LEADERSHIP

We have the courage to lead and do so through inspiration, innovation, collaboration and execution.

Coal Done Right

Energy is essential. It is part of our global economy and an engine of human and environmental progress. Our world needs more modern energy delivered safely, reliably, affordably and cleanly.

Sustainable, Essential, Advanced

Peabody is a leader in sustainable mining, committing to safe workplaces, maximizing productivity and resource recovery and restoring mined lands for generations to follow. The company drives partnerships and policy and works with stakeholders to recognize coal's essential role in electricity generation and steelmaking. Peabody supports greater development and deployment of advanced coal technologies. This is what we call "Coal Done Right."

Peabody's senior leaders are represented on prominent industry and association boards, spearheading advocacy of a technology path for long-term improvement in carbon emissions that will enable the world to use more energy while keeping electricity reliable and affordable. They lend constructive voices through leadership in organizations including the World Coal Association, International Energy Agency's Coal Industry Advisory Board, U.S. National Mining Association, COAL21 Fund, Minerals Council of Australia and Queensland Resources Council.

Peabody's workforce received numerous honors in 2017. For the second consecutive year, the London-based Capital Finance International named Peabody Best ESG – Responsible Mining Company – Global, recognizing the company's excellence in environmental, social and governance standards and performance. The judges commended Peabody noting, "…coal mining in particular benefits from strict adherence to ESG standards. Peabody recognizes its corporate responsibilities better than most – and acts upon them."

Corporate LiveWire named Peabody 2017 Coal Mining Company of the Year, recognizing responsible coal mining and use and highlighting the company as a pioneer in sustainability, noting that Peabody launched its first land reclamation program in the U.S. in 1954, well before modern restoration laws.

The Role of Advanced Coal Technologies in the Future of Energy

Peabody is an industry leader in advocating and collaborating to advance development and deployment of clean coal technologies. There are two core steps toward this goal:

1) Use commercially available high-efficiency, low-emissions (HELE) coal-fueled generation technologies to drive down carbon dioxide (CO_2) levels and regulated emission rates.
2) Advance research and development initiatives as well as policies to improve and commercialize next-generation carbon capture, use and storage (CCUS) technologies, which offer the potential to achieve near-zero emissions from coal-fueled power generation and other industrial processes.

With technology available today, HELE coal-fueled power plants can considerably reduce emissions from power generation. For example, building a supercritical or ultrasupercritical power plant instead of a subcritical plant of the same size can reduce CO_2 emissions by 20 to 30 percent.[1]

[1] *International Energy Agency Clean Coal Centre. "Upgrading the Efficiency of the World's Coal Fleet to Reduce CO_2 Emissions." Barnes, Ian. July 2014.*

State-of-the-art emissions controls can capture 90 to 99[2] percent of regulated emissions from a coal-fueled power plant that provides affordable, reliable power.

HELE coal-fueled power plants are vital to achieving international energy and environmental goals, such as the United Nations Sustainable Development Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all. This goal includes a call for the international community, by 2030, to "enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology."[3]

Many countries, including major coal consumers like China, India and Japan, included HELE coal-fueled power plants in their Nationally Determined Contributions (NDCs) to the Paris Agreement, designating coal as part of their lower-carbon future.[4] These NDCs were submitted by Parties to the Agreement and outline how each Party shall pursue domestic mitigation measures. HELE technology is an important step toward reducing emissions from coal use. Continuing the emissions reduction path and achieving near-zero emissions from coal use for power and other applications will require the development and deployment of CCUS.

Countries That Have Included Clean Coal Technologies in Their Climate Pledges

Countries across the globe will continue to use coal-fueled electricity generation to build vibrant and growing communities. Twenty-four countries have included utilizing clean coal technologies in their climate pledges.

