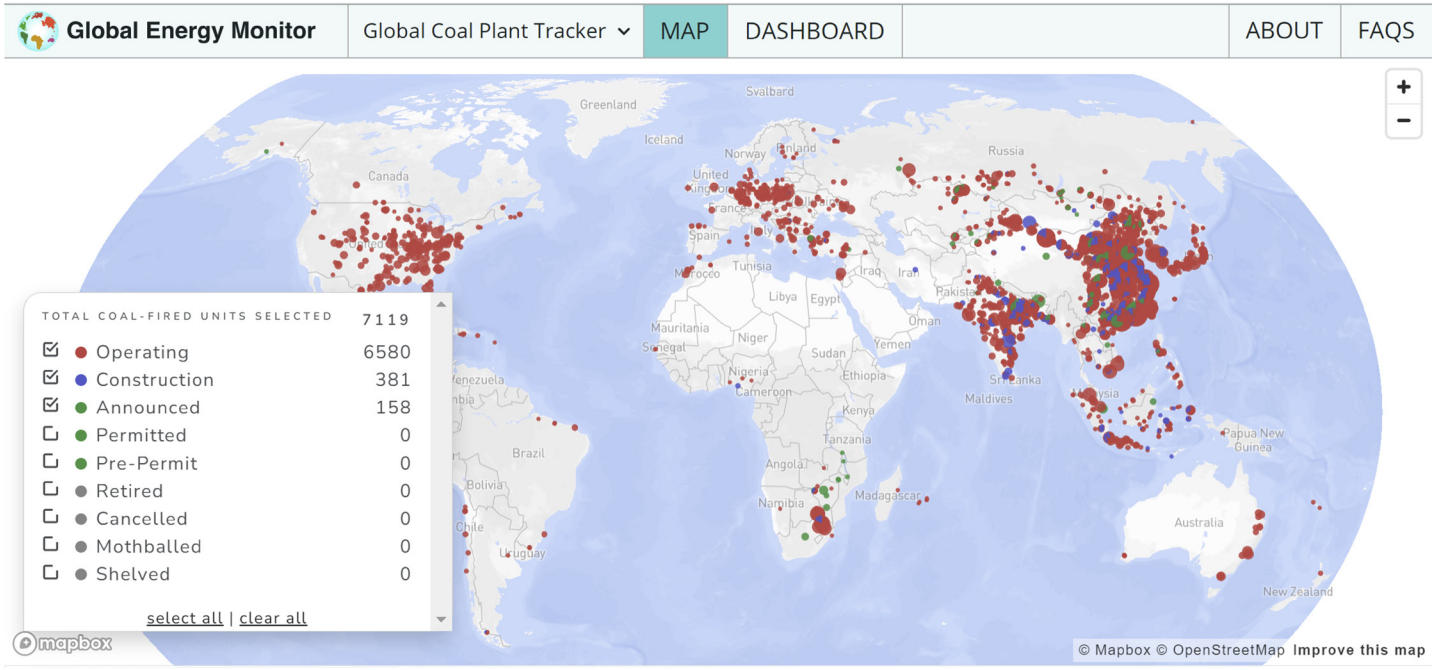
The operating plants, constituting approximately 56 percent of all plants in the Global Energy Monitor dataset, vary in age from one to 91 years, with an average age of 23 years (Maamoun 2020). Figure 1 displays a map of global coal-fired power plant capacities in 2023, measured in megawatts (MW). The average capacity of these active plants is about 325 MW. Notably, China, India, the United States, Europe and Southeast Asia have the highest number of operational coal plants.

In developing countries, coal-fired power plants play a significant role in electricity generation. In 2022, countries like Indonesia, Vietnam and the Philippines canceled nearly 13 GW of coal projects (Fernandez 2023). Southeast Asia faces the challenge of retiring over 5 gigawatts of coal plants annually for the next two decades to phase out this fossil fuel. However, the ongoing debate revolves around the changing role of coal plants—from serving as the primary power source to a stabilizing factor among various renewable sources.

Worldwide, there is growing support for moving away from coal, with stronger public policies for coal phase-out globally and regionally. The 2023 United Nations Climate Change Conference (COP28) marked a significant step, signaling the "beginning of the end" for the fossil fuel era. The agreement focuses on a rapid, fair and equitable transition, emphasizing substantial emissions reductions and increased financial support (UNFCCC 2023). However, effectively financing and managing the



**Figure 1: Capacity of Global Operating Coal-Fired Plants**




**Source:** Global Energy Monitor.

phase-out of coal power poses a broad challenge that demands a comprehensive and coordinated approach (GFANZ 2023).

Asset management companies (AMCs) with expertise in handling non-performing assets can effectively apply their experiences to scale up and expedite the process of early retirement of coal-fired power plants. For transition management, AMCs play vital roles in planning and executing plant transitions, establishing new business processes, identifying and mitigating risks, advocating for stakeholders and integrating environmental, social and governance considerations into all operations. Regarding transition financing, AMCs can take the lead in restructuring loans, negotiating agreements, renegotiating public-private partnerships (PPP) and power purchase agreements (PPA), formulating portfolio strategies, conducting investment analysis and asset valuation, allocating capital and providing investment and financing solutions, ultimately leading to asset disposition.

