SERVICES

METALS AND MINING

Resource constraints make the requirement for reliable and economic energy more important than ever.

Energy costs form a significant portion of a mining operation's costs and controlling them has a significant impact on operation's competitive position.

Energy reliability is also receiving renewed focus amid system shortages in many parts of the world.

Pace has wide experience working with the metals and mining sector, including supporting projects in over 35 countries on six continents with some of the largest mine operators. Our clients range from global leaders to niche or regional players.

We support the energy needs of the world's largest aluminium companies who rely on Pace to help manage their most critical production cost component.

We assist our clients in controlling energy costs for existing operations, while finding low cost, reliable energy solutions to support global expansion.

Pace has extensive expertise in advising on establishing environmental best practices including Carbon Footprinting and Kyoto Joint Implementation (JI) and Clean Development Mechanism (CDM) based investments.

OUR CAPABILITIES

- Corporate energy strategies
- Energy and risk management
- Greenfield project development
- Power generation development
- Energy supply contracting
- Supply reliability assessments
- Energy efficiency & emissions programs
- Carbon strategies & programs

METALS AND MINING EXPERIENCE

...Supported metals and mining sector projects in over 35 countries on six continents

...Experience in additional countries with other market sectors including developers, energy companies, and other industries

...Actively managing energy needs for over 150 metals industry facilities

OUR EXPERTISE

Pace has energy experience in all areas of the processing chain….

- Development
- Mining
- Power Generation
- Processing
- Smelting
- Fabrication

CASE STUDIES

METALS AND MINING

Corporate Energy Strategy

CLIENT NEED

An international mining and metals leader was facing significant corporate-wide energy cost & corresponding production cost increases and questioning how to tackle energy challenges corporately to protect margin and shareholder value.

OUR ROLE IN PROJECT

Pace took a “boots on the ground” approach to detailing energy use, prices, and costs across global operations. We provided high-confidence historic and current energy profiles, as well as a thorough understanding of client’s approach to energy management (including procurement, operations and risk) and where risk and opportunities for cost reduction existed. Pace consolidated the detailed corporate energy information (including related carbon emissions) by region, site, process, and commodity into its central energy management system called EnergyZone® for continued client use.

Both tactical and strategic recommendations resulted. Tactically, Pace worked with the client to develop specific approaches to major upcoming procurements, assisted in the development of power solutions for new investments, and supported the assessment and implementation of a long list of energy efficiency and best practices applications.

Strategically, recommendations related to organization, corporate energy & greenhouse gas policies, energy information systems & reporting, carbon strategy, generation development, and risk management were made and approved. Pace continues to support the implementation of these recommendations.

CASE STUDIES

METALS AND MINING

Carbon Strategy and Positioning

CLIENT NEED

An international mining company with majority of operations in the U.S., Canada, and Australia was concerned about corporate exposure to the newly emerging carbon markets and possible opportunities and mitigation measures.

OUR ROLE IN PROJECT

In order to define the client's carbon footprint and exposure, Pace utilized its proficient energy management information systems to gather and organize data from across the Client's organization. The resulting "inventory", which met all notable carbon program requirements, became the basis for the ongoing analysis.

Pace then provided the client with a comprehensive review of carbon legislative proposals in the relevant regions & global carbon markets as well as a listing of carbon reduction and market opportunities from the company's portfolio of operations. A resulting range of carbon exposure was developed based on the client's carbon footprint and Pace's view of pending regulations and carbon market outlook.

To assist the client in obtaining its objective to position itself for expected carbon regulations, Pace is implementing a dynamic carbon inventory system, assessing a variety of operational, generation & market-based carbon reduction or credit opportunities, and assisting the client with its branding and messaging related to its newly adopted carbon practices. To date, Pace has identified potential energy savings and carbon revenue associated with carbon offset projects totaling over twenty million dollars.

Russian Industrial Complex Modernisation

CLIENT NEED

The client had acquired a world-scale metals processing facility in Russia. The facility was in need of major modernization and refurbishment, but improvements had to be prioritized and investment decisions and implementation managed.

OUR ROLE IN PROJECT

Pace was initially retained to develop a strategy for modernizing the facility's energy and utility operations. This included operations, organization, procurement contracts, and emissions. Priorities were set in order of safety, reliability, and cost reduction. Pace developed an energy plan that identified, prioritized, and summarized over 300 recommended improvement measures.

Over the course of two years, Pace continued to assess, justify and manage the implementation of most of these projects. This resulted in a workplace that now meets western standards for safety and reliability. Further, over $30 million dollars of annual cost has been trimmed from operations through improvements to utility systems including electricity, fuels, water, waste water, compressed air, process nitrogen, and "district" steam/hot water. Further, improvements to energy supply contracting have been made and training has converted the workforce to a new set of higher standards. Pace has also managed carbon offset projects and continues to serve in the role of on-site energy manager.

PACE

CASE STUDIES

METALS AND MINING

Independent Engineer for Greenfield Mining and Processing Complex

CLIENT NEED

An international joint venture sought a due diligence assessment and a bankable independent engineering study for the power supply requirements of a $2 billion greenfield aluminium complex in northwest Russia. The complex was to include bauxite mining, alumina refining, and aluminium smelting operations.

OUR ROLE IN PROJECT

Pace was retained to determine the infrastructure requirements for delivery of over 500 MW of highly-reliable power supply and an even greater amount of equivalent natural gas. The remote region targeted for the mining complex has an isolated power system consisting of 5 major power plants along a linear, single-circuit transmission line.

Pace led the independent engineering energy supply effort, including on-site assessment of all major power plants, transmission system load flow & reliability assessments, and utility supply planning. This was coordinated with major engineering firms leading the design efforts for the mining complex. Pace also led natural gas supply planning and contracting discussions.

The results of the independent engineer bankable feasibility study detailed the energy and infrastructure requirements to support the industrial complex. This included capital costs, commercial challenges, and risks associated with powering the greenfield operations. While the smelter investment remains pending, mining and processing have proceeded and are in commercial operations.

CASE STUDIES

METALS AND MINING

Power Generation Development for a Greenfield Mine in Latin America

CLIENT NEED

A junior mining company developing a new nickel mining project in Central America required short-term and long-term power supply. The electrical load of the mining operation represents the single largest load in the country and therefore presented a challenge to supply from existing generation and transmission infrastructure.

OUR ROLE IN PROJECT

Pace provided a comparative assessment of asset and contract-based power supply options to meet aggressive near-term start-up and long-term cost objectives. Pace led the technical, commercial, and fuel analyses associated with "build versus buy" options. Ultimately, the client focused on seeking a partner in the development of a 150 MW pet coke or coal-fired power plant to support the long-term power needs of the mining operation.

Pace led discussions with potential partners and advised on issues ranging from plant performance & cost, fuel supply strategy, project structuring, project economics, and commercial terms associated with a potential partnership. Further, Pace provided supply assessments and price forecasts for pet coke and coal within the Caribbean Basin.

Additionally, Pace lead the solicitation and negotiation of a short-term power supply contract to support an aggressive mine start-up schedule and early-year mining operations, prior to start-up of the new power development.