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[2] Environmental Protection Agency. "Emission Control Technologies." www.epa.gov/sites/production/files/2015-07/documents/chapter_5_emission_control_technologies.pdf; U.S. Department of Energy, National Energy Technology Laboratory, Office of Fossil Fuel Energy. "Cost and Performance Baseline for Fossil Energy Plants." Volume 1a: Bituminous Coal (PC) and Natural Gas to Electricity, Revision 3. 6 July 2015.

[3] United Nations: un.org/sustainabledevelopment/energy. Accessed March 2018.

[4] Interim NDC Registry: www4.unfcc.int/ndcregistry/Pages/All.aspx. Accessed March 2018.

Advocating and Collaborating for Technology Advancement

Peabody has invested $300 million over the past two decades in global partnerships and projects in Australia, China and the U.S. to advance HELE and CCUS technologies. We serve in a leadership position and are members of organizations that span the spectrum of technology research, development and deployment, with some directly investing in novel research and others acting as leading advocates for developing incentives necessary for deployment.

Carbon Capture Coalition

Peabody is a participant in the Carbon Capture Coalition, formerly known as the National Enhanced Oil Recovery Initiative (NEORI), which brings together coal, oil and gas, electric power, ethanol, chemical and energy technology companies, labor unions and national environmental and energy policy organizations. Its goal is to make CCUS a widely available, cost effective and rapidly scalable technology solution in the U.S.

NEORI, which launched in 2011, built bipartisan support at the state and federal levels for pragmatic policies to accelerate CCUS and boost U.S. energy infrastructure development, create jobs and reduce CO_2 emissions from both the power and industrial sectors. In February 2018, legislation based on NEORI's policy recommendations to reform and extend the federal Section 45Q tax credit for CO_2 storage passed into law. Building on political support and momentum, the Coalition plans to expand its agenda to attract private investment in carbon capture projects, engage in federal infrastructure policy deliberations to ensure carbon capture and CO_2 pipelines are included, work with state and local officials to support deployment of carbon capture, pipeline infrastructure and CCUS projects, and maintain federal support to bring the next generation of technologies to the marketplace.[5]

Carbon Utilization Research Council

Peabody serves as co-chair of the Carbon Utilization Research Council (CURC), a unique coalition of fossil fuel producers, electric utilities, equipment manufacturers, technology innovators and national associations that represent the power-generating industry and state, university and technology research organizations. Created in 1998, CURC serves as an industry voice and advocate by identifying technology pathways that enable the U.S. to enjoy the benefits of abundant and low-cost fossil fuels in a manner compatible with societal energy needs and goals.

COAL21 Fund

Peabody is a founding member and board chair of Australia's A$1 billion COAL21 Fund, an industry effort to pursue a collection of low-carbon technologies. This world-first, whole-of-industry funding approach is designed to support greenhouse gas abatement and is based on a voluntary levy on coal production. To date, Peabody has committed more than A$30 million to the COAL21 Fund, which has so far directed more than A$300 million to demonstration projects in Queensland, New South Wales and nationally, covering CO_2 capture, geological storage and methane emissions abatement at operating underground coal mines. In 2017, the Australian coal industry announced it plans to commit another A$255 million into cleaner coal research by contributing to COAL21 for another decade.[6]

COAL21's flagship initiative is the Callide Oxyfuel Project in central Queensland, which has successfully demonstrated how oxyfuel and carbon capture technology can be applied to existing power stations to generate electricity from coal with low emissions. Three years of testing under "live" power station conditions showed that the technology is ready for application at full-scale

[5] Carbon Capture Coalition: carboncapturecoalition.org. Accessed February 2018.
[6] The Australian: theaustralian.com.au. "Thermal Miners Pump Another $225m into Clean Coal Research." Chambers, Matt. Accessed August 2017.

commercial power stations and has the potential to reduce CO_2 emissions from coal-fueled power stations by 90 percent or more.[7]

Consortium for Clean Coal Utilization

Peabody is a founding member and board member of the Consortium for Clean Coal Utilization (CCCU), which is a cutting-edge research program focused on advanced coal utilization and carbon capture technologies at the prestigious Washington University in St. Louis. Peabody renewed its funding commitment to the CCCU through 2021.