AMCs follow two main processes for the early retirement of coal-fired power plants, addressing financially unviable and viable plants. Both processes involve acquiring a substantial share of the plant's debt and equity and gaining management control to enable the AMC to be involved in various aspects of the early retirement process.

AMCs' approach and alternative early retirement initiatives complement each other in various roles. While most initiatives use a top-down process with high-level policy agreements, AMCs may lack the authority for high-level policy changes but can influence the process by applying practical experience. Unlike other institutions undertaking early retirement programs, AMCs have a proven record in change management through debt restructuring. Blended finance is often mentioned in other programs without specific details, while AMCs excel in offering optimal finance packages. While most initiatives rely on ex-ante risk management, AMCs can engage in both ex-ante and ex-post, choosing to exit deals early when risks are known, and business processes are established.

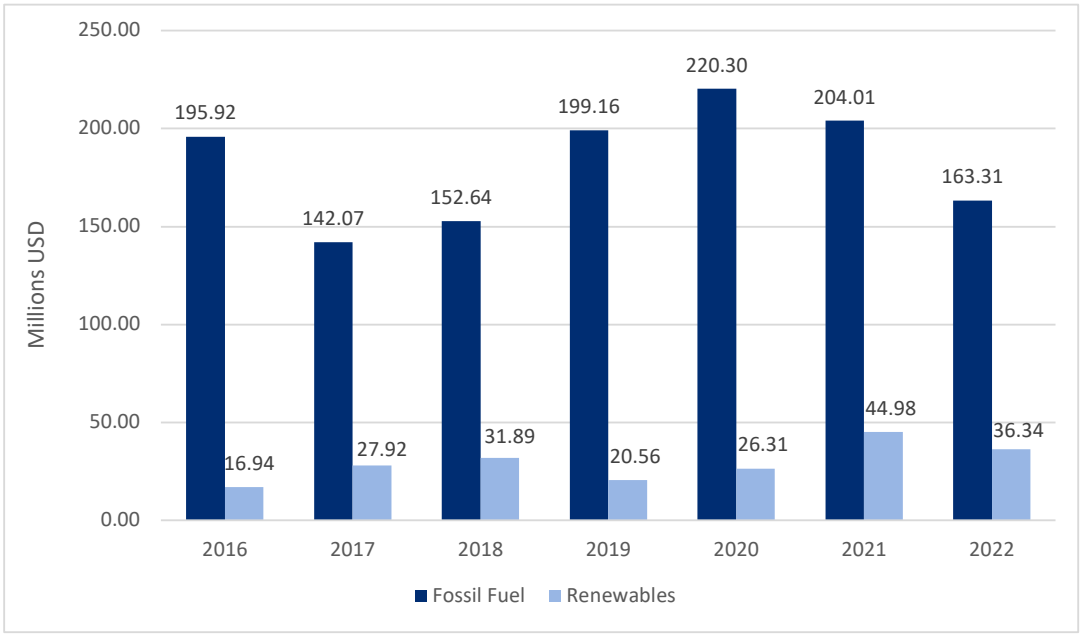
This policy brief explores the role of AMCs in the early retirement of coal-fired power plants by examining AMCs' capabilities in supporting transition management and financing issues as compared to other early retirement mechanisms and programs. The brief maps the business process for AMCs to deal with both financially viable and unviable coal-fired power plants and concludes with policy recommendations for how multilateral development banks (MDBs) can integrate AMCs into distressed debt resolution efforts.

## CHALLENGES AND OPPORTUNITIES

Constructing new clean energy infrastructure is now more cost-effective than continuing to operate coal-fired power plants. This makes a rapid transition from fossil fuels seem practically obstacle-free on paper. The cost of clean energy has dropped significantly, making renewables more competitive than coal plants in almost every location. Running outdated and uncompetitive coal plants incurs costs for consumers and taxpayers alike. By phasing out the portion of the existing global capacity that is already economically outmatched by new renewables, a savings of $39 billion in 2020 could be achieved. Within five years, 73 percent of the global coal fleet is projected to be economically uncompetitive with new renewables and storage, leading to a savings of $141 billion in 2025 (Bodnar 2020).

However, renewable energy accounts for only 14 percent of Asian commercial bank financing and no discernible upward trend over the past six years has been observed, as seen in Figure 2. Nearly 70 percent of the global coal fleet relies on what experts call market distortions, or policy decisions that help coal producers beat the competition.

**Figure 2: Loan Sanctioned by Banks in Asia for the Energy Sector (USD millions, 2016-2022)**




**Source:** Statista, "Value of loans and underwriting by Asian banks for the energy sector in Asia in from 2016-2022, by energy type" (in million US dollars).



A preliminary study by the ADB estimated that approximately $27 billion would be needed to retire 44 percent of the combined coal plant portfolios in the Philippines ($7 billion), Vietnam ($9.6 billion) and Indonesia ($10.1 billion), based on discounted cash flows of selected coal power plants (ADB 2021).

The significant concept of shutting down large-scale, polluting fossil fuel power sources has shifted from being a fringe topic in discussions about climate change to a central focus. In many countries, millions of people depend on thermal power for their livelihoods, both directly and indirectly, and substantial capital has been invested in this sector. Successfully decommissioning these facilities requires careful consideration of the political and economic aspects specific to each country, including regional differences and the impact on state revenues (Ghosh 2021). When preparing for early retirement of coal plants, key factors include securing political support, collaborating with operators, creating a fair transition plan for affected workers and communities, identifying suitable financing options, planning for electricity and grid needs and addressing legal and institutional considerations (Nedopil 2022).

Table 1 outlines and categorizes management and financing considerations pertinent to orchestrating a smooth and successful transition during the early retirement process of coal-fired power plants. Each aspect presented in the table can be further elaborated upon, and the synergy between management and financing endeavors is crucial for optimizing outcomes through iterative reinforcement.

**Table 1: Issues Considered for Effective Transition of Coal-fired Power Plants**

| Management | Financing |
|---|---|
| • Political buy-in and cooperation with operators<br>• Planning, prioritizing and sequencing the transition of the coal fleet<br>• Just transition for affected employees and communities<br>• Electricity and grid planning<br>• Environment compliance<br>• Legal and institutional planning<br>• Transparency and accountability for climate and social outcomes | • Finding the right financing/refinance options<br>• Public-private partnership and power purchase agreements<br>• Debt, equity and cash flows<br>• Financing for just transition<br>• Institutional and technical support |

**Source:** Author's elaboration.

## Transition Management Issues

Closing coal-fired power plants early is complex due to political, economic and environmental factors. Political support is challenging but crucial. The program manager[1] must clearly explain reasons, such as environmental, economic, public health and local economic aspects for retiring early. Providing incentives like tax breaks is pivotal. Good communication, keeping the public informed and open dialogue are vital. Striving for mutually beneficial results and supportive policies are critical for successful early retirement planning.

[1] "Program manager" refers to the entity implementing the coal-fired plant early retirement program.

Planning the shift from coal power involves considering factors like age, efficiency, environmental impact and maintenance costs. This includes examining regulations and setting clear goals. The program manager establishes criteria based on age, inefficiency, environmental impact and economic viability, also considering potential repurposing of sites. Creating a detailed plan with a timeline, the manager may need to identify alternative energy sources and technologies suited to the local energy scene. Implementing a monitoring and evaluation system is vital to track progress, adjust based on feedback and stay updated with advancements.

Ensuring a fair transition for employees and communities during the early retirement of a coal-fired power plant is crucial. Clear communication is key, with program managers explaining reasons, timeline and potential impacts. Retraining employees for clean energy or other industries is vital. To support those affected, program managers, governments and stakeholders should provide comprehensive financial aid, covering education, training, job placement, severance pay and extended healthcare benefits. Governments can diversify the economy in affected areas by supporting new industries. Early engagement with labor unions is vital for fair transition plans. Environmental responsibility is imperative, with plans for site remediation developed collaboratively with community leaders and local governments.

Coal plant decommissioning includes investigating and cleaning up hazardous materials to meet government requirements, as well as defining site-specific redevelopment needs. The site owner is responsible for ensuring regulatory compliance and collaborating with stakeholders and relevant government agencies, such as the Environmental Protection Agency in the United States (2016).

Planning the switch from a coal-fired power plant to alternative energy requires a careful approach. The program manager assesses the current grid, estimates the needed capacity for renewable sources and identifies upgrades. Plans include a mix of energy sources for grid reliability. Investments promote modern technologies like smart grids and energy storage. Program managers use strategies to optimize energy use, reduce peak demand and promote efficiency, resulting in a well-prepared and adaptive grid system.

Legal and institutional planning is essential for the early retirement of a coal-fired power plant. The program manager oversees emissions compliance, secures permits and potentially repurposes the site. This includes a thorough environmental impact assessment and adherence to local regulations. Renegotiating contracts and addressing legal obligations, such as labor laws, is essential. The program manager considers long-term legal implications, anticipates challenges and collaborates with the government to manage and mitigate liabilities.

To maintain transparency and accountability during the early retirement of coal-fired power plants, the program manager needs to establish a robust monitoring and reporting system. This system tracks progress toward climate and social goals, providing clear data on emissions reductions and other impacts. Independent audits or reviews verify reported data. Adherence to relevant regulations and comprehensive worker transition programs are crucial and should be implemented and communicated.