The CCCU fosters partnerships between universities around the world, industry leaders and government agencies to advance clean coal technologies. Research currently underway at the CCCU is advancing pressurized oxy-combustion technology. If commercialized, this new technology could use coal to create near-zero emissions power at competitive costs.

Global Carbon Capture and Storage Institute

Peabody is a founding member of the Global Carbon Capture and Storage Institute (GCCSI), which was launched in Australia and now serves as an internationally recognized advocate for CCS. GCCSI aims to provide relevant information on the status of CCS and other practical policy advice regarding CCS to governments and other key stakeholders. GCCSI is a leader in capacity building through tailored workshops, conferences, presentations and production of technical reports.

GreenGen

Peabody is on the board of the GreenGen project and is the only non-Chinese equity partner. The GreenGen power plant in Tianjin, China, was one of the first integrated gasification combined cycle power plants in the world and includes a carbon research center. The 250-megawatt gasification unit was commissioned in 2012 and continues operating today.

National Carbon Capture Center

Peabody is a partner of the National Carbon Capture Center (NCCC), a world-class test facility created by the U.S. Department of Energy to "accelerate commercialization of promising, next-generation carbon capture technologies." Managed and operated by Southern Company, the NCCC provides scientists and engineers that are developing novel technologies access to realistic power plant operating conditions and technical support. About 60 technologies being evaluated and refined in more than 100,000 hours of testing at the NCCC have resulted in the costs of carbon capture decreasing by one-third, with additional savings likely. In addition, the NCCC co-founded and chairs the International Test Center Network, a global coalition advancing research and development, collaboration and knowledge sharing of CCUS technologies.

U.S.-China Clean Energy Research Center

Peabody is an active member in the U.S.-China Clean Energy Research Center (CERC). CERC is a research and development (R&D) partnership between the U.S. and China to accelerate the development and deployment of advanced clean energy technologies. Peabody is involved in the Advanced Coal Technology Consortia, which facilitates R&D to advance important clean coal technologies.

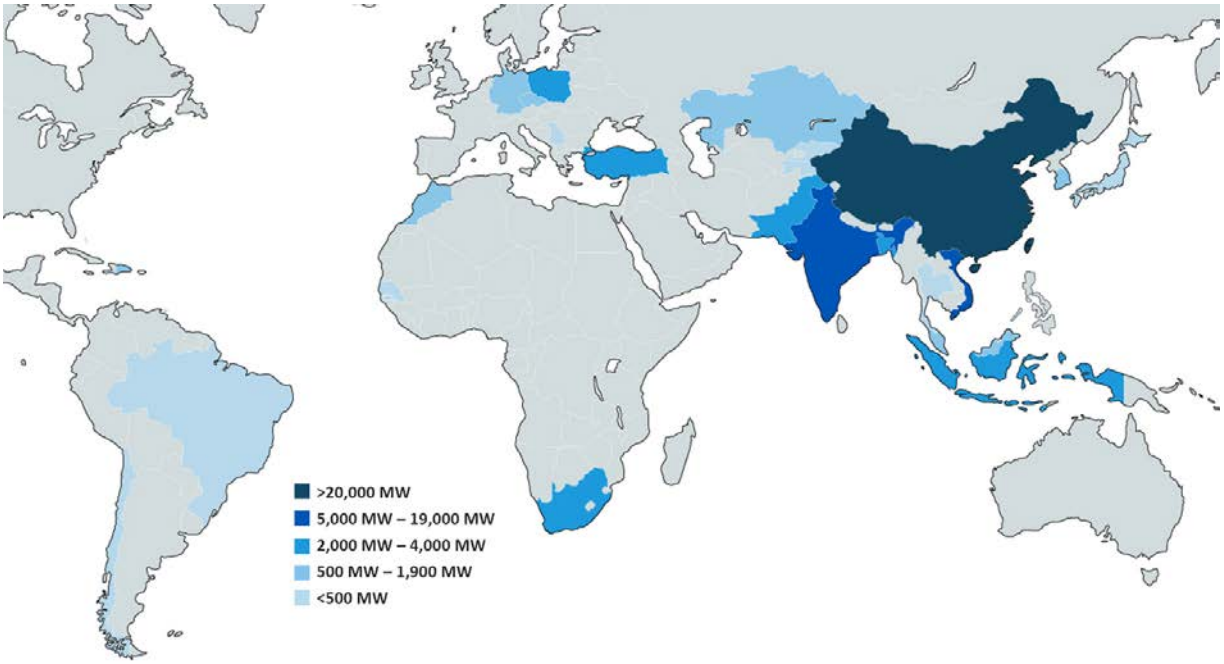
[7] *Callide Oxyfuel Project: callideoxyfuel.com/about/the-project. Accessed February 2018.*