## Transition Financing Issues

Retiring coal plants requires significant upfront investment for decommissioning and transitioning to cleaner energy. Choosing funding options means evaluating various instruments and considering costs and benefits. The need can be met through debt financing, including green bonds and project-specific loans. Revenue derived from renewable energy can also be used to repay debt. Equity financing, involving selling shares to various investors, from private companies to the public, is also



an option. Partnerships with private equity firms allow investment in exchange for ownership shares. Venture capital may fund innovative technologies for early retirement, especially in renewable energy.

Options such as utilizing government grants, subsidies and tax credits for renewable energy development can help early retire coal-fired power plants with positive cash flows. Additional financing possibilities involve carbon credit sales, public-private partnerships (PPPs) and accessing specialized funds for emission reduction, environment, social and governance (ESG) risks. Other avenues encompass community investment programs, insurance solutions for risk mitigation and asset leasing or sales. Support may also come from MDBs, corporate social responsibility initiatives and various funding sources.

Funding options should address unwinding PPPs and power purchase agreements (PPAs). The program manager will assess terms to understand each party's scope and obligations. Negotiations for amendments will occur, addressing financial settlements for fairness. The program manager will oversee asset transfer, complete comprehensive documentation for official closure, consider environmental factors and establish mechanisms for dispute resolution.

Public funds, local, national and international, are often required alongside financing, refinancing and reinvestment mechanisms. Institutions in public finance play a crucial role in creating financial tools that reduce risks and are suitable for use in developing economies. Public institutions also contribute to the portfolio emissions accounting standard which measures and discloses greenhouse gas (GHG) emissions related to financial institutions' lending and investments. Institutions often establish short-term emission reduction targets based on various recommendations from relevant alliances and initiatives (Pinko 2023).

Considering social aspects in client relationship management for a just transition is key. Engaging in dialogue with relevant actors to create an enabling environment and promote system-wide innovation is crucial (ILO 2022). Sustainable development contributions can facilitate the early phase-out of coal plants, replacing them with renewable energy (Gold Standard 2023). Finance plays a crucial role, supporting worker reskilling, economic diversification, safety nets, community engagement, consultation processes and access to credit (among other elements) in a just transition.

Financial support for institutional and technical assistance in the early retirement of coal-fired power plants complements the actual retirement operations. This encompasses areas such as policy development, capacity building, research, community engagement, feasibility studies, technology transition, environmental impact assessments (EIAs), training, partnerships with private entities and risk mitigation. Potential funding sources for these activities may include technical assistance programs from MDBs and accessing global funds.

Some completed transactions demonstrate the financial feasibility of managed coal plant phaseouts in various countries. These transactions utilize three financing mechanisms: adjusting risks and returns through mechanisms like securitizations and key performance indicator (KPI)-linked debt instruments, reducing the cost of equity through managed transition vehicles and blended finance tools, and enhancing cash flows via government incentives and revenue contracts for replacement renewables (Bhat 2023).

Financial institutions (FIs) play a crucial role in supporting the net-zero transition, presenting a significant impact on decarbonizing the real economy. FIs should actively increase the adoption of managed phaseout in their net-zero planning and target setting. Ambitious commitments require accountability, prompting FIs to enhance metrics and targets with managed phaseout-specific considerations. The rapidly emerging field lacks standards and best practices, urging collaboration among financial sector professionals, industry experts and standard setters to establish clear

guidelines, guardrails and criteria for credible managed phaseout plans, and mitigate the risk of greenwashing (Kekki 2023).

## ASSET MANAGEMENT COMPANIES AS THE OPERATOR AND FINANCER

AMCs specialize in managing distressed assets or underperforming loans, a skill set applicable to coal power plant early retirement. They excel in identifying financially challenged or at-risk-of-default assets through practical experiences. Following a comprehensive analysis of the plant's financial health, reasons for distress and market conditions, AMCs propose loan restructuring solutions. These proposals address specific challenges while considering stakeholder interests, facilitating negotiations with the power plant and creditors for mutually agreeable solutions, including outright loan purchase and modified repayment terms. As part of the restructuring, AMCs may explore options like debt-to-equity swaps and initiate liquidation processes.

The AMC approach, known as the good bank-bad bank approach, was widely used in past financial crises, including the Asian financial crisis (late 1990s) and the global financial crisis (late 2000s). AMCs manage non-performing assets (NPAs) to improve overall asset quality in the financial system. Their goal is to maximize NPA recovery through activities like asset resolution and collections, utilizing capabilities such as NPA assessment, asset acquisition, finance sourcing, debt-equity swap, NPA management, conversion and disposition, workforce redeployment and environmental/social services. Debt-equity swap and optimization measures allow AMCs direct involvement in debtor company management. Whether public or privately owned, AMCs often evolve into full-service financial conglomerates, leveraging expertise in distressed debt workouts and asset management. The transformation of AMCs in developing countries contributes to financial market development, including legal and regulatory reforms in bankruptcy, non-judicial foreclosure, merging and acquisition, and fostering financial market infrastructure development like corporate bonds and asset-backed securities.

Leveraging their expertise in resolving non-performing assets, AMCs are well-equipped for various aspects of coal-fired plant early retirement. In transition management, they actively collaborate with government authorities and partners, applying proven business processes for execution. They provide real-time on the ground feedback which aid continuous policy adjustments. AMCs, experienced in resolving similar assets, excel in managing risks associated with early plant retirement. Key functions include thorough risk assessments covering financial, regulatory, environmental and reputational aspects. Financial implications, like decommissioning costs and impacts on investors, are assessed through models, exploring cost-effectiveness and alternative energy transitions. AMCs also explore insurance and risk mechanisms for unexpected events, address legal risks and leverage specific AMC laws in some countries. They proficiently conduct environmental and social impact assessments, adhering to advanced ESG standards in the just transition process.

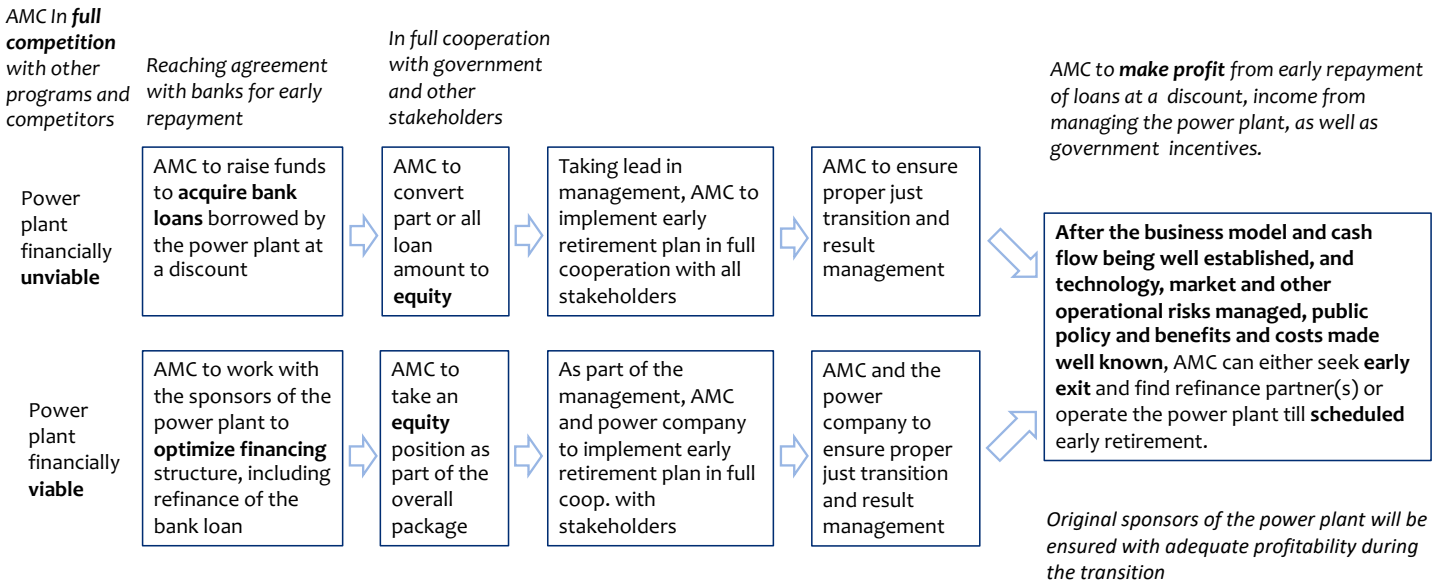
AMCs need to strategically manage the phased retirement of coal-fired power plants to optimize overall portfolio performance. The decision-making process considers factors like market conditions, regulations, environmental concerns and the broader energy transition. AMC oversees the entire asset lifecycle, making choices on maintenance, upgrades and retiring assets not aligned with the portfolio strategy. In handling coal-fired power plants, the AMC approach to early retirement involves a thorough evaluation of these factors. When taking over plant management, AMC helps resolve PPAs often found in PPPs. By engaging with stakeholders, including government authorities and utility companies, AMCs assess impacts and financial implications, balancing against the costs and benefits of early retirement.



As a financial intermediary, AMCs excel in analyzing and valuing assets, particularly in the context of early coal power plant retirement. This involves assessing both financial and non-financial aspects, aligning decisions with investor interests and the overall portfolio strategy. Asset valuation considers fair market value, incorporating financial, operational and environmental factors, as well as market conditions, regulations and sustainability. AMCs conduct legal due diligence, ESG integration and social considerations into their investment analysis. By evaluating results, including risk and return on investments, AMCs determine the impact of reallocating capital and assets during early retirement on overall portfolio performance. AMCs explore alternative investments, weighing risk-adjusted returns and alignment with its strategy. Leveraging financial expertise, AMCs can identify and execute optimal financing solutions, including government grants, subsidies, carbon markets, ESG financing and funds for energy transitions. Asset valuation guides AMCs in approving the disposal of assets during the early retirement of coal-fired power plants. AMCs develop divestment strategies considering economic viability and alignment with clean energy goals. These strategies identify potential buyers or investors and negotiate favorable terms, including considerations for environmental liabilities, permitting and future land use, to structure deals for asset disposition.