Continued Buildout of Coal-Fueled Generation

Peabody expects coal to play an essential role in the global electricity mix for decades to come. Countries continue buildout of coal capacity due to the affordable, reliable, sustainable and modern energy that coal provides. In fact, since 2010, 46 countries have added over 590 gigawatts of new coal generation capacity, the equivalent of a new coal unit coming on line every three days.[8]

Over the next two years, 110 gigawatts of coal-fueled plant capacity will be constructed across 25 countries on five continents, with nearly 90 percent of plants in the Asia-Pacific region and the majority utilizing HELE technologies.[9] Today's advanced HELE coal technologies deliver major environmental benefits, enabling substantial improvements in air quality by reducing sulfur dioxide (SO_2), nitrogen oxides (NO_x), particulate matter, mercury and other emissions by 90 to 99 percent.[10] In addition, these high-efficiency plants achieve a 20 to 30 percent lower CO_2 profile compared to building a less efficient plant of the same size.[11]

New Coal-Fueled Generation Buildout Totals ~110 GW in 2018 and 2019



[8] Platts World Electric Power Plant Database. December 2017.
[9] Ibid.
[10] Environmental Protection Agency. "Emission Control Technologies." www.epa.gov/sites/production/files/2015-07/documents/chapter_5_emission_control_technologies.pdf; U.S. Department of Energy, National Energy Technology Laboratory, Office of Fossil Fuel Energy. "Cost and Performance Baseline for Fossil Energy Plants." Volume 1a: Bituminous Coal (PC) and Natural Gas to Electricity, Revision 3. 6 July 2015.
[11] International Energy Agency Clean Coal Centre. "Upgrading the Efficiency of the World's Coal Fleet to Reduce CO2 Emissions." Barnes, Ian. July 2014.

A Common Ground Approach

When it comes to energy, the question should not be whether we use coal, but how we use it. Central to the growing global dialogue around energy and the environment is the need to maintain a reliable, affordable baseload supply of power. A look at world energy shows coal is a vital component of the energy mix; 37 percent of the world's electricity is fueled by coal, the most of any single fuel type.[12]

Society has both a growing need for energy – and a desire to lower emissions. Coal offers a Common Ground approach through the combination of innovation and supportive policies.

The world has seen the rapid development and deployment of clean coal technologies. Since 1970, coal-based electricity generation in the U.S. has increased about 70 percent, while regulated power plant emissions have decreased 93 percent per megawatt hour.[13] Given appropriate research and development support and deployment incentives, clean coal technologies have been advanced, yielding a suite of options to dramatically reduce emissions from coal use.