Figure 3 outlines two processes for AMCs to enable the early retirement of coal-fired power plants. The first deals with financially unviable plants, over 70 percent of which plants may become uncompetitive within five years. In this scenario, AMCs assist creditors in recovering non-performing loans (NPLs) from the plant, potentially acquiring bank loans at a discount through negotiations. Working with the power plant management team or by taking over, AMCs implement an early retirement plan in collaboration with government agencies and stakeholders. This involves just transition activities and result management. Once the business model is established, risks are managed, and benefits and costs are clear, the AMC may seek an early exit or continue operating the plant till scheduled retirement. AMCs can profit from early loan repayment, income from managing the plant and government incentives.

**Figure 3: Typical AMC Processes**




**Source:** Author's elaboration.

If the coal-fired power plant is financially viable, the AMC faces less pressure for accelerated loan repayments. In this scenario, the AMC proactively collaborates with power plant sponsors to optimize the financing structure, possibly including refinancing bank loans. The AMC may take an equity position and join the management team. Together with the power company, the AMC can implement an early retirement plan in cooperation with stakeholders, ensuring a just transition and result management. The subsequent steps mirror those in the first case, where the AMC seeks an early exit or continues plant operation till scheduled retirement, based on known risks, policies, benefits and costs.

## Comparing the AMC Approach with Other Programs and Mechanisms

Besides the proposed approach of AMCs, alternative programs exist for early retirement of coal-fired power plants. These encompass government interventions, power plants' own initiatives in specific countries, mechanisms from regional or global trust funds, programs by MDBs and initiatives led by non-governmental organizations (NGOs). One example is the Accelerating Coal Transition Investment Program (CIF-ACT) under the Climate Investment Funds, which aims for a just transition from coal to clean energy in recipient countries. CIF-ACT supports initiatives like the Just Energy Transition Partnerships (JETPs) in South Africa, Indonesia and Vietnam. Within MDB programs, the Asian Development Bank's (ADB) Energy Transition Mechanism (ETM) is notable. ETM utilizes both private and public capital to refinance coal-fired power investments, enabling the shortening of PPAs and the early closure of plants by up to a decade. The ADB is actively collaborating with Indonesia, Kazakhstan, Pakistan, the Philippines and Vietnam at different stages of ETM implementation. The Inter-American Development Bank (IDB) has adopted an innovative incentive in Chile for early coal plant phase out with the use of carbon markets (Inter-American Development Bank / Inter-American Investment Corporation, 2023). Singapore's transition carbon credit also uses carbon markets to create alternative cashflows to support early retirement (Monetary Authority of Singapore, 2023).

Table 2 compares the AMC approach with key transition management functions against other mechanisms like the ETM and JETP. Regarding political buy-in and cooperation with operators, both the ETM and JETP address challenges through formal memorandums of understanding (MOUs) at the national level, while the AMC collaborates with policymakers and global/regional partnerships. In planning, prioritizing and sequencing coal fleet transitions, the ETM focuses on country-level pre-feasibility studies, policy dialogues and planning, while JETP offers a toolkit for holistic government strategies. An AMC conducts smaller-scale studies but supports country-level prioritization by other partners. For electricity and grid planning, the ETM, JETP and an AMC can collaborate with broader clean energy partners, with the AMC focusing on smaller, local implementation. The ETM targets independent power producers (IPPs), while AMCs are effective for financially unviable state-owned coal-fired power plants.

In terms of ensuring a just transition for affected employees and communities, JETP excels in addressing challenges related to people, communities and land/infrastructure, supporting upskilling, reskilling and repurposing existing infrastructure. With public sector support, the AMC combines operational assistance with financial capabilities in this area. Regarding legal and institutional planning, the ETM focuses on regulatory and institutional assessments, and the AMC can provide real-time feedback to legislators, regulators and partners. JETP prioritizes transparency and accountability through stakeholder consultation, while the AMC adopts best practices at the operational level. The ETM primarily focuses on Southeast Asia but is scalable to other regions, while JETP engages select countries. AMCs are globally active where there is willingness. In areas lacking institutional capacity, JETP supports capacity building. AMCs apply experiences from similar projects through a learning-by-doing process.