Peabody believes that next-generation carbon capture must be brought to commercial readiness to transition toward energy from coal that is near-zero emissions. While it is clear that achieving a low-carbon future comes at a very high price, that price soars higher if carbon capture is not deployed. Government studies have shown that the costs of achieving the goals of global climate agreements could more than double without the inclusion of carbon capture, and researchers have stated that excluding carbon capture from the mix increases the median estimated mitigation costs from about 2 percent of GDP annually to 5 percent of GDP.[14]

Technologies Offer Best Common Ground Approach

As the United Nations Conference of the Parties took place in Bonn, Germany, in November 2017, Holly Krutka, Vice President Coal Generation and Emissions Technology, spoke on a panel that was sponsored by the U.S. Government. The presentation reinforced Peabody's vision of emissions reductions through advocating for the deployment of technology, including HELE coal-fueled generation technologies and CCUS. Technology will lead to a future of energy security, economic progress and environmental solutions.

Holly Krutka, Vice President of Coal Generation and Emissions Technologies

"How does society square the interests of a world in which leaders have identified a goal of reducing greenhouse gas emissions, even as global coal demand is strong and scores of new coal-fueled generating plants continue to be built every year?

Technologies offer the best common ground approach, with the widest appeal and greatest chance of meeting the world's many energy demands and emission-reduction goals."

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[12] *International Energy Agency. World Energy Outlook 2017.*

[13] *Energy Information Administration. Electric Power Monthly. February 2018; Environmental Protection Agency. National Emissions Inventory, Air Pollutant Emissions Trends Data, 1970 - 2017, Fuel Combustion Electric Utilities. March 2018.*

[14] *IPCC, 2014: Summary for Policymakers. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA; Volker Krey et. al, "Getting From Here to There – Energy Technology Transformation Pathways in the EMF27 Scenarios." December 2013.*

Investment Principles for Best-in-Class Coal Companies

Recognizing that environmental, social and governance transparency and disclosure is increasingly important to investors, we have advanced principles to provide portfolio managers, banks and governance committees a means of comparing coal company investments.

Coal is expected to be an essential source of global electricity generation and steelmaking for many decades to come. Today's clean coal technologies are capable of reducing sulfur dioxide, nitrogen oxides, particulate matter, mercury and other emissions by 90 to 99 percent, enabling substantial improvement in air quality, even as coal use has greatly increased. High-efficiency, low-emissions plants reduce carbon dioxide emission rates by 20 to 30 percent compared to a less efficient plant of the same size. Longer-term investments in next-generation carbon capture, use and storage technologies are necessary to transition to the ultimate goal of near-zero emissions from coal.

With energy being vital to life, and future energy needs heavily reliant on coal, we submit that investors consider the following principles to assess whether their target investment companies meet the vast majority of the following standards consistent with best-in-class coal companies. View the Investment Principles Questionnaire in the Appendix and Peabody's self-assessment of alignment to the Investment Principles at PeabodyEnergy.com.

Sustainable Mining

- Operate safe workplaces, commit to continuous improvement in safety and health practices and performance, and establish safety as a top priority principle.
- Maximize resource recovery.
- Seek ongoing improvement in environmental performance.
- Disclose which mines provide mountaintop-removal-free production.
- Commit to restoring mined lands for generations that follow.
- Respect human rights and indigenous people who are potentially impacted by mining activities.

Essential for Electricity and Steelmaking

- Drive partnerships and policy and work with stakeholders to recognize coal's essential role in electricity generation and steelmaking.
- Engage with government, academia and other stakeholders to address major energy challenges.

Advanced Coal Technologies

- Support greater development and deployment of advanced coal technologies and next-generation carbon capture, use and storage technologies.
- Support and drive policies to achieve the goal of near-zero emissions in the world's next-generation coal-based electricity generation fleet.