**Table 2: Coal-fired Power Plant Transition Management Functions Among Different Mechanisms**

| | ETM | JETP | AMC |
|---|---|---|---|
| **Political buy-in and cooperation with operators** | Country level commitment through an MOU | Tackling challenges linked to national strategies, and builds support at the local level | Individual AMC needs to work with national policy makers and global or regional partnerships |
| **Planning, prioritizing and sequencing the transition of the coal fleet** | Country level pre-feasibility study, policy dialogue and planning | A holistic toolkit, help governments develop transformation strategies and economic and social development plans | Possible on a smaller scale (city or county), but generally need to support the country level prioritization |
| **Electricity and grid planning** | Support and enable technologies such as smart grids | Define paths to advance clean energy transitions | Feasible on a smaller scale (city or county) |
| **Types of power plants covered** | Independent power producers (IPPs) | | Any, more effective on those state-owned but financially unviable |
| **Just transition for affected employees and communities** | | Tackling challenges linked to people and communities as well as land and infrastructure. Supporting people's upskilling and reskilling. Reclaiming and repurposing the existing infrastructure, including land and power plants. | With public sector support, AMC can do a lot of work in this area |
| **Legal and institutional planning** | Regulatory and institutional assessments | | Provide real time feedback to legislators and regulators |
| **Transparency and accountability for climate and social outcomes** | | Consult with key stakeholders | Ready to adopt best practices |
| **Regional focus** | Southeast Asia and scalable to other parts of Asia and the pacific, as well as Latin America and Africa | Selected countries globally | Can be active in conducive markets globally |
| **Institutional and technical support** | | Build technical and institutional capacities | Learning by doing. Experiences accumulated can be useful for other similar projects |

**Source:** Author's elaboration.

**Note:** ETM = Energy Transition Mechanism; JETP = Just Energy Transition Partnership.

Table 3 illustrates the AMC approach to transition financing compared with other mechanisms. Regarding financing and refinance options, the ETM emphasizes blended finance with details, while JETP relies mostly on MDBs. The AMC, as a financial intermediary, collaborates with donors and the finance market for optimal solutions. Debt, equity and cash flow analysis are common in all mechanisms, with the ETM favoring senior debt and JETP exploring PPPs. The AMC, with flexibility, evaluates various financing forms for the best fit. Reworking PPPs and PPAs for early retirement is challenging but critical. The ETM relies on PPA tenor adjustments, whereas the AMC, directly managing the plant, can initiate PPA changes. For just transition support, JETP aids employees and suppliers, while the AMC provides direct support through ESG and corporate social responsibility mandates. Effective risk management is crucial for transition finance. The ETM and JETP focus on ex-ante risk management, while the AMC has an advantage in ex-post risk management, seeking an early exit after well-managed policy, market, technology and finance risks with an established business process.

**Table 3: Transition Financing Functions Among Different Mechanisms**

| | ETM | JETP | AMC |
|---|---|---|---|
| **Finding the right financing / refinance options** | Part of the blended-finance program | Funding will be channeled through multiple multilateral development banks (MDBs) | AMCs to work with donors and the market to find the best solution; donors and markets can also review AMCs' performance |
| **Debt, Equity and Cash Flow analysis** | Senior debt | Public-private-partnership or direct project-finance basis | Every possibility would be evaluated |
| **Rework PPP and PPAs** | On the condition that the tenor of the power purchase agreement will be shortened. | | As AMC directly manages the plant, it can initiate the changes to PPAs etc. |
| **Financial support for just transition considerations** | | Provide just transition support to coal plant employees and training opportunities for suppliers, contract workers | ESG and corporate social responsibility mandates and potential public finance support allows the AMC to provide financial support for just transition |
| **Risk management** | *ex-ante* finding the right mix of policies, sponsors and operators, and the financing package to work with IPPs | *ex-ante* finding the right mix of policies; focusing on upstream public sector's role and downstream just transition related issues | *ex-ante* working with and finding the right mix of policies, sponsors and operators, and the financing package in full competition with other competitors; *ex-post* seeking early exit through refinance after risks are well known and managed, and business process well established |

**Source:** Author's elaboration.

**Note:** ETM = Energy Transition Mechanism; JETPs = Just Energy Transition Partnership; PPP = public-private partnership.

AMCs and other initiatives are complementary in various roles and functions. Public and private sector AMCs can swiftly expand global coal-fired power plant early retirement programs through innovation and replicating successful experiences. Financial mechanisms complement regulatory, legal and advocacy efforts, fostering a faster, more ambitious and just transition from coal. They initiate immediate action, boost investor confidence without undermining agreements and support a just transition. However, financial mechanisms cannot replace effective policy and must be designed with proper safeguards to ensure a just, low-carbon transition (Calhoun 2021).

Table 4 compares the complementary role of AMCs in coal-fired power plant early retirement with other initiatives and programs. At the strategy and policy level, many initiatives rely on top-down approaches and formal high-level agreements, which can be ad-hoc and time-consuming. In contrast, the AMC's approach is bottom-up, not requiring formal agreements, and while it may not dictate policy changes, it can influence the policymaking process through practical experience. In change management, some programs lack details and proven track records, making AMCs ideal institutions as part of debt and business restructuring. Regarding financial arrangements, many initiatives mention blended finance without specific details, while AMCs, as licensed financial intermediaries, are well-equipped to offer debtors optimal finance packages. They can also provide timely updates to financing if needed. In risk management, most initiatives rely on ex-ante risk management, while AMCs, particularly public sector ones willing to take more risks, engage in ex-post risk management. They can choose to exit deals early when various risks are known, and business processes are established.