Peabody Global Clean Coal Leadership Awards

The fourth annual Peabody Global Clean Coal Leadership Awards recognized innovation in clean coal technologies among leading examples of coal-fueled generating plants, with winners from the U.S., China, Japan and India. Honors are based on the best environmental performance for reducing key criteria emission rates and CO_2. Categories include leadership in reducing SO_2 and NO_x, and in improving efficiency as measured by heat rate, which results in a lower carbon footprint. In addition, Peabody recognized a new coal plant and an industry pioneer advancing carbon capture and storage technologies. A distinguished panel of international experts in HELE and carbon capture technologies selected the award recipients following a comprehensive review process.

Dynegy's Duck Creek Power Station: Honored for SO_2 Leadership and Performance. The 425-megawatt Duck Creek plant operates in Canton, Ill., and virtually eliminated SO_2 emissions. The SO_2 achievement is attributed to the wet flue-gas desulfurization technology paired with low-sulfur Powder River Basin coal.

Shenergy Company Limited's Shanghai Waigaoqiao No. 3 Power Generation Co., LTD: Honored for NO_x Leadership and Performance and Heat Rate Leadership and Performance. The 2,000-megawatt (two units x 1,000 megawatt) Waigaoqiao No. 3 Power Generation plant located in Shanghai has one of the lowest global NO_x emissions profiles at 0.11 pounds per megawatt hour. The power plant's heat rate of 8,141 Btu per kilowatt hour is among the best in the world.

Russell Ray, Chief Editor Power Engineering Magazine and Bryan Galli, Group Executive and Chief Marketing Officer-Peabody, present two awards to Shi Min, General Manager of Shanghai Waigaoqiao No. 3 Power Generation Co., LTD.

Waigaoqiao No. 3 was designed to achieve high-efficiency operation and the plant's operators have made retrofit improvements to further boost the annual average net efficiency to as high as 44.5 percent, lower heating value (LHV).

Kyushu Electric Power Company Inc.'s Matsuura Power Station No. 2: Honored for New Coal Plant Leadership and Innovation. The 1,000-megawatt ultrasupercritical plant located in Matsuura, Japan, is currently under construction and expected to come on line in 2019. It is designed to have an efficiency of over 45 percent, LHV, which will make it one of the most efficient coal-fueled power plants in the world, reducing CO_2 and regulated emissions.

U.S. Department of Energy's National Carbon Capture Center, managed and operated by Southern Company: Honored as Carbon Capture and Storage Pioneer. The National Carbon Capture Center in Wilsonville, Ala., is a world-class neutral test facility working to advance technologies to reduce greenhouse gas emissions from coal- and natural gas-based power plants. The center works with third-party technology developers to bridge the gap between laboratory research and large-scale demonstrations. In addition, the National Carbon Capture Center chairs the International Test Center Network to accelerate research, development and deployment of carbon capture technologies.

Nabha Power Limited, a wholly owned subsidiary of Larsen & Toubro: Recognized with an Honorable Mention in the Heat Rate Leadership and Performance category. The 1,400-megawatt power plant in Rajpura, Punjab, is among the most efficient supercritical plants in India, and in 2016 notably achieved its lowest auxiliary power consumption of 5.2 percent at 77 percent plant load. In addition, the plant implemented several environmental controls, including Mitsubishi Advanced Combustion Technology burners for NO_x emissions reduction, 100 percent washed coal, a zero-water discharge system and utilization of 100 percent of its dry fly ash on a sustainable basis.

Living Our Values

Peabody's core values – safety, customer focus, leadership, people, excellence, integrity and sustainability – are more than just words. They reflect who we are and what we believe and guide our daily actions and business decisions.

Peabody values complement the company's leadership pillars: inspiration, innovation, collaboration and execution. Given their importance in guiding behavior, Director and above employees will be required in 2018 to integrate values into goal setting and performance review discussions.

Learn more about our talented workforce in the People chapter.

"It is not enough that Peabody values are on a company wall or our website. Our values come alive through each of us demonstrating them in what we do each day and in how we work together." ~ Janette Hewson, Vice President Government Relations and General Counsel-Australia