**Table 4: AMCs' Complementary Role**

| | Other Initiatives and Programs | AMC |
|---|---|---|
| **Strategy and policy** | Top-down approach, **high level agreements** are pre-requisites, but can be ad-hoc and time-consuming | Does not need high-level agreements. May not have the authority to dictate policy changes but can **influence the policymaking process** by offering practical experiences |
| **Change management** | Issue oriented and multi-dimensional, but **lack details and proven track records needed** to implement various activities | AMCs' **core competency working** with debtors on restructuring their main line of business |
| **Finance** | **Blended finance is often mentioned** but lacks detail on how to ensure that finance packages meet needs. | Are well equipped to **offer the debtors optimal finance packages** given that they are licensed financial intermediaries, and such financing can also be timely updated if needed |
| **Risk management** | ***ex-ante:*** finding the right mix of policies, sponsors and operators, financing package and working through the project cycle | ***ex-ante:*** willing to take more risks and getting to the deals early; and ex-post: may choose to exit deals early when risks are known, and business process established |

**Source:** Author's elaboration.

The market size for AMCs involved in coal-fired power plant early retirement is substantial, given that 93 percent of global coal plants face limited competition from renewables due to legacy contracts and noncompetitive tariffs (Khannan 2023). In China, 42 percent of the 1,142 GW coal fleet was uncompetitive in 2020, rising to 66 percent in 2022 and projected to reach 94 percent in 2025. In India, 17 percent of the 283 GW coal fleet was uncompetitive in 2020, increasing to 50 percent in 2022 and estimated at 85 percent in 2025 (Bodnar 2023). The ADB's application of a shadow price of carbon indicates that, with this pricing, no coal power plants would meet economic investment criteria (Zhai 2018). Many of these plants require support from AMCs for a debt workout and transition.

Some initial AMC approaches have come to fruition. In India, Asset Reconstruction Company (India) Limited (ARCIL) acquired a 51 percent stake in Essar Power Gujarat Limited (EPGL), operating a 1,200 MW coal-fired power plant in Gujarat. The deal includes a debt resolution plan, converting part of the plant to a gas-fired unit and selling power at a lower tariff (*Economic Times* 2022). In Germany, RWE AG sold its lignite assets, including coal-fired power plants and mines, to a consortium of NPL AMCs led by Cerberus Capital Management. This aligns with Germany's coal phase-out by 2038 (Library of Congress, 2020). Brookfield Asset Management and Mike Cannon-Brookes jointly bid to acquire AGL Energy in Australia, aiming to close its coal power plants earlier than planned (*The Guardian* 2023).

In various developing countries, numerous AMCs remain actively involved in managing NPLs and providing financial intermediary services. The ADB coordinates the International Public AMC Forum, with members from China, Indonesia, Kazakhstan, Korea, Malaysia, Mongolia, Thailand and Vietnam. The Forum conducts annual and focused group meetings, serving as a platform to share best practices for AMCs engaging in coal-fired power plant early retirement. MDBs can contribute by offering technical assistance, facilitating knowledge sharing among AMCs and stakeholders across countries, and enhancing the governance and transparency of AMCs. MDBs have the potential to integrate AMCs into distressed debt resolution efforts within a country, implementing

climate-friendly distressed debt swap initiatives and enabling AMC participation in projects funded by CIF-ACT, JETPs, ETM and other such initiatives. Additionally, MDBs' own AMC subsidiaries, if present, can actively participate in transactions within member countries.

## CONCLUSION

Coal-fired power plants are major contributors to global carbon emissions, posing significant challenges in aligning with the Paris Agreement's goal of limiting global warming to 1.5C by 2030. Current efforts aimed at retiring these plants are falling short of expectations.

AMCs, drawing on their expertise in managing NPLs and transitioning to financial intermediaries, are well-positioned to expedite early retirement initiatives for coal power. Operating in a market-driven and bottom-up manner, AMCs can significantly enhance the speed and scale of global efforts in this regard. Their proficiency in asset management, financing and change management complements the administrative and top-down approaches adopted by other initiatives.

On the policy level, government agencies and MDBs can encourage AMCs who are already working on a country's distressed debt resolution to include coal-fired power plant early retirement projects in their portfolio as part of distressed debt-for-climate swap initiatives. MDBs, in partnership with government agencies, can provide crucial support to AMCs through technical assistance, facilitating knowledge-sharing to help improve governance and transparency of AMCs, and promoting the replication of best practices across different countries. On the operational level, government agencies and MDBs should allow AMCs to participate in early retirement projects under CIF – ACT and ETM funded programs, as well as in individual cases directly financed by MDBs. In the future, if MDBs establish their own AMC subsidiaries (Qian, 2023), these AMC subsidiaries should develop coal-fired power plant early retirement plans as one of their main products, and work with country-level AMCs on actual transactions in member countries.